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# TAX MINIMIZATION MODERATING DETERMINANT TRANSFER PRICING IN ENERGY SECTOR COMPANIES INDONESIA

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**Abstract**
The objective of this study is to examine and compare the various factors that influence transfer pricing decisions, with a particular emphasis on bonus schemes and loan contracts. It further explores the impact of tax reduction strategies on these factors within energy sector firms listed on the Indonesia Stock Exchange (IDX) between 2017 and 2023. The study's sample, consisting of 83 energy sector companies listed on the IDX, was selected using purposive sampling. Based on specific criteria, 49 data points and 7 energy-related firms were chosen as representatives for the analysis. The primary analytical technique applied in this study is moderated regression analysis. The findings indicate that transfer pricing strategies are significantly influenced by loan agreements and compensation schemes. However, tunneling incentives appear to have no substantial impact on transfer pricing decisions. Additionally, the moderating effect of tax minimization strengthens the relationship between loan agreements and transfer pricing. On the other hand, tax minimization seems to have minimal effect on the connection between transfer pricing, bonus plans, and tunneling incentives.

Keywords: Transfer Pricing, Tax Minimization, Debt Covenant, Tunnelling Incentive, Bonus Mechanism

## 1. Introduction

The company is a profit-oriented business entity, so all activities carried out will aim to obtain the maximum profit. To increase its net profit, the company is involved in strategic tax planning. One approach that is considered effective in paying taxes is through the application of transfer pricing (Rossa et al., 2024). To optimize the overall profitability of an organization, this approach entails calculating the cost of transactions involving goods or services exchanged between companies based in jurisdictions at more favorable tax rates.

Many companies in Indonesia implement a determination strategy Transfer Pricing with their subsidiaries located in countries that benefit from lower tax rates. One of the cases that has been highlighted is Transfer Pricing involving PT Adaro Energy Tbk (ADRO). Based on a report published by globalwitness.org with the title "Taxing Times for Adaro"In 2019, it is possible that PT Adaro Energy sold coal to its subsidiary, Coaltrade Services International Pte Ltd. located in Singapore, at a lower price compared to the prevailing price in the global market. The coal is then sold back to the global market through Coaltrade at a price that matches the international market value. This practice causes PT Adaro Energy to only obtain minimal profits, so the amount of tax that must be paid is much smaller. As a result of this practice, Indonesia suffered losses of up to Rp 1.7 trillion (www.tempo.co).

The company decided to implement a transfer pricing strategy due to various considerations. One of the reasons is the existence of obligations stipulated in certain agreements, which are made between debtors and creditors and have limitations such as debt ratios. This agreement was created to ensure that companies can still pay their debts (Priyanti & Suryarini, 2021). When the company approaches the limit of breach of contract, the company will carry out tax minimization by choosing accounting policies such as transfer pricing that can increase the cash flow position and have enough funds to pay debts. Research by Rahmawati and Machdar (2024) found that debt covenants have a positive impact on transfer pricing, and this influence can be moderated by tax minimization. On the other hand, research conducted by Azzuhriyyah and Kurnia (2023) revealed that "the existence of debt covenants turns out to have the opposite impact, namely lowering transfer pricing practices". Meanwhile, the results of a study published by Amanah and Suyono (2020) stated that "the existence of debt covenants does not show a significant influence on transfer pricing activities, and tax minimization cannot function as a moderating factor in the relationship between the two variables".

Other elements that motivate businesses to adopt assignment techniques transfer pricing including "Tunnelling incentives" refers to the practice of transferring funds to key stakeholders in companies incorporated in low-tax jurisdictions (Mardiana & Badjuri, 2023). The transfer of assets and profits is carried out through transfer pricing, which aims to improve profit for majority shareholders. Tunnelling can be one way tax minimization. The existence of a motive tax minimization powerful ones can intensify the impact tunnelling incentive at transfer pricing (N. Rahmawati & Mulyani, 2020). Based on a study conducted by (S. A. Rahmawati & Machdar, 2024), It was found that "Tunnelling incentive has a negative impact on practice transfer pricing". In contrast, the research conducted by (Amanah & Suyono, 2020) revealed different results, namely that "Tunnelling incentive has no influence on transfer pricing". Furthermore, it was found that the tax minimization strategy did not have a significant effect or did not reduce the relationship between the two variables studied.

In addition, incentive structures such as the bonus system play a role in the decision to determine transfer pricing. One approach to increase the motivation of managers and executives, which aims to improve the company's performance, is to give them performance-based bonuses. Company leaders are trying to improve organizational performance to achieve greater incentives. The implementation of regulations and transfer pricing strategies for revenue management, which is intended to optimize profits, is a common method used by businesses. The purpose of these measures is to minimize the amount of taxes that the organization must pay, although it often overrides the priorities or interests of the majority shareholders. A study conducted by Ayem and Ningsih (2021) revealed that "the implementation of the bonus mechanism has a positive impact on transfer pricing practices". However, the results of research conducted by Aryati and Harahap (2021) stated that "there is a negative impact of the bonus mechanism on transfer pricing". The results of the study conducted by Aryati and Harahap (2021) concluded that "the bonus mechanism does not have a significant influence on transfer pricing, and tax minimization does not have the ability to moderate the relationship between the two variables". Meanwhile, research by Mardiana and Badjuri (2023) shows "that tax minimization can play a role as a moderator in the relationship between the bonus mechanism and transfer pricing".

Based on background information, previous research on the impact of tunneling incentives, bonus structures, and debt covenants on transfer pricing practices has yielded

mixed results. Significant differences were also observed in research on the role of tax minimization as a moderation factor in the relationship between these variables. To analyze the impact of tunneling incentives, bonus systems, and debt covenants on the practice of determining transfer pricing, this study includes tax minimization as a moderation variable.

## 2. Theoretical Background

### 2.1 Agency Theory

Jensen and Meckling (1976) explain "the theory of agency as an agreement in which a principal assigns an agent to act on their behalf". Within this framework, the principal authorizes the agent to decide what is most beneficial to the principal while ensuring that these decisions are in the best interests of the principal, while keeping intact the fundamental objectives that may affect the outcome of the decisions taken. However, there is a conflict of interest because both principals and agents want to maximize their profits (Devi & Suryarini, 2020). Companies tend to avoid paying high taxes because taxes reduce profits, so they apply Transfer Pricing to minimize tax liability. Issues related to agencies also open up the possibility of Tunnelling Incentive (Yudhistira et al., 2023), which refers to "a situation in which majority shareholders originating from abroad move the company's assets and profits abroad for their personal interests, without considering the impact on the company and minority shareholders". This kind of practice is often carried out with the aim of maximizing personal profits, which can ultimately harm other parties involved in the company, while minority shareholders bear the costs (Ashali, 2024). Tax minimization that aims to reduce the tax liability of the company, often without regard to the interests of the major shareholders, as explained in the agency theory (Sebele & Wealth, 2022).

### 2.2 Positive Accounting Theory

According to the perspective in the "positive accounting theory" expressed by (Watts & Zimmerman, 1990), "companies and various parties involved in the process of preparing financial statements are often faced with challenges that arise due to the application of applicable accounting principles". This theory explains the accounting approach or method chosen by a company when certain conditions or requirements have been met. In the context of this theory, projections about future accounting behavior are more influenced by the way decision-makers in companies interact with various parties interested in financial statements. These parties include investors, creditors, auditors, capital market managers, and supervisory institutions that play a role in regulating industry regulations. In positive accounting theory, the hypothesis Debt Covenant said that business managers should strive to use certain accounting methods to increase profits and leverage assets while reducing costs associated with debt contracts (Nizary, 2024). The hypothesis regarding the bonus plan suggests that "managers of companies that have a bonus system are more likely to choose an accounting approach that allows them to recognize revenue in the ongoing accounting period from the outset, with the aim of maximizing the profits reported in that period" (Vernando & Erawati, 2020).

### 2.3 Transfer pricing

Utilize Transfer Pricing is an important strategy for businesses looking to increase their profits. Multinational companies generally use the method of determination Transfer Pricing to minimize their tax liability by distributing tax liabilities across jurisdictions at

low tax rates. By taking advantage of these tax rate differences, companies can effectively optimize their revenue while reducing their overall tax burden. As a result, the determination of Transfer Pricing serves as an invaluable tool in tax planning, which can contribute significantly to improving a company's profitability (Pondrinal & Sari, 2023). Calculation process Transfer Pricing This can be done by analyzing the ratio between the total receivables owned by the company and receivables that have a special relationship, as explained by (Panjalusman et al., 2018).

2.4 Debt Covenant

Debt covenant or debt agreement refers to an agreement made between the borrowing party and the lending party, which stipulates certain conditions that both parties must comply with. These terms are binding and cannot be violated or ignored by either party, in order to ensure the smooth running of financial relations between them. Companies with large debt obligations often face the risk of violating the terms set out in their loan agreements. This phenomenon can be clarified by applying the theory of Debt Covenant, a concept in positive accounting theory, as discussed by experts in the field (Watts & Zimmerman, 1990). Determining the accounting procedures that managers will use to increase the company's profits is an opportunity to Transfer Pricing. Through Transfer Pricing, managers have the goal of reducing the tax burden so that the company's profits increase, so that the company can avoid violating the agreed credit limits. Research that has been conducted by (Nasrah, 2024), (Salsabila et al., 2023) and (Ashali, 2024) states that debt covenant affect transfer pricing. Taking this into account, the following hypothesis can be developed:

H1: Allegedly, debt covenant has a positive effect on transfer pricing.

2.5 Tunnelling Incentive

According to the agency theory, "the relationship between a company and its owners provides an opportunity for the controlling shareholder to control all the assets and resources owned by the company". This transfer can occur through the sale of assets, the granting of debts or loans, and a variety of other means. However, this does not necessarily imply that the majority shareholder or controlling party transfers assets by issuing shares that may cause dilution of ownership or by engaging in other financial actions that may adversely affect minority shareholders or other investors who are not directly involved in the decision . Increase Tunnelling Incentive will have a positive impact on Transfer Pricing (N. Rahmawati & Mulyani, 2020). Research that has been carried out by (Prapanca, 2024) (Mineri & Paramitha, 2021) (Choirunnisa et al., 2022) stated Tunneling Incentive auspicious transfer pricing. Based on these findings, the following hypotheses can be formulated for further development:

H2: Allegedly, tunnelling incentives have a positive effect on transfer pricing.

2.6 Bonus Mechanism

Based on positive accounting theory, the bonus mechanism is closely related to the company's profit performance and has a very important role in providing incentives to directors or managers. This allows them to influence or manage the company's profits, with the aim of increasing the compensation or income they receive as part of the reward system implemented. The bonus mechanism is intended to provide incentives to the board of directors or management, encouraging them to do the best of their ability, such as taking advantage of direct income transfers or using better revenue transfer methods. The

more profits a company gets, the better the reputation of the board of directors in the eyes of shareholders. Research that has been conducted by (Ayem & Ningsih, 2021) (Choirunnisa et al., 2022) (Denny et al., 2024) explain Bonus Mechanism has a positive effect on Transfer Pricing. Taking this into account, the following hypothesis can be developed:

H3: Allegedly, bonus mechanism has a positive effect on transfer pricing

2.7 Tax Minimization

When multinational companies prioritize tax minimization, these actions can have an impact on the strategies they implement in determining Transfer Pricing related to debt provisions. Global companies have the potential to lower the amount of tax payable in countries with higher tax rates by maintaining a healthy balance in their financial ratios as well as ensuring a well-managed cash flow. This strategy allows companies to minimize their tax payments, improve their cash flow position, and ensure the availability of sufficient funds to pay off debts and avoid default debt covenant. Study conducted by (Rahma & Wahjudi, 2021), (Azzuhriyyah & Kurnia, 2023) and (S. A. Rahmawati & Machdar, 2024) revealed that the implementation of tax minimization can act as a variable in influencing the positive relationship between debt covenant and price transfer.

One approach that can be used to reduce tax liability is to implement a tunneling strategy. This strategy involves the process by which companies move their profits from jurisdictions that have higher tax rates to jurisdictions that have lower tax rates, which in turn lowers the amount of tax liability they have to pay overall. The existence of a motive Tax Minimization powerful ones can intensify the impact Tunnelling Incentive at Transfer Pricing. The greater the focus on Tax Minimization, the more likely the company is to be affected by Tunnelling Incentive and move to practice Transfer Pricing aggressive (N. Rahmawati & Mulyani, 2020). Research conducted by (S. A. Rahmawati & Machdar, 2024), (Mardiana & Badjuri, 2023) and (Azzuhriyyah & Kurnia, 2023) indicates that the Tax Minimization can play a role in strengthening the positive relationship between Tunnelling Incentive and the practice of determination Transfer Pricing.

Based on the bonus plan hypothesis, "managers will usually choose an accounting method that allows revenue to be recognized in the current period even though it should be recognized in the future, with the aim of increasing their chances of earning bonuses". This is especially true when the amount of bonus they receive depends on the reported net profit, the manager will try to report the highest profit possible in order to get a bigger bonus. On the other hand, the goal for tax minimization can influence decisions in choosing metrics to measure financial performance and worsen the implementation of transfer pricing practices. Research conducted by Rahma and Wahjudi (2021), Nasrah (2024), and Dakal (2020) stated that "tax minimization can moderate the positive influence of the bonus mechanism on transfer pricing". Based on these findings, a hypothesis can be developed that focuses on:

H4: Allegedly, tax minimization moderates the positive influence of debt covenants on transfer pricing.

H5: Allegedly, tax minimization moderates the positive effect of tunnelling incentives on transfer pricing.

H6: Allegedly, tax minimization moderates the positive influence of the bonus mechanism on transfer pricing.

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## 3. Methods

3.1 Research Design

In this study, quantitative data analysis was carried out on 83 energy supply companies listed on the Indonesia Stock Exchange (IDX) during the period 2017 to 2023. Secondary data is collected from various related sources to gather the necessary information. Moderation regression analysis was used to investigate whether there was any moderation effect on the relationship between the variables studied, while panel data regression was applied to explore the reciprocal relationship between the variables. Analysis was conducted using the EViews version 12 application.

3.2 Variable Research and Measurement

The operational definitions and measurements of variables in this study can be explained in Table 1.

**Table 1.** Variable Research and Measurement

| No. | Variable | Definition | Indicators |
|---|---|---|---|
| 1. | Transfer pricing | Transfer pricing is a method to optimize profits by determining the price of goods or services offered by other divisions of the organization in the same company (Rahma & Wahjudi, 2021). | $= \frac{\text{Related Receivables}}{\text{Total Receivables}}$ (Azzuhriyyah & Kurnia, 2023) |
| 2. | Debt Covenant | Debt Covenant is a debt contract between the debtor and the creditor, which has a limit with the aim of maintaining the creditor's ability to pay his debt (Watts & Zimmerman, 1990). | $= \frac{\text{Total Liabilities}}{\text{Total Asset}}$ (Aryati & Harahap, 2021) |
| 3. | Tunnelling Incentive | Tunnelling Incentive is when major shareholders use the company's profits and assets for their own personal gain. (Chalimatussa'diyah et al., 2020). | $= \frac{\text{Total Foreign Shares}}{\text{Total Shares}}$ (Rahma & Wahjudi, 2021) |
| 4. | Bonus Mechanism | Bonus mechanism is a tactic used by managers to increase their bonuses by trying to increase the company's profits (Herman et al., 2023). | $= \frac{\text{Net Profit}_{t}}{\text{Net Profit}_{t-1}}$ (Darmawati & Muslichah, 2022) |
| 5. | Tax Minimization | Tax minimization is a strategy to reduce tax liability by shifting a business's income and expenses to affiliated businesses in countries with lower tax rates (Mardiana & Badjuri, 2023). | $= \frac{\text{Total Tax Expense}}{\text{Profit Before Tax}}$ (Devi & Suryarini, 2020) |

## 4. Results and Discussion

In this study, a purposive sample selection approach is applied. This approach specifies certain criteria for obtaining a sample that can describe the relevant conditions. The previously established criteria, which included 49 research statistical points and 7 groups related to strength, have been successfully accumulated. The standards are further applied in conjunction with the selection of companies that will form the research sample:

a. Companies engaged in the energy sector and listed on the Indonesia Stock Exchange during the period 2017 to 2023
b. Companies that operate in the energy sector and publicly publish financial statements in the period between 2017 and 2023
c. A company in the energy sector that owns shares controlled by a foreign party with a minimum percentage of 20% during 2017 to 2023
d. Companies engaged in the energy sector and managed to record profits or profits in the period 2016 to 2023section presents the results of the research analysis.

4.1 Descriptive Statistics

The main focus of quantitative research methodologies such as descriptive statistical analysis involves collecting sample data and calculating various significant measures of the research variables.

**Table 2**. Descriptive Statistics of Research

| | TP | DC | TI | BM | TM |
|---|---|---|---|---|---|
| Mean | 0.379382 | 0.338737 | 0.554522 | 2.336390 | 0.210718 |
| Median | 0.310700 | 0.328600 | 0.590300 | 0.883000 | 0.223600 |
| Maximum | 0.994300 | 0.783800 | 0.946100 | 31.06440 | 0.690200 |
| Minimum | 0.002400 | 0.001600 | 0.292200 | 0.018100 | 0.000100 |
| Std. Dev. | 0.308484 | 0.210504 | 0.192424 | 4.826393 | 0.149041 |
| Skewness | 0.598450 | 0.045453 | 0.142052 | 4.694809 | 0.807101 |
| Kurtosis | 2.157373 | 2.262836 | 1.845677 | 27.25431 | 4.498072 |
| Jarque-Bera | 4.374456 | 1.126336 | 2.885233 | 1381.057 | 9.901816 |
| Probability | 0.112227 | 0.569402 | 0.236309 | 0.000000 | 0.007077 |
| Sum | 18.58970 | 16.69810 | 27.17160 | 114.4831 | 10.32520 |
| Sum Sq. Dev. | 4.567786 | 2.126970 | 1.777291 | 1118.115 | 1.066239 |
| Observations | 49 | 49 | 49 | 49 | 49 |

Source: EViews 12 Output (2024)

Based on the results of the previous descriptive statistics, we can draw the following conclusions:

1) The variable related to transfer pricing (Y) recorded the lowest value of 0.002400, which was recorded by PT Pelita Samudera Shipping Tbk. in 2023. On the other hand, the highest value for this variable reached 0.994300, which was achieved by PT Sumber Energi Andalan Tbk. in 2021. The average value of the transfer pricing variable was 0.379382, which illustrates that, overall, the seven companies sampled had a tendency to do transfer pricing with an average proportion of around 37.93%.
2) The debt covenant variable (X1) shows a minimum value of 0.001600 recorded by PT Sumber Energi Andalan Tbk. in 2020. On the other hand, the highest value in the debt covenant variable was recorded at 0.783800 obtained by PT TBS Energi Utama Tbk. in 2019. Meanwhile, the mean value for the debt covenant variable is 0.338737, which illustrates that overall, the seven companies in this sample have an average debt covenant implementation of 33.87%.
3) In 2017, PT Pelita Samudera Shipping Tbk. had a minimum value of 0.292200 for the tunnelling incentive variable (X2), while PT Sumber Energi Andalan Tbk. had a maximum value of 0.946100. The mean value for the tunnelling incentive variable is

0.554522 which can show that the 7 sample companies have an average tunneling incentive of 55.45%.

4) The variable bonus mechanism (X3) recorded the lowest value of 0.018100 received by PT Indo Straits Tbk. in 2020. In contrast, in 2021, the company obtained the highest score of 31.06440 from the variable bonus mechanism. The mean value for the bonus mechanism variable was recorded at 2.336390, which illustrates that from the seven sample companies, the average rate of application of the bonus mechanism reached around 233%.
5) The tax minimization variable (Z) shows the lowest value of 0.000100 received by PT Sumber Energi Andalan Tbk. in the 2017-2018 period, while the highest value for this variable is recorded at 0.690200 received by PT Indo Straits Tbk. in 2023. Based on calculations, the average value for the variable of tax liability reduction is 0.210718, which means that overall, the average tax minimization applied by the seven companies in this sample reaches around 21.07%.

4.2 Panel Data Regression Estimation

**Table 3**. Conclusion of Estimation Model

| No. | Test | Model | Prob. Value | Result |
|---|---|---|---|---|
| 1. | Chow | CEM Vs FEM | 0.0000 | FEM |
| 2. | Hausman | REM Vs FEM | 0.0000 | FEM |
| 3. | Lagrange Multiplier | CEM Vs REM | 0.0000 | REM |

Source: EViews 12 Output (2024)

Based on the table 3 findings obtained from the three trials, it can be concluded that FEM (Fixed Effects Model) will be used in hypothesis testing as well as in the analysis of regression equations on panel data. Because of this result, the classic assumption test will be carried out.

4.3 Classic Assumption Test

4.3.1 Multicollinearity Test

When regression analysis is performed for more than one independent variable, this test should be performed. Because there is a strong relationship between independent variables, based on the results of the analysis of the coefficients, the data obtained cannot be used for further interpretation. Therefore, it can be concluded that there are no problems related to multicollinearity in this model, as long as there is no correlation value between independent variables that exceeds the threshold of 0.85 (Basuki, 2021).

**Table 4**. Multicollinearity Test Result

| | DC | TI | BM | TM |
|---|---|---|---|---|
| DC | 1.000000 | 0.212530 | 0.093995 | 0.414604 |
| TI | 0.212530 | 1.000000 | 0.217920 | 0.418990 |
| BM | 0.093995 | 0.217920 | 1.000000 | 0.052081 |
| TM | 0.414604 | 0.418990 | 0.052081 | 1.000000 |

Source: EViews 12 Output (2024)

Since no independent variable exceeds the value of 0.85, it can be deduced from the data in the table 4 that there is no multicollinearity problem among the variables. This shows that the relationship between the independent variables in this study remains within acceptable limits and does not unduly affect the model results.

4.3.2 Heteroscedasticity Test

This heteroscedasticity test determines whether the model's residual data shows constant differences. Although the existence of heteroscedasticity does not compromise the consistency and unbiased nature of the estimation results, it does cause inefficiencies in the estimation process. Furthermore, the existence of heteroscedasticity can make the results of the t-test and F-test ineffective and misleading.

**Table 5**. Heteroscedasticity Test with Glejser Result

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|---|---|---|---|---|
| C | 0.197944 | 0.057258 | 3.457035 | 0.0014 |
| DC | -0.108087 | 0.086769 | -1.245681 | 0.2209 |
| IT | -0.142251 | 0.084486 | -1.683710 | 0.1009 |
| BM | 0.006173 | 0.006719 | 0.918825 | 0.3643 |
| DC_TM | -0.104668 | 0.192683 | -0.543213 | 0.5903 |
| TI_TM | 0.165189 | 0.096339 | 1.714658 | 0.0950 |
| BM_TM | -0.031483 | 0.024125 | -1.304977 | 0.2002 |

Source: EViews 12 Output (2024)

There is no probability lower than 0.05 on the independent variable indicates that no heteroscedasticity problem was detected in the residual data generated by the panel data regression model, based on the results of table 5.

4.4 Moderation Regression Analysis (MRA)

Regression with moderation variables is tested by interaction test. The interaction test is the application of multiple linear regression when the equation involves an interaction factor that is the result of multiplication between two or more independent variables.

**Table 6**. Moderation Regression Analysis Result

| Variabel | Coeficient | Std. Error | t-Statistic | Prob. |
|---|---|---|---|---|
| C | 0.182640 | 0.127530 | 1.432135 | 0.1607 |
| DC | 0.439119 | 0.193056 | 2.274570 | 0.0290 |
| TI | -0.207768 | 0.187885 | -1.105826 | 0.2761 |
| BM | 0.046527 | 0.015037 | 3.094253 | 0.0038 |
| DC_TM | 1.228925 | 0.427404 | 2.875322 | 0.0067 |
| TI_TM | 0.053859 | 0.215180 | 0.250297 | 0.8038 |
| BM_TM | -0.109933 | 0.054067 | -2.033264 | 0.0494 |

Source: EViews 12 Output (2024)

From the table 6, model equation is obtained as follows:

$$TP = 0.182640 + 0.439119 * DC - 0.207768 * TI + 0.046527 * BM + 1.2289 * DC\_TM + 0.053859 * TI\_TM - 0.109933 * BM\_TM + e$$

From the table 3, it can be seen that:

1) The constant value is 0.182640, if there is no change to the debt covenant, tunneling incentive, and bonus mechanism included in the independent variables, and there is also no moderation of tax minimization, then the value of the transfer pricing variable is 0.182640 as a constant value for the dependent variable.
2) The variable coefficient for debt covenants was recorded at 0.439119, which indicates that any increase in the number of debt covenants will have an impact on the transfer pricing increase by that number, which is 0.439119.
3) The variable coefficient for tunnelling incentives has a value of -0.207768, which indicates that the addition of tunnelling incentives will have an effect on decreasing transfer pricing by this value, which is -0.207768.

4) The variable coefficient for the bonus mechanism is recorded at 0.046527, which means that any increase in the bonus mechanism will have an impact on an increase in transfer pricing by 0.046527.
5) The variable coefficient of debt covenant moderated by tax minimization reached 1.228925, which indicates that any additional debt covenant affected by the tax minimization policy will lead to an increase in transfer pricing with a value of 1.228925.
6) The variable coefficient of tunnelling incentives with tax minimization moderation was recorded at 0.053859, which indicates that any additional tunnelling incentive influenced by the tax minimization strategy will have an impact on an increase in transfer pricing of 0.053859.
7) The value of the variable coefficient of the bonus mechanism with tax minimization moderation is -0.109933, meaning that every addition of the bonus mechanism moderated by tax minimization will affect the decrease in transfer pricing by 0.109933.
8) e = error of estimation.

4.5 Hypothesis Test

4.5.1 F Test Result

To assess the adequacy of the model in explaining the relationship between independent and dependent variables, the F-test was used. This test evaluates the validity of the hypothesis related to the regression coefficient simultaneously.

**Table 7**. F Test Result

| | | | |
|---|---|---|---|
| R-squared | 0.849860 | Mean dependen var | 0.379382 |
| Adjusted R-squared | 0.799813 | S.D. dependen var | 0.308484 |
| S.E. of regresion | 0.138023 | Akaike info criterion | -0.900487 |
| Sum squared resid | 0.685809 | Schwarz criterion | -0.398576 |
| Log likelihood | 35.06194 | Hannan-Quinn criter. | -0.710063 |
| F-statistic | 16.98131 | Durbi-Watson stat | 1.898397 |
| Prob(F-statistic) | 0.000000 | | |

Source: EViews 12 Output (2024)

With a significance level of 0.05, the calculated F statistic from the data presented in the previous table is 16.98131. In addition, the degree of freedom for the numerator (df1), calculated as the number of groups (5) minus one, is 4, and the degree of freedom for the denominator (df2), which is determined by subtracting the number of groups from the total sample size (49), is 44. The fact that the F statistic exceeds the F table value of 3.78 and that the probability associated with the F statistic is less than 0.05 indicates that the independent variables simultaneously have a significant influence on the transfer pricing determination.

4.5.2 T-test Result

The t-test is used to evaluate whether, within the framework of a predetermined model, the independent variable exerts a significant impact on the overall dependent variable in the panel analysis. In general, the t-test compares the estimated value of the regression coefficient with its standard error value to see if the difference is large enough to be considered statistically significant.

**Table 8**. T-test Result

| Variabel | Coeficient | Std. Error | t-Statistic | Prob. |
|---|---|---|---|---|
| C | 0.182640 | 0.127530 | 1.432135 | 0.1607 |
| DC | 0.439119 | 0.193056 | 2.274570 | 0.0290 |
| TI | -0.207768 | 0.187885 | -1.105826 | 0.2761 |
| BM | 0.046527 | 0.015037 | 3.094253 | 0.0038 |
| DC_TM | 1.228925 | 0.427404 | 2.875322 | 0.0067 |
| TI_TM | 0.053859 | 0.215180 | 0.250297 | 0.8038 |
| BM_TM | -0.109933 | 0.054067 | -2.033264 | 0.0494 |

Source: EViews 12 Output (2024)

The following information can be retrieved from the data presented in the figure 6:

1) The p-value for the debt covenant is 0.0290, which is below the threshold of 0.05, and the statistical value of t is 2.274570, which exceeds the table value of 1.680230. In addition, a substantial positive effect on the transfer pricing strategy is indicated by a coefficient of 0.439119.
2) With a p value of 0.2761, which is greater than 0.05, the t-statistic for tunneling incentives is recorded at -1.105826, which is below the table value of 1.680230. Furthermore, a coefficient of -0.207768 indicates that tunneling incentives do not have a significant impact on the transfer pricing strategy.
3) The p-value for the bonus method is 0.0038, which is below the threshold of 0.05, and the t-statistic is 3.094253, which exceeds the table value of 1.680230. This shows a substantial positive influence on the transfer pricing calculation, as supported by a coefficient of 0.046527.
4) The p-value of 0.0067, which is less than 0.05, and the t-statistic for the moderation effect of tax minimization on the relationship between debt covenant and transfer pricing, which is 2.875322, which exceeds the table value of 1.680230, shows that tax minimization moderates the debt covenant effect on the transfer pricing strategy. The expected coefficient of 1.228925 further supports this moderation.
5) The p-value of 0.8038, which is greater than 0.05, and the t-statistic for tax minimization moderation on the effect of tunneling incentives, was recorded at 0.250297, lower than the table value of 1.680230. The resulting coefficient of 0.053859 shows that tax minimization does not moderate the influence of tunneling incentives on transfer pricing decisions.
6) Given that the probability is 0.0494, which is significantly lower than the threshold of 0.05, the t-statistic for the moderation effect of tax minimization on the relationship between the bonus mechanism and the transfer pricing determination is calculated at -2.033264, which is lower than the critical t-value of 1.680230 found in the table. These results, together with a coefficient of -0.1109933, show that tax minimization does not significantly change the relationship between the bonus mechanism and the practice of setting transfer pricing.

4.5.3 Coefficient Determination ($R^2$)

The main metric in regression analysis is the determination coefficient, which measures how well the regression model takes into account the relationship between independent (explainer) and dependent (response) variables. These statistics provide an overview of how effectively the model predicts dependent variables using data from independent variables, which shows the proportion of variance in dependent variables that can be explained by changes in independent variables.

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**Table 9**. Adjusted R2 Result

| | | | |
|---|---|---|---|
| R-squared | 0.849860 | Mean dependen var | 0.379382 |
| Adjusted R-squared | 0.799813 | S.D. dependen var | 0.308484 |
| S.E. of regresion | 0.138023 | Akaike info criterion | -0.900487 |
| Sum squard resid | 0.685809 | Schwarz criterion | -0.398576 |
| Log likelhood | 35.06194 | Hanan-Quin criter. | -0.710063 |
| F-statistic | 16.98131 | Durbi-Watson stat | 1.898397 |
| Prob(F-statistic) | 0.000000 | | |

Source: EViews 12 Output (2024)

Based on the figure 7, an Adjusted R-squared value of 0.7998 was obtained, which shows that about 79.98% of the variations in the data can be explained using the model applied in this analysis. This reflects the extent to which the model can explain the patterns contained in the analyzed data, which shows that debt covenants, tunnelling incentives and bonus mechanisms affect 79.98% of transfer pricing, and other factors outside the study affect 20.2%.

4.6 Discussion of Research Result

Based on the figure 6, it is possible to accept the first hypothesis that the variables of the debt agreement have a positive impact on Transfer Pricing. Related to positive accounting theory, hypotheses regarding debt related to agreements (Watts & Zimmerman, 1990) When the company experiences an increase in debt ratio that will cause a violation Debt Covenant then the management will carry out Transfer Pricing and prevent a higher debt ratio, as well as prevent violations Debt Covenant. Transfer pricing done with related companies can help maintain debt ratios by reducing costs and significantly increasing profits. Other research conducted by (Nasrah, 2024), (Salsabila et al., 2023) and (Ashali, 2024) also reinforces these findings, which suggest that "the Debt Covenant has a significant influence in influencing Transfer Pricing positively".

The second hypothesis, which states that the tunnelling incentive variable has a positive influence on practice Transfer Pricing, is unacceptable based on the results of the analysis carried out. This indicates that Transfer Pricing cannot be determined based on the company's foreign ownership. This is because Transfer Pricing It can cause disputes between majority and minority shareholders and affect business operations. Additional research by (Amanah & Suyono, 2020), (Nuraisah et al., 2024)and (Khoirunisa & Wahyudin, 2022) that Tunnelling Incentive cannot affect Transfer Pricing.

The third hypothesis states that Bonus Mechanism have a positive impact on the implementation of Transfer Pricing acceptable. In accordance with the theory of positive accounting regarding the bonus plan put forward by (Watts & Zimmerman, 1990)"Management tends to take steps that can manipulate profits through Transfer Pricing with the aim of increasing the remuneration received by directors and managers". These findings are reinforced by other studies, such as those conducted by (Ayem & Ningsih, 2021) (Choirunnisa et al., 2022)and (Denny et al., 2024) which reveals that "Bonus Mechanism can have a significant influence on the implementation of Transfer Pricing".

The fourth hypothesis states that the effort to Tax Minimization has an impact on practice Transfer Pricing through moderate influence. Aligned with the positive accounting theory hypothesis Debt Covenant (Watts & Zimmerman, 1990) When the company experiences an increase in debt ratio that will cause a violation Debt Covenant then the management will carry out Transfer Pricing and prevent a higher debt ratio, as

well as prevent violations Debt Covenant. To reduce taxes, businesses reduce taxable income. This can improve financial ratios and prevent violations of debt clauses. Findings from additional research conducted by (Rahma & Wahjudi, 2021), (Azzuhriyyah & Kurnia, 2023)and (S. A. Rahmawati & Machdar, 2024) shows that "the implementation of tax minimization strategies can play an important role in moderating the relationship between debt obligations (debt covenants) and Transfer Pricing (Transfer Pricing)".

It is impossible to accept the fifth hypothesis, which states that tax minimization strategies can also reduce the positive relationship between debt agreements and transfer pricing. This implies that the foreign ownership of the company cannot be used as a basis for calculating the transfer price, because Transfer Pricing It can also trigger conflicts between majority and minority shareholders and affect the company's operational activities. The company conducts Tax Minimization through Transfer Pricing However, the difference in tax regulations between countries is a factor that needs to be reconsidered. This statement is supported by the results of other research conducted by (Mardiana & Badjuri, 2023), (Hariyani & Ayem, 2021)and (Mintorogo & Djaddang, 2020) which shows that "the tax minimization strategy is not able to moderate the impact of tunnelling incentives on price shifting practices (Transfer Pricing)".

The sixth hypothesis states that tax minimization efforts can moderate positive impacts Bonus Mechanism against the practice of price transfer cannot be proven or accepted. Aligned with positive accounting theory of the bonus plan hypothesis (Watts & Zimmerman, 1990) management conducts profit manipulation actions through Transfer Pricing to improve rewards that the directors and managers will get, but the efforts of Tax Minimization not always through bonus mechanism, Because the remuneration received by management and directors will always depend on profit obtained. Therefore, companies tend to choose to use Tax Planning effectively which is able to affect the performance of the targeted company. Research conducted by (Amanah & Suyono, 2020), (Ayem & Ningsih, 2021)and (Aryati & Harahap, 2021) also provided evidence to support this. Based on their findings, "the concept of tax minimization cannot function as an intermediary factor that affects the relationship between Bonus Mechanism and practice Transfer Pricing".

## 5. Conclusion

After conducting research on 49 data of energy companies listed on the Indonesia Stock Exchange (IDX) over the last seven years, starting from 2017, 2018, 2019, 2020, 2021, 2022, and 2023, the results of the research on the influence of debt covenants, tunnelling incentives, and bonus mechanism on transfer pricing with tax minimization moderation can be concluded (1). Debt covenants can positively affect transfer pricing, (2). Tunnelling incentives cannot affect transfer pricing, (3). The bonus mechanism can positively affect transfer pricing, (4). Tax minimization can moderate the positive influence of debt covenants on transfer pricing, (5). Tax minimization cannot moderate the influence of tunnelling incentives on transfer pricing, (6). Tax minimization cannot moderate the positive influence of the bonus mechanism on transfer pricing.

The independent variables studied in this study were limited to bonus schemes, tunneling incentives, and debt agreements. However, it is possible that other factors may also play a role in shaping transfer pricing strategies within the energy sector. The number of company samples in this study is relatively small, because there are still many companies that do not meet the research criteria.

Future research should consider including additional independent variables, such as the size of the company, its profitability, and factors such as thin capitalization, to improve the robustness and completeness of the research findings. Further research is expected to increase the number of samples of companies in their research by changing the research object outside the energy sector, because the more samples obtained, the more accurate the results obtained.

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