Earnings Management Factors Analysis Using Earnings Quality as a Moderator

(An Energy Firm Will Be Established On The Indonesia Stock Exchange Between 2015-2020)

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\textbf{Abstract}

The desired outcome of the research is to examine and empirically establish the effect of tax planning, deferred tax assets, deferred tax expense, and profitability on earnings management in energy sector firms established on the Indonesia Stock Exchange (IDX) between 2015-2020, with earnings quality as a moderating variable and leverage and firm size as control variables. According to the research object's criteria, the samples used in this research were 11 firms from 78 in the energy sector. Purposive sampling was used in the research, along with the Moderated Regression Analysis (MRA) test. According to the result of this research, tax planning, deferred tax expense, and profitability, all have a positive effect on earnings management, but deferred tax assets have no effect. Earnings quality, as a moderating variable, can mitigate the effects of tax planning on earnings management, but cannot mitigate the effects of profitability on earnings management. Furthermore, leverage has no effect on earnings management as a control variable, whereas firm size has a negative effect on earnings management. This research's contribution is a discussion of research results and differences with previous research results and related theories, and it can be implemented in every company's management in its operations for policy-making and management decisions for firms, particularly in the energy sector.

\textbf{Keywords:}

Earnings management; Tax planning; Deferred tax assets; Deferred tax expense; Profitability; Earnings quality; Leverage; Company size

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\textbf{Introduction}

Because of the rapid development in today's business world, every company must be able to create a competitive advantage in its field of business and make accurate decisions. The efficient and effective use of company resources in carrying out operational activities can assist businesses in winning the market competition. As a result, businesses almost always perform well. The priority of the accounting cycle as a decision-making tool is to offer accurate and reliable information. Profitability is one statistic that could be used to predict a firm's performance. Profit figures are increasing year after year, implying that the company can manage resources optimally to maximize profit.

Profit is an accrual-based accounting measure of a company's performance summary. Profit information in financial reports is typically a major concern when evaluating performance or determining how management is held accountable (Bestivano, 2013). Earnings can be managed in two ways: by adjusting accruals without affecting the flow of cash, or by adjusting operational factors that affect the flow of cash through the business (Wardani & Kusuma, 2012).
A company's profit management can be opportunistic and efficient in addition to these two ways (informative). If earnings management is opportunistic, then the decisions made by managers benefit the managers themselves, and this opportunistic activity may prompt someone to pursue earnings management actions. Meanwhile, if earnings management is efficient (informative), managers' decisions tend to benefit shareholders (Yudanto & Ratnaningsih, 2014), particularly, managers utilize earnings management to protect the company against unforeseen events that harm the company's good image (Scott, 2015).

An agency problem that arises as a result of a disagreement is among the triggering elements for the procedure of earnings management. There are three main types of agency conflicts that frequently emerge in a company: disputes between shareholders and management, conflicts between shareholders and debt holders, and conflicts between the majority shareholders and minority owners (Setiyarini & Purwanti, 2011). This conflict arose as a result of competing interests between the manager or agent in charge of managing the company and optimizing the profits of the owners (principal). Managers who work as corporate executives, on the other side, have a personal stake in higher revenue.

The phenomenon of earnings management can be seen from the profits managed by a company. Because financial reports are a picture of a company's condition, management will generally choose certain policies to provide good profit reports on financial statements. Several cases in Indonesia involving earnings management practices can occur anywhere and are carried out for a variety of reasons, such as in the following firm: (1) PT. Adaro Energy Tbk (ADRO) in 2014-2018, practiced earnings management through income minimization (reducing profits) to reduce taxes; (2) PT. Golden Energy Mines Tbk (GEMS) in 2014-2015 through income maximization (profit maximization) and income minimization (profit reduction); (3) PT. Ratu Prabu Energy Tbk (ARTI) received a special notation from the exchange for the period 2019-2021 due to price, trading liquidity, and financial performance; (4) PT. Perusahaan Gas Negara Tbk (PGAS) in its financial report for the first quarter of 2019, stated that there was a decrease in company profits due to an increase in the cost of goods purchased; and (5) PT. Atlas Resources Tbk (ARII) is under IDX supervision in 2021 because of its unusual market activity stock price.

Based on the foregoing occurrences, it is possible to conclude that earnings management is not a new thing in Indonesian economic growth, endangering ethics, morals, and, most importantly, external trust in the quality of financial reports provided. Profit information is frequently the target of management engineering in order to enhance personal interests while harming investors. Earnings management will have a direct impact on financial statement information's ability to predict the company's future profitability. The resulting impact can reduce the predictive ability of financial reports or be opportunistic, in which management reports company profits by their desire to maximize personal gain, resulting in decisions that can harm investors but can also harm management.

Many factors influence earnings management, according to research on earnings management, including leverage, firm size, independent commissioning board, audit quality, audit committee, dividend policy, as well as others. However, in 25 prior research collated by the authors between 2017-2022, four independent variables have the biggest GAP: tax planning, deferred tax assets, deferred tax expense, and profitability. Based upon this identified research gap, the authors intend to delve more into the factors that influence earnings management in energy sector firms listed Stock Exchange between 2015-2020. In this case, the authors also use earnings quality as a moderating variable to determine the strength and weakness of the correlation between the independent variables and the dependent variable, and leverage and firm size are used as control variables to ensure that no other factors affect the dependent variable besides the independent variables chosen by the author.
Agency Theory
As said by Jensen and Meckling (1976), the principal-agent relationship produces many interests since, in general, persons will want to maximize rewards for their interests. Agency theory has previously served as the theoretical framework for the company’s business activities (Brigham & Houston, 2018). Economic theorizing, behavioral sociology, and organizational philosophy serve as the foundation for the theory. The primary tenet of this theory states that there is a functioning relationship between the authorizer (investor) and the recipient of legitimacy, namely the management.

Financial Accounting
Financial accounting is a series of processes related to financial reporting by users of financial statements by accounting standards for the benefit of third parties (Kieso et al., 2002).

Positive Accounting Theory
Positive accounting theory, according to Scott (2015), is a theory that predicts how managers make accounting decisions and how they will respond to innovation that impacts accounting methods. Using positive accounting theory, policymakers can foresee the economic consequences of various financial regulations and procedures. Positive accounting theory also defines a technique for dealing with future conditions that employ accounting talents, comprehension, and knowledge, as well as the most appropriate accounting rules.

Earnings Management
Earnings management is a planned procedure that directs earnings reporting at a specified level by utilizing the limits of financial accounting rules (Santana & Wirakusuma, 2016). Bonus motivation, other legal enthusiasm, political enthusiasm, fiscal policy enthusiasm, replacing the Chief Executive Officer (CEO), Initial Public Offering (IPO), and providing information to investors (communicating information to investors) are some of the reasons that convince managers to execute out earnings management (Scott, 2015). Earnings management is done because management is interested in financial reports that provide a description or stable financial information about the company so that stakeholders can trust it and continue to invest in it.

Tax Planning
Tax planning is an early phase in fiscal management and another part of fiscal management. Following suitable tax compliance, such as tax laws and procedures that are legal and do not violate the Constitution, is a technique for limiting or lessening the quantity of tax that is being compensated to the state.

Deferred Tax Assets
Deferred tax assets are assets in a business's accounting records that represent future advantages. Management is frequently encouraged to raise deferred tax assets by bonuses, political burdens for the firm's size, and reducing tax payments so as not to undermine the corporation. The risk that a corporation will carry if this is done, however, is very great because the company would have to pay a larger sum.

Deferred Tax Expense
Deferred tax expense is an expense sustained due to short-term variances throughout accounting gains and taxable revenues (Harnanto, 2003). Reporting income tax expense, which includes both current and deferred tax, results in a more informed accounting profit that can reflect the company's actual performance.
Profitability
Profitability refers to a firm's capacity to generate profits from its sales, total assets, and private equity (Sartono, 2017). The profitability ratio is a ratio used to analyze the financial performance of a business over a given period (Hanafi & Halim, 2018). Profitability measures a business's capacity to generate profits in percentage terms (Hasibuan, 2006). Profitability is regarded as critical to a company's survival because it can completely support the company's operating activities.

Earnings Quality
Earnings quality is important information that the public and investors can use to evaluate a company. Profitability can be used to gauge the financial accomplishments of a business. The company's high-quality earnings can help investors make sound decisions. Furthermore, quality profit is profit presented on the balance sheet, allowing for an accurate assessment of key risks such as liquidity, financial flexibility, and solvency.

Leverage
Leverage is a tool used to calculate how much a company relies on creditors to finance its assets. Firms with significant leverage rely largely on external borrowing to finance their assets. Meanwhile, firms with low leverage finance their assets more with their own money.

Company Size
Firms are divided into three categories based on their size: major firms, medium-sized firms, and tiny firms. Averaging the average amount of total net revenue for one year up to particular periods depending on what you want to compute (the last 5 years or 10 years) (Brigham & Houston, 2018).

2. Research Method
This research used a causal explanatory research method, which is a method that tests hypotheses that explain phenomena in the form of relationships between variables. The authors sought to investigate the impact of tax planning, deferred tax assets, deferred tax expenses, and profitability on earnings management, with earnings quality serving as a moderator and leverage and firm size serving as control variables.

The population for this research is an energy sector firm established on the Indonesia Stock Exchange between 2015-2020. This is due to Energy Sector firms' incomplete reports for 2021-2022, which means they cannot be used as study samples. The sampling criteria specified in this research are as follows: (1) Energy firms established on the Indonesia Stock Exchange between 2015-2020; (2) Firms in the energy sector that offer accomplished annual report data for 2015-2020; and (3) Data and information related to research variables are presented in full in published financial reports for 2015-2020.

In this research, sampling was done through means or the purposive sampling method. This research's sample included 11 energy sector firms with the following information:

<table>
<thead>
<tr>
<th>No.</th>
<th>Share Code</th>
<th>Company Name</th>
<th>IPO Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>ADRO</td>
<td>Adro Energy Indonesia Tbk</td>
<td>16/06/2018</td>
</tr>
<tr>
<td>2</td>
<td>AKRA</td>
<td>AKR Corporindo Tbk</td>
<td>03/10/1994</td>
</tr>
<tr>
<td>3</td>
<td>BYAN</td>
<td>Bayan Resources Tbk</td>
<td>12/08/2008</td>
</tr>
<tr>
<td>4</td>
<td>DSSA</td>
<td>Dian Swastatika Sentosa Tbk</td>
<td>10/12/2009</td>
</tr>
<tr>
<td>5</td>
<td>ENRG</td>
<td>Energi Mega Persada Tbk</td>
<td>07/06/2004</td>
</tr>
</tbody>
</table>
This research relied on secondary data. The secondary data collected are yearly reports from each energy company for the years 2015-2020, which can be accessed via the websites www.investasi.com and www.idx.co.id. SPSS Statistics 25 is the data processing application used in this research. Because the selected population is so small, the amount of data gathered is less than optimal; therefore, only this application can make the study data normally distributed so that further statistical tests can be accomplished.

To clarify the research variables used by the authors in this research, the operationalization of each variable is shown in the table below:

<table>
<thead>
<tr>
<th>Variable</th>
<th>Operational Definition</th>
<th>Indicator</th>
<th>Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Earnings Management (Y)</td>
<td>Earnings management refers to management's efforts to boost and decrease profits in financial reports to enrich oneself (Schipper, 1989).</td>
<td>( \text{SEC}<em>{it} = \frac{\text{Net Income}</em>{it} - \text{Net Income}<em>{i(t-1)}}{\text{Market Value Equity}</em>{i(t-1)}} )</td>
<td>Ratio</td>
</tr>
<tr>
<td>Tax Planning (X1)</td>
<td>A systematic effort by taxpayers to obtain tax savings through tax avoidance procedures by the provisions of the applicable tax laws (Hoffman, 1961).</td>
<td>( \text{TRR}<em>{it} = \frac{\text{Net Income}</em>{it}}{\text{Pretax Income} (EBIT)_{it}} )</td>
<td>Ratio</td>
</tr>
<tr>
<td>Deferred Tax Assets (X2)</td>
<td>Assets that occur when there is a difference in time cause a positive correction which results in a smaller commercial tax burden than the tax burden according to the tax law (Waluyo, 2011).</td>
<td>( \text{APT}<em>{it} = \frac{\Delta \text{Deferred Tax Assets}</em>{it}}{\text{Deferred Tax Assets}_{t}} )</td>
<td>Ratio</td>
</tr>
<tr>
<td>Deferred Tax Expense (X3)</td>
<td>Expenses incurred due to transient discrepancies in accounting profits and taxable earnings (Phillips et al., 2002).</td>
<td>( \text{DTE}<em>{it} = \frac{\text{Deferred Tax Expense}</em>{t}}{\text{Total Assets}_{t-1}} )</td>
<td>Ratio</td>
</tr>
<tr>
<td>Profitability (X4)</td>
<td>Employees receive all money or goods as compensation for services rendered to the company, either directly or indirectly (Hasibuan, 2003).</td>
<td>( \text{ROA} = \frac{\text{Profit After Tax}}{\text{Total Assets}} )</td>
<td>Ratio</td>
</tr>
<tr>
<td>Variable</td>
<td>Operational Definition</td>
<td>Indicator</td>
<td>Scale</td>
</tr>
<tr>
<td>-------------------</td>
<td>----------------------------------------------------------------------------------------</td>
<td>-----------------------------------------------</td>
<td>-------</td>
</tr>
<tr>
<td>Earnings Quality</td>
<td>Profitability of the company within a given time range (Munawir, 2004).</td>
<td>Earnings Quality = ( \frac{\text{Operating Cash Flow}}{\text{Net Income}} ) Ratio</td>
<td></td>
</tr>
<tr>
<td>Leverage (K1)</td>
<td>The use of some of the firm's capital to pay debts reflects the ability of the firm to meet its debts.</td>
<td>( \frac{\text{Total Amount of Debt}}{\text{Total Assets}} \times 100% ) Ratio</td>
<td></td>
</tr>
<tr>
<td>Company Size (K2)</td>
<td>Over several years, the average total net sales for the year</td>
<td>Company Size = ( \ln(\text{Total Assets}) ) Ratio</td>
<td></td>
</tr>
</tbody>
</table>

**Tax Planning's Effects on Earnings Management**

Tax planning has been the practice of modifying a taxpayer's transaction company in order to reduce tax liability while maintaining within the parameters of tax legislation. Tax planning governs how much profit is reported so that it can be included in earnings management practices. To avoid an excessive tax burden, the company will implement earnings management, resulting in fiscally lower reported profits and a lower tax burden.

This summary is consistent with the observations of the Putra et al. (2019) review, which found that tax planning affects earnings management. Management will automatically review profits because firms want to carry out tax planning to reduce their tax burden. However, it is negatively related to the result of Andrayani et al. (2018), who discovered if tax planning had no impact on earnings management techniques, implying that the tax retention rate does not create incentives for businesses to exercise earnings management. The first hypothesis in this research is based on this:

**H1: Tax planning affects earnings management in energy sector firms established on the Indonesia Stock Exchange (IDX) in 2015-2020**

**Deferred Tax Assets' Effects on Earnings Management**

When revenue from accounting is less than tax revenue due to temporary discrepancies, deferred tax assets are created. Because the profits are less than the tax liability, the firm can postpone the payment of taxes for the next period. PSAK No. 46, revised 2012, allows managers to examine the rules of accounting used through valuing deferred tax assets in their financial results, allowing them to indicate whether firms use profit engineering or earnings management in their reported financial reports to avoid a profit decrease or loss.

According to Iskandar et al. (2019), deferred tax assets have an impact on earnings management. This is a reference from agency theory, in which the interests of each party, both agents and principals, can be the primary motivation for the practice of earnings management, and deferred tax assets can be one of the loopholes. However, this contradicts the findings of Gulo & Mappadang (2022) research, which discovered that deferred tax assets do not influence earnings management. The negative effect of the variable deferred tax assets might be understood to suggest that earnings management actions taken by corporations to avoid a fall in profits are unaffected by the level or advantages of some firms’ deferred tax assets. The second hypothesis in this research is based on this:

**H2: Deferred tax assets affect earnings management in energy sector firms established on the Indonesia Stock Exchange (IDX) in 2015-2020**
Deferred Tax Expenses' Effects on Earnings Management
Deferred tax expense can influence the profits of management since it can reduce a company's profit level, particularly management minimizes tax payments by minimizing and keeping the cost of taxes as minimal as feasible.

This is accordant with findings by Baradja et al. (2017) which states that deferred tax expense partially has a positive and significant effect on earnings management disclosure, this is by the theory which says that the greater a company's profits, the greater its tax burden. In line with findings from Putra & Kurnia (2019) which states that deferred tax expense has a negative effect on earnings management. The findings of the current research are inversely related to those of Gulo and Mappadang (2022) which shows that deferred tax expense does not affect earnings management, which is not in line with management's goal of showing maximum profit statistics. The third hypothesis in this research is based on this:

\[ H3: \text{Deferred tax expense affects earnings management in energy sector firms established on the Indonesia Stock Exchange (IDX) in 2015-2020} \]

Profitability’s Effects on Earnings Management
Profitability can reflect the company's capacity to operate company resources to generate profits (Lestari & Wulandari, 2019). Firms which have a greater level of profitability can gain the trust of stakeholders, especially creditors in terms of lending, so the level of leverage will be higher so that the company can expand its business and the size of the company will also be higher.

Sari et al. (2018) in his research stated that profitability affects earnings management. This indicates that the greater the level of earnings management, the better the firm's performance or the greater the level of company profitability. However, it is different from the outcome of Fandriani and Tunjung's (2019) analysis which says that profitability does not affect earnings management. The fourth hypothesis in this research is based on this:

\[ H4: \text{Profitability affects earnings management in energy sector firms established on the Indonesia Stock Exchange (IDX) in 2015-2020} \]

The Effects of Tax Planning on Earnings Management is Moderated by Earnings Quality
Higher-level managers employ their knowledge, talent, and expertise to undertake genuine earnings management and improve earnings quality (Simamora, 2021). Tax planning is a tax management function that estimates the value of the tax that should be allocated and what might be done to avoid taxes. Tax planning pertains to corporate profit publishing. High profits will cause the company's tax burden to be also high. As a result, to meet profit targets, company management will employ a variety of earnings management techniques. Earnings management inside the firm has a large influence on both the highest and lowest earnings quality because the manager, as the company manager who will give earnings reports in the financial statements, may have an impact on both the highest and lowest earnings quality. Quality earnings reflect an optimism that can forecast further earnings.

Christabelle et al. (2022) researched institutional ownership moderating the effect of tax planning on earnings quality. This research delivers the result that tax planning does not affect earnings quality. It is assumed that the company has already implemented prior tax planning, so that earnings management actions are no longer carried out in tax planning, and thus tax planning has no effect on earnings quality. The fifth hypothesis in this research is based on this:

\[ H5: \text{Earnings quality moderates the effect of tax planning on earnings management in energy sector firms established on the Indonesia Stock Exchange (IDX) in 2015-2020} \]

Earnings Quality Moderates Profitability's Effects on Earnings Management
Profitability is a ratio that demonstrates a company’s capacity to bring in revenue based on the resources it has available. The Return on Assets is a profitability ratio that measures the
capacity of a company to create revenue based on its revenues, assets, and ownership capital. The greater the value of profitability, the higher will be the quality of earnings, and vice versa. Other elements that affect profitability include fixed asset turnover and working turnover (Puspita et al., 2021).

This is consistent with Sumertiasih & Yasa (2022) findings that profitability has a significant impact on earnings quality. This means that a high Return on Assets (ROA) value indicates a high-profit rate, so the higher the ROA value, the greater the number of investors interested in joining the company. However, contrary to the findings of a study conducted by Maulita et al. (2022), profitability has a significant effect on earnings quality, which implies a company's high level of profitability does not guarantee that the results reported in financial reports faithfully represent their actual financial condition.

Research conducted by Ginting (2017) also has results that are inversely proportional to other studies, this research concludes that profitability has no significant effect on earnings quality. Profitability is a statistic that is used to evaluate the ability of a company for making profits. Profitability does not cause a market reaction to earnings information, indicating that profitability does not help investors assess market conditions. The sixth hypothesis in this research is based on this:

\[ H_6: \text{Earnings quality moderates the effect of profitability on earnings management in energy sector firms established on the Indonesia Stock Exchange (IDX) in 2015-2020} \]

Following an explanation of the background, theory, and previous research, a research gap was identified to form a framework of thought that would be studied comprehensively and structured. This research's theoretical structure is as follows:

![Figure 1. Theoretical Framework](image)

3. **Results and Discussions**

**Descriptive Statistical Test Results**

Its descriptive statistics findings are shown in the table below:
Table 3. Descriptive Statistics

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>TP</td>
<td>53</td>
<td>-.5074</td>
<td>1.8948</td>
<td>.654198</td>
<td>.4524429</td>
</tr>
<tr>
<td>APT</td>
<td>53</td>
<td>-1.0667</td>
<td>.7234</td>
<td>.016517</td>
<td>.3516231</td>
</tr>
<tr>
<td>BPT</td>
<td>53</td>
<td>.0002</td>
<td>.1002</td>
<td>.032462</td>
<td>.0278559</td>
</tr>
<tr>
<td>PRO</td>
<td>53</td>
<td>-.0872</td>
<td>.3803</td>
<td>.060772</td>
<td>.0784466</td>
</tr>
<tr>
<td>TPKL</td>
<td>53</td>
<td>-4.8824</td>
<td>3.3729</td>
<td>.435240</td>
<td>1.6547880</td>
</tr>
<tr>
<td>PROKL</td>
<td>53</td>
<td>-.3303</td>
<td>.5136</td>
<td>.092962</td>
<td>.1182693</td>
</tr>
<tr>
<td>LEV</td>
<td>53</td>
<td>.2628</td>
<td>.9123</td>
<td>.571874</td>
<td>.1537012</td>
</tr>
<tr>
<td>SIZE</td>
<td>53</td>
<td>15.0725</td>
<td>18.5904</td>
<td>17.094887</td>
<td>1.0204633</td>
</tr>
<tr>
<td>Valid N (listwise)</td>
<td>53</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The variable tax planning has a value ranging from -0.5074 to 1.8948. The average tax planning variable obtained from 53 samples has a value of 0.654198 and a standard deviation of 0.4524429, because the standard deviation value is less than the mean value, the data are less different and more gathered around the average (more dependable).

The deferred tax asset variable has a value ranging from -1.0667 to 0.7234. The average deferred tax asset variable result from 53 samples is 0.016517 with a standard deviation of 0.3516231, showing that data results fluctuate and data spread about the average (less dependable) since the standard deviation is more than the mean value.

The variable deferred tax expense has a value ranging from 0.0002 to 0.1002. The average deferred tax expense variable from 53 samples has a value of 0.032462 and a standard deviation of 0.0278559, because the standard deviation is less than the mean value, the data is less diversified and clusters around the average (more dependable).

The profitability variable has a value ranging from -0.0872 to 0.3803. The average profitability variable from 53 samples has a value of 0.092962 and a standard deviation of 0.1182693, because the standard deviation value is bigger than the mean value, the data varies and spreads about the average (making it less reliable).

The interaction variable between tax planning and earnings quality has a value ranging from -4.8824 to 3.3729. The average interaction variable of tax planning with the quality of earnings obtained from 53 samples yields a value of 0.435240 and a standard deviation of 1.6547880, because the standard deviation is greater than the mean, the data is dispersed about the average (less dependable).

The profitability with earnings quality interaction variable has a value ranging from -0.3303 to 0.5136. The average profitability interaction variable with earnings quality resulting from 53 samples has a value of 0.092962 and a standard deviation of 0.1182693, because the standard deviation value is bigger than the mean value, the data varies and spreads about the average (making it less reliable).

The leverage variable has a value ranging from 0.2628 to 0.9123. The average leverage variable obtained from 53 samples has a value of 0.571874 and a standard deviation of 0.1537012, because the standard deviation is less than the mean value, the data are less diversified and clustered around the average (more reliable).

The firm size variable has a value ranging from 15.0725 to 18.5904. The average firm size variable obtained from 53 samples has a value of 17.094887 and a standard deviation of 1.0204633, because the standard deviation is less than the mean value, the data are less diversified and clustered around the average (more reliable).
Normality Test Results

A Kolmogorov-Smirnov test was used in this study to determine normality. The results of the normality test are displayed in the table below:

### Table 4. Normality Test Results

<table>
<thead>
<tr>
<th>Unstandardized Residual</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>53</td>
</tr>
<tr>
<td>Normal Parametersᵇ</td>
<td>Mean</td>
</tr>
<tr>
<td></td>
<td>Std. Deviation</td>
</tr>
<tr>
<td>Most Extreme Differences</td>
<td>Absolute</td>
</tr>
<tr>
<td></td>
<td>Positive</td>
</tr>
<tr>
<td></td>
<td>Negative</td>
</tr>
<tr>
<td>Test Statistic</td>
<td></td>
</tr>
<tr>
<td>Asymp. Sig. (2-tailed)</td>
<td></td>
</tr>
</tbody>
</table>

A Kolmogorov-Smirnov one-sample test has a significance value of 0.200. This number is already bigger than the significance level (0.05), hence the residuals are assumed to be normally distributed.

![Normal P-P Plot of Regression Standardized Residual](image)

**Figure 2. Normal P-Plot Graph**

The histogram graph depicts properly distributed data as evidenced by the points (data) that are dispersed along the diagonal line and follow its direction.

Multicollinearity Test Results

This research used a multicollinearity test with the stipulation that if the level of tolerance is greater than 0.1 and VIF is greater than 10, there is no multicollinearity between the variables. The multicollinearity test results are displayed in the table below:
### Table 5. Multicollinearity Test Results

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>Collinearity Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
</tr>
<tr>
<td>(Constant)</td>
<td>.240</td>
<td>.198</td>
<td></td>
</tr>
<tr>
<td>TP</td>
<td>.047</td>
<td>.023</td>
<td>.268</td>
</tr>
<tr>
<td>APT</td>
<td>-.007</td>
<td>.026</td>
<td>-.031</td>
</tr>
<tr>
<td>BPT</td>
<td>.998</td>
<td>.400</td>
<td>.349</td>
</tr>
<tr>
<td>PRO</td>
<td>.435</td>
<td>.165</td>
<td>.428</td>
</tr>
<tr>
<td>TPKL</td>
<td>.013</td>
<td>.007</td>
<td>.270</td>
</tr>
<tr>
<td>PROKL</td>
<td>.021</td>
<td>.102</td>
<td>.032</td>
</tr>
<tr>
<td>LEV</td>
<td>.001</td>
<td>.072</td>
<td>.001</td>
</tr>
<tr>
<td>SIZE</td>
<td>-.021</td>
<td>.011</td>
<td>-.270</td>
</tr>
</tbody>
</table>

Multicollinearity does not occur in the data. The total level of tolerance exceeds 0.1, while the overall VIF value is beneath 10. As a result, no multicollinearity exists between each independent variable, moderating variable, and control variable in the regression model.

### Heteroscedasticity Test Results

The scatterplot graph can be used to test for heteroscedasticity; if the graph exhibits random dots above and below 0 on the Y axis, there is no heteroscedasticity in the regression model. The results of the heteroscedasticity test are shown in the picture below:

![Figure 3. Heteroscedasticity Test Results](image)

According to the data analysis results, the resulting points have been distributed irregularly and are scattered across and above the value 0 on the Y axis. As a result, the regression model in this investigation shows no signs of heteroscedasticity.

### Autocorrelation Test Results

To determine whether there is autocorrelation, the Durbin-Watson test (DW test) is used, which employs crucial points, notably the lower limit (dl) and upper limit (du) (Ghozali, 2013). The autocorrelation test results are shown in the table below:

![Scatterplot](image)
Table 6. Autocorrelation Test Results

<table>
<thead>
<tr>
<th></th>
<th>Change Statistics</th>
<th>Durbin-Watson</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>R Square Change</td>
<td>F Change</td>
</tr>
<tr>
<td>1</td>
<td>.0644362</td>
<td>.446</td>
</tr>
</tbody>
</table>

The data processing findings show that the Durbin-Watson test value is 1.656. This value is then compared to the values dL and dU. dL values are lower than Durbin-Watson statistics, whereas dU values are higher than Durbin-Watson statistics. The Durbin-Watson table shows the value of dL and dU with α = 5%, n = amount of data, and K = total of independent variables. The values of dL and dU are then found to be 1.2334 and 1.9167, respectively, with K = 8 and n = 53.

Thus, after calculating and comparing with the Durbin-Watson table, the Durbin-Watson value is 1.656, which is between dL and dU, namely 1.2334<1.656<1.9167, indicating that there is no autocorrelation in this research’s regression model.

Moderated Regression Analysis (MRA) Test Results

The Moderated Regression Analysis (MRA) exam results will be shown in the table below:

Table 7. Moderated Regression Analysis (MRA) Test Results

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1 (Constant)</td>
<td>.240</td>
<td>.198</td>
<td></td>
<td>1.213</td>
</tr>
<tr>
<td>TP</td>
<td>.047</td>
<td>.023</td>
<td>.268</td>
<td>2.035</td>
</tr>
<tr>
<td>APT</td>
<td>-.007</td>
<td>.026</td>
<td>-.031</td>
<td>-.267</td>
</tr>
<tr>
<td>BPT</td>
<td>.998</td>
<td>.400</td>
<td>.349</td>
<td>2.495</td>
</tr>
<tr>
<td>PRO</td>
<td>.435</td>
<td>.165</td>
<td>.428</td>
<td>2.637</td>
</tr>
<tr>
<td>TPKL</td>
<td>.013</td>
<td>.007</td>
<td>.270</td>
<td>1.857</td>
</tr>
<tr>
<td>PROKL</td>
<td>.021</td>
<td>.102</td>
<td>.032</td>
<td>.211</td>
</tr>
<tr>
<td>LEV</td>
<td>.001</td>
<td>.072</td>
<td>.001</td>
<td>.009</td>
</tr>
<tr>
<td>SIZE</td>
<td>-.021</td>
<td>.011</td>
<td>-.270</td>
<td>-1.836</td>
</tr>
</tbody>
</table>

The following is the regression equation model:

\[ ML = \alpha + \beta^1.TP + \beta^2.APT + \beta^3.BPT + \beta^4.PRO + \beta^5.(TP*KL) + \beta^6.(PRO*KL) + \beta^7.LEV + \beta^8.SIZE + \epsilon \]

\[ ML = 0.240 + 0.047.TP - 0.07.APT + 0.998.BPT + 0.435.PRO + 0.013.(TP*KL) + 0.021.(PRO*KL) + 0.001.LEV - 0.021.SIZE + 0.198 \]

F Test Results

The table summarizes the F test results:

Table 8. F Test Results

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Regression</td>
<td>.147</td>
<td>8</td>
<td>.018</td>
<td>4.419</td>
<td>.001^b</td>
</tr>
<tr>
<td>Residual</td>
<td>.183</td>
<td>44</td>
<td>.004</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>.329</td>
<td>52</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The data processing results show that the F value is $4.419 > f_{Table\ 2,16}$ with a significance value of 0.001 (0.05), indicating that the independent variables, the interaction of independent variables with moderating variables, and control variables all have a significant effect on the variable dependent, or in other words tax planning variables, deferred tax assets, deferred tax expenses, profitability, the interaction of tax planning with earnings quality, the interaction of profitability with earnings quality, leverage, and firm size have a significant effect on earnings management, while the remaining 65.5% is influenced by other variables not evaluated and the results.

**Coefficient of Determination (R Square) Test Results**

The coefficient of determination (R Square) test results are shown in the table below:

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.667\textsuperscript{a}</td>
<td>.446</td>
<td>.345</td>
<td>.0644362</td>
</tr>
</tbody>
</table>

Adjusted R Square value of 0.345 or 34.5%. This means that tax planning, deferred tax assets, deferred tax expenses, profitability, the interaction of tax planning with earnings quality, the interaction of profitability with earnings quality, leverage, and firm size have a 34.5% impact on earnings management, while the remaining 65.5% is influenced by other variables not evaluated and the results.

**Hypothesis Test Results (T-Test) and Discussion of Research Results**

Table 7 displays the hypothesis test (t-test) results. The first hypothesis, indicating tax planning has a positive effect on earnings management in energy sector firms established on the Indonesia Stock Exchange (IDX) between 2015-2020, is accepted. The computed t value for tax planning is $2.035 > 1.674 t_{Table}$, with a significance value of 0.048 $< \alpha$ (0.05) and a $\beta$ coefficient value of 0.268. Tax planning will increase earnings management because it can minimize the number of company profits that aim to achieve tax advantages without breaching applicable tax laws, to get fiscal benefits, and to gain profits in obtaining more capital from investors through the sale of company shares.

Tax planning in this research is consistent with agency theory, namely that when there are differences in interests and goals (principals and agents), risks that must be faced, and cost reductions (agency costs), management process in order to perform earnings management in order to improve corporate performance, particularly the company's net profit, which is used as a benchmark for evaluating company performance. The research findings also support the positive accounting theory of the political cost hypothesis, which states managers will try to minimize the proportion of tax expense which is needed bearing by the company because the taxation burden is a deduction from net income, and thus firm will carry out earnings management by making tax planning as effective as possible.

Research by Faqih & Sulistyowati (2021), Yuliza & Fitri (2020), Islamiah & Apollo (2020), and Bete et al. (2021) supports the result of this research, which shows that tax planning influences earnings management. Whereas the larger the level of tax preparation implemented, the greater the chance for corporations to undertake earnings management. This is due to the company’s desire to decrease its tax burden.

The research findings, however, disagree with those of Sari et al. (2018) and Kanji (2019), who claim that tax planning does not affect earnings management. In their research, Setyawan et al. (2021) stated that tax planning does not affect earnings management. This is because the corporation is divided into various divisions or departments, each overseen by a different
management. Each management will strive for high divisional performance to receive bonuses or prizes.

The second hypothesis, that deferred tax assets have no effect on earnings management in energy sector firms established on the Indonesia Stock Exchange (IDX) between 2015-2020, is rejected. Deferred tax assets have a $t$ value of $-0.267 < 1.674$ and a significance value of $0.791 > \alpha (0.05)$ as well as a $\beta$ coefficient of $-0.031$. This is because a higher tax burden in a given period results in a lower company-owned profit, therefore the company experiences losses owing to a high tax burden and net profit is not optimal. As a result, earnings management methods aimed at preventing losses or enhancing profits in one period as assessed by discretionary accruals cannot be represented in the amount of changes in the value of deferred tax assets.

The outcomes of the research contradict what is thought of as deferred tax assets, which states that deferred taxes can bring benefits to businesses by eliminating tax liabilities, implying that no future obligations must be paid. The research findings are consistent with the findings of Faqih & Sulistyowati (2021), who found that deferred tax assets do not affect earnings management. Because the accumulation of deferred tax assets implies that the taxable revenue is more than the profit in accounting for temporary differences, the recorded tax expense in that period may be higher.

However, the research findings contradict Putra & Kurnia’s (2019) research, which claims that deferred tax assets have a positive effect on earnings management. One of the motivations for management to conduct earnings management by altering the amount of deferred tax assets is the motivation for paying bonuses, the political burden of the firm's size, and reducing tax payments so that the company is not harmed.

The third hypothesis, that deferred tax expense has a positive effect on earnings management in energy sector firms established on the Indonesia Stock Exchange (IDX) between 2015-2020, is accepted. The estimated $t$ value for deferred tax expense is $2.495 > 1.674$ t table, with a significance value of $0.016 < \alpha (0.05)$ and a $\beta$ coefficient value of $0.349$. The greater the increase in deferred tax expenses, the greater the increase in earnings management. This is due to management's desire to reduce tax payments to prevent lower profits and losses.

This research shall support the positive accounting theory of the debt-to-equity hypothesis. The proposed theory explains why, the closer a firm gets to accounting violations based on debt arrangements, the more likely it is that corporate executives may choose accounting techniques that result in reported earnings fluctuations from the future period to the current period. The rise in deferred tax expense correlates with corporations understanding profits previously or postponing costs as a result of financial reporting reasons in the timeframe than to report taxes. Management is controlling earnings on commercial financial statements, as evidenced by the firm's measures of recognizing profits earlier and delaying costs. The more the revenue earned by the management practice, the bigger the deferred tax liability is recorded as a deferred tax expense by the firm (Sumomba & Hutomo, 2012).

The research findings are consistent with those of Negara & Suputra (2017), Faqih & Sulistyowati (2021), Septianingrum et al. (2022), and Putra et al. (2019), who found that deferred tax expense has a positive effect on earnings management because management avoids disclosing losses. However, contrary to the research that was done by Setyawan et al. (2021), partially deferred tax expense does not affect earnings management. This can arise because management is limited in altering accounts of deferred tax expenses due to deferred tax expense regulations in the applicable tax regulations. This is what prevents management from implementing fiscal accounting-based financial reporting policies.

The fourth hypothesis, that profitability has a positive effect on earnings management in energy sector businesses established on the Indonesia Stock Exchange (IDX) between 2015-2020, is accepted. Profitability has a $t$-value of $2.637 > 1.674$ t-table and a significance value of $0.012 < \alpha (0.05)$ and a $\beta$ coefficient of $0.428$. Increasing profitability means improving earnings
management. This is because management seeks to attract creditors and investors by demonstrating the company's future growth.

Profitability ratios reflect how well a company uses its assets to generate profits and shareholder value. Profitability ratios are quite beneficial for examining and comparing firms or past eras. The presentation of good profitability will entice investors to invest in the company. Earnings management strategies are encouraged by investor interest in the value of profitability.

This research's findings are consistent with those of Setyawan et al. (2021) and Habibie & Parasetya (2022), who found that profitability has a positive effect on earnings management. High profitability will be perceived as good asset management, attracting investors' interest. However, this contradicts the findings of Anindya & Yuyetta (2020), who found that profitability did not affect earnings management constraints. This is because the more the profit, the less the dividends distributed.

The fifth hypothesis, that earnings quality quasi-moderates the influence of tax planning on earnings management, is accepted in cases where the findings of the significant value of tax planning and earnings quality are significant. Tax planning moderated earnings quality on earnings management, with a t value of 1,857 > 1,674 and a significance value of 0.070 < α (0,10), and a β coefficient value of 0,270. This indicates that as tax planning and earnings quality become increasingly intertwined, so will earnings management. The company's tax planning is one technique for management to control earnings. This suggests that management engages in tax planning to preserve earnings quality.

Taxation can be used as one of the reasons for firms to carry out earnings management cases the imposition of taxes might be one of the motivators for organizations to execute earnings management circumstances (Scott, 2015). Tax planning implemented by the company is one method for management to implement earnings management to generate high-quality earnings for the organization. The company's net profit can be maximized and investors can be attracted by excellent tax planning. Earnings management inside the company has a significant impact on the average and low earnings quality, because the manager, as the company's manager, will present earnings reports in the financial statements, which can contribute to higher and lower earnings quality.

The research findings contradict those of Arizona et al. (2017), who contend that tax management, as assessed by book-tax disparities, has a negative impact on earnings quality. The information regarding corporate taxes in the financial statements also provides information about the earnings quality. Katuruni (2018) discovered that the tax retention rate had a considerable negative effect on profits quality in his research.

The sixth hypothesis, that earnings quality is a moderating predictor of profitability's influence on earnings management, is rejected since the significance value results on profitability and earnings quality are not significant. Earnings quality on earnings management has a t-count value of 0,211 < 1,674 t-table and a significance value of 0,834 > α (0,10) and a β coefficient value of 0,320, which moderates profitability. This is because earnings quality is unable to influence management judgments in defining earnings management policies, implying that management believes earnings quality does not contribute much to investors' assessments of market conditions.

This finding is contrary to previous research findings that profitability has a direct and positive effect on earnings management. Earnings quality has no impact on investors' investment decisions because earnings have an accrual component that can be handled according to management's accounting model. Corporate profitability ratios, whether high or low, have little influence on the quality of a company's earnings. In theory, the level of profitability, on the other hand, determines the company's ability to make profits with the resources available. A high-earnings quality is not always associated with a high-value profit, and a low-earnings quality is not always associated with a low-quality profit. Earnings of high quality indicate the company's financial success under present conditions.
The research conclusions align with the outcomes of Aziza et al. (2022), who found that profitability did not affect earnings quality. Investors' perspectives on evaluating corporate performance are evolving, as strong profitability does not ensure excellent earnings quality. The research findings contradict the findings of Dewi & Fachruroz (2021), namely that profitability has a negative impact on earnings quality. This is most likely due to the influence of positive accounting theory's bonus plan concept. However, it is inversely related to Lusiani & Khafid's (2022) research, which claims that profitability has a significant positive effect on earnings quality. This is due to the existence of one of the management's motivations, who is responsible for the company and is also tasked with managing the company to receive the highest bonus.

In the period 2015-2020, leverage as a control variable has no effect on earnings management in firms established on the Indonesia Stock Exchange (IDX). The estimated t value for leverage is 0.009 < 1.674 t table, the significance value is 0.993 > α (0.10), and a β coefficient value is 0.001.

In the period 2015-2020, company size as a control variable has a negative impact on earnings management in energy sector businesses established on the Indonesia Stock Exchange (IDX). Firm size has a t value of -1.836 > 1.674, a significance value of 0.073 < α (0.10), and a β coefficient value of -0.270.

4. Conclusions

The reason for the existence of this research is to analyze the factors that affect earnings management in energy sector firms established on the Indonesia Stock Exchange between 2015-2020, using earnings quality as a moderating factor and leverage and company size as control variables. Tax planning, deferred tax assets, deferred tax expenses, and profitability are the independent factors in this research. Earnings quality is used as a moderating variable to enhance or weaken the independent variable with the dependent variable. In addition, leverage and firm size are employed as control variables to ensure that no other factors, other than the independent variables chosen by the author, influence the dependent variable. According to the result of this research, tax planning, deferred tax expense, and profitability, all have a positive effect on earnings management, while deferred tax assets have no effect. Earnings quality, as a moderating variable, can mitigate the impact of tax planning on earnings management but cannot mitigate the impact of profitability on earnings management. Furthermore, leverage has no effect on earnings management as a control variable, whereas firm size has a negative effect on earnings management.

Tax planning for energy sector firms established on the Indonesia Stock Exchange (IDX) for 2015-2020 can minimize the number of company profits that aim to achieve tax advantages without breaching applicable tax laws, to get fiscal benefits, and to gain profits in obtaining more capital from investors through the sale of company shares. The research findings also support the positive accounting theory of the political cost hypothesis, which states managers will try to minimize the proportion of tax expense which is needed bearing by the company because the taxation burden is a deduction from net income, and thus firm will carry out earnings management by making tax planning as effective as possible.

Fluctuations in deferred tax assets measured by discretionary accruals in energy sector firms established on the Indonesia Stock Exchange (IDX) between 2015-2020 will not indicate the firm's earnings management methods. The outcomes of the research contradict what is thought of as deferred tax assets, which states that deferred taxes can bring benefits to businesses by eliminating tax liabilities, implying that no future obligations must be paid.

The deferred tax expense of the energy sector firm established on the Indonesia Stock Exchange (IDX) from 2015 to 2020 indicated the positive accounting theory of the debt-to-equity
hypothesis, namely management is controlling earnings on commercial financial statements, as evidenced by the firm's measures of recognizing profits earlier and delay costs.

Profitability in firms established on the Indonesia Stock Exchange (IDX) in the energy sector from 2015-2020 demonstrates earnings management methods. This is because management seeks to attract creditors and investors by demonstrating the company's future growth. The presentation of good profitability will entice investors to invest in the company.

Earnings quality in energy sector firms listed on the Indonesia Stock Exchange (IDX) in 2015-2020 can mitigate the influence of tax planning on earnings management since management engages in tax planning to preserve earnings quality. The company's net profit can be maximized and investors can be attracted by excellent tax planning.

In the period 2015-2020, earnings quality in energy sector firms established on the Indonesia Stock Exchange (IDX) is unable to moderate the effect of profitability on earnings management. This finding is contrary to previous research findings that profitability has a direct and positive effect on earnings management. This is because earnings quality is unable to influence management judgments in defining earnings management policies, implying that management believes earnings quality does not contribute much to investors' assessments of market conditions. A high-earnings quality is not always associated with a high-value profit, and a low-earnings quality is not always associated with a low-quality profit. Earnings of high quality indicate the company's financial success under present conditions.

In the period 2015-2020, leverage as a control variable has no effect on earnings management in energy sector firms established on the Indonesia Stock Exchange (IDX). Meanwhile, company size as a control variable has a negative effect on earnings management in energy sector firms established on the Indonesia Stock Exchange (IDX) in 2015-2020.

Limitations

Some of the limitations possessed by the authors include: (1) The theoretical foundation in this study is still very minimal due to limited previous research literature regarding the interaction (relationship) between earnings quality and earnings management; (2) The population and samples taken by the authors are only in a small scope, namely energy sector firm established on the Indonesia Stock Exchange in the 2015-2020 period, and (3) The completeness of the financial report data in the selected population is minimal which causes the amount of data obtained to be less than optimal so that the results of this study only apply to the corporate sector sampled by the author, and cannot be generalized to all other corporate sectors.

Suggestions and Implications of Research Findings

The implications of this research are: (1) This research is expected to be a reference in the development of science/theory and to be a motivation and inspiration to conduct further research with different samples and methods; (2) This research can add insight about financial management, especially in terms of taxation, especially for the firm. Agents can determine earnings management policies that are more accurate in increasing company profits, resulting in improved financial performance; (3) This research can be used as a reference for investors to obtain the information required in making investment decisions by implementing an earnings management mechanism by applicable accounting rules; and (4) This research can contribute to policies at the Directorate General of Taxes.

Future research is predicted to be able to add other aspects to earnings management, predict the influence of other earnings management, and deliver more accurate results on earnings management. Researchers in the future will probably use a larger sample than has been used in this study or previously to guarantee it may offer an accurate representation and contribute broader information to the prospects of firms in Indonesia with the current regulations and investment climate.
Reference


