JURNAL AKUNTANSI
Vol.18 No.1 April 2024 : 1 - 31
Doi: https://doi.org/10.25170/jara.v18i1.4964

ISSN : 2580-9792 (Online)
ISSN : 1978-8029 (Print)

PENGUJIAN BESARAN PERGESERAN LABA PERUSAHAAN MULTINASIONAL DENGAN MOTIF PERPAJAKAN DI ASEAN: STUDI FDI TIPOLOGI

MEASURING THE MAGNITUDE OF MNE'S TAX-MOTIVATED PROFIT SHIFTING IN ASEAN: A STUDY OF FDI TYPOLOGY

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ABSTRAK

Studi ini bertujuan menguji besarnya pergeseran laba (*profit shifting*) yang dilakukan oleh perusahaan multinasional (MNE) di berbagai jenis investasi di ASEAN. Dengan menggunakan data ORBIS dari tahun 2013 hingga 2018, dilakukan analisis data panel *pooled least square* atas data yang telah dikumpulkan. Hasil penelitian menemukan bahwa kegiatan investasi yang bertujuan mencapai efisiensi yang lebih tinggi (*efficiency seeking*) menunjukkan elastisitas yang lebih besar terhadap perilaku pergeseran laba. Secara khusus, para pembuat kebijakan harus berfokus pada sektor manufaktur, yang menekankan praktik pergeseran laba lebih umum terjadi dalam investasi yang bertujuan efisiensi. Meskipun demikian, pemerintah perlu menyeimbangkan upaya regulasi dan kebijakan untuk menarik *Foreign Direct Investment* (FDI) karena adanya potensi dan manfaat FDI dan risiko pengalihan keuntungan. Mencapai keseimbangan tersebut merupakan tantangan penting.

Kata kunci: pengalihan keuntungan, pengalihan pendapatan, penghindaran pajak.

ABSTRACT

This study examines the magnitude of outbound profit-shifting by multinational enterprises (MNEs) across different investment types in the ASEAN. Using ORBIS data from 2013 to 2018, a pooled least squares panel data analysis is conducted. Results indicate that investment activities that achieve higher efficiency demonstrate greater elasticity regarding profit-shifting behavior. Policymakers should focus on the manufacturing sector, where profit-shifting practices are more common in efficiency-seeking investments. Nevertheless, governments must balance regulatory efforts and policies to attract foreign direct investment due to the potential benefits of FDI spillovers and the risks of profit-shifting activities. Achieving this balance is a critical challenge.

Keywords: *profit shifting, income shifting, tax avoidance.*

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Penulis Korespondensi : Mohamad Gunadi
Sitasi: Pratama, R.A..& Gunadi, M. (2024). Measuring The Magnitude of MNE's Tax-Motivated Profit Shifting in Asean: a study of FDI Typology . *Jurnal Akuntansi*, *18*(1),
Artikel masuk: 1 Desember 2023; Artikel diterima: 17 Januari 2024

1. INTRODUCTION

Tax-Motivated Profit Shifting. MNEs are vital in promoting economic growth and innovation in developing countries by attracting Foreign Direct Investment (FDI) and integrating them into global value chains (Backer, 2019). Numerous studies have established the positive influence of MNEs activity on international business and economic environments (Cravino et al., 2014; Kleinert et al., 2012), shaping the comparative advantages of host countries (Alviarez et al., 2020), creating employment opportunities (Bajgar et al., 2019; Moran, 2019), generating spillover effects on domestic firms (Narjoko & Urata, 1990; Yasin et al., 2022; Bajgar et al., 2019; Keller & Yeaple, 2003), inducing productivity growth, and influencing investment and trade policies (Keller & Yeaple, 2009). At the global level, MNEs impact resources and capital allocation, affecting institutions, amenities, and the quality of labor (Alviarez et al., 2020). As a result, governments pay significant attention to the presence of MNEs (Brewer, 1992), and competition to attract FDI through MNEs has become commonplace worldwide (De Feo & Amerighi, 2014; Sam & Haufler, 2005).

The presence of MNEs in host countries has several positive aspects but also negative consequences. MNEs often become a consideration for policymakers as they manage their economies, leading governments to align their fiscal policies with MNE globalization strategies (Buckley & Ghauri, 2004). This complexity poses political challenges for governments, and it becomes a critical point in designing trade regulations and investments (Rugman, 1985; Poynter, 1982). Furthermore, taxation is essential for host countries, as MNEs strategically plan to minimize their tax burdens (Armstrong et al., 2012; Crivelli, 2021; Johansson et al., 2017). When determining output or price, MNEs consider input costs, taxes, and tariffs (Horst, 1974). The tax rate is a crucial factor that MNEs consider before deciding to invest in the first place. Several studies have explored this issue, highlighting the significance of tax rates for MNEs (Becker et al., 2009; Mudambi, 1995; Karkinsky & Riedel, 2012).

In principal, MNEs business activity is a collective effort of firms to maximize aggregate group profit (Fowler, 1978). Profitability is the most prominent and easily measurable indicator of MNE performance (Abdel-Khalik & Lusk,

1974). To achieve their profit maximization goal, MNEs behave as a single entity coordinating its actions rather than separate entities (Perry-Kessaris, 2012). This goal is influenced not only by the level of ownership of the parent company but also by the differences in corporate tax rates among the members of the MNEs across the world, known as international tax rate differentials (Fowler, 1978; Heckemeyer & Overesch, 2017; Huizinga & Laeven, 2008). It is worth noting that the corporate tax rate represents the statutory tax rate (STR), whereas the effective tax rate (ETR) is more critical from the MNE's perspective. To exploit tax rate differences (Stöwhase, 2005), MNEs shift profits from high-tax to low-tax countries through intragroup transactions and transfer pricing. This phenomenon is known as Base Erosion and Profit Shifting (BEPS) (Grubert & Mutti, 1991;Beer & Loeprick, 2015; Dharmapala, 2014; Dowd et al., 2017; Haufler & Schjelderup, 1999). Having operated in multiple jurisdictions, MNE can utilize specific tax policies in particular jurisdictions (Pratama, 2020; Bond, 1980; Egger et al., 2009). It has been demonstrated that an MNE member's profits vary according to the existence of tax incentives (Clausing, 2009).

The issue of profit-shifting schemes has resulted in a decline in tax revenue collection, particularly in developing countries, which need more countermeasure legislation to prevent these schemes. This observation has been supported by previous studies (Buettner et al., 2018; Johansson & Sorbe, 2016; Pratama, 2020; Rodulfo, 2021). Furthermore, the tax systems of these countries are vulnerable to revenue shocks caused by international trade (Mascagni et al., 2014; Morrissey et al., 2016). Despite these challenges, tax revenues are still essential in funding the development of countries (Bahl et al., 2013; Gnangnon, 2019). Therefore, the tax system should be carefully designed to balance revenue collection and create a conducive investment environment for FDI. Both tax revenues and FDI are critical for economic growth; however, policies that emphasize one aspect often come at the expense of the other. For instance, studies have shown that tax revenues are often foregone to facilitate FDI (Gropp & Kostial, 2000; Janský & Palanský, 2019). Without a proper assessment of the scale of profit-shifting, sacrificing tax revenues to promote FDI would be pointless if the increase in FDI inflows is less than the potential loss of tax revenues (De Feo & Amerighi, 2014) (Choi et al., 2020).

Furthermore, tax competition to attract foreign direct investment (FDI) has become an increasingly prevalent policy trend in most countries worldwide. This phenomenon is characterized by the implementation of numerous tax policies in the form of tax incentives, offered without consideration for the specific FDI characteristics that advantages a given country. Consequently, the provision of these tax incentives becomes suboptimal, as the behavior of FDI varies across nations (Klemm, 2009).

Thus, the government must comprehend the sectoral characteristics of the tax-driven strategy that MNEs employ to formulate policies that align with the FDI typology. Additionally, it is worth noting that the impact of specific types of FDI on economic growth may vary since the motivations for each investment category differ (Ali & Asgher, 2016). For instance, investments can be categorized as market-seeking, natural resource-seeking, efficiency-seeking, and strategic asset-seeking (UNCTAD-ASEAN, 2019). Thus, evaluating the extent of tax-driven profit shifting for each FDI typology is essential, however, the existing research on the extent of benefits derived from tax policy sacrifices remains considerably limited. This paper posits that assessing the magnitude of tax-driven profit shifting from each FDI typology is critical for designing policies that effectively promote economic growth while balancing the interests of investors and the host country.

Understanding the extent of sectoral profit shifting is crucial for the strategic design of tax policies before determining foreign direct investment (FDI) incentives for a particular sector. Although the study of sectoral profit shifting is essential, it remains an under-researched area in academic discourse (Beer & Devlin, 2020). This paper will specifically focus on ASEAN countries since the region comprises developing countries still emerging as FDI destinations (Gropp & Kostial, 2000; Lee et al., 2019; Thomsen, 1999). The study will measure the magnitude of tax-motivated profit shifting and break it down according to the investment typology of MNEs in ASEAN. The data for this study was obtained from ORBIS and covered the period from 2013 to 2018, as these years provide a stable economic environment. As a result, the expected findings are poised to offer valuable insights into the optimal design of tax policies for the forthcoming year, 2023, in the aftermath of the COVID-19 pandemic. The findings of this research will provide

insights into the tax policy implications for each sector and investment typology, thereby enabling policymakers to make informed decisions that will promote economic growth while ensuring a balanced approach to the interests of both investors and host countries.

FDI Typology. This study adopts the FDI typology perspective, which has been established and frequently cited in the literature (UNESCAP, 2017; Dunning, 2009; Narula & Dunning, 2010; Scholarship et al., 2019; Dunning, 1998). In this framework, FDI is classified based on the motives that prompt its inflow. By employing this typology, the present study aims to provide a clearer understanding of the various objectives that drive FDI inflows and the specific strategies employed by MNEs to attain these goals.

First, resource-seeking FDI, which involves investments by MNEs seeking access to natural resources, such as minerals, oil, gas, raw materials, and agricultural products. These investments are usually made in countries with abundant natural resources to ensure a dependable supply of raw materials for the MNE's operations (UNESCAP, 2017; Dunning & Lundan, 2008).

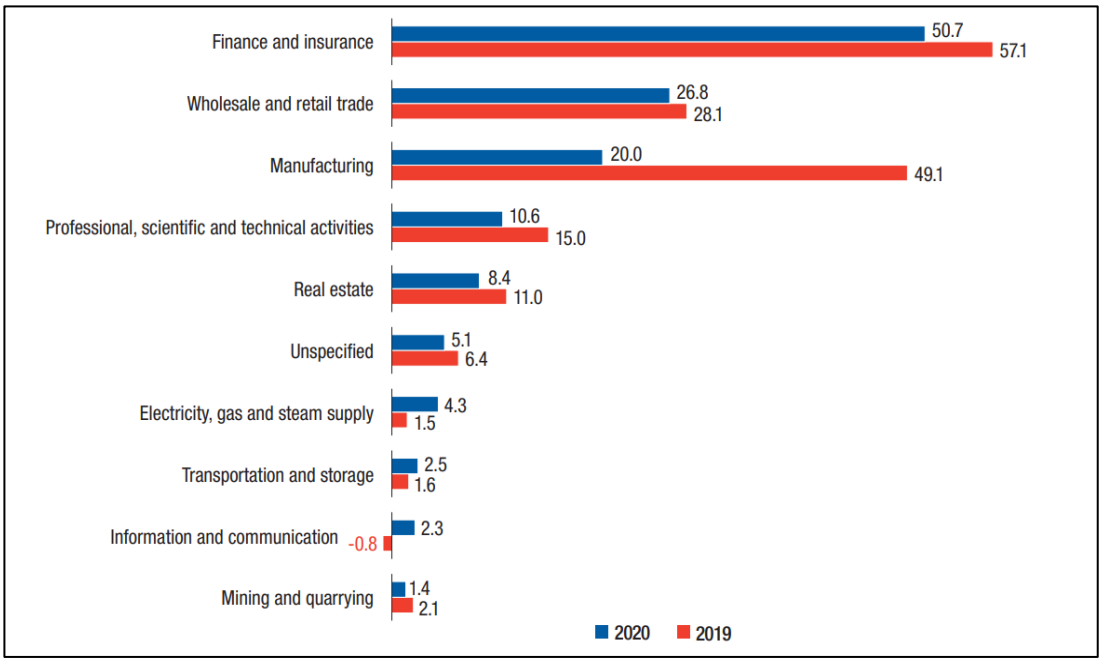
Second, market-seeking FDI is an investment that involves MNEs investing in foreign markets to access new markets and expand their customer base. The primary objective of market-seeking FDI is to establish a local presence in a foreign market, typically by setting up new operations or acquiring local companies, to capitalize on economies of scale. Ultimately, MNEs' goal in market-seeking FDI is to sell their finished products or services to consumers in the host countries, preferably in markets where consumer preferences align with the MNE's offerings. This approach to FDI represents a strategic business decision that allows MNEs to diversify their customer base and revenue streams while mitigating risks associated with a reliance on a single market (UNESCAP, 2017 Dunning & Lundan, 2008).

Third, Efficiency-seeking FDI refers to a form of investment aimed at improving operational efficiency, reducing costs, and enhancing competitiveness by leveraging cheaper factors of production, such as skilled labor, advanced technology, and infrastructure, in foreign markets. This type of investment typically involves the establishment of new operations or the acquisition of local companies that enable MNEs to access and utilize these cost-saving factors. The efficiency-

seeking FDI aims to restructure existing investments to allocate international economic activity across the MNE's operations efficiently. This may involve strategies such as international specialization, global sourcing, and participation in global value chains. By engaging in efficiency-seeking FDI, MNEs can increase their competitiveness, optimize their production processes, and gain access to new markets while simultaneously reducing their costs of production (UNESCAP, 2017 Dunning & Lundan, 2008).

Lastly, strategic asset-seeking FDI seeks to acquire critical assets vital to business operations. Such strategic assets typically comprise intellectual property, knowledge, expertise, and networks. Strategic asset-seeking FDI aims to assume control over these assets, often via establishing new operations or acquiring local companies, knowledge, research and development (R&D), and human capital. By doing so, MNEs can expand their business operations, bolster their competitiveness, and improve their innovation potential. In addition, strategic asset-seeking FDI enables MNEs to diversify their asset portfolio, minimize risks, and ensure sustainable long-term growth (UNESCAP, 2017; Dunning & Lundan, 2008).

In line with the proposed framework, this paper has classified every NACE-based sector of MNEs operating in the Association of Southeast Asian Nations (ASEAN) region into the top eight investments in 2019. These investments encompass the following sectors: 01 - Manufacturing; 02 - Financial and Insurance activities; 03 - Agriculture, forestry, and fishing; 04 - Real estate activities; 05 - Wholesale and retail trade; repair of motor vehicles and motorcycles; 06 - Information and communication; 07 - Services activities; 08 - Mining. The base of selection is as follows (UNCTAD, 2019):



Source: ASEAN Investment Report 2020–2021
Figure 1. Top 10 FDI by Sector in ASEAN (in Billion Dollars)

Sectoral Perspective In ASEAN. The ASEAN region remains an alluring investment destination for MNEs due to its diverse investment opportunities across various sectors. It encompasses all the typologies of investments, ranging from natural resources-seeking to strategic asset-seeking. Investing in ASEAN can be a strategic move for MNEs to expand their operations, diversify their business portfolio, and harness the region's vast market potential and abundant resources. This is evident from the significant inflow of FDI from the ASEAN region from 2013 to 2018, summarized below.

Table 1
FDI Inflow to ASEAN by Country (in a million US$)

Host Country	2013	2014	2015	2016	2017	2018
Brunei Darussalam	725.5	568.2	171.3	-150.4	460.1	517.3
Cambodia	1,274.9	1,726.5	1,701.0	2,475.9	2,788.1	3,212.6
Indonesia	18,443.8	21,810.4	16,642.1	3,920.7	20,579.2	20,563.5
Lao PDR	426.7	913.2	1,079.2	1,075.7	1,695.4	1,358.0
Malaysia	12,107.1	10,875.3	10,180.0	11,290.3	9,295.8	7,611.3
Myanmar	2,620.9	946.2	2,824.5	2,989.5	4,002.4	1,609.8

Philippines	3,859.8	5,814.6	5,639.2	8,279.5	10,256.4	9,948.6
Singapore	56,670.9	73,284.5	59,702.3	67,504.6	82,496.0	73,917.6
Thailand	15,936.0	4,975.5	8,927.7	3,486.3	8,285.2	13,751.8
Viet Nam	8,900.0	9,200.1	11,800.0	12,600.0	14,100.0	15,500.0
Total	120,965.5	130,114.5	118,667.2	113,472.0	153,958.6	147,990.4

Source : *https://data.aseanstats.org/*, accessed March 2023

The ASEAN region is endowed with abundant natural resources such as oil, gas, minerals, and timber, which provide lucrative opportunities for MNEs engaged in natural resources-seeking investments in the mining and energy sectors. Furthermore, the region boasts a stable investment climate and political environment, further bolsters investor confidence. Countries such as Indonesia, Malaysia, Brunei, and Vietnam have leveraged their natural resources to propel economic growth. This underscores the ASEAN region's potential as an attractive investment destination for MNEs seeking to exploit its natural resources endowment.

The ASEAN region presents a vast and expanding market potential, with a population exceeding 650 million people, and is recognized as one of the fastest-growing regions globally. The potential demand for goods and services assures opportunities for MNEs to expand their business activities. Furthermore, the region has a burgeoning middle-class segment, which is expected to grow further. Therefore, ASEAN represents an attractive market-seeking investment destination for MNEs, particularly in the trading and financial sectors. Promising markets are available in countries such as Indonesia, Thailand, Vietnam, the Philippines, and Malaysia, which have large GDPs and are continuously evolving.

The ASEAN region is a cost-efficient investment destination, offering lower resource costs, particularly in labor and capital. This makes the region attractive for efficiency-seeking investments, particularly in the manufacturing and service sectors. Moreover, the relatively robust domestic Small and Medium-sized Enterprises ("SMEs") provide healthy competition, leading to increased competitiveness and the potential for achieving competitive advantages. Countries such as Cambodia, Myanmar, Vietnam, Indonesia, and the Philippines have

established themselves as regions offering inexpensive labor while presenting robust market opportunities.

The ASEAN region presents an opportunity to access innovative technologies. Investing in ASEAN can provide access to new technologies and expertise. Some regions in ASEAN have demonstrated leadership in innovation, such as the technology sector in Singapore. This provides a fertile ground for strategic asset-seeking investments in the information and technology sector. Table 2 below shows the inflow of FDI for the region.

Table 2
FDI Inflow to ASEAN by sector (in a million US$)

No	Sector (NACE Code)	2015	2016	2017	2018	Total
1	[C] Manufacturing	4,404.86	6,683.63	7,376.61	7,956.17	26,421.27
2	[K] Financial and Insurance activities	2,530.78	5,701.88	3,637.26	3,584.50	15,454.42
3	[A] Agriculture, forestry, and fishing	4,126.25	2,752.58	3,824.96	3,769.13	14,472.92
4	[L] Real estate activities	2,980.22	3,535.11	3,620.94	1,853.87	11,990.14
5	[G] Wholesale and retail trade; repair of motor vehicles and motorcycles	1,247.49	1,862.35	2,828.95	4,179.50	10,118.29
6	[Z] Unspecified activity	2,123.36	2,024.28	0.04	0	4,147.68
7	[J] Information and communication	788.48	279.8	1,395.08	399.18	2,862.54
8	[S] Other services activities.	139.68	895.35	1,046.98	370.23	2,452.24
9	[B] Mining and quarrying	1,190.99	1,216.60	665.58	-804.07	2,269.10
10	[D] Electricity, gas, steam, and air conditioning supply	471.69	113.78	921.01	253.38	1,759.86
11	[F] Construction	281.03	164.52	610.08	454.32	1,509.95
12	[M] Professional, scientific and technical activities	25.33	498.78	415.56	514.13	1,453.80
13	[I] Accommodation and food service activities	22.3	249.48	114.19	190.33	576.30
14	[H] Transportation and storage	426.1	237.1	195.83	-330.44	528.59
15	[N] Administrative and support service activities	20.65	50.97	38.13	213.02	322.77
16	[Q] Human health and social work activities	24.94	56	113.57	103.93	298.44
17	[E] Water supply; sewerage, waste management and remediation activities	28.49	88.85	40.27	34.16	191.77
18	[R] Arts, entertainment and recreation	-18.55	11.04	3.04	90.29	85.82
19	[P] Education	5.2	16.71	14.48	10.69	47.08
20	[O] Public administration and defence; compulsory social security	0	6.35	0.24	-0.38	6.21

Source: *https://data.aseanstats.org/*, accessed March 2023, Year before 2014 is not available on the website, the year 2019 – the current year is not chosen since to avoid specific year effect, for example, Covid-19 Pandemic, NACE Code sourced from *https://ec.europa.eu/*

2. LITERATURE REVIEW

The study of tax-motivated profit shifting started from the fundamental theory of the differences between reported profit and real profit, which is the difference in the amount of shifted profit. The extent of elasticity of shifted profit is contingent upon the tax rate and the various incentives available to MNEs. Hines and Rice

conducted a study that utilized the data from the Bureau of Economic Analysis, which included aggregate country data from the years 1982. Their research findings indicate that the elasticity of profit shifting ranges between 2.25, signifying that a one percent difference in tax rate between parent country and host country results in a 2.25% shift from real profit. Notably, the study does not distinguish between inbound profit shifting, which occurs when the host country's tax rate is greater than the parent countries, and outbound profit shifting, which occurs when the host country's tax rate is lower (Hines & Rice, 1994).

Additional research undertaken by Huizinga and Laeven indicated that the elasticity of profit shifting in response to tax incentives was 1.43, implying that a 1% deviation in tax rates resulted in a 1.43% change from the actual profit (Huizinga & Laeven, 2008). The study employed cross-sectional data from Amadeus for the year 1992, and, similarly to Hines and Rice, did not distinguish between inbound and outbound profit shifting.

Utilizing the AMADEUS dataset, encompassing European MNEs, Dischinger (2007) uncovered that the elasticity of profit shifting was 0.7, implying that a 1% disparity in tax rates resulted in 0.7% of the shifted profit for the period 1995-2005 (Dischinger et al., 2007). The research observed that profit shifts outside the European Union and greater parent ownership contributed to higher profit-shifting behavior.

According to Clausing's study, which examines the real and financial channels of profit shifting among U.S. Multinational Firms from 1982-2004, the elasticity of profit shifting is 1.58. This means that a 1% difference in tax rates resulted in a 1.58% shift profit (Clausing, 2009). The author discovered that MNEs employ both real and financial responses to determine profit allocation among MNEs as a response to different tax rates (Clausing, 2009).

Lohse and Riedel conducted a study investigating the elasticity of profit shifting to corporate tax rate differentials. Their findings revealed an elasticity of 3.42, indicating that for every 1% tax difference, the shifted profit is 3.42% (Lohse et al., 2014). The authors also examined the role of transfer pricing regulation in curbing profit-shifting behavior. The results of their research suggest that these regulations can effectively reduce shifted profit by up to 1.71%.

Moreover, Heckemeyer and Overesch have emphasized determining the consensus elasticity of profit shifting, drawing on previous research in this area (Heckemeyer & Overesch, 2017). Their study concludes that the consensus elasticity of profit shifting is estimated to be 0.8, indicating that a 1% disparity in tax rates would result in a 0.8% shift in profit.

Johansson's recent research has introduced new dimensions to the existing debate on profit shifting. The study differentiates the tax rate into positive and negative tax differences, where the former denotes when the subsidiary's tax rate is higher than the average tax rate of another member of the MNEs, and the latter when it is lower (Johansson et al., 2017). The research is based on ORBIS data from 2000 to 2010 for OECD and G20 countries. The study's findings indicate that a 1% difference in tax rate results in a 6% decrease in return on assets (ROA) for the sample population. This suggests that tax rate differentials may substantially impact the overall profitability of MNEs.

In 2020, Pratama conducted a study on the effectiveness of tax regulations in combating profit shifting. The research utilized ORBIS data for ASEAN MNEs from 2009 to 2018 (Pratama, 2020). The study revealed that tax regulations could effectively backstop shifted profit as much as 0.55% of 1.82% profit shifted abroad for every 1% difference in tax rates. Additionally, the research suggested that excessively stringent regulations may lead to a diminishing impact. Therefore, designing and implementing effective anti-avoidance regulations is crucial rather than a comprehensive set of anti-avoidance measures.

Langenmayr and Liu (2022) shed light on the importance of the specific tax system in driving the strategic profit-shifting behavior of MNEs. Their study, which centered on the territorial tax system of the United Kingdom in 2009, revealed that abolishing profit taxation sourced from foreign countries or adopting a territorial tax system resulted in a significant 2% increase in outbound profit shifting by MNEs. Interestingly, the study also found that such profit-shifting behavior led to spillover productivity growth in foreign countries (Langenmayr & Liu, 2022). On the other hand, Schjelderup (1999) research highlights the effectiveness of tax policies that focus on price rather than profit in reducing intra-group transactions.

Nonetheless, evidence of the effectiveness of such policies in reducing the profit-shifting strategy of MNEs remains inconclusive (Schjelderup, 1999).

The issue of sectoral profit-shifting is an area of research that requires further attention by scholars. Anardi and Nerudová conducted a 10-year study from 2004 to 2014 on the extent of profit shifting in the Mining Industry in Czech. The research applied random effect model estimations and utilized AMADEUS data from Bureau Van Dijk, which revealed that the elasticity of profit shifts to the tax rate differential in mining industries was 1.20. Additionally, the study found that the capital structure of mining firms was significantly influenced by different tax rates (Anarfi & Nerudová, 2017).

Beer and Devlin (2020) studied the extent of profit shifting in extractive industries. The study reveals that the elasticity of the industry to corporate tax rate is more than 3%. This implies that a 1% increase in the corporate tax rate in host countries leads to a reduction in shifted profit of over 3%. The research pooled least squares regression for unbalanced firms' level data and found that MNEs operating in natural resources pose a significant material threat to resources in the domestic country. Moreover, the study suggests that transfer pricing regulations need to be improved to combat profit shifting in this sector (Beer & Devlin, 2020).

Barrios and D'Andria (2020) study aims to investigate the harmful effects of base erosion and profit shifting on tax revenue collection, leading to a shift in tax burden towards households in developed countries. The authors utilized company-level data covering 2004-2013 to examine the sectoral differences in profit-shifting magnitudes that seriously threaten policy and welfare. Specifically, MNEs operating in sectors with lower capital costs tend to attract more investment and deter investment in other industries with less ability to avoid tax, thereby reducing their investment opportunities. The study further indicates that the ownership of intangible assets does not significantly influence the magnitude of profit shifting, while sectoral differences have a more significant impact. Moreover, the study reveals that most profit-shifting occurs through transfer pricing mechanisms (Barrios & D'Andria, 2020).

According to Nurhidayati and Fuadillah (2018), recent investigations reveal that basic industries and chemical sectors tend to exhibit a greater degree of income

shifting in comparison to other industries (Nurhidayati & Fuadillah, 2018). The findings of the study also indicate that the employment of thin capitalization and intangible assets serve as the most frequently utilized mechanisms for profit shifting within the manufacturing sector. The study further recommends that the government undertake increased regulatory oversight of infrastructure, utilities, and transportation as a policy implication.

The study conducted by Effendi et al. (2022) aimed to investigate the relative tax burdens of financial industries vis-à-vis other sectors in the largest firms operating in Indonesia (Efendi et al., 2022). Through the utilization of confidential tax return data, the results indicate that the financial industries possess a greater propensity for tax avoidance compared to other sectors. Based on these findings, the authors recommend that Indonesian tax authorities focus greater attention on financial services and suggest policy implications accordingly.

3. THEORETICAL MODEL

To develop a theoretical model of profit shifting, we will employ the approach presented by Hines and Rice (1994) (Hines & Rice, 1994), and Huizinga and Leaven (Huizinga & Laeven, 2008). The theoretical model employs a simplified two-country framework consisting of the country where the MNEs is being observed (i) and the country outside of the observed country (k). In this model, the two countries engage in international business and manage their tax policies, which may differ between them. The tax rate in the country (i) is denoted by (t_i), while the tax rate in the country (k) is denoted by (t_k). The price of a given output is denoted by (P_{output}), while the quantity produced is represented by (Q_{output}). These variables are used to calculate the total revenue (TR) generated by the production process. (TR) can be derived by multiplying the price of the output by the quantity produced, as expressed by the following equation:

$$TR = \left(P_{output} \cdot Q_{output}\right) \quad (1)$$

Note that total revenues are comprised of not only income from operational activities but also income from financing activities and other sources. The equation

used to calculate total revenues does not distinguish between these different sources of income. While the cost incurred is the product of the price of input used which is denoted by (P_{input}) and the quantity of input used denoted by (Q_{input}). The resulting function includes fixed and variable costs, $TC = f(Fixed\ Costs, Variable\ Costs)$. From the equation, we come up with the total cost (TC). The function which consists of both fixed cost and variable cost as follows:

$$TC = \left(P_{input} \cdot Q_{input}\right) \quad (2)$$

Note that the total cost represents the summation of the cost of goods sold, operating expenses, and other expenses. The individual MNE profit function (π) from activity in a country denotes as follows:

$$\pi = TR - TC \quad (3)$$

$$\pi = \left(P_{output} \cdot Q_{output}\right) - \left(P_{input} \cdot Q_{input}\right) \quad (4)$$

Hence for an individual MNE in the country (i) the profit function denotes as follows:

$$\pi_i = \left(P_{output} \cdot Q_{output}\right) - \left(P_{input} \cdot Q_{input}\right) \quad (5)$$

The equation (5) incorporates tax variables specific to a particular country denoted by (t_i) to compute the post-tax profits for that country (i). The most appropriate values for the tax variables can be represented by an effective tax rate (ETR). Nevertheless, determining the value of an ETR is a challenging task and it often remains implicit to MNE' accountants. The equation for calculating the profit after tax can be expressed as follows:

$$\pi_i\,(1 - t_i) = \left[\left(P_{output} \cdot Q_{output}\right) - \left(P_{input} \cdot Q_{input}\right)\right](1 - t_i) \quad (6)$$

From equation (6), to derive the profit shifting strategy in the country (i) we derive the shifting strategy in the country (i) which denotes by (s_i). Notes that the profit-shifting strategy could affect the output perspective as well as the input perspective. As we assume that the responds of MNE are to shift profit abroad, hence MNE in country (i) use strategy to minimize profit by underpricing output revenues or overpricing input cost. Under that equation we come up with the equation of profit before tax with a shifting strategy as follows:

$$\pi_i - s_i = \left[\left(P_{output} \cdot Q_{output}\right).s_i - \left(P_{input} \cdot Q_{input}\right).s_i\right] \quad (7)$$

It is important to note that the shifting strategy solely impacts price, not quantity. This is because profit-shifting involves tax avoidance through mispricing, whereas misreporting quantity constitutes tax evasion. The quantity reflected in the accounting figures is the actual value, whereas the price is mispriced. The equation for tax avoidance employs outbound profit shifting through output and input transaction prices and can be expressed as follows:

$$P_{ouput.s_i} = \left(P_{outputreal} - P_{outputshifted}\right) \quad (8)$$

$$P_{inputput.s_i} = \left(P_{inputreal} + P_{inputshifted}\right) \quad (9)$$

From the perspective of outbound profit shifting, equation (8) resulted in underpricing of revenues where $(P_{outputreal} > P_{outputshifted})$, and equation (9) resulted in overpricing of cost where $\left(P_{inputreal} < P_{inputshifted}\right)$. From equation (7), we have come up with the individual company profit shifting before tax in the country (i), and we assume that the response of the country (i) is outbound profit shifting, where profits are outflow outside the country (i). Note that the profit-shifting strategy (s_i) could be in positive or negative amounts:

$$\pi_i - s_i = \left[\left(P_{output} \,.\, Q_{output}\right) - \left(P_{input} \,.\, Q_{input}\right)\right] - s_i \quad (10)$$

By incorporating the tax variable (t_i) in equation (10), we obtain the following equation. It is important to note that the profit-shifting strategy (s_i) is not affected by tax (t_i) as it is already shifted abroad prior to being taxed at the end of the year.

$$(1 - t_i) \,.\, (\pi_i - s_i) = (1 - t_i) \,.\, \left\{\left[\left(P_{output} \,.\, Q_{output}\right) - \left(P_{input} \,.\, Q_{input}\right)\right] - s_i\right\} \quad (11)$$

The same mechanism is conducted to come up with profit shifting strategy in the country (k) as counterpart country as a response to tax (t_k) and implemented a shifting strategy (s_k), the results are as follows:

$$(1 - t_k) \,.\, (\pi_k + s_k) = (1 - t_k) \,.\, \left\{\left[\left(P_{output} \,.\, Q_{output}\right) - \left(P_{input} \,.\, Q_{input}\right)\right] + s_i\right\}) \quad (12)$$

Equation (12) highlights that the profit-shifting strategy in country (k) differs from that of country (i). This is because country (k) serves as the destination for

the shifted profit where it inflows into the country. Therefore, the MNE's total profit after tax in both countries can be expressed as follows:

$$(1-t)\pi_{MNE} = \left((1-t_i).\{[(P_{output}.Q_{output}) - (P_{input}.Q_{input})] - s_i\}\right) + \left((1-t_k).\{[(P_{output}.Q_{output}) - (P_{input}.Q_{input})] + s_i\}\right) \quad (13)$$

Simplifying equation (13) we come up with the equation as follows:

$$(1-t)\pi_{MNE} = (1-t_i).(\pi_i - s_i) + (1-t_k).(\pi_k + s_k) \quad (14)$$

Equation (14) represents the MNE's total profit in both countries. Note that the profit-shifting strategy in country (i) is equivalent to that of country (k).Therefore, we can express equation (14) in the following:

$$(1-t)\pi_{MNE} = (1-t_i).(\pi_i - s) + (1-t_k).(\pi_k + s) \text{ , where } s_k = s_i = s \quad (15)$$

It is important to note that different sectors have varying costs of profit shifting due to the differing levels of scrutiny in each country. The variable for profit-shifting cost, denoted as $(C(s))$, is a function of (s). The cost of profit shifting is influenced by several factors such as the level of anti-avoidance measures, the level of scrutiny in specific sectors, and the strength of tax regulations. Therefore, the MNE's total profit after tax, considering the cost of profit shifting, can be expressed as follows:

$$(1-t)\pi_{MNE} = [(1-t_i).(\pi_i - s) + (1-t_k).(\pi_k + s)] - C(s) \quad (16)$$

From equation (16) we now can derive the profit-maximizing decision with respect to profit shifting strategy as follows:

$$\frac{\partial(1-t)\pi_{MNE}}{\partial S} = (t_i - t_k) = C'(s) \quad (17)$$

Equation (17) represents the profit-shifting decision for the entire MNE group. The equation indicates that the marginal benefit of profit shifting, in terms of group tax savings from exploiting differences in tax rates $(t_i - t_k)$, should be equal to the marginal cost of profit shifting, denoted as $C'(s)$. Going forward, we will focus on the tax rate difference $(t_i - t_k)$ and how this variable can influence

the profit-shifting strategy. If we assume an outbound profit-shifting incentive in country (i), where the tax rate difference $(t_i - t_k)$ is such that $(t_i > t_k)$, this tax rate difference serves as an incentive for the MNE to engage in profit shifting from the perspective of country (i). Consequently, the profit-shifting decision should follow the equation below:

$$S_i = \begin{Bmatrix} S_i \geq 0 \; if \; t_i > t_k \\ S_i = 0 \; if \; t_i = t_k \\ S_i \leq 0 \; if \; t_k < t_i \end{Bmatrix} \tag{18}$$

The following equation illustrates how the real profit (π_{real}) of an individual member of MNE in country (i) is derived from the reported profit $(\pi_{reported})$ and the shifted profit $(\pi_{shifted})$, from that assumption we have the following equation:

$$\pi_{reported.i} = \pi_i = \pi_{real} - \pi_{shifted} \tag{19}$$

Equation (19) is the simple form of equation (10), so the equation can be rewritten as follows:

$$\pi_{reported.i} = \pi_i = \pi_{real} - \pi_{shifted} = \pi_i - s_i \tag{20}$$

Hence the equation of maximizing is as follows:

$$\max_{s_i}(1 - t_i)\pi_i = (1 - t_i)\,(\pi_i + (\, s(t_i - t_k) - C(s))) \tag{21}$$

Thus, the first-order condition with respect to profit shifting strategy is as follows:

$$\frac{\partial(1-t_i)\pi_i}{\partial s_i} = (\,(t_i - t_k) - C'(s)) = 0 \tag{22}$$

$$(t_i - t_k) = C'(s) \tag{23}$$

Equation (23) represents the profit-shifting decision for an individual company, indicating that the decision to shift profit is based on the cost of profit shifting, which is subject to the tax rate differential between the host country and foreign countries. Therefore, Equation (18) remains valid for the decision of individual companies, demonstrating that the theory of tax rate differential is a significant factor influencing the profit-shifting strategy in both the entire group of MNE and individual companies.

4. EMPIRICAL MODEL

The estimation model employed the Cobb-Douglas Production function, represented by the equation ($Y = A^{\beta 1} L^{\beta 2} K^{\beta 3}$). The individual firm real profit is equal to rent of capital (rK), after deducted by wage of labor which equal (wL) to ($\pi_i = TR - TC = rK = Y - wL = (1 - \beta_2) A^{\beta 1} L^{\beta 2} K^{\beta 3}$),

where *A* represents labor productivity, *K* represents capital input, *L* represents labor input, *Y* denotes the produced output, and *w* denotes the wage of labor. By taking the natural logarithm, we obtain the equation for real profit without the shifting strategy.

$$log\, \pi_i = log(1 - \beta_2) + \beta_1\, log\, A + \beta_2\, log\, L + \beta_3\, log\, K \quad (24)$$

Equation (24) can be understood as a variant of equation (5) from a different perspective. Specifically, the incorporation of the tax rate differential variable, defined as ($taxratediff = \frac{\sum_{k \neq i}^{n} (t_i - t_k)}{n}$). The variable allows for the group average tax rate difference to be considered in the analysis. This is important because profit shifting can occur not only between parent and subsidiary, but also among subsidiaries of MNEs.

Then, We have derived an equation for the reported profit of a single MNE subject to tax rate differential as follows:

$$log\, \pi_i = log(1 - \beta_3) + \beta_1\, log\, A + \beta_2\, log\, L + \beta_3\, log\, K + \beta_4\, taxratediff \quad (25)$$

Additionally, we decompose the ($taxdiff$) variable into positive and negative values and embed a sector-specific cost, denoted as $C(s)$, into the model via investment type dummy variables ($dummyinv$). This modification allows for differential reactions of the firm based on equation (18). The resulting model is presented below:

$$log\, \pi_{it}^{r} = \beta_0 + \beta_1\, log\, A_{it} + \beta_2\, log\, L_{it} + \beta_3\, log\, K_{it} + \beta_4\, positive.taxratediff_{it} + \beta_5\, negative.taxratediff_{it} + \beta_6\, dummyinv_{it} + \delta\, X_{it} + \epsilon_{it} \quad (26)$$

To assess the impact of specific sectors, we introduce a new interaction variable between positive tax rate differences and investment sector dummy variables. This variable is incorporated into the equation presented below:

$$log\,\pi_{it}^{r} = \beta_0 + \beta_1\ log\,A_{it} + \beta_2\,log\,L_{it} + \beta_3\ log\,K_{it} + \beta_4\,positive.taxratediff_{it} + \beta_5\,negative.taxratediff_{it} + \beta_6\,dummyinv_{it} + \beta_7\,(positive.taxratediff_{it}\ x\ dummyinv_{it}) + \delta\,X_{it} + \epsilon_{it} \quad (27)$$

The variable of interest is denoted as $(positive.taxratediff_{it}\ x\ dummyinv_{it})$ and it measures the extent of profit-shifting within investment sectors. The elasticity of this variable is represented by β_7 the elasticity of respective variable. Below are explanations of each variable:

Table 3
List of Variables

Variables	STATA Variable	Explanation
$Log\ \pi_i^r$	*logrepprofit*	The logarithm of Reported Profit before tax, as stated in the Financial Report of the individual entity in the country *i.*
β_0	*constant*	Equal to $log(1-\beta_2)$, A constant, equal to rent of capital.
$\beta_1\ log\ A$	*productivity*	The logarithm of productivity of the individual entity in the country (i). It denotes total factor productivity of a firm. The equation is total output per total Input $(\frac{Ln.Y}{Ln.K+Ln.L})$, or the natural log total sales divided by natural log of total asset plus natural log of cost of employee
$\beta_2\ log\ L$	*lncostemployee*	The logarithm of labor is proxied by the cost of an employee.
$\beta_3\ \ log\ K$	*lntotalasset*	The logarithm of the capital is proxied by total assets.
β_4 $positive.$ $taxratediff$	*postaxratefdif*	The positive result of the average difference between the corporate Income Tax Rate of country (i) and country (k), or $(\frac{\sum_{k\neq i}^{n}(t_i-t_k)}{n} > 0)$. Where (n) is the number of entities under the MNE. This variable serves as an incentive for Outbound Profit Shifting. If the result is negative, the value will be zero.
β_5 $negative.$ $taxratediff$	*negtaxratedif*	The negative result of the average difference between the corporate Income Tax Rate of country (i) and country (k). $(\frac{\sum_{k\neq i}^{n}(t_i-t_k)}{n} < 0)$, Where (n) is the number of entities under the MNE. This variable serves as an incentive for Inbound Profit Shifting. If the result is positive, the value will be zero.
$\beta_6\ dummy$ $inv = C(s)$	*dummyinvesment*	Dummy for Specific Industry Country (i) which consists of 4 investment typology as follows: 1. Natural Resources-Seeking as base; 2. Market-seeking; 3. Efficiency-Seeking; 4. Strategic Asset-Seeking.

δX	*loggdpp, gdpgrowth, inflationrate, exchangerate*	The set of control variables consists of macroeconomic variables such as; GDP per capita, exchange rate, inflation, and GDP growth rate.
$\varepsilon_{i,t}$	*residual*	Residual Term.

The estimation descriptive statistics of variables are as follows:

Table 4
Descriptive Statistics

Variable	Observation	Mean	Standard Deviation	Minimum	Maximum
logrepprofit	55,677	7.00	2.73	-7.03	17.12
productivity	55,677	51.02	18.04	-1,658.35	1,836.48
lncostemployee	55,677	4.24	2.80	13.37	14.00
lntotalasset	55,677	9.37	2.58	-3.14	19.81
postaxratefdif	55,677	0.04	0.05	0	0.30
negtaxratedif	55,677	-0.02	0.02	-0.10	0
loggdpp	55,677	4.30	0.26	3.40	5.11
gdpgrowth	55,677	3.54	2.10	-1.51	15.24
inflationrate	55,677	0.75	1.49	-0.90	18.67
exchangerate	55,677	158.91	1,441.65	1.24	20,933.42

5. RESEARCH METHOD

The panel data estimation method employed in this study follows prior research (Fuest et al., 2011; Huizinga & Laeven, 2006; Johansson et al., 2017; Purba, 2018; Ratan, 2015). The elasticity of profit shifting within investment sectors is represented by β_7, while the total elasticity is given by $(\beta_4 + \beta_7)$. The study utilizes longitudinal unbalanced panel data at the company level, derived from ORBIS for the period spanning from 2015 to 2018. The selection of this year is grounded in a more stable economic environment and aims to avoid the influence of specific conditions in the observed year. Consequently, the anticipated outcomes are expected to provide insights for the year 2023, wherein the impact of the COVID-19 pandemic is anticipated to have diminished. The exclusion of data from 2019 onwards aims to mitigate potential bias arising from specific occurrences. ORBIS was chosen due to its availability of financial reports for individual companies. However, data cleaning was performed prior to the analysis, following the steps outlined below:

Table 5

Data Collection and Cleaning

No.	Step	Number of Observations	% of Step 1	Reason
1	Initial Population of ORBIS	307,563,635	100%	-
2	Omitting Independence firms	211,858,469	68%	Criteria of 25% Ownership (directly or indirectly) is used to determine an affiliated company.
3	Omitting non-ASEAN firms.	2,915,067	0.948%	-
4	Omitting firms with a consolidated financial report	112,347	0.037%	The financial report should be on the individual firm report.
5	Omitting years outside 2013-2018	99,646	0.032%	-
6	Omitting firms with incomplete financial information	85,136	0.028%	-
7	Manual Cleansing which consists of: • Omitting 2.5% Of the Top And Bottom Ratio. • Omitting Loss-Making Firms. • Exclude Domestic Only MNE Firms. • Omitting Firms With Negative Tax Payment.	18,529	0.006%	The cleansing process follows the step conducted by Johansson (2017).
8	Final Sample	18,529	0.006%	The Number of Foreign Owned MNE Entity

After cleansing the data, the next step is to grouping the sample according to the top 8 investment sector and investment typology. The grouping method following the explanation based on the previous research (UNESCAP, 2017; Dunning & Lundan, 2008). The result are as follows:

Table 6
Sectoral Decomposition

NACE Industry Group	Top 8 Investment Sector	Investment Type	MNE Count
A - AGRICULTURE, FORESTRY AND FISHING	03 - Agriculture, forestry, and fishing	Natural resource-seeking investment	29
B - MINING AND QUARRYING	08 - Mining	Natural resource-seeking investment	119
C - MANUFACTURING	01 - Manufacturing	Efficiency-seeking investment	1,889
D - ELECTRICITY, GAS, STEAM AND AIR CONDITIONING SUPPLY	05 - Wholesale and retail trade; repair of motor vehicles and motorcycles	Natural resource-seeking investment	55
E - WATER SUPPLY; SEWERAGE, WASTE MANAGEMENT AND REMEDIATION ACTIVITIES	07 - services activities	Market-seeking investment	34
F - CONSTRUCTION	07 - services activities	Market-seeking investment	215
G - WHOLESALE AND RETAIL TRAD	05 - Wholesale and retail trade; repair of motor vehicles and motor cycles	Market-seeking investment	4,090
H - TRANSPORTATION AND STORAGE	07 - services activities	Market-seeking investment	1,140

I - ACCOMMODATION AND FOOD SERVICE ACTIVITIES	07 - services activities	Market-seeking investment	223
J - INFORMATION AND COMMUNICATION	06 - Information and communication	Strategic asset-seeking investment	1,297
K - FINANCIAL AND INSURANCE ACTIVITIES	02 - Financial and Insurance activities	Market-seeking investment	5,216
L - REAL ESTATE ACTIVITIES	04 - Real estate activities	Market-seeking investment	266
M - PROFESSIONAL, SCIENTIFIC AND TECHNICAL ACTIVITIES	07 - services activities	Market-seeking investment	1,894
N - ADMINISTRATIVE AND SUPPORT SERVICE ACTIVITIES	07 - services activities	Market-seeking investment	1,478
O - PUBLIC ADMINISTRATION AND DEFENCE; COMPULSORY SOCIAL SECURITY	07 - services activities	Market-seeking investment	1
P - EDUCATION	07 - services activities	Market-seeking investment	107
Q - HUMAN HEALTH AND SOCIAL WORK ACTIVITIES	07 - services activities	Market-seeking investment	159
R - ARTS, ENTERTAINMENT AND RECREATION	07 - services activities	Market-seeking investment	19
S - OTHER SERVICE ACTIVITIES	07 - services activities	Depend on the service, some fall into Market-seeking investment; Efficiency-seeking investment; Strategic asset-seeking investment	298
Total			18,529

6. RESULTS AND DISCUSSION

The estimation result using STATA Software, the result is as follows:

Table 7
Estimation Result

	Base Model (Equation 25)	Investment Type (Equation 26)	Profit Shifting (Equation 27)
Country Fixed Effect	Yes	No	No
Year Fixed Effect	Yes	No	No
Dependent Variable	Log of reported profit	Log of reported profit	Log of reported profit
Constant	-2.73**	-2.78***	-2.77***
	(0.015)	(0.000)	(0.000)
Productivity	0.05***	0.05***	0.05***
	(0.000)	(0.000)	(0.000)
Log of employee cost	0.31***	0.60***	0.32***
	(0.000)	(0.000)	(0.000)
Log of total asset	0.33***	0.60***	0.60***
	(0.00)	(0.000)	(0.000)
Positive tax rates different	**-3.03****	**-3.63*****	**-3.85*****
	(0.021)	**(0.000)**	**(0.000)**
Negative tax rates different	-2.49***	-	-
	(0.006)		
Dummy market-seeking Investment	-	0.19***	0.18***
		(0.000)	(0.000)
Dummy efficient-seeking Investment	-	0.26***	0.28***
		(0.000)	(0.000)
Dummy strategic asset-seeking Investment	-	0.13***	0.07***
		(0.000)	(0.002)

Dummy market-seeking x positive tax different	-	-	**0.36*** (0.000)**
Dummy efficiency-seeking Investment x positive tax different	-	-	**-0.45* (0.063)**
Dummy strategic asset-seeking Investment x positive tax different	-	-	**1.2*** (0.000)**
Log GDP per capita	0.03**	0.04***	0.04***
	(0.039)	(0.009)	(0.005)
GDP growth rate	0.006**	0.006**	0.006**
	(0.017)	(0.015)	(0.012)
Inflation rate	-0.0085**	-0.015***	-0.015***
	(0.031)	(0.000)	(0.001)
Exchange rate	-0.00002***	-0.00002***	-0.00002***
	(0.000)	(0.000)	(0.000)
Observations	55.677	55.677	55.677
R-Squared	0.8501	0.8508	0.8508
Adjusted	0.8501	0.8507	0.8508

*** indicates significance at 1%. ** indicates significance at 5%. * indicates significance at 10%. All coefficients estimated in robust standard error, F-test, Hausman Test, and Breusch-Pagan LM test concluded the pooled least square is the most appropriate method.

The table reveals that the elasticity of profit shifting to tax rate differentials is -3.89. This suggests that a 1 percentage point increase in positive tax rate differentials leads to an outbound profit shift of 3.89%. This elasticity is greater than that reported in previous research, which indicates that developing countries are susceptible to profit shifting by MNEs (Fuest et al., 2011). Additionally, the variable of interest, namely the interaction between dummy investment and positive tax rate differentials, indicates a significant finding at the 5% level. Furthermore, efficiency-seeking is found to be significant at the 10% level.

7. CONCLUSION

Among the various investment categories, efficiency-seeking investment was found to exhibit the highest elasticity of profit-shifting. Specifically, the average elasticity of profit-shifting associated with efficiency-seeking investment was 4.3% (3.85% and 0.45%). This finding implies that a 1 percentage point increase in positive tax rate differentials for efficiency-seeking investment would lead to a 4.3% shift in profits out of the host country. In comparison to efficiency-seeking investment, natural resources-seeking investment exhibited a lower average outbound profit-shifting elasticity of 3.85%. Market-seeking and strategic asset-seeking investments were found to have even lower elasticities of profit-shifting,

with magnitudes of 3.49% and 2.65%, respectively. These findings suggest that MNEs engaged in efficiency-seeking investment are more likely to engage in profit-shifting behavior than those engaged in other types of investment.

The finding highlights the importance of implementing stronger tax oversight for investment activities to achieve greater efficiency, particularly in the manufacturing sector. The diverse range of profit-shifting channels employed within this sector further underscores the need for enhanced monitoring. These channels include intragroup transactions related to strategic procurement centers, royalties, intragroup services, loans, intangible property, and merger and acquisition activities (Batrakova & Hoefele, 2017; Maury, 2020; Bilaney, 2021; Tambunan & Rosdiana, 2020). In addition, indicates that even though the sector is the most profitable compared to another (Dummy efficient-seeking Investment equal +0.28), at the same time, the profit-shifting magnitude is the largest.

The tax policymakers need to ensure that MNES, in efficiency-seeking FDI, comply with the tax regulations, especially when reporting their profit in the country where the value is created. The value is in the form of access to resources such as labor, raw materials, and productivity in a host country that is more efficient and cost-effective than those available in their home country. As the resources in host countries are being exploited in the production process, a fair amount of tax should be paid as a payback to the host country.

However, MNES activity in the manufacturing sector can also bring several benefits to host countries, such as job creation, transfer of technology, and access to new markets. Companies that invest in a country's manufacturing sector may contribute to the local economy by paying taxes, purchasing local goods and services, and investing in local infrastructure. In addition, the manufacturing sector generates spillover effects on the local economy such as the transfer of knowledge, technology, and skills from foreign firms to local firms, resulting in increased productivity, innovation, and competitiveness (Wei & Liu, 2006).

When MNES engage in tax avoidance practices they may have a competitive advantage over local firms that comply with tax regulations. This is because tax avoidance can lead to lower costs for MNES, resulting in lower prices for their products or services. In the long run, the competitiveness of local companies is

under threat. In the end, when the market is saturated by MNES, the ones who suffer the most are household customers. Also, it is important to ensure that MNES does not hamper the development of domestic manufacturing capabilities. In some cases, MNES may lead to the domination of foreign companies in the domestic market, which could hurt domestic manufacturers and lead to job losses. Thus, The challenge for the government is to find a balance between the positive impact of FDI spillovers with the negative impact of profit shifting.

The finding also suggests that all of the MNES investment types are tending to conduct outbound profit-shifting, except strategic asset-seeking types of investment. I assume this because the types of investment are intangible property ("IP") related investment. Where in some cases, IP-related transaction between member of MNES is possible be abuse as one of the profit-shifting channels, especially since this types of investment is commonly happening in a country that has relatively low tax rates, making it an attractive destination.

Again, the finding emphasize previous research that the tax policy design should not "one sized fit all" policy that treat all in the same level. Every industry has specific issues that need to be considered in accordance with the specificity of respective industry. As the government resources is also limited, put more focus on the certain issues according to the risk would help government to streamline its policy patterns.

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