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The Financial Drivers of Base Erosion Profit Shifting in Indonesia: Transfer Pricing, Leverage, And Inventory Intensity in Multinational Companies

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Abstract

Introduction: Some multinational companies in Indonesia have increasingly adopted aggressive strategies for tax planning. By January 2015, more than 4,000 such companies, owned by foreign entities, managed to avoid financial losses and bypass their tax obligations. Some view this behaviour as a deliberate tactic to evade tax payments, reducing government tax revenues. The study investigated how transfer pricing, return on assets (ROA), leverage, and inventory intensity influence these aggressive tax planning practices as financial drivers of base erosion profit shifting among multinational firms listed in Indonesia. By analyzing data from 101 firms between 2018 and 2022, totalling 505 observations, the research contributes theoretically and practically to the existing knowledge. The study conducted multiple regression analyses and diagnostic tests, including normality, heteroskedasticity, multicollinearity, and collinearity, to reveal that Indonesian multinational companies significantly employ various methods to minimize their tax liabilities. Specifically, the study identifies transfer pricing, ROA, leverage, and inventory intensity as crucial factors associated with aggressive tax planning practices. The novelty of the research is the sample of study 95 % in tax havens. The study highlights that increased aggressiveness in tax planning often occurs in transactions involving related parties across different tax jurisdictions. Future research could expand its focus by including unlisted non-multinational companies.

Keywords: *Transfer Pricing, ROA, Leverage, Inventory Intensity, Aggressive tax.*

Introduction

Is tax aggressiveness by multinational companies (MNCs) a thing of the past? Various reports suggest that large multinationals have evaded substantial tax amounts, potentially as high as $240 billion (Nair, 2023). However, in 2022, 135 countries, under the guidance of the Organisation for Economic Cooperation and Development (OECD), reached a consensus to curb this practice (Nair, 2023). This agreement has been lauded as a groundbreaking and remarkable example of international cooperation among companies (Nair, 2023).

Moreover, Indonesian MNCs have been found to engage in enhanced aggressive tax planning (ATP), as indicated by research (Kristiaji, 2015). By January 2015, over 4,000 MNCs whose shareholders or ultimate owners are foreign entities experienced no financial losses. This circumstance prevents them from fulfilling their obligation to pay their income taxes. Some suggest that it is a method used to avoid paying taxes. This condition has led to a decrease in state receipts from the tax sector (Kristiaji, 2015).

Meanwhile, Indonesia needs taxation as an income resource, and at least 70% of Indonesia's income comes from taxation (Purnomo, 2016). Moreover, Indonesia heavily relies on tax revenue to fund its governmental expenditures, with the tax sector serving as the principal source of income for the state. Table 1 demonstrates that taxes constitute Indonesia's primary source of revenue.

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Table 1: Indonesian Revenue

Revenue	March 15, 2023	March 15, 2024
Tax	356.20	342.90
Customs and Duties	58.40	56.50
GNP	106.60	93.50
Total state income	521.30	493.20

Source: Indonesia Ministry of Finance 2024

Indonesia Ministry of Finance statement during a press conference on March 23, 2024, the State Revenue and Expenditure Budget showed an income realization of 493.2 trillion by March 15, 2024, with tax revenues contributing 70% of this total. This realization represents 17.6% of the targeted revenue for the year, set at 2,802.3 trillion. As of March 15, 2024, tax receipts remained the largest income source, amounting to 342.9 trillion, a 3.7 % decrease from the previous year. Additionally, customs and excise revenues decreased by 3.2% year-on-year to 56.5 trillion, while GDP decreased by 12.3% year-on-year to 93.5 trillion. In contrast, state expenditure by mid-March 2024 reached 470.3 trillion, equivalent to 14.1% of the year's budget of 3,325.1 trillion. Unlike the decline in revenue, state spending increased by 18.1% year-on-year. With income surpassing expenditures, APBN recorded a surplus of 22.8 trillion as of March 15, 2024, underscoring the significance of tax receipts as a crucial income source for Indonesia (Cindy, 2024).

Therefore, the government aims to attract foreign investors to increase tax revenues from multinational company transactions. Indonesia offers tax incentives such as tax holidays, low tax rates for foreign investments, accelerated depreciation, and investment allowances to attract foreign investors, as outlined by Gunadi (2020). Taxpayers, particularly foreign investors, can utilize these facilities to optimize tax efficiency through strategies known as tax planning. To maximize benefits in developing countries like Indonesia, MNCs often engage in tax planning, categorized as active (aggressive) or passive (non-aggressive). However, from the government's perspective, ATP strategies can be seen negatively (Rahayu, 2011).

In Indonesia, MNCs employ various strategies under ATP, including transfer pricing, utilizing tax havens, thin capitalization, treaty shopping, and controlled foreign companies (Rahayu, 2011). Therefore, this research aims to analyze the impact of transfer pricing in the context of ATP. Additionally, the study will explore the relationships between ROA, leverage, and inventory intensity. Previous researchers who discussed ATP to increase income were Allen et al. (2016), Chen & Lin (2017), Chung et al. (2019), Lanis & Richardson (2018), Mariana et al. (2021), Aristyatama & Bandiyono (2021), Damayanti & Prastiwi (2017), Iswari et al. (2019), Nugroho & Suryarini (2018), Suyono (2018), and Utami & Irawan (2022).

The inquiry aims to explore the relationship among transfer pricing, ROA, leverage, and inventory intensity in relation to the aggressive tax strategies employed by MNCs. This research aims to investigate the interplay among transfer pricing, ROA, leverage, and inventory intensity in relation to the ATP strategies employed by MNCs.

Moreover, the significance of this study lies in its investigation of the impact of transfer pricing with related-party transactions on the ATP strategies of MNCs operating in Indonesia, as measured by ROA, leverage, and inventory intensity. The research will enhance the existing body of data, mainly through its theoretical and practical contributions. The following sections emphasize the significance of theory and practice. Firstly, the theoretical contribution, the research problem, aims, and question description emphasize the importance of future studies on transfer pricing, ROA, Leverage, Inventory intensity, and ATP of MNCs. Regarding ATP, only a few studies have used transfer pricing concepts, especially for MNCs in tax haven countries. These studies focus on the relationship between ATP and tax revenue, Indonesia's primary income source. In order to deter MNCs from participating in ATP, it is crucial to conduct further studies on the impact of the government's revised regulations on tax-aggressive planning and the anti-aggressive tax planning scheme. Secondly, the practical contribution: This study provides direct advantages to regulatory agencies, legislators, and related sectors. The study assists regulatory agencies such as the Directorate General of Tax, the Ministry of Finance Department, and other pertinent government entities that deal with MNCs, revenue, and taxes.

Moreover, few studies have investigated the impact of transfer pricing on ATP, especially concerning MNCs based in tax havens. This study examines tax havens with data updated to 2022. Jurisdictions are assessed using their Corporate Tax Haven Index (CTHI) value and OECD, which integrates a Haven Score and Global Scale Weight. The Haven Score evaluates the potential for corporate tax abuse within a jurisdiction's tax and financial systems through various indicators. Therefore, the study's novelty lies in analyzing how transfer pricing influences ATP among MNCs in tax haven jurisdictions, utilizing the latest available data.

Literature Review

Underpinning theory

The theoretical perspective offers a deeper understanding of the fundamental inquiry of the research. In order to provide a clearer understanding of the study's viewpoint, which is based on the principles of Agency theory, an examination of other related theories serves as a guide for identifying and assessing numerous crucial theories. This study examines the theory and practicality of these theories. This study employs agency theory as its main framework. A recent study has shown the statistical relevance of using agency theory to address the issue of ATP (Alkausar et al., 2023). An agency relationship, as described by Jensen & Meckling (1976), is a contractual agreement where one or more individuals (principals) assign the duty of performing a task to another individual (an agent) and impose on them a specific degree of authority to make decisions. According to agency theory, managers, acting as agents, prioritize their interests, while shareholders depend on executives to efficiently use their resources to maximize profits (Jensen & Meckling, 1976).

Aggressive tax planning

Taxes are one of a company's most significant charges, and they directly impact profitability and shareholder value. Given the primary objective of maximizing shareholder value, companies have financial incentives to adopt tax strategies that minimize their taxes. However, ATP can have a negative impact on a firm's reputation and invaluable assets. ATP does not enhance the company's value, as it can lead to significant expenditures following tax inspections and potentially harm the company's reputation (Purnomo, 2016). According to Chen and Lin (2017), ATP is defined as using tax strategies to lower tax revenue. According to Frank et al. (2009), aggressive tax involves planning to reduce taxable profits through tax avoidance or tax evasion. Tax evasion is a taxpayer's attempt to reduce their tax burden in a way that does not comply with tax regulations(Frank et al., 2009).

Additionally, ATP refers to minimizing tax liability through methods that push the boundaries of tax laws and regulations, often exploiting loopholes or ambiguities in tax codes (Inside, 2007). Unlike lawful tax planning, which aims to optimize tax efficiency with loopholes in regulations, ATP involves strategies that may be considered overly risky or ethically questionable. Some characteristics of ATP include Maximizing Deductions and Credits, Transfer Pricing Manipulation, Complex Corporate Structures, Tax Havens and Jurisdiction Shopping, Challenging Tax Authority Interpretations, and Timing of Income and Expenses (Inside, 2007).

So, ATP is a contentious issue because while some strategies may technically comply with current tax laws, they can be seen as circumventing the spirit of tax regulations or social expectations of fair contribution to public finances. As a result, governments and tax authorities often seek to close loopholes, tighten regulations, and enforce penalties to discourage and prevent aggressive tax practices (Inside, 2007).

Transfer pricing and aggressive tax planning

The term "transfer pricing" describes the practice of setting prices for products, services, and intellectual property that are traded between businesses that are related to one another, such as parent firms, subsidiaries, or businesses governed by a common shareholder. Using transfer pricing, businesses that are related can be guaranteed that their deals are valued fairly, just like any other transaction between two unrelated parties. It is called the arm's length principle. In ATP, transfer pricing is used to set prices artificially high or low so that profits can be moved to jurisdictions with lower tax rates or so that expenses can be claimed in jurisdictions with higher tax rates. Due to its direct impact on the distribution of taxable income among several tax countries, this manipulation can be an important part of ATP methods (Larking, 2015).

Furthermore, countries exhibit variations in corporate tax rates and preferential tax policies. MNCs, actively involved in interfirm transactions throughout the industry, manipulate internal transfer prices to

reduce their tax liabilities, a practice known as transfer pricing (Choi et al., 2018; Al-Eryani et al., 1990; Amidu et al., 2019; Hutomo et al., 2021; Panjalusman et al., 2018a), have previously demonstrated a relationship between transfer pricing and ATP. So, the first hypothesis (H_1) shows that transfer pricing and ATP have a relationship.

ROA and aggressive tax planning

ROA and aggressive tax planning are often intertwined in financial management strategies within MNCs. ROA is a financial metric that measures a company's profitability relative to its total assets (Hanlon & Heitzman, 2010a). ROA is calculated by dividing net income by average total assets (Hanlon & Heitzman, 2010a). ATP strategies may impact ROA in several ways, such as impact on net income, financial performance perception, risk management, and strategic resource allocation (Dewi & Pernamasari, 2022). Impact on net income is when ATP can reduce taxable income by exploiting tax loopholes or transferring profits to low-tax jurisdictions. As a result, reported net income may be lower, potentially impacting ROA negatively if net income decreases without a corresponding decrease in assets. Financial performance perception is when Lower reported net income due to ATP can give the impression of reduced profitability, affecting how investors and stakeholders perceive the company's financial health as measured by ROA. ROA measures a company's ability to generate profits through its resources and capabilities, influenced by various policies and decisions (Assidi & Hussainey, 2021). Previous studies have consistently found a relationship between ROA and ATP, as highlighted in research by Millán-Narotzky et al. (2021), Firmansyah (2019), and Kusuma & Maryono (2022). Therefore, the second hypothesis (H2) posits a direct relationship between ROA and tax aggressiveness.

Leverage and aggressive tax planning

Leverage and ATP are closely intertwined in the financial strategies of MNCs, particularly in how they structure their capital and financial operations to reduce tax liabilities (Nasiti et al., 2022). Leverage interacts with ATP through interest deductibility, transfer pricing strategies involving debt, risk management considerations, and regulatory scrutiny(Ramboll Management Consulting & CORIT Advisory P/S, 2016). The ability to deduct interest payments from taxable income is known as interest deductibility. ATP might include strategies to maximize deductible interest expenses by taking on excessive debt or structuring loans to optimize tax benefits. Transfer pricing strategies influence the terms and interest rates of intercompany loans, with ATP potentially utilizing preferential rates to manage taxable income allocation among affiliates. High leverage increases financial risk but can also be employed strategically in tax planning, as companies may use assets in high-tax jurisdictions to fund operations in low-tax ones, thereby managing global tax liabilities. So, leverage plays a pivotal role in the financial strategies of MNCs seeking to optimize tax outcomes. However, the integration with ATP introduces complexities and risks, necessitating careful management and adherence to regulatory frameworks (Ramboll Management Consulting & CORIT Advisory P/S, 2016).

Meanwhile, Leverage suggests that enterprises with elevated leverage ratios exhibit reduced effective tax rates and demonstrate more efficiency in tax optimization (Law & Mills, 2015). Leverage is the level of debt a company owns as asset financing with loan funds with interest charges (Herlinda & Rahmawati, 2021). According to agency theory, a company with high leverage indicates that it depends on external loans or debt, while a company with low leverage does less. Low can finance their assets with their capital. The higher the debt level, the lower the tax burden, and the company's aggressiveness regarding taxes will decrease. The explanation is proven by the results of research conducted by previous researchers, which concluded that leverage has a negative effect on tax aggressiveness (Dinar et al., 2020; Oktaviyani & Munandar, 2017; Herlinda & Rahmawati, 2021). So, the third hypothesis (H_3) shows that there is a relationship between ROA and tax aggressiveness.

Inventory intensity and aggressive tax planning

Inventory intensity and ATP can be intricately linked within the financial strategies of MNCs, particularly concerning how they manage inventory levels to optimize tax outcomes. Inventory intensity interacts with ATP, such as Transfer Pricing and Inventory and Financial Reporting Implications (da Silva Stefano et al., 2022). Transfer Pricing and Inventory**:** Transfer pricing strategies can impact the valuation of inventory transferred between related entities in different tax jurisdictions. ATP may involve setting transfer prices for inventory to allocate profits to low-tax jurisdictions, thus minimizing total tax obligations. Financial Reporting Implications: Inventory valuation methods, such as LIFO or FIFO, can affect reported profits and taxable income. ATP may involve choosing valuation methods that minimize taxable income or maximize deductions (da Silva Stefano et al., 2022).

Meanwhile, High levels of inventory intensity lead to reduced company profits due to increased costs associated with inventory. According to Statement of Financial Accounting Standards No. 14 of 2018, these costs are recognized as expenses when incurred, resulting in lower taxable profits for the company. This situation is advantageous for the company, as high inventory intensity can minimize its tax liabilities by deferring profits from the current period to future periods through inventory stocking. Consequently, companies invest in inventory strategically to achieve favourable tax outcomes, anticipating lower tax burdens and higher future profits. Research by Zia et al. (2018) indicates that inventory intensity correlates negatively with tax aggressiveness. Meanwhile, there is a significant relationship between inventory intensity (Adisamartha & Noviari, 2015). So, there is a correlation between inventory intensity and ATP, according to the fourth hypothesis (H4).

Methodology

Sample Selection

This research gathered the financial statements and annual reports of MNCs listed in Indonesia between 2018 and 2022. The study employed purposive sampling, which involved selecting samples based on predefined criteria. These criteria included: (1) MNCs publicly traded on the Indonesian stock exchange from 2018 to 2022, excluding finance and insurance companies regulated under the Indonesian Ministry of Finance; (2) companies that consistently provided complete financial data from 2018 to 2022; and (3) the availability of comprehensive data from the Indonesian Stock Exchange for necessary variables spanning 2018 to 2022. Consequently, the study's sample consisted of 101 MNCs, resulting in 505 data points over the five years.

Measurement of variables

Tax planning aggressiveness measurement (dependent variable)

The study defines active tax planning according to earlier studies. To measure tax aggression, the GAAP Effective Tax Rate (ETR) is utilized as discussed by Armstrong et al. (2012) and Hanlon & Heitzman (2010b). GAAP ETR is proxied as total income tax divided by profit before tax. According to(Hanlon & Heitzman, 2010b), GAAP ETR captures ATP stemming from temporary differences and provides a comprehensive view of tax obligation changes by encompassing current and deferred taxes. Moreover, recent empirical tax research employs GAAP ETR because it consolidates tax avoidance strategies and is widely utilized by academic researchers in Indonesia (Devi et al., 2018).

$$\text{GAAP\_ ETR} = \text{(Income Tax)}/\text{(Profit Before Tax)} \quad (1)$$

Transfer pricing (independent variable)

As stated by (Talab et al., 2017), the price that businesses with a particular relationship charge for goods or services is known as transfer pricing. The study uses Related Party Transaction Assets and Liabilities (RPTAL) to assess transfer pricing (Utama, 2015).

$$RPTAL = (RPT\ Asset\ +\ RPT\ Liabilities)/Equities \quad (2)$$

Return on Assets (independent variable)

The primary goal of any company's activities is to achieve profitability. Profitability is commonly assessed using the ROA ratio. It is argued that more profitable companies are not only motivated to maximize tax savings but also possess the capacity to pursue tax strategies more aggressively (Richardson & Taylor, 2015a). The formula for the ROA proxy is given by:

$$ROA = Pretax\ Income/Total\ Assets \quad (3)$$

Leverage (independent variable)

The leverage ratio shows how much debt a corporation uses to fund its assets. It measures financial risk by highlighting the company's dependence on creditors to finance its operations. Increased use of debt influences this reliance on creditors, affecting how the company's assets are financed. Higher leverage signifies a more aggressive corporate stance, driven by heightened debt levels that increase interest expenses and consequently lower earnings before taxes (Mackie-Mason, 1990). According to Mackie-Mason (1990), *leverage* is formally defined as the total debt ratio to total assets.

$$Leverage\ = Total\ Debt/Total\ Asset \quad (4)$$

Inventory intensity (independent variable)

Inventory intensity refers to the ratio of inventories within a company relative to its total assets. It can be calculated by comparing the total fixed assets to the overall assets owned by the company. According to (Argilés-Bosch et al., 2020), inventory intensity can be quantified using the formula:

$$INV = Inventories/Total\ Assets \quad (5)$$

Table 2: Table of Measurement

Variable	Measurement	Author
Aggressive Tax Planning	GAAP_ ETR = (Income Tax) /(Profit Before Tax)	Hanlon & Heitzman, 2010
Transfer Pricing	$RPTAL = (RPT\ Asset + RPT\ Liabilities)/Equities$	(Utama, 2015)
Return on Asset (ROA)	$ROA = Pretax\ Income/Total\ Assets$	Richardson & Taylor, 2015
Leverage	$Leverage = Total\ Debt/Total\ Asset$	Mackie-Mason, 1990
Inventory Intensity	$INV = Inventories/Total\ Assets$	Argilés-Bosch et al., 2020

Research Framework

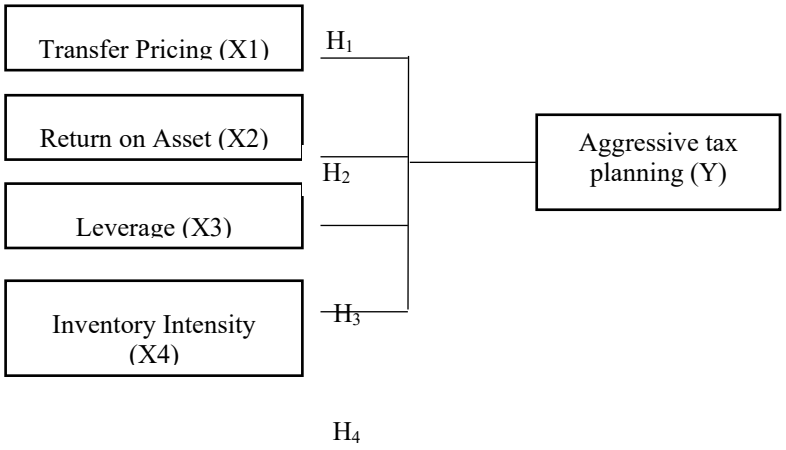

Figure 1: Research Framework

Results and Discussion

Result

Demographics of Indonesian MNCs according to the type of industry

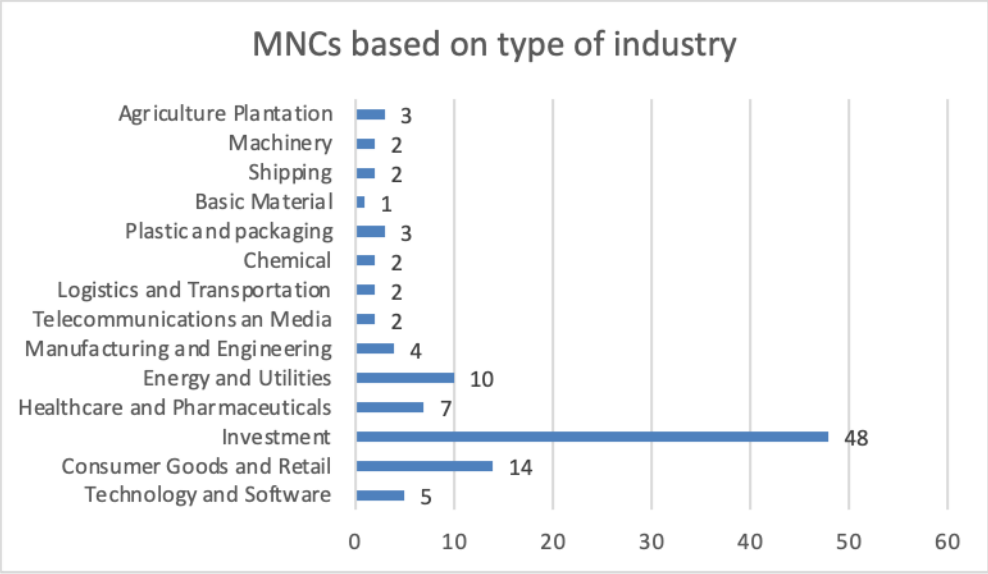

Figure 2: Multinational companies based on type of industry

Source: MNCs profile (https :// www.idx.co.id/en/listed-companies)

The preceding data shows that among 101 MNCs surveyed, the majority are in the investment sector (48 MNCs), followed by consumer goods (14 MNCs) and energy and utilities (10 MNCs). Other industries each have fewer than 10 MNCs. This underscores the prevalence of investment-focused MNCs, indicating a strong emphasis on financial activities, capital allocation, and wealth management. These firms are critical in directing capital towards productive investments, promoting economic growth, and supporting global financial markets. Additionally, the presence of consumer goods and energy and utility sectors among the largest categories highlights the diverse range of industries in the multinational landscape. Consumer goods MNCs manufacture, distribute, and market products like food, beverages, personal care items, and household goods. Energy and utilities MNCs, meanwhile, operate in energy production, distribution, and utility services. Overall, the dominance of investment-focused MNCs underscores the significance of financial services and investment activities in the global economy, reflecting their pivotal role in international trade, investment, and economic development (Indonesia Stock Exchange, 2022).

Demographics of Indonesian MNCs according to the location of countries

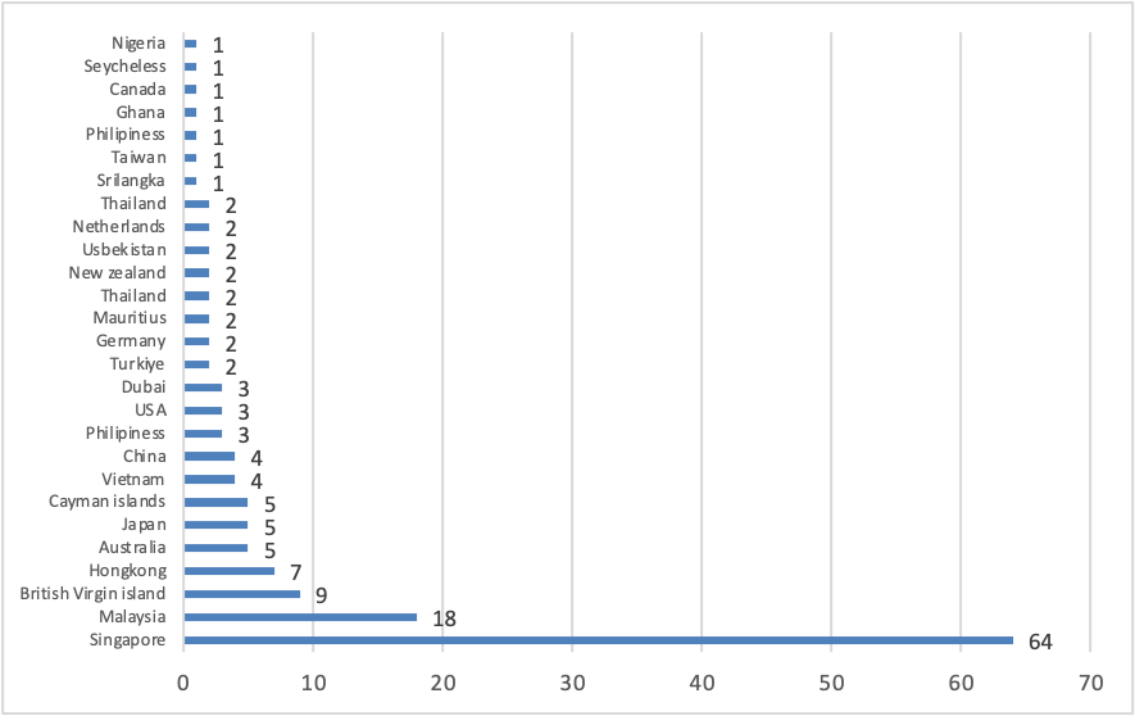

Figure 3: Demographics Of Indonesian Mncs According to the Location of Countries

Source: MNCs profile. https://www.idx.co.id/en/listedcompanies/company-profiles/

Demographics of Indonesian MNCs according to the location of countries shows that from 101 samples of Indonesian MNCs, Singapore (64 MNCs) is the country most where to have a branch, head office, or other affiliation, followed by Malaysia (18 MNCs), British Virgin Island (9 MNCs) and Hongkong (7 MNCs) while the other countries less than 6 MNCs. They are tax havens, according to the OECD.

Descriptive statistics

Descriptive statistical analysis is employed to provide an overview of the sample data. It encompasses metrics such as minimum and maximum values, average (mean), and standard deviation, which characterize the distribution of data derived from the study. The variables examined in this research include GAAP ETR, Transfer Pricing, ROA, Leverage, and Inventory Intensity.

Table 3: Descriptive statistics

	Mean	Median	Maximum	Minimum	Std. Dev
Aggressive Tax Planning (GAAP ETR)	0.222061	0.226940	0.921847	0.000000	0.126448
Transfer Pricing (TPRICE)	0.110714	0.030569	2.560149	0.000000	0.230769
Return On Asset (ROA)	0.110295	0.078565	0.795947	0.002191	0.111895
Leverage (LEV)	0.161863	0.117593	0.866307	0.000537	0.149251
Inventory Intensity (INV)	0.150538	0.110579	1.991953	0.000000	0.165759

The descriptive statistics from Table 3 reveal that the average GAAP ETR stands at 0.222061, implying that approximately 22% of MNCs engage in ATP. Based on 101 analysis units, the average transfer pricing value is 0.110714, indicating that about 11% of receivables transactions involve transfer pricing with related parties. The mean ROA is 0.110295, suggesting that the company's profitability remains modest, reflecting a ROA of around 11%.

Certain variables, like GAAP ETR and leverage, have standard deviations smaller than their means, suggesting a consistent and homogeneous data distribution. In contrast, variables such as transfer pricing, inventory intensity, and ROA show standard deviations larger than their means, indicating a more diverse distribution of data and thus demonstrating heterogeneity in these variables.

Diagnostic test

Normality test

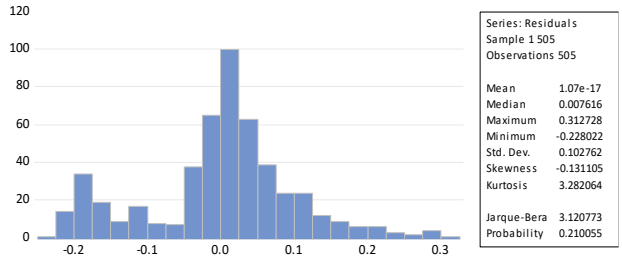

Figure 2: Normality test (source: idx.com 2023)

The normality test examines if the regression model's residual variables or confounding errors have a normal distribution (Gujarati, 2004). In this research, the Jarque-Bera test was employed to assess normality. According to the test results in Table 2, the Jarque-Bera probability value is 0.210055. Since this value exceeds the significance level of 0.05, it indicates that the data in this model is normally distributed.

Test for multicollinearity

Table 4: Multicollinearity test

Variable	Coefficient Variance	Uncentered VIF	Centred VIF
TPRICE	0.000589	1.254339	1.019267
ROA	0.002671	2.144638	1.086702
LEV	0.001593	2.512553	1.153354
INV	0.001211	1.974411	1.081029

Considering that the dependent and independent in the model have VIF values less than 10.00 in Table 4, it can be stated that either the multicollinearity test has been passed or there are no signs of multicollinearity.

Test for heteroscedasticity

Table 5: Heteroscedasticity test

F-statistic	1.666763	Prob. F(4,499)	0.1564
Obs*R-squared	6.645074	Prob. Chi-Square(4)	0.1559

The Heteroscedasticity Test investigates whether there is unequal variability among residuals in the regression model (Gujarati, 2004). Heteroscedasticity occurs when a variable's variance varies inconsistently. This study employs the Breusch-Pagan test to identify potential issues with heteroscedasticity. According to Table 5, the Prob. Chi-Square is 0.1559 exceeds 0.05, indicating no heteroscedasticity problem.

Hypothesis Test

R-squared Test (Determination Coefficient)

Table 6.1: R – R-squared test (Determination Coefficient)

R-squared	0.339540	Mean dependent var	0.222061
Adjusted R-squared	0.320670	S.D. dependent var	0.126448

Simultaneous effect significance test (F Test)

Table 6.2 Simultaneous Effect Significance Test (F Test)

Log-likelihood	432.9807	Hannan-Quinn criter.	-1.606151
F-statistic	17.99339	Durbin-Watson stat	1.154779
Prob(F-statistic)	0.000000		

T-test (partial influences)

Table 6.3: T-test (partial influence)

Variable	Prediction	Coefficient	Std. Error	t-Statistic	Prob.	Result
TPRICE	H_1 +	0.059700	0.020370	2.930781	0.0035	Accepted
ROA	H_2 +	0.107057	0.043450	2.463903	0.0141	Accepted
LEV	H_3 +	0.086921	0.034228	2.539501	0.0114	Accepted
INV	H_4 +	0.065148	0.029263	2.226266	0.0265	Accepted

Based on Table 6.3 above, the results indicate the following: The first hypothesis (H_1) demonstrates that transfer pricing, with a coefficient of 0.059700 and a probability value of 0.0035 (< 0.05, indicating significance), positively and significantly influences ATP. Therefore, the first hypothesis (H_1) is accepted. The second hypothesis (H_2) shows that ROA has a coefficient of 0.107057 and a probability value of 0.0141 (significant), indicating a positive and significant impact on ATP. Hence, the second hypothesis (H_2) is accepted. The third hypothesis (H_3) reveals that leverage has a coefficient of 0.086921 and a probability value of 0.0114 (significant), indicating a positive and significant effect on ATP. Thus, the third hypothesis (H_3) is accepted. The fourth hypothesis (H_4) demonstrates that Inventory Intensity has a coefficient of 0.065148 and a probability value of 0.0265 (significant), suggesting a positive and significant influence on ATP. Thus, the fourth hypothesis (H_4) is accepted.

Multiple Linear Regression Results

Multiple regression analysis measures the influence of the independent variables on the dependent variable, namely transfer pricing, ROA, leverage, and inventory intensity, on the aggressiveness of tax planning. So, the analysis result of multiple regression, in the table below:

$$Y = 0.169969 + 0.059700 \times \text{TPRICE} + 0.107057 \times \text{ROA} + 0.086921 \times \text{LEV} + 0.065148 \times \text{INV} + e \quad (1)$$

This equation indicates that when TPRICE, ROA, LEV, and INV are all zero, the GAAP ETR is 0.169968. The results suggest that variables not included in the model could still significantly influence GAAP ETR by 16.99%. Furthermore, the regression outcomes indicate that increasing TPRICE by 1% is associated with an average increase in GAAP ETR of 5.97%. Similarly, a 1% increase in ROA is associated with an average increase in GAAP ETR of 10.7%, LEV by 8.69%, and INV by 6.51%.

Discussion

Transfer pricing and aggressive tax planning

The study results show a relationship between transfer pricing and ATP. Agency theory explores the relationship between principals (shareholders) and agents (managers) within companies. In the context of ATP and transfer pricing, agency theory examines how managers acting as agents may engage in behaviours such as ATP to maximize their interests, potentially conflicting with the interests of shareholders. As part of this dynamic, transfer pricing involves setting prices for goods or services exchanged between related entities in other countries within a corporate structure (Panjalusman et al., 2018b).

Meanwhile, MNCs can engage in tax arbitrage by taking advantage of different tax rates and systems between countries. For example, the condition can be accomplished by strategically

selecting transfer prices for products and services traded among affiliates and strategically utilizing debt financing among affiliates (Dharmapala & Riedel, 2013). A previous study shows a significant positive relationship between transfer pricing and ATP (Arslan, 2019; Deasvery Falbo et al., 2018; Santosa & Karina, 2022).

ROA and aggressive tax planning

The study results show a relationship between ROA and ATP. Agency theory examines the dynamics between principals (shareholders) and agents (managers) within a company, focusing on how conflicts of interest arise when agents prioritize their interests over those of the principals. The theory suggests such managerial incentives in the context of ATP and ROA. Managers may use ATP to boost short-term performance metrics like ROA. By minimizing taxes, they can potentially inflate reported profits, enhancing ROA and possibly their compensation tied to financial performance (Viriany & Susanto, 2018). A previous study shows a significant positive relationship between ROA and ATP (Gupta & Newberry, 1997; Richardson & Taylor, 2015b; Amidu et al., 2019).

Leverage and aggressive tax planning

The study result shows a relationship between leverage and ATP. Agency theory offers insights into the relationship between principals (shareholders) and agents (managers) within a corporation, highlighting potential conflicts of interest when agents pursue goals that may not align with shareholder interests. The theory suggests agency cost in the context of ATP and leverage (debt levels). Managers prioritizing personal gain through ATP may inadvertently increase agency costs and expenses incurred to monitor and control managerial behaviour. This is because shareholders may need to invest resources in overseeing tax strategies to ensure they align with long-term shareholder value (Setyowati et al., 2018). A previous study that shows a significant positive relationship between leverage and ATP was (Gupta & Newberry, 1997), (Richardson & Taylor, 2015b), (Amidu et al., 2019).

Inventory Intensity and aggressive tax planning

The study result shows a relation between inventory intensity and ATP. Agency theory offers insights into how conflicts of interest between principals (shareholders) and agents (managers) within a corporation can influence decisions related to ATP and inventory intensity. ATP can impact decisions regarding inventory intensity and the ratio of inventory to total assets. Managers may adjust inventory levels, production schedules, or supply chain strategies to optimize tax outcomes while balancing operational efficiency and financial reporting requirements (Reschiwati et al., 2022). Meanwhile, MNCs with significant inventory are inclined to engage in aggressive tax strategies (Yahya et al., 2022).

Conclusion and Recommendation

Table 8: Conclusion

Variable	Hypothesis Prediction	Statement	Result	Hypothesis Decision
TPRICE	H_1 +	The aggressive tax planning of MNCs is significantly affected by transfer pricing.	Positive and Significant	Accepted
ROA	H_2 +	The aggressive tax planning of MNCs is significantly affected by ROA.	Positive and Significant	Accepted
LEV	H_3 +	The aggressive tax planning of MNCs is significantly affected by leverage.	Positive and Significant	Accepted
INV	H_4 +	The aggressive tax planning of MNCs is significantly affected by inventory intensity.	Positive and Significant	Accepted

The test results indicated that transfer pricing, ROA, leverage, and inventory intensity significantly influence the aggressiveness of tax planning. This finding shows higher transfer pricing is associated with more aggressive tax planning strategies. Transfer pricing is the tax or financial advantage obtained by exploiting jurisdictions' financial, economic, and regulatory disparities. The potential for increased aggressiveness in tax planning mainly arises in transactions involving related parties across diverse tax jurisdictions.

Moreover, studying the relationship between ROA, leverage, inventory intensity, and transfer pricing in the context of ATP is interesting for readers due to its complexity, practical relevance, regulatory implications, ethical considerations, and contribution to academic knowledge. It provides

valuable insights into how financial strategies intersect with tax planning, impacting business decisions, policy development, and public understanding.

Additionally, the association between higher transfer pricing and ATP by MNCs in Indonesia has significant implications for the country. First is revenue loss. Increased transfer pricing can lead to substantial tax base erosion, resulting in reduced tax revenues for the Indonesian government. This loss limits the funds available for public services and infrastructure development. Secondly, there is an inequitable tax burden. ATP strategies may disproportionately benefit larger MNCs, creating an uneven playing field for local businesses that cannot engage in the same practices, potentially stifling competition and innovation. Thirdly, reputational risk. The perception of Indonesia as a tax haven or a country that tolerates tax avoidance may deter foreign investment in the long run, as firms may be wary of regulatory scrutiny or public backlash. Fourth, regulatory challenges: the complexity of transfer pricing can strain regulatory bodies, requiring more resources for enforcement and compliance, which may be challenging for developing economies.

To address the challenges posed by ATP and transfer pricing, Indonesia could implement the following strategies: First, Strengthening Transfer Pricing Regulations: The government should enhance existing regulations by aligning them more closely with the OECD guidelines, ensuring clearer rules and greater transparency in transactions between related parties. Secondly, improving compliance and enforcement: Increasing the capacity of tax authorities to monitor and audit MNC activities will help ensure compliance. Investing in training and technology can help identify potential abuse more effectively. Thirdly, Promoting Public Awareness: Educating local businesses about tax obligations and the implications of ATP can help level the playing field and promote fair competition. Fourth, Encouraging International Cooperation: Engaging with other countries and international organizations to share best practices and data can enhance Indonesia's ability to combat tax avoidance on a global scale. Fifth, Establishing Incentives for Fair Tax Practices: Incentivizing MNCs that adhere to fair tax practices can encourage compliance and foster a more equitable tax environment. By taking these steps, Indonesia can mitigate the negative impacts of ATP and ensure a fairer tax system that supports sustainable economic growth.

However, this study faces several limitations. Firstly, the sample comprises listed MNCs due to the unavailability of data for unlisted non-MNCs. Secondly, the sample data pertains exclusively to non-financial firms in Indonesia. Future research could broaden its scope by including unlisted non-MNCs. Additionally, further empirical investigations in this field are encouraged.

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