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Corporate Governance, Asset Structure, Institutional and Managerial Ownership on Real Earnings Management Indonesia Energy Firms

Heri Dwi Agung Laksono[1*], Agrianti Komalasari[2]

University of Lampung, Lampung, Indonesia[1,2]

***Corresponding author:** heridwiagunglaksono@gmail.com |

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Abstract

Purpose: This study examines the effect of corporate governance, asset structure, institutional ownership, and managerial ownership on Real Earnings Management (REM) in energy sector companies listed on the Indonesia Stock Exchange during 2020–2024.

Research Methodology: A quantitative approach is applied using panel data regression with the Fixed Effect Model (FEM). The sample consists of 47 energy companies selected through purposive sampling, producing 235 observations. REM is measured using abnormal production costs. Independent variables include Corporate Governance (CG), Asset Structure (AS), Institutional Ownership (IO), and Managerial Ownership (MO). Data are obtained from annual reports and audited financial statements and analyzed using EViews, supported by Chow, Hausman, and LM tests.

Results: The findings show that asset structure has a positive and significant effect on REM. Meanwhile, corporate governance, institutional ownership, and managerial ownership do not significantly affect REM. The model explains 63.08% of REM variation (Adjusted R^2 = 0.6308), indicating strong explanatory power.

Conclusions: Real earnings management in Indonesian energy companies is primarily driven by firm resource characteristics rather than governance or ownership mechanisms, supporting Resource Dependence Theory.

Contributions: This study integrates Agency Theory and Resource Dependence Theory, focuses on the under-researched energy sector, and provides an integrated model of governance, ownership, and asset structure in explaining REM behavior.

Limitations: The study is limited to one sector, a five-year period, a single REM proxy, and board size as the sole governance indicator, which may limit generalizability.

Keywords: *Asset Structure, Corporate Governance, Institutional Ownership, Managerial Ownership, Real Earnings Management*

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1. Introduction

High-quality earnings information plays a crucial role in supporting investment decision-making, evaluating company performance, and reducing information asymmetry between management and

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stakeholders. Financial statements are the primary source of information used by investors, creditors, and regulators to assess a company's economic condition. Therefore, earnings quality is a crucial indicator in assessing the reliability of financial reporting because it reflects a company's true economic performance, supports efficient resource allocation, and contributes to increased firm value (Tulcanaza-Prieto & Lee, 2022). Furthermore, reliable earnings information can enhance market confidence and reduce uncertainty in the investment decision-making process (Yuan et al., 2022).

Although earnings quality is crucial, managers often face pressure to achieve specific financial targets, creating incentives to manipulate reported earnings. One common practice is earnings management , particularly Real Earnings Management *(*REM), which is conducted through a company's operational activities rather than through accounting policy choices. Real earnings management has received increasing attention because it directly affects a company's cash flow and business activities, yet is relatively more difficult to detect by auditors and other external parties (Abad, Cutillas-Gomariz, Sánchez-Ballesta, & Yagüe, 2018 Ali, & Kamardin, 2018). Compared with accrual-based earnings management, REM is generally considered more difficult to observe because it is embedded in a company's normal business activities and operational decisions (Eng, Fang, Tian, Yu, & Zhang, 2019) .

The issue of real earnings management is particularly relevant in the energy sector. Energy companies generally operate in a highly dynamic environment characterized by fluctuating commodity prices, significant capital expenditure requirements, funding constraints, and high performance pressure (Ichdan, & Maryani, 2024El, & Alami, 2021). These conditions can push managers to modify operational decisions to maintain reported earnings stability and meet market expectations (Anagnostopoulou, & Tsekrekos, 2017 ; Khuong, Ha, & Thu, 2019). Furthermore, post-pandemic economic conditions and global energy market uncertainty are increasing pressure on management to maintain financial performance and earnings consistency.

Corporate governance has long been recognized as an important mechanism for mitigating agency conflicts and curbing opportunistic management behavior (Olayinka, & Kaka, 2025Alie, Fitri, Desmon, Nasir, & Meidasari, 2024). An effective governance structure can strengthen oversight, increase transparency, and enhance accountability, thereby reducing the opportunities for managers to manipulate earnings. Previous research has shown that effective boards and governance mechanisms can improve financial reporting quality and limit managerial opportunistic behavior through stronger oversight processes (Mellado & Saona, 2020). Furthermore, board characteristics and governance quality have also been shown to influence various corporate outcomes, including the credibility of financial reporting and market confidence (Li et al., 2022).

Asset structure is another factor that potentially influences real earnings management. Companies with a higher proportion of fixed assets generally face stricter scrutiny from creditors because these assets can be used as collateral to obtain external funding. Therefore, stronger external oversight has the potential to reduce management's discretion in taking opportunistic actions (Budiarti, Prajanto, & Dian, 2024). However, companies with substantial fixed assets also have greater operational flexibility and production capacity, potentially creating opportunities for real earnings management through production decisions and resource utilization (Anagnostopoulou & Tsekrekos, 2017).

Institutional ownership also plays a crucial role in corporate oversight mechanisms. Institutional investors generally possess greater resources, expertise, and incentives than individual investors to monitor management (Debnath & Chowdhury, 2021). This oversight role can improve the quality of financial reporting and reduce opportunistic management behavior by increasing oversight of corporate decisions (Al-Duais, Malek, Abdul-Hamid, & Almasawa, 2022). However, the impact of institutional ownership can vary depending on the institutional investor's investment objectives and investment horizon. Some institutional investors may be more focused on achieving short-term performance targets than on improving long-term governance.

Managerial ownership is a governance mechanism that can align the interests of managers and shareholders. When managers own company shares, they directly experience the consequences of their decisions, thus being more motivated to create long-term value and reducing earnings manipulation (Mellado & Saona, 2020). From an agency theory perspective, managerial ownership can mitigate conflicts of interest because managers share in the benefits and risks of company decisions (Khuong et al., 2019). However, excessively high levels of managerial ownership can also lead to an entrenchment effect, potentially weakening the effectiveness of management oversight and accountability (Mellado & Saona, 2020).

Previous studies have shown inconsistent results regarding the factors influencing real earnings management. Some studies found that corporate governance and ownership structure can limit earnings manipulation practices (Debnath & Chowdhury, 2021), while others found insignificant or even opposite effects (Al-Duais et al., 2022 Mellado and Saona, 2020). Similarly, empirical evidence regarding the effect of asset structure on earnings management continues to show mixed results, indicating that the relationship may be influenced by industry characteristics and company-specific conditions (Li et al., 2022 Anagnostopoulou and Tsekrekos, 2017). These inconsistent findings indicate a research gap that requires further study.

This study makes several contributions. First, it integrates Agency Theory and Resource Dependence Theory to explain managerial behavior and the effectiveness of monitoring mechanisms. Agency Theory is used to explain conflicts of interest between managers and shareholders, while Resource Dependence Theory emphasizes the strategic role of organizational resources in shaping managerial decisions and corporate behavior (Akram, Abrar, & Haq, 2022). Second, this study focuses on energy sector companies, which have received relatively little research in the Indonesian earnings management literature, despite their strategic role in the economy and unique operational characteristics. Third, this study simultaneously examines corporate governance, asset structure, institutional ownership, and managerial ownership within a single, integrated analytical framework, providing a more comprehensive understanding of the determinants of real earnings management.

Based on the above description, this study aims to analyze the influence of corporate governance, asset structure, institutional ownership, and managerial ownership on real earnings management in energy sector companies in Indonesia during the period 2020–2024. The research findings are expected to contribute to the development of literature on earnings management and provide input for investors, regulators, and corporate stakeholders in improving the quality of corporate governance and the reliability of financial reporting.

2. Literature Review and Hypothesis/es Development

2.1 Agency Theory

Agency theory explains the contractual relationship between principals and agents, where managers are authorized to manage company resources on behalf of shareholders. Agency conflicts arise because managers may have personal interests that differ from shareholder goals, thus creating agency costs and information asymmetry between internal parties and external stakeholders (Tulcanaza-Prieto & Lee, 2022). The separation of ownership and control creates opportunities for managers to prioritize personal interests over maximizing shareholder welfare, especially when monitoring mechanisms are ineffective (Mahrani & Soewarno, 2018).

In the context of financial reporting, information asymmetry provides managers with the opportunity to manipulate earnings to obtain higher compensation, fulfill contractual obligations, avoid regulatory oversight, or maintain the company's reputation in the market (Abad, Cutillas-Gomariz, Sánchez-Ballesta, & Yagüe, 2018 Ali, & Kamardin, 2018). Earnings management can occur when managers possess private information that is not fully known to investors or other external parties, allowing them to influence reported performance to achieve personal or organizational goals (Mellado &

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Saona, 2020). Therefore, effective oversight mechanisms are needed to reduce opportunistic management behavior, suppress agency conflicts, and improve the quality of financial reporting (Akram et al., 2022).

Agency theory further suggests that corporate governance mechanisms function as essential monitoring instruments to mitigate agency conflicts and reduce managerial opportunism. Effective governance practices, including independent oversight and concentrated ownership structures, can strengthen monitoring quality and discourage managers from engaging in real earnings management. Institutional ownership is generally associated with stronger monitoring because institutional investors possess greater expertise, resources, and incentives to oversee managerial decisions. Likewise, managerial ownership aligns the interests of managers with those of shareholders by increasing managers' financial stake in the firm's long-term performance, thereby reducing incentives for opportunistic financial reporting. Consequently, stronger governance mechanisms and well-structured ownership arrangements are expected to constrain real earnings management and improve the credibility and transparency of financial reporting (Mellado and Saona, 2020 Akram et al., 2022).

2.2 Resource Dependence Theory

Resource Dependence Theory emphasizes the importance of an organization's relationship with its external environment in obtaining the resources necessary to maintain its survival and growth. Organizations rely on various external parties, such as investors, creditors, regulators, and business partners, for capital, legitimacy, information, expertise, and strategic support that can enhance its competitiveness and sustainability. This perspective explains that organizational behavior is influenced not only by internal governance mechanisms but also by access to external resources and the degree of dependence on the surrounding environment (Utami et al., 2021).

In the context of corporate governance, the board of commissioners serves not only as an oversight mechanism but also as a means of gaining access to external resources, strategic knowledge, and stakeholder networks that can enhance organizational effectiveness. Board members often have relationships with financial institutions, regulators, and the business community, which can strengthen the organization's legitimacy and improve the quality of corporate decision-making. Therefore, governance effectiveness is determined not only by internal control mechanisms but also by the quality of external networks and relationships with stakeholders, which can influence management behavior and corporate reporting practices (García et al., 2022).

2.3 Corporate Governance and Real Profit Management

Corporate governance is an oversight mechanism designed to reduce agency conflicts and increase accountability within an organization (Olayinka & Kaka, 2025). An effective governance structure can strengthen oversight of managerial decisions, increase transparency, and limit managers' opportunities for earnings manipulation (García et al., 2022). A strong governance system can also enhance the credibility of financial reports by ensuring that management actions align with shareholder interests (Mellado & Saona, 2020).

Based on Resource Dependence Theory, governance structures also provide access to external information, professional expertise, and oversight mechanisms from stakeholders. A board with extensive professional networks can increase transparency, facilitate information exchange, and create greater reputational pressure, thereby reducing opportunistic management behavior (Munir, 2021). Furthermore, effective board oversight has been shown to be associated with improved financial reporting quality and reduced earnings management practices across various institutional environments (García et al., 2022).

Various empirical studies have shown that effective governance mechanisms can reduce information asymmetry and improve the quality of financial reporting. Research by García et al. (2022) shows that stronger governance practices are associated with lower levels of earnings management.

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Therefore, the better the corporate governance, the lower the tendency for a company to engage in real earnings management.

H_1: Corporate governance has a negative effect on real earnings management.

2.4 Asset Structure and Real Profit Management

Asset structure reflects the proportion of fixed assets to a company's total assets and influences both financing decisions and the level of external oversight a company receives (Budiarti, Prajanto, & Dian, 2024Fachrian, & Hidayat, 2023). Companies with high fixed asset intensity generally face stricter scrutiny from creditors because fixed assets can be used as collateral to obtain external funding, thereby reducing information asymmetry between the company and lenders (Anagnostopoulou & Tsekrekos, 2017).

Greater supervisory pressure has the potential to limit management discretion and reduce opportunities for real earnings management. However, companies with substantial fixed assets generally have higher production capacity and greater operational flexibility, creating opportunities for earnings manipulation through production decisions, such as overproduction strategies (Li, Kannan, Rau, & Yang, 2022). Real earnings management practices through production activities are particularly relevant in asset-intensive industries because managers can influence reported earnings through changes in production levels and inventory policies (Eng, Fang, Tian, Yu, & Zhang, 2019 Roychowdhury, 2006).

Thus, asset structure is expected to influence real earnings management through the interaction between supervisory pressure and operational flexibility. Previous research indicates that fixed asset intensity has a significant influence on managerial incentives and operational decisions related to earnings management practices (Anagnostopoulou and Tsekrekos, 2017 Khuong, Ha, & Thu, 2019).

H_2: Asset structure has an effect on real earnings management.

2.5 Institutional Ownership and Real Earnings Management

Institutional investors possess superior resources, expertise, and analytical skills compared to individual investors, enabling them to monitor management more effectively (Debnath & Chowdhury, 2021). This oversight role can mitigate agency problems and improve the quality of financial reporting through closer scrutiny of managerial decisions (Al-Duais et al., 2022). Institutional investors also have strong incentives to preserve the value of their investments, thus reducing opportunistic management behavior (Yao et al., 2026).

However, institutional investors can also exert pressure on management to achieve short-term performance targets, particularly when investment evaluations are more oriented toward short-term financial results (Fan & Fu, 2020). Under these conditions, managers may be encouraged to engage in real earnings management to meet market expectations and maintain good performance indicators (Debnath & Chowdhury, 2021). This dual role of institutional ownership suggests that its influence on earnings management may depend on the institutional investor's investment orientation, monitoring effectiveness, and investment horizon.

Previous research has yielded mixed results. Some studies found that institutional ownership can mitigate earnings management practices through a strong monitoring function, while others suggest that institutional investor pressure can actually encourage short-term managerial behavior (Al-Duais et al., 2022). Therefore, institutional ownership is expected to influence actual earnings management practices.

H_3: Institutional ownership has a positive effect on real earnings management.

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2.6 Managerial Ownership and Real Earnings Management

Managerial ownership can align the interests of managers and shareholders because managers share the economic consequences of company decisions (Mellado & Saona, 2020). This alignment of interests can reduce agency conflicts and encourage managers to be more oriented towards creating long-term corporate value rather than short-term personal gain (Sari et al., 2025). The greater management's share ownership, the greater the tendency for managers to consider the long-term impact of their decisions on the company's sustainability.

Higher levels of managerial ownership generally reduce the incentive to manipulate earnings because managers share the financial consequences of such opportunistic actions (Mellado & Saona, 2020). Several studies have found that managerial ownership can strengthen the alignment of interests between management and shareholders and improve the quality of financial reporting (Fanani et al., 2020). However, if the proportion of managerial ownership is too large, an entrenchment effect can occur, which actually reduces the effectiveness of external oversight and management accountability (Mellado & Saona, 2020).

In general, empirical evidence suggests that managerial ownership tends to strengthen monitoring mechanisms by aligning interests and reducing managers' incentives to manipulate earnings (Liu et al., 2023). Therefore, the higher the managerial ownership, the lower the tendency for a company to engage in real earnings management.

H_4: Managerial ownership has a negative effect on real earnings management.

3. Research Methodology

3.1 Population, Sample, and Data

The population of this study includes all energy sector companies listed on the Indonesia Stock Exchange (IDX) during the 2020–2024 period. The research sample was determined using a purposive sampling method based on the following criteria: (1) energy sector companies consistently listed on the Indonesia Stock Exchange during the observation period; (2) companies not included in the special monitoring category by the Indonesia Stock Exchange; (3) companies that publish complete annual reports and financial statements; and (4) companies that have complete data for all research variables.

Based on these criteria, 47 companies were selected as research samples, with a total of 235 panel data observations (47 companies × 5 years). The data used were secondary data obtained from annual reports and audited financial statements published on the official website of the Indonesia Stock Exchange and the official websites of each company.

3.2 Measurement of Variables

The dependent variable in this study is Real Earnings Management (REM) which is proxied using abnormal production costs (Abnormal Production Cost/AbnPROD) according to the model developed by (Roychowdhury, 2006).

The independent variables consist of:

1. Corporate governance (CG), is proxied by the size of the board of commissioners which is measured based on the number of members of the board of commissioners.
2. Asset Structure (AS), measured using the ratio of fixed assets to the company's total assets.
3. Institutional Ownership (IO), measured based on the proportion of shares owned by institutions to the total shares outstanding.

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4. Managerial Ownership (MO), measured using the proportion of shares owned by management to the total shares outstanding

3.3 Data Analysis Techniques

Data analysis was conducted using panel data regression methods with the aid of EViews software. The regression model used in this study is formulated as follows:

$$\text{REM}_{it} = \alpha + \beta_1\text{CG}_{it} + \beta_2\text{AS}_{it} + \beta_3\text{MO}_{it} + \beta_4\text{IO}_{it} + \varepsilon_{it} \quad (1)$$

Formula (1) specifies the panel data regression model used to examine the effects of corporate governance, asset structure, managerial ownership, and institutional ownership on real earnings management. Where REM = Real Earnings Management, CG = Corporate Governance (board of commissioners), AS = Asset Structure, MO = Managerial Ownership, IO = Institutional Ownership, α = Constant, β = Regression Coefficient, ε = Error term.

The best panel regression model was selected using the Chow Test, the Hausman Test, and *the Lagrange Multiplier* (LM) Test. Before hypothesis testing, the model was first tested using classical assumption tests, including multicollinearity, heteroscedasticity, and cross-sectional dependence.

Hypothesis testing was conducted using the t-test to determine the partial influence of each independent variable on the dependent variable, the F-test to determine the simultaneous influence of all independent variables on the dependent variable, and the coefficient of determination (*Adjusted* R^2) to measure the model's ability to explain variations in real earnings management.

4. Results and Discussions

4.1 Descriptive Statistics

Table 1. Descriptive Statistics of Research Variables

Variable	Mean	Median	Maximum	Minimum	Std. Deviation
CG	4.094	3.000	10.000	2.000	1.712
AS	0.353	0.286	0.864	0.000	0.271
MO	0.089	0.002	6.740	0.000	0.544
IO	0.630	0.659	1.031	0.026	0.232
REM	-0.000	0.003	0.712	-0.490	0.153

Table 1 shows the average Corporate Governance (CG) size is 4.09 members, with a minimum of 2 members and a maximum of 10 members. This indicates a variation in oversight structures across the energy sector companies sampled in the study. Asset structure, as proxied by Asset Structure (AS), has an average value of 35.3%. This finding indicates that fixed assets are a fairly dominant component in the asset structure of energy sector companies.

Managerial Ownership (MO) averages 8.9%, but exhibits significant variation across companies. The large difference between the minimum and maximum values indicates that some companies have high levels of management involvement in share ownership, while others have virtually no managerial ownership. Institutional Ownership (IO) has an average of 63.0%, which indicates the dominance of institutional investors in the ownership structure of energy sector companies in Indonesia.

Meanwhile, Real Earnings Management (REM), measured using abnormal production costs, had an average value close to zero (-0.00017). These results indicate that, in general, the sample companies

did not exhibit excessive levels of real earnings management. However, variations in the minimum and maximum values indicate that real earnings management practices were still found in some companies throughout the study period.

4.2 Classical Assumption Test

4.2.1 Multicollinearity Test

The results of the multicollinearity test showed that all correlation coefficients between independent variables were below the threshold value of 0.80. The highest correlation value, 0.4681, was found between the board of commissioners and asset structure variables. Because all correlation values are below the critical limit, the regression model is declared free of multicollinearity. Therefore, all independent variables can be retained in the panel regression model for subsequent analysis.

4.2.2 Cross-Sectional Dependence Test

The results of the cross-sectional dependence test indicate that the Breusch-Pagan LM, Pesaran Scaled LM, and Bias-Corrected Scaled LM statistics are significant at the 5 percent significance level. However, the Pesaran CD test results yield a probability value of 0.3707, which is greater than 0.05. These findings indicate that there is no significant cross-sectional dependence between companies in the study sample. Therefore, the model residuals can be considered cross-sectionally independent, making the panel regression model suitable for further analysis.

4.3 Selection of Panel Data Regression Model

The Chow test results show a probability value of 0.0000, which is less than 0.05. Therefore, the Fixed Effect Model (FEM) is more appropriate than the Common Effect Model (CEM). These results indicate significant differences in characteristics between energy sector companies that need to be accommodated in the regression model.

Furthermore, the Hausman test results show a probability value of 0.0022, which is less than 0.05. Therefore, the Fixed Effects Model (FEM) is considered more appropriate than the Random Effects Model (REM). This result indicates that individual company effects are correlated with the independent variables, making the FEM a more consistent estimator. Based on the results of the Chow Test and the Hausman Test, this study establishes the Fixed Effect Model (FEM) as the best model to analyze the influence of corporate governance, asset structure, institutional ownership, and managerial ownership on real earnings management.

4.4 Regression Analysis

Based on the estimation results using the Fixed Effect Model (FEM), the following regression equation is obtained:

$$REM_{PRODit} = -0.0655 + 0.0002(GC) + 0.2492(AS) - 0.0300(MO) - 0.0326(IO) \quad (2)$$

Formula (2) indicates the estimated relationship between Corporate Governance (CG), Asset Structure (AS), Managerial Ownership (MO), Institutional Ownership (IO), and Real Earnings Management (REM) using the Fixed Effect Model (FEM). Holding other variables constant, corporate governance has a positive coefficient of 0.0002, asset structure has a positive coefficient of 0.2492, managerial ownership has a negative coefficient of 0.0300, and institutional ownership has a negative coefficient of 0.0326. The positive coefficients suggest that increases in corporate governance and asset structure are associated with higher real earnings management, whereas the negative coefficients indicate that greater managerial and institutional ownership tends to reduce real earnings management. Nevertheless, the

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statistical significance of these relationships should be interpreted based on the corresponding *t*-test results.

Table 2. Panel Data Regression Results Using Fixed Effect Model (FEM) on Real Earnings Management

Variable	Coefficient	Std. Error	t-Statistic	Prob.
X1A Corporate Governance	0.0002	0.0216	0.0081	0.9939
X2A Asset Structure	0.2492	0.0538	4.6304	0.0098
X3A MO Ratio	-0.0300	0.0254	-1.1805	0.3032
X3B IO Ratio	-0.0326	0.0462	-0.7060	0.5191
C	-0.0655	0.0833	-0.7863	0.4757
Effects Specification				
Cross-section Fixed (Dummy Variables)				
Statistic	Value	Statistics		Value
R-squared	0.7104	Mean dependent var Mean dependent var		-0.0002
Adjusted R-squared	0.6308	S.D. dependent var S.D. dependent var		0.1528
S.E. of regression	0.0928	Akaike info criterion Akaike info criterion		-1.7252
Sum squared resid	1.5686	Schwarz criterion Schwarz criterion		-0.9698
Log likelihood	251.9866	Hannan-Quinn criter. Hannan-Quinn criter.		-1.4206
F-statistic	8.9281	Durbin-Watson stat Durbin-Watson stat		2.0831
Prob(F-statistic)	0.0000			

Table 2 show that the corporate governance variable, proxied by the size of the board of commissioners, has a coefficient of 0.0002 with a probability value of 0.9939. The asset structure variable has a coefficient of 0.2492 with a probability value of 0.0098. Managerial ownership has a coefficient of -0.0300 with a probability value of 0.3032, while institutional ownership has a coefficient of -0.0326 with a probability value of 0.5191.

R-squared value of 0.7104 indicates that 71.04% of the variation in real earnings management can be explained by the variables of corporate governance, asset structure, managerial ownership, institutional ownership, and firm-specific effects contained in the model. Meanwhile, the Adjusted R-squared value of 0.6308 indicates that after considering the number of variables and degrees of freedom, the model is still able to explain approximately 63.08% of the variation in real earnings management.

The simultaneous test (F-statistic) results of 8.9281 with a probability of 0.0000 indicate that all independent variables together have a significant effect on real earnings management. Furthermore, the Durbin-Watson value of 2.0831 indicates that the model does not experience serious autocorrelation problems. Overall, the regression results indicate that only asset structure has a significant influence on real earnings management. Conversely, corporate governance, institutional ownership, and managerial ownership did not show a significant influence on energy sector companies in Indonesia during the study period.

4.5 Hypothesis Testing and Discussion

4.5.1 The Influence of Corporate Governance on Real Profit Management

The test results show that the corporate governance variable, proxied by the size of the board of commissioners, has a coefficient of 0.0002 with a probability value of 0.9939 (> 0.05). Thus, the first hypothesis (H_1) is rejected, meaning corporate governance does not significantly influence real earnings management. This finding aligns with research by (Asmaranti et al., 2024), which states that

board characteristics are not always sufficient to limit earnings manipulation by management. Based on Agency Theory, the existence of a board of commissioners does not automatically guarantee effective oversight of management actions. The effectiveness of the oversight function is determined more by the independence, competence, experience, and quality of oversight than simply the number of board members. The results of this study indicate that board size in energy sector companies in Indonesia has not been an effective control mechanism in limiting real earnings management practices. Real earnings management practices conducted through company operational decisions tend to be more difficult to detect than accrual-based manipulation, so board oversight may not be effective enough to identify such practices.

4.5.2 The Influence of Asset Structure on Real Profit Management

The test results show that asset structure has a coefficient of 0.2492 with a probability value of 0.0098 (<0.05). Thus, the second hypothesis (H2) is accepted, meaning asset structure has a positive and significant effect on real earnings management. This finding is consistent with research by (Bui, 2024 Yao, Guo, & Guo, 2026), which found that companies with larger production capacities tend to have a higher chance of engaging in earnings management through operational activities.

From the perspective of Resource Dependence Theory, fixed assets are strategic resources that can influence organizational behavior and managerial decision-making. Companies with high fixed asset intensity generally have greater production capacity and greater operational flexibility. This allows managers to implement certain production strategies, such as overproduction, to lower unit costs and increase reported profits. The results of this study indicate that the higher the proportion of fixed assets a company owns, the greater the likelihood of the company engaging in real earnings management through production activities. This finding strengthens the argument that a company's resource characteristics play a significant role in explaining earnings management behavior.

4.5.3 The Effect of Institutional Ownership on Real Earnings Management

The test results show that institutional ownership has a coefficient of -0.0326 with a probability value of 0.5191 (>0.05). Thus, the third hypothesis (H_3) is rejected, meaning institutional ownership does not significantly influence real earnings management. These results align with research by Debnath and Chowdhury (2021), which shows that institutional investors are not always able to limit earnings management practices by companies.

According to Agency Theory, institutional investors are expected to mitigate agency conflicts through more effective monitoring activities. However, the effectiveness of institutional investor oversight depends heavily on the level of ownership concentration, investment orientation, and their ability to oversee complex corporate operational decisions. The insignificant effect of institutional ownership in this study indicates that the dominance of institutional ownership in energy sector companies has not been able to exert sufficient supervisory pressure to reduce actual earnings management practices. Institutional investors may be more focused on overall company performance than on direct oversight of operational activities, which are the primary means of actual earnings management.

4.5.4 The Effect of Managerial Ownership on Real Earnings Management

The test results show that managerial ownership has a coefficient of -0.0300 with a probability value of 0.3032 (>0.05). Thus, the fourth hypothesis (H_4) is rejected, meaning managerial ownership does not significantly influence real earnings management. This finding supports the research results of (Al-Duais et al., 2022) which states that share ownership by management does not always influence earnings management behavior.

Based on Agency Theory, managerial ownership should align the interests of managers and shareholders, thereby reducing agency conflicts. However, the average managerial ownership in the energy sector companies in this study was relatively low, likely insufficient to provide strong

incentives for management to change decision-making behavior. These findings indicate that managerial ownership has not yet functioned as an effective governance mechanism in limiting actual earnings management practices. The low proportion of management share ownership has resulted in the benefits of interest alignment expected by Agency Theory not being fully achieved.

4.5.5 Summary of Hypothesis Testing Results

Table 3. Summary of Hypothesis Testing Results on the Effect of Corporate Governance, Asset Structure, and Ownership Structure on Real Earnings Management

Hypothesis	Hypothesis Statement	Coefficient	Probability	Results
H_1	Corporate Governance (CG) has a negative effect on real earnings management	0,0002	0,9939	Rejected
H_2	Asset Structure (AS) influences real earnings management	0,2492	0,0098	Accepted
H_3	Institutional Ownership (IO) has a positive effect on real earnings management	-0,0326	0,5191	Rejected
H_4	Managerial Ownership (MO) has a negative effect on real earnings management	-0,0300	0,3032	Rejected

Table 3 shows that only asset structure has a statistically influences real earnings management in energy sector companies in Indonesia during the 2020–2024 period. Corporate governance, institutional ownership, and managerial ownership do not significantly influence real earnings management practices.

5. Conclusions

This study aims to analyze the influence of corporate governance, asset structure, institutional ownership, and managerial ownership on real earnings management in energy sector companies listed on the Indonesia Stock Exchange during the 2020–2024 period. Based on the analysis using the Fixed Effects Model (FEM), it was concluded that corporate governance, as proxied by board size, had no significant effect on real earnings management. This finding suggests that board size alone is insufficient to limit earnings manipulation practices carried out through a company's operational activities.

Asset structure has been shown to have a positive and significant effect on real earnings management. This finding suggests that companies with higher fixed asset intensity tend to have a greater opportunity to engage in real earnings management through production activities and other operational decisions. Institutional ownership and managerial ownership did not significantly influence real earnings management. These results indicate that ownership structure in energy sector companies has not been able to effectively reduce opportunistic management behavior related to real earnings management practices. Overall, the research results indicate that actual earnings management practices in Indonesian energy sector companies are more influenced by the characteristics of the company's operational resources than by formal governance mechanisms. This finding supports Resource Dependence Theory, which emphasizes the importance of a company's strategic resources in shaping organizational behavior, while also indicating that the monitoring mechanisms described in Agency Theory are not yet fully effective in limiting actual earnings management practices.

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quality of this manuscript. Any remaining shortcomings or errors remain the sole responsibility of the authors.

Author Contributions

HDAL was responsible for conceptualizing the study and developing the theoretical framework, as well as formulating the research hypotheses. The research methodology was designed, while data collection and panel data processing were conducted and analyzed using EViews. Interpretation of empirical results and discussion of findings were also carried out. The initial manuscript was drafted, followed by revision, editing, and final approval prior to submission and publication.

Conflict of Interest

The authors declare that there is no conflict of interest regarding the publication of this article. The research was conducted independently without any financial, commercial, or personal relationships that could be construed as a potential conflict of interest.

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