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The role of corporate strategy in transfer pricing: The moderating effect of bonus mechanisms on performance management

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JAI Website:**Abstract****Research aims:** This study seeks to prove empirical evidence regarding the moderating effect of bonus mechanisms on fiscal optimization and tunnelling incentives on the Transfer Pricing relationship.**Design/Methodology/Approach:** The study uses a quantitative approach with a hypothesis-testing design. The data used is natural resource sector companies listed on the Indonesian Stock Exchange (IDX) in the 2021 – 2023 period. The final sample consists of 152 observations that meet the selection criteria.**Research findings:** The results showed that the Tunneling Incentive has an influence on Transfer Pricing, and Fiscal Optimization does not influence Transfer Pricing. The Bonus Mechanism does not strengthen the Effect of the Tunneling Incentive on Transfer Pricing. The Bonus Mechanism enhances the effect of fiscal optimization on transfer pricing. This research shows that the ownership factor (Tunneling Incentive) plays an important role in Transfer Pricing decisions rather than Tax strategy (Fiscal Optimization). In addition, the Bonus Mechanism moderate the relationship between Fiscal Optimization and Transfer Pricing. However, the Bonus Mechanism does not moderate the relationship between Tunneling Incentive and Transfer pricing.**Theoretical contribution/ Originality:** The originality of this research is based on the moderating results of the bonus mechanism, which strengthens the effect of Fiscal Optimization on transfer pricing compared to previous studies.**Practitioner/Policy implications:** The practical implications of this study suggest that companies need to be more transparent in Transfer Pricing policies, regulators should increase supervision against Tunneling practices, and investors and auditors should be more wary of companies with concentrated ownership structures.**Research limitations/Implications:** The limitation of this research is the research scope, which is just in the resource sector used in this research. The study does not account for potential changes in tax regulations or corporate governance laws that could impact the results over time.**Keywords:** Bonus; Fiscal Optimazation; Strategy; Transfer Pricing; Tunnelling Incentive

Introduction

Transfer pricing and bonus mechanisms are part of a company's strategy, especially in performance management, cost control, and achieving organizational goals (Tambunan et al., 2023). Transfer pricing is the price specified for transactions between divisions or units within a company. This strategy is used for corporate tax optimization by setting transfer prices to minimize tax burden by allocating profits to countries or regions

with lower tax rates (Nizary & Budyastuti, 2024; Tang, 2020; Tarmidi et al., 2023). In addition, transfer pricing is used to evaluate performance because transfer pricing reflects market value or production costs, which can be used to assess the efficiency of internal divisions (Aliyah & Indriani, 2024). Fair transfer pricing can encourage each division to operate efficiently.

While existing literature has examined the direct effects of bonus mechanisms, fiscal optimization (often linked with tax avoidance), and tunnelling incentives on transfer pricing decisions, there is a scarcity of studies investigating the moderating role of bonus mechanisms in the relationship between fiscal optimization and tunnelling incentives on transfer pricing. For instance, a study by Nizary and Budyastuti (2024) analyzed the roles of tunnelling incentives, debt covenants, and bonus mechanisms on transfer pricing decisions, with tax minimization as a moderator. Still, it did not explore the bonus mechanism as a moderator itself. Similarly, research Khasanah and Suryarini (2020) examined prudence as a moderating factor but did not consider the bonus mechanism in this role. This indicates a gap in understanding how bonus mechanisms might influence the impact of fiscal optimization and tunnelling incentives on transfer pricing practices.

Research conducted by Putri and Simanjuntak (2023), Aliyah and Indriani (2024) only tested the relationship between bonus mechanisms, tunnelling incentives and debt covenants directly. They did not explore the bonus mechanism as a moderating variable. Companies are increasingly carrying out transfer pricing because management uses transfer pricing to maximize profits, which are the basis for calculating bonuses (Aliyah & Indriani, 2024; Putri & Simanjuntak, 2023). In contrast, the study's results by Ginting et al. (2021) directly tested the effect of taxes, exchange rates and bonus mechanisms on transfer pricing. The study shows that taxes affect transfer pricing, while bonus mechanisms do not affect transfer pricing. Bonuses are a recognition of the company's success in obtaining the targeted profit. This profit can be obtained using transfer pricing and other factors, such as earnings management and tax avoidance, to increase profits and bonus incentives. The research gap that is the basis of this study is that most previous studies have focused more on the influence of bonus or compensation structures on tax aggressiveness or earnings management, but have not explicitly tested the moderating effect of bonuses in the context of transfer pricing (Aliyah & Indriani, 2024; Ginting et al., 2021; Putri & Simanjuntak, 2023). Research on tunnelling incentives and fiscal optimization has largely ignored the role of internal management incentives as a factor influencing the intensity of transfer pricing use (Chan et al., 2016). This research gap creates opportunity bonus mechanisms to moderate the relationship between tunnelling incentives and fiscal optimization on transfer pricing.

Investigating the moderating effect of bonus mechanisms is crucial due to the intricate relationship between managerial incentives, fiscal strategies, and transfer pricing. Understanding whether bonus mechanisms amplify or mitigate the effects of budgetary optimization and tunnelling incentives on transfer pricing can provide deeper insights into corporate behaviour. If bonus mechanisms significantly moderate these relationships, policymakers and regulators could be informed about potential areas to

monitor or regulate to prevent aggressive transfer pricing practices. Understanding this moderation for corporate governance can help design compensation structures that align managerial incentives with ethical fiscal practices. The study adds depth to agency theory, particularly in understanding how incentives influence managerial decisions in complex financial contexts. The moderating role of bonus mechanisms can lead to more comprehensive models of transfer pricing behaviour, accounting for internal incentive structures alongside external fiscal strategies (Chan et al., 2016). Companies can design bonus structures that discourage manipulative transfer pricing practices and promote ethical financial reporting and compliance.

Theoretical and empirical support for the moderation test of the bonus mechanism can be explained by agency theory and incentive theory. Agency theory explains the conflict of interest between the principal (shareholder) and agent (management). One effort to reduce this conflict is through providing performance-based incentives, such as bonuses. However, providing bonuses can create a new dilemma because management can use transfer pricing strategies to achieve performance targets, even though they ignore fiscal compliance (Jensen & Meckling, 1976). According to incentive theory, the compensation structure encourages specific managerial behaviour. If the profit-based bonus is high, management is incentivised to use transfer pricing practices to transfer profits between entities in the business group to maximize bonuses. Bonuses are extrinsic motivation. When management relies heavily on bonuses, they tend to do earnings management, including through transfer pricing mechanisms (Deci & Ryan, 1985). Previous studies have identified the influence of bonus mechanisms on managerial behaviour and fiscal practices. The study by Chan et al. (2016) found that the incentive structure significantly affects tax avoidance strategies, and these incentives often interact with transfer pricing. In addition, a study by (Mardjono et al. 2020; Khasanah & Suryarini, 2020) shows that management with performance-based incentives has a higher tendency to engage in earnings management. Blouin et al. (2019) highlight how bonus structures can interact with cross-border corporate tax strategies, including transfer pricing.

The novelty of the study lies in testing the moderating effect of bonus mechanisms in the context of transfer pricing behaviour influenced by tunnelling incentives and fiscal optimization strategies, something that has not been widely studied simultaneously. Previous studies mostly focused on direct effects. This study explores how bonus structures strengthen or reduce the impact of external strategies (fiscal and tunnelling). Its theoretical contribution is to expand agency theory by including the dimensions of incentive interaction and fiscal strategy on managerial behaviour in the context of multi-level incentives. Its practical contribution is that this study provides recommendations for ethical and effective compensation designs to minimize manipulative transfer pricing practices.

The relationship between the tunnelling incentives moderated by the bonus mechanism and the transfer price relates to how the company manages the incentive to move profits between affiliated entities and how the bonus mechanism can influence those decisions. The bonus mechanism can increase the Incentive for Tunneling. Suppose the

bonus mechanism is based on the profits of individual entities. In that case, management may be encouraged to set a transfer price that benefits the entity, even if it harms other entities in the group (Aliyah & Indriani, 2024).

Fiscal optimization is a company's effort to reduce the tax burden by utilizing legal tax rules, one of which is through transfer pricing. Multinational corporations use Transfer Pricing to transfer revenue or fees between entities in various jurisdictions. Multinational companies can use transfer pricing to shift profits to countries with lower tax rates. This mechanism is carried out by, among other things, overpricing goods or services. A company in a low-tax country sells goods or services at a high price to an affiliate in a high-tax country, thereby reducing taxable profits in the high-tax country. Underpricing goods or services can also do it. Conversely, an entity in a high-tax country sells goods or services to an affiliate in a low-tax country at a low price, shifting profits to a jurisdiction with a lower tax rate.

In the context of fiscal optimization, if efforts to minimize high taxes are high, management tries to maximize transfer price adjustments to divert profits to countries with lower tax rates (Nurmalasari et al., 2023; Safira et al., 2021). Companies can design bonus structures that discourage manipulative transfer pricing practices and promote ethical financial reporting and compliance. The bonus mechanism can moderate the relationship between fiscal optimization and transfer pricing, depending on the bonus design applied. Companies that design bonus mechanisms based on the performance of individual entities tend to be encouraged to maximize the profits of certain entities so that transfer prices are adjusted for fiscal optimization or lowering taxes as little as possible (Yulia & Daud, 2019). This can increase aggressive transfer pricing practices. Suppose a company creates a group performance-based bonus mechanism. In that case, a goal focused on group performance reduces the incentive to transfer pricing that benefits only one entity. This results in more rational transfer price decisions and is not only oriented towards lowering taxes.

The bonus mechanism is important in moderating the relationship between fiscal optimization and transfer pricing. Individual results-based bonuses increase incentives to minimize taxes so that there is manipulation of transfer prices. However, the group performance-based bonus mechanism can suppress incentives to minimize taxes and reduce the potential for transfer price manipulation for tax purposes, as managers focus more on the company's global performance.

This study investigates and tests the moderating role of bonus mechanisms in influencing the relationship between fiscal optimization and tunnelling incentives on transfer pricing practices. Specifically, this study aims to explain whether and how bonus mechanisms can strengthen or weaken management's tendency to conduct transfer pricing to maximize after-tax profits or transfer wealth between entities in a business group. This study is motivated by the complexity of the interaction between internal managerial incentives (bonus mechanisms) and external fiscal strategies (fiscal optimization & tunnelling) in driving transfer pricing practices.

The urgency of moderating bonus mechanisms needs to be done because of the potential effect of strengthening or weakening managerial incentives to carry out aggressive transfer pricing to achieve bonus targets or vice versa. When bonuses are designed with penalties for fiscal non-compliance, the effect can suppress manipulative practices. In addition, corporate governance & And the results of the moderation test can be used as evaluation material for regulators and remuneration committees to design bonuses that do not stimulate abusive practices in financial reporting and taxation. Modifying bonus mechanisms will be crucial in corporate governance, especially in developing countries, where tunnelling and transfer pricing practices often occur due to weak supervision.

Literature Review and Hypotheses Development

Prospect Theory

Prospect Theory, developed by Kahneman & Tversky (2018), describes a unique perspective in understanding how individuals or organizations make decisions under conditions of risk and uncertainty. This theory states that decisions are not always rational but rather influenced by subjective perceptions of potential profits and losses. One of the main concepts is loss aversion, which is the tendency to avoid losses that are felt more painful than equivalent profits. In the context of transfer pricing, companies often face pressure to minimize their tax burden, focusing more on avoiding losses in the form of high tax payments rather than pursuing profits from moderate tax avoidance strategies. In addition, this theory highlights the importance of reference points, namely companies' initial expectations of tax burdens or profit targets that affect their risk preferences (Hofmann, 2022; Long & Nasiry, 2015; Meng, 2011; Zuo et al., 2019). In the practice of transfer pricing, Prospect Theory explains why companies sometimes take high risks by shifting profits to low-tax jurisdictions, even though audit risks or legal sanctions lurk. This is related to decision weighting, where the low probability of tax sanctions is often underestimated while the potential for significant tax savings is overemphasized (Brink & White, 2015). In addition, this theory is relevant in explaining the influence of the bonus mechanism on management decisions. If the bonus is profit-based, managers are likely to take risks to achieve the profit target, especially when they feel they are in a loss situation relative to the expected reference point (Cornacchione & Reginato, 2022; Grossmann et al., 2011). Prospect Theory provides in-depth insights into how financial incentives and risk perceptions affect transfer pricing strategies, which can ultimately help understand the motivations behind complex corporate practices.

Transfer Pricing

Transfer pricing determines the transaction value of goods, services, or intangible assets exchanged between entities in a multinational company (MNC). Transfer pricing must comply with *the arm's length principle*, which requires transaction prices between companies to be set like transactions between independent parties in the free market

(Mpofu & Wealth, 2022; Permatasari & Husnasari, 2022). In multinational companies, transfer pricing diverts profits to jurisdictions with lower tax rates (tax havens) to reduce the overall tax burden (Iriyadi et al., 2024; Robin & Shaumi Nurjannah, 2021). This strategy is usually carried out through various methods, such as price adjustments on goods and services, royalty manipulation on intangible assets, disproportionate arrangement of research and development (R&D) cost sharing, and debt financing with excessively high interest rates.

Receivables of related parties have an important role in transfer pricing strategies in moving profits between entities in different countries with different tax rates (Barokah & Nindya Sari, 2024; Solikhah et al., 2021). These receivables arise from transactions between companies, such as the sale of goods, provision of services, or loans carried out within a group of multinational companies. Through related party receivables, entities in countries with high taxes can delay payments to entities with low taxes so that profits recorded in countries with high taxes become smaller (Rezeki et al., 2021). In addition, these receivables can be used for inter-entity financing, where entities in high-tax countries pay interest on loans from entities in low-tax countries (Nainggolan & Sari, 2020). The interest can be claimed as a cost that reduces the tax burden, while the profit from the interest is recorded in the jurisdiction with a lower tax rate. This can encourage manipulation of transfer prices by setting prices between goods or services that are too high or low to move profits strategically. Receivables of these related parties are an area prone to abuse because they are used for tax avoidance purposes.

Bonus Mechanism

The bonus mechanism is a strategy to improve performance because performance-based strategies encourage employees and managers to achieve set targets (Ginting et al., 2021). In addition, the bonus mechanism is used to align the company's interests (Nizary & Budyastuti, 2024). Bonuses are often designed to align management's interests with shareholders, especially regarding profitability and growth (Tambunan et al., 2023). The bonus mechanism is realized through awards given to management based on specific performance, such as achieving profit targets. This bonus mechanism can influence management's decision to set transfer prices (Fuadah & Nazihah, 2019).

Tunneling Incentive

Tunneling Incentive refers to the efforts of majority shareholders or related parties to transfer resources or profits from a company they control to another entity they own, often to the detriment of minority shareholders (Napitupulu et al., 2024). One way to do this is through unreasonable transfer pricing in company transactions in a group. The bonus mechanism can improve tunnelling practices for setting transfer prices. It can also happen the other way around, where the bonus mechanism can reduce the practice of tunnelling. Suppose the bonus mechanism is based on the overall performance of the group. In that case, management will be incentivised to set a reasonable transfer price and reduce the practice of tunnelling in transfer pricing, as the focus is on collective performance rather than individual profits (Putri & Simanjuntak, 2023).

The influence of tunnelling incentives on transfer pricing

Tunnelling incentive refers to the motivation of controlling shareholders to transfer wealth from the company to provide their profits by using transfer pricing manipulation (Napitupulu et al., 2024; Nausika et al., 2023). As a price allocation technique in transactions between companies in a group, tunnelling incentives are often used to shift profits to more profitable entities for controlling shareholders with the lowest tax rates. This practice is carried out through sales underpricing or purchase overpricing in company transactions. From the perspective of Prospect Theory, the influence of tunnelling incentives on transfer pricing can be explained through the concept of loss aversion and reference point. Controlling shareholders tend to be more sensitive to potential losses in their wealth than additional gains for minority shareholders (Tarmidi et al., 2023). For example, if a company has an incentive structure in which its profits are allocated to dividends proportionately to all shareholders, controlling shareholders may be more motivated to shift profits to the parties they control through transfer pricing. This is done to avoid "relative losses", i.e. profits that must be shared with minority shareholders so that personal profits are more guaranteed. In this context, their reference point is a level of profit or return that is personally considered "fair" or "adequate", which encourages them to act aggressively in order to achieve that goal.

In addition, decision weighting from Prospect Theory explains why controlling shareholders are sometimes willing to take big risks using aggressive transfer pricing (Herlina & Murniati, 2023; Irawan & Sari, 2022). They underestimate the probability of risk detection by tax authorities or regulators, especially when they believe the chances of an audit are relatively low or the sanctions are insignificant. Instead, they prioritize the potential for large profits from profit diversion. This is often the case in countries with less stringent regulations or limited supervisory capacity. On the other hand, if sanctions for transfer pricing practices that violate the rules are perceived to be high or if regulatory oversight increases, controlling shareholders can change their strategies. This is in accordance with the framing effect principle of Prospect Theory, whereby the problem presented (risk of sanctions or reputational costs) can change decision-makers behaviour (Uyar & Paksoy, 2020). In such conditions, companies adhere to transfer pricing rules to avoid large losses rather than pursuing small profits from profit transfer.

Thus, Prospect Theory provides a comprehensive framework for understanding how tunnelling incentives affect transfer pricing decisions by highlighting the role of risk perception, sensitivity to loss, and the influence of reference points. This theory also indicates that regulatory policies that improve risk perception, detection, and sanctions can effectively reduce transfer pricing manipulation driven by tunnelling incentives. This is in line with the research of Aliyah and Indriani (2024); Anggraeni and Lutfillah (2019); Lutfia and Sukirman (2021); Novita et al. (2024); Putri (2023); Rahma and Wahjudi (2021); Rizanti and Karlina (2024); Umiyati et al. (2024); Wiharja and Sutandi (2023).

H₁: Tunneling incentive has an effect on transfer pricing.

The influence of fiscal optimization on transfer pricing

Fiscal optimization, or low tax rates, is a technique companies use to reduce tax liabilities (Kosi & Valentincic, 2013). The practice of tax minimization through transfer pricing is carried out by determining the selling price rate or purchase price of goods, services, or intellectual property rights between related entities in a group of companies located in different countries. Companies take advantage of the difference in tax rates between countries to move profits from countries with high tax rates to countries with lower tax rates (Andrejovská & Glova, 2025; Skeie, 2017). Suppose a multinational company has subsidiaries in countries with high tax rates and other subsidiaries in countries with low tax rates. In that case, the company can set a higher transfer price for goods sold to subsidiaries in countries with high tax rates and lower transfer prices for goods sold to subsidiaries in countries with lower tax rates. In this way, most profits are reported in countries with lower tax rates, reducing overall tax liability.

However, while this practice offers significant tax savings potential, Prospect Theory explains how companies assess these decisions by considering more significant risk factors, especially the risk of losses due to detection by tax authorities (Ali & Asri, 2019; Rodionov et al., 2018). In Prospect Theory, two important and relevant concepts are loss aversion and decision weighting. Loss Aversion refers to the tendency of humans to feel losses more intensely than equivalent profits. Although tax deductions can increase a company's profits, the risk of losses due to audits or tax sanctions tends to be greater. Companies involved in transfer pricing manipulation will be more cautious and reluctant to take risky steps despite the potential for financial gain. In this case, potential losses arising from sanctions or fines imposed by the tax authorities will be avoided because the losses are perceived to be greater than the profits obtained. In Decision Weighting, Prospect Theory also explains that individuals (or companies) do not always judge the probability of events rationally. They tend to give greater weight to seemingly small opportunities, such as the chance of detection by tax authorities, even if those chances are low. This prompted companies to be cautious and not engage in overly aggressive transfer pricing setups, even though the tax incentives were powerful. Although multinational corporations can significantly reduce the taxes payable through aggressive transfer pricing that is in line with previous research (Anisa et al., 2024; Fatmi & Amin, 2023; Mahdeni et al., 2024; Marfuah et al., 2021; W. C. Putri & Lindawati, 2023; Ratnosari et al., 2024; Syah & Poerwati, 2023; Wayan & Khomsiyah, 2024).

H₂: Fiscal optimization has an effect on transfer pricing.

Moderation of Bonus Mechanism to the Effect of Tunneling Incentives on Transfer Pricing

Mechanism bonuses can act as a moderation factor that affects the extent to which transfer pricing manipulation practices are carried out by managers or controlling shareholders (Indriaswari & Nita, 2018). Tunnelling incentives refer to the incentive for controlling shareholders or managers to transfer wealth from the leading company to an

entity they control using transfer price manipulation. This is done through underpricing sales or overpricing of purchases in transactions between companies within a group to move profits to more profitable entities, often located in countries with lower tax rates. Bonus mechanisms can exacerbate tunnelling and become more aggressive when implemented as part of a company's incentive structure (Fuadah & Nazihah, 2019; Nizary & Budyastuti, 2024). This mechanism bonus links financial rewards (annual bonuses or performance-based incentives) to achieving specific financial targets, such as profits or cost savings, that can be achieved through transfer pricing management. Bonus mechanisms designed to motivate managers by linking profit performance to favourable transfer pricing will encourage managers to tunnel more aggressively, i.e. transfer profits illegally through transfer pricing practices to achieve targets and get bigger bonuses.

From the perspective of Prospect Theory, the influence of the bonus mechanism in the moderation of tunnelling incentives can be highly dependent on the perception of risk owned by managers or controlling shareholders (Aluchna, 2014). Loss aversion plays an important role here. Controlling shareholders or managers have the temptation of large bonus incentives, but they are also susceptible to potential losses that can arise as a result of detection by tax authorities or regulators (Aljughaiman & Chebbi, 2022; Harjoto et al., 2023). In this case, despite the strong incentive to manipulate transfer pricing in favour of higher bonuses, loss aversion can reduce the positive impact of the bonus mechanism if the manager feels that the risk of detection and potential penalties far outweighs the gains gained from the transfer of profits (Carrillo & Emran, 2018). In addition, decision weighting also plays a role in how the bonus mechanism moderates the influence of tunnelling incentives. Company managers or controllers tend to place a higher weight on possible losses incurred as a result of audits and fines (Liao et al., 2022), even though the chances of detection are low.

H₃: Bonus mechanism moderating the effect of tunneling incentives on transfer pricing.

Moderation of Bonus Mechanism to the Effect of Fiscal optimization on Transfer Pricing

In this era of moderation, the bonus mechanism serves as an incentive tool that encourages managers to achieve certain financial targets, including tax savings through transfer pricing optimization (Kramer & Matějka, 2024). In multinational companies, bonuses are designed based on profit achievement or cost savings, one of which can include a reduction in tax liability (Sujana et al., 2022). Managers given this incentive tend to choose a transfer pricing strategy, which is their strategic tactic to reduce tax liabilities, maximize the company's profits, and increase the bonuses they earn. Setting a higher transfer price for goods sold between entities in low-tax countries can transfer profits, and the company's tax liability is reduced. However, while the bonus mechanism provides a strong incentive to minimize taxes, Prospect Theory explains that managers will consider the major risks associated with this decision, especially if they assess the risk of detection and sanctions arising from aggressive transfer pricing practices. Loss

aversion, a core concept in Prospect Theory, suggests that the losses that can be caused by detection by tax authorities (large fines or reputational losses) are more emotionally perceived than the financial gains obtained (Blavatsky, 2021; Bleichrodt & L'Haridon, 2023; Gao, 2023; Passarelli & Del Ponte, 2020; Tian, 2024). While tax deductions can increase profits and bonuses, this fear of loss can deter managers from taking significant risks. In other words, although bonus incentives lead to decisions oriented towards tax savings, loss aversion makes managers more cautious about taking steps that can be high-risk. Prospect Theory also explains how decision weighting can affect those decisions. Managers tend to ignore detection by tax authorities, especially if they believe that the chances of an audit or audit are low (Fotuh & Lorentzon, 2023; Merdekawati, 2022; Ojala et al., 2014). They tend to focus more on the potentially huge benefits of tax reductions, while the risk of detection and sanctions is considered smaller. With this, the bonus mechanism provides an impetus to make profitable transfer pricing; in other words, the bonus mechanism significantly influences the practice of transfer pricing.

H₄: *Bonus mechanism moderating the effect of fiscal optimization on transfer pricing.*

Based on the ideas, a research model was developed and is depicted in Figure 1.

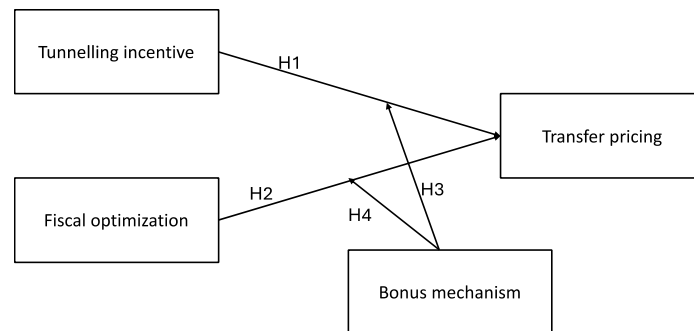


Figure 1 Research Model

Research Method

This study applies a quantitative approach to test and analyze hypotheses, intending to identify the influence of tunnelling incentives and tax minimization on transfer pricing decisions, where the bonus mechanism acts as a moderation variable. The data used in this study is sourced from secondary data obtained through the official website of the Indonesia Stock Exchange and the official website of each sampled company. The research population includes companies in the natural resources sector listed on the Indonesia Stock Exchange from 2020-2022. The measurement of each variable is presented in Table 1.

Table 1 Operational Definition Variable and Measurements

Variables	Definitions	Measure	Source
Transfer Pricing	Transfer Pricing is a mechanism used to determine the price of transactions between affiliated companies, which has significant implications for the distribution of revenue, cost structure, and the amount of taxable profit in various tax jurisdictions (OECD, 2022)	$\frac{\text{Related Party Receivables}}{\text{Total Receivables}}$	(Suhartono et al., 2022)
Tunneling Incentive	Tunnelling Incentive is the practice of transferring a company's assets and profits to the benefit of controlling shareholders, often at the expense of minority shareholders (Napitupulu et al., 2024)	$\frac{\text{Amount of most significant shareholding}}{\text{Total Shares Outstanding}} \times 100\%$	(Ubaidillah, 2023)
Fiscal optimization	Fiscal optimization is defined as a strategy to minimise the tax burden without considering other aspects of a transaction or business decision used by a business entity to reduce its tax liability lawfully in accordance with applicable tax regulations (Hashfi & Martani, 2023)	$\frac{\text{Tax expense} - \text{Deferred tax expense}}{\text{Income Before Tax}} \times 100\%$	(Illahi et al., 2023)
Bonus Mechanism	The bonus mechanism is defined as a compensation system that incentivises managers based on the achievement of accounting profits that have been specified in the firm's bonus contract (Hidayah & Madjid, 2024)	$\frac{\text{Net profit for year } t}{\text{Net profit for year } t - 1} \times 100\%$	(Ginting et al., 2021)

Based on the application of the purposive sampling method for selecting company samples during the 2021-2023 period, this study collected 152 observation data that met the predetermined sample criteria. Details of the sample conditions are presented in the following Table 2.

Table 2 Sampling Criteria

No	Criteria	Total
1	Natural resources sector companies listed on the IDX	183
2	Companies that do not publish annual reports in 2021-2023	(9)
3	Companies that have experienced losses in 2021-2023	(99)
4	Companies that do not have a related receivables transaction balance	(18)
5	Number of Samples	57
6	Total observations (57*3 years)	171
7	Outlier	(19)
	TOTAL	152

This study applies a multiple linear regression analysis method with a Moderating Regression Analysis (MRA) approach using WarpPLS 8.0 software. The MRA technique tests the influence of moderation variables in modifying or strengthening the relationship between independent and dependent variables (Park & Yi, 2023). This approach provides a simpler framework for explaining how corporate governance works, specifically by analyzing the relationship between tax minimization, tunnelling incentives, and bonus mechanisms to transfer pricing practices in natural resources sector companies in Indonesia.

Transfer pricing involves complex relationships between various factors, including company characteristics, intercompany transactions, and the economic environment. Financial and economic data are often not normally distributed; PLS is a non-parametric method that does not require strict data normality assumptions, making it suitable for transfer pricing data that may have a non-normal distribution. Transfer pricing often involves abstract concepts or latent variables that cannot be measured directly, such as transfer pricing aggressiveness (Mulya, 2022). In addition, the interpretation of coefficients in PLS can be more complex than ordinary linear regression. Previous studies that use PLS Analysis in research on Transfer Pricing are as follows (Mulia et al., 2024; Mulya, 2022; Pamungkas et al., 2024; Puspitasari et al., 2024).

Result and Discussion

Fit Model and Quality Index

Based on the Fit Model and Quality Index analysis in Table 3, most indicators show that the model used has met the eligibility criteria. The Average Path Coefficient (APC) value of 0.125 with a significance level of $P=0.031$ indicates that the mean relationship between paths in the model is statistically significant, so the model is considered appropriate. The same is also shown by the Average R-Squared (ARS) of 0.009 with a $P<0.229$, although a low ARS value indicates that the model is only able to account for a

small part of the variability of the data. In addition, the Adjusted R-squared mean of 0.019 with $P < 0.203$ remains within the eligibility criteria. Furthermore, the Average Block Variance Inflation Factor (AVIF) and Average Full Collinearity VIF (AFVIF) indicators have values of 1.117 and 1.144, respectively, which are well below the ideal threshold of ≤ 3.3 , indicating that there are no collinearity issues in the model.

Table 3 Results of model fit test

Model Fit and Quality Index	Index	Criteria	Results
Average Path Coefficient (APC)	0.125	$P > 0.031$	Model fits
Average R-Square (ARS)	0.009	$P < 0.229$	Model fits
Adjusted R-Squared Mean	0.019	$P < 0.203$	Model fits
Average Block Variance Inflation Factor (AVIF)	1.117	if ≤ 5 , ideally ≤ 3.3	Model fits
Average Full Collinearity VIF (AFVIF)	1.144	if ≤ 5 , ideally ≤ 3.3	Model fits
Tenenhaus GoF (GoF)	0.094	small ≥ 0.1 , medium ≥ 0.25 , large ≥ 0.36	Model fits
Simpson's Paradox Ratio (SPR)	0.750	acceptable if ≥ 0.7 , ideally = 1	Model fits
R-Squared Contribution Ratio (RSCR)	0.554	acceptable if ≥ 0.9 , ideally = 1	Model fits
Statistical Suppression Ratio (SSR)	1.000	acceptable if ≥ 0.7 , ideally = 1	Model fits
Nonlinear Bivariate Causality Direction Ratio (NLBCDR)	0.500	acceptable if ≥ 0.7 , ideally = 1	Model unfits

However, the Tenenhaus GoF (GoF) value of 0.094 is below the small limit (≥ 0.1), indicating that the global conformity of the model is still relatively low. Nonetheless, the model has avoided the possibility of Simpson's paradox with Simpson's Paradox Ratio (SPR) of 0.750, meeting the minimum criteria (≥ 0.7). On the other hand, the R-squared contribution Ratio (RSCR) with a value of 0.554 is still below the minimum limit (≥ 0.9), so the R-squared contribution in the model needs reinforcement.

However, the Statistical Suppression Ratio (SSR) that reached the ideal value of 1,000 showed no statistical suppression effect that affected the analysis results. However, the Nonlinear Bivariate Causality Direction Ratio (NLBCDR) value of 0.500 does not meet the minimum criteria (≥ 0.7), indicating the need to revise the model structure to capture the direction of non-linear causality better. Although the model shows feasibility levels on most indicators, some aspects still need improvement, especially in the GoF, RSCR, and NLBCDR values. This is important to ensure that the model is able to provide a stronger and more accurate interpretation of the relationships between the variables being studied.

Based on the results of descriptive statistics in Table 4, this study involved 152 observational data that were analyzed for each variable. The Transfer Pricing variable has a minimum value of 0 and a maximum of 5, with a mean of 0.27 and a standard deviation of 0.496. The low average value shows that the transfer pricing practice in the

research sample tends to occur on a small scale with relatively low data variation. Furthermore, the Tunneling Incentive variable has a minimum value of 0 and a maximum of 1, with an average value of 0.49 and a standard deviation of 0.165. This shows that most of the companies in the sample have a moderate level of tunnelling incentives, with low variability between companies. The Fiscal Optimization variable ranges from -1 to 4, with an average of 0.26 and a standard deviation of 0.372. This average value indicates that tax minimization efforts on companies in the sample are relatively low. Still, some companies have higher or even negative values, which may indicate significant differences in tax strategies. The Bonus Mechanism variable has a minimum value of 0 and a maximum of 4, with an average value of 1.39 and a standard deviation of 0.887. Higher variability in bonus mechanisms shows significant differences in the provision of bonus-based incentives among the companies studied. Overall, the value distribution of each variable reflects the characteristics of the companies in the natural resources sector that are the research samples. The measurable variation in the values of each variable provides a basis for further analysis of the relationship between variables in the research model.

Table 4 Descriptive statistics

Variable	Min	Max	Mean	Std. Deviation
Transfer Pricing	0	5	0.270	0.496
Tunneling Incentive	0	1	0.490	0.165
Fiscal Optimization	-1	4	0.260	0.372
Bonus Mechanism	0	4	1.390	0.887
N= 152				

Based on Table 5, the results show that tunneling incentives significantly influence transfer pricing, as indicated by a p-value of 0.012, supporting the hypothesis. However, fiscal optimization does not have a significant effect on transfer pricing, with a p-value of 0.103, thus the hypothesis is not supported. Additionally, the bonus mechanism does not significantly strengthen the effect of tunneling incentives on transfer pricing (p-value = 0.317), and this hypothesis is also not supported. Conversely, the bonus mechanism significantly strengthens the effect of fiscal optimization on transfer pricing, with a p-value of 0.015, thereby supporting this hypothesis.

Table 5 Hypothesis Summary

	Hypotheses	P-Value	Decision
H1	Tunneling Incentives Have an Influence on Transfer Pricing	0.012	Supported
H2	Fiscal Optimization Has an Effect on Transfer Pricing	0.103	Not Supported
H3	The bonus Mechanism strengthens the effect of Tunneling Incentive on transfer pricing	0.317	Not Supported
H4	Bonus Mechanism strengthens the effect of Fiscal Optimization of Transfer Pricing	0.015	Supported

Effect of Incentive Tunneling on Transfer Pricing

Based on the results of data processing and the summary of the hypothesis presented in Table 5, it is revealed that there is a significant relationship between incentive tunnelling and transfer pricing. Many research concluded that while tunnelling incentives and tax minimization significantly affect transfer pricing (Aliyah & Indriani, 2024; Novita et al., 2024; Putri, 2023; Umiyati et al., 2024; Wiharja & Sutandi, 2023)

Tunnelling incentive refers to an incentive for a controlling shareholder or manager of a company to transfer the company's resources to another entity in the same group for personal gain or the interests of a particular group. One of the methods often used for tunnelling is transfer pricing, which is a pricing strategy in transactions between entities with a special relationship in a multinational group of companies. Tunnelling incentives can affect the transfer pricing price in the following ways: first, transfer of profits to affiliated companies. Controlling shareholders can use transfer pricing to shift profits from a company with minority shareholders to another entity they fully control. By shifting profits to a more controlled company, majority shareholders can reduce the dividends that must be distributed to minority shareholders. This is often the case in companies with complex ownership structures; second, cost manipulation to reduce profits. Companies that want to move profits can increase the purchase price of goods or services from affiliated companies located in jurisdictions with lower taxes. Conversely, if a company wants to show higher profits for investment purposes, it can use transfer prices with a larger profit margin.

Utilization of Differences in Tax Regulations between Countries. In multinational companies, tunnelling can occur by taking advantage of the difference in tax rates between countries. Profits can be transferred to low-tax countries by manipulating transfer prices between subsidiaries in different countries. Thus, Prospect Theory provides a comprehensive framework for understanding how tunnelling incentives affect transfer pricing decisions by highlighting the role of risk perception, sensitivity to loss, and the influence of reference points. In practice, this theory also indicates that regulatory policies that focus on improving risk perception, detection, and sanctions can effectively reduce transfer pricing manipulation driven by tunnelling incentives.

The main phenomenon in this study is how tunnelling incentives affect transfer pricing without adequate moderation; tunnelling incentives can encourage the transfer of profits through transfer pricing for the benefit of majority shareholders by often sacrificing the interests of minority shareholders. The bonus mechanism as a moderating variable uses a performance-based compensation system; manager behaviour focuses more on creating overall corporate value rather than just optimizing the benefits of majority shareholders through transfer pricing manipulation. Performance-based bonuses linked to net income after tax or other financial indicators can reduce the tendency of managers to use transfer pricing as a tunnelling tool. This study opens new insights into how incentive policies and corporate governance can mitigate manipulative practices in transactions between affiliated companies.

Effect of Tax Minimization on Transfer Pricing

Based on the analysis results and the summary of the hypothesis in Table 5, this study states that fiscal optimization does not significantly influence transfer pricing. This finding aligns with the research findings of (Marfuah et al., 2021; (Nizary & Budyastuti, 2024). Several studies have examined the relationship between tax minimization efforts and transfer pricing, with mixed results. Some studies have found that tax minimization does not significantly influence a company's transfer pricing decisions. Tax minimization does not affect transfer pricing due to regulatory compliance. The company focuses more on complying with applicable tax and transfer pricing regulations to avoid sanctions or penalties. In addition, there is a reputational risk where the company considers reputational risks that can arise from aggressive transfer pricing practices to minimize taxes. Another more dominant factor is that the transfer pricing decision may be more influenced by other factors such as bonus mechanisms, foreign ownership, or audit quality. Thus, although tax minimization is often considered a major driver in transfer pricing decisions, some studies show that there is not always a significant influence between the two.

In this context, the bonus mechanism is recommended as a moderating variable as an important factor that can explain why the relationship between fiscal optimization and transfer pricing is not significant. The bonus mechanism creates incentives for management to maximize the company's net profit, which in turn can limit the use of tax minimization-based transfer pricing strategies. In other words, when performance-based incentives are implemented, management is more oriented towards achieving healthy profitability rather than simply reducing the tax burden through aggressive transfer pricing. The practical implication of the results of this study is that companies do not always make tax optimization the main reason for their transfer pricing strategies; they need to consider other variables, such as bonus mechanisms, in analyzing the company's transfer pricing policies.

Bonus Mechanism Moderates the Effect of Tunneling Incentives on Transfer Pricing

Based on the results of the analysis and the summary of the hypothesis listed in Table 5, this study states that the Bonus Mechanism does not moderate the Effect of the Tunneling Incentive on Transfer Pricing. Tunnelling incentives refer to the actions of majority shareholders who move a company's assets or income to another entity they control, often to the detriment of minority shareholders. Transfer pricing is pricing for transactions between companies in a group, which can be used as a tool for tunnelling. In this study, the bonus mechanism is not always effective in moderating the relationship between tunnelling incentives and transfer pricing. This is because the bonus design applied by the company is not right. The bonus mechanism is not designed to oversee or control tunnelling practices, so the bonus will not effectively moderate the relationship between tunnelling incentives and transfer pricing. In addition, the bonus mechanism cannot moderate the relationship between incentive tunnelling and transfer pricing because companies designing bonus mechanisms are often based on performance indicators that are not directly related to transfer pricing practices, such as

profitability or sales targets. Therefore, the bonus mechanism does not affect the relationship between tunnelling incentives and transfer pricing. This aligns with Fuadah & Nazihah's (2019) research by Ni Nyoman & Gerianta (2023), who stated that the bonus mechanism does not affect transfer pricing. On the other hand, if the company uses other performance indicators directly related to transfer pricing, such as Economic Value Added (EVA), then the EVA-based bonus scheme can be more suitable. Companies can use transfer pricing to manage profit streams and improve their EVA.

The results of this study emphasize that the bonus mechanism has not been effective in suppressing the impact of tunnelling incentives on transfer pricing. The moderation of the bonus mechanism is not running effectively because of the inaccuracy in designing bonus mechanisms. In addition, the incentives provided in the bonus scheme are not strong enough to shift management's focus from the interests of the majority shareholders to more transparent and fair management of inter-entity transactions. The practical implication of this study is the need for reformulation in the design of the company's incentive scheme. Controlling the use of transfer pricing, which has the potential to become a tunnelling tool, companies need to implement a bonus mechanism based on more relevant performance indicators, such as EVA. With this approach, transfer pricing can be directed to improve the company's overall economic performance, not just as an instrument for transferring profits for the benefit of majority shareholders. The effectiveness of the bonus mechanism is highly dependent on its design and the performance indicators used. Incentives are specifically aimed at monitoring and controlling tunnelling practices through transfer pricing, so the bonus mechanism becomes an effective tool in suppressing the impact of tunnelling incentives. Therefore, companies need to adopt a more measurable incentive system that aligns with the objectives of good corporate governance.

Bonus Mechanism Moderates the Influence of Fiscal Optimization on Transfer Pricing

The bonus mechanism in the company can strengthen the relationship between fiscal optimization and transfer pricing practices. Table 5 shows that the Bonus Mechanism moderates the relationship between fiscal optimization and Transfer Pricing. When a bonus structure is designed to encourage management to achieve certain financial targets, such as an increase in net income or a reduction in tax burden, managers may be encouraged to use transfer pricing strategies to shift revenue or expenses between entities within a multinational company. The goal is to minimize the overall tax liability and achieve the set performance targets, ultimately increasing their bonuses. This finding is relevant to the research of Lisa, Kenneth & Jeri (2022), which stated that multinational companies are involved in transfer pricing balance performance measurement in their subsidiaries with tax objectives at the parent company level. The study results show that management incentives related to financial performance can encourage the practice of revenue transfer to achieve tax and performance goals. Thus, designing a bonus mechanism focusing on specific financial metrics can indirectly encourage management to optimise fiscal by utilizing transfer pricing.

In this context, the bonus mechanism becomes a key factor in determining the extent to which a company implements a fiscal optimization strategy through transfer pricing so it can reduce tax risk while maximizing corporate profits in a more balanced way. Companies use fiscal optimization strategies to minimise tax burdens in a legitimate manner, such as utilizing tax incentives, international tax agreements, or profit allocation strategies. One technique often used in fiscal optimization is transfer pricing, which determines transaction prices between entities in one corporate group, especially in cross-border transactions.

The bonus mechanism can play a role in moderating the relationship between fiscal optimization and transfer pricing because the incentives given to managers can influence their decisions in implementing transfer pricing strategies. The urgency of the bonus mechanism in moderating the relationship between fiscal optimization and transfer pricing, such as reducing the aggressiveness of transfer pricing. If bonuses are given based on operating profit or after tax, managers will be more selective in implementing transfer pricing to stay within the limits of tax regulations. An adequately designed bonus mechanism can reduce tax risks and sanctions because policies that are not too aggressive can help avoid tax audits that can potentially harm the company in the long term. In addition, a properly designed bonus mechanism can improve corporate governance. Managers given the right incentives tend to be more transparent and accountable in implementing transfer pricing policies.

Conclusion

The results of this study reveal several important findings related to the relationship between tunnelling incentive, fiscal optimization, transfer pricing, and the moderation role of the bonus mechanism. This study explores the influence of tunnelling incentives and fiscal optimization on transfer pricing, focusing on the moderating role of bonus mechanisms. The key findings are: Tunneling incentives significantly affect transfer pricing, confirming that ownership structure is crucial in transfer pricing decisions. Fiscal optimization does not substantially affect transfer pricing, suggesting that tax minimization is not always a primary driver of transfer pricing strategies. The bonus mechanism does not moderate the relationship between tunnelling incentives and transfer pricing, likely due to the design of bonus structures that do not directly control tunnelling practices. The bonus mechanism strengthens the relationship between fiscal optimization and transfer pricing, indicating that financial incentives influence managerial tax planning decisions. These findings highlight the complexities of corporate strategies related to transfer pricing and the importance of governance structures in mitigating potential manipulation. Practical Implications for this research offer insights for multiple stakeholders: Companies should ensure transparency in transfer pricing policies to prevent abusive practices that could harm shareholders and investors. Regulators should enhance supervision over tunnelling practices, particularly in firms with concentrated ownership structures, to protect minority shareholders. Investors and auditors should pay closer attention to companies with significant tunnelling incentives, as they are more likely to engage in aggressive transfer pricing. Corporate governance

policymakers should consider designing performance-based bonus mechanisms that discourage tax-motivated profit shifting while aligning managerial incentives with ethical financial practices. Research Limitations for this scope study focus only on the natural resource sector in Indonesia, limiting generalizability to other industries. Also, the study does not account for potential shifts in tax regulations and corporate governance laws that could affect transfer pricing decisions over time. Based on these limitations, future studies can explore A broader industry sample to assess whether the findings hold across different business sectors. Longitudinal studies examine transfer pricing behaviour over an extended period to understand how regulatory changes impact corporate strategies. Alternative moderating variables, such as corporate governance quality, firm size, or foreign ownership, provide deeper insights into transfer pricing decisions. Different measurement approaches for bonus mechanisms, such as EVA-based incentives, determine their effectiveness in mitigating profit-shifting practices.

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Conflicts of Interest

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