Earnings Quality Determinants: Evidence from Transportation and Logistics Companies

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ABSTRACT
Companies with good earnings quality are companies that have stable and sustainable earnings. This research examines the factors that influence earnings quality. The factors studied are investment opportunity set (IOS), leverage, and liquidity. The population of this research is 31 transportation and logistics companies listed on the IDX for the 2018-2022 period. This research is quantitative. Sampling used a purposive sampling technique. The research sample was 17 companies with five years of observation, namely 85 observations. The analysis used is multiple linear regression. This research finds that leverage affects earnings quality, while investment opportunity set and liquidity do not.

Keyword: Earnings Quality, Investment Opportunity Set, Leverage, Liquidity

ABSTRAK

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1. INTRODUCTION
Profit becomes a reference for investors in making decisions (Erawati & Wuarlela, 2022). Recorded profit based on economic events past does not reflect the current condition of the company, which causes non-quality earnings. Market and economic conditions often change over time, and profits recorded based on past events may not be relevant or accurate in describing the company’s current performance and financial health. They may not be used in decision-making (Septiani, 2020). When users of financial statements, such as investors, management, or other stakeholders, use earnings reports to analyze performance or make investment decisions, information that reflects current conditions and prospects is more important than information based on past events.

Recording profit based on past events also does not consider fair value on the actual assets or liabilities of the company (Houqe et al., 2012). Recorded profit based on past economic events is also vulnerable to manipulation by corporate management. Profit manipulation can be done by changing the estimates or assumptions used in valuing assets or liabilities. This can lead to inaccurate earnings reports and obscure the company’s performance, resulting in low earnings quality.

Earnings quality can reflect a company’s ability to generate profits consistently and can also affect the reputation and trust of investors (Nurlailia & Pertiwi, 2020). The profit presented in achieving the objective of presenting valuable information in making economic decisions must be a quality profit. Profits that can be said to be quality profits are profits that reflect the current state of the company and profits that are free from manipulation made by management so that these profits can be used for decision-making (Nanang & Tanusdjaja, 2019). Earnings quality refers to the extent to which earnings reported in the financial statements reflect the company’s actual performance and whether those earnings are distorted.

It is essential to pay attention to the quality of earnings in the financial statements because if the quality of earnings is low, the reported and presented earnings are not by the company’s actual performance, which will mislead decision-makers. Since the financial manager is positioned as an internal party who knows more in detail about financial information than external parties, the financial manager reports company profits that are not by the actual conditions of the company for personal gain, for example, to get a bonus for performance (Safitri & Afriyenti, 2020). This behavior is known as profit manipulation and is generally carried out by company financial managers to attract investors to invest their money in their company (Al-Vionita & Asyik, 2020). This indicates that earnings do not have quality or are low quality because they are not presented according to actual conditions.
The phenomenon concerning profit manipulation, which results in low earnings quality, has occurred in the transportation sector involving PT. Garuda Indonesia (Persero) (GIAA). The owner of the GIAA stock code in 2019 was reported to have found irregularities. In its financial report, PT. Garuda Indonesia 2018 recorded a net profit of US $ 809 or around IDR 11.33 billion if converted into rupiah, in contrast to the conditions in 2017, which suffered a loss of US $ 216.58 million. This indicates an infiltration of interests by PT. Garuda Indonesia to increase its profits. As a result of these manipulations, the quality of the GIAA company’s earnings is considered low because it presents financial information that is different from the actual condition (CNN Indonesia, 2019).

Low earnings quality will cause errors in decision-making for users of financial statements, such as investors and creditors. The earnings manipulation in the above financial statements indicates that earnings quality is still considered low. Earnings of low quality will raise concerns and doubts for investors to invest in the company, which will impact the continuity of the company’s operations. Therefore, companies must evaluate and improve these conditions to stabilize profits and make earnings increase without any fraud that can be fatal (Nona et al., 2021).

Several factors influence the quality of earnings. The first factor that is considered to affect the quality of earnings is the Investment Opportunity Set (IOS). IOS itself refers to a description of how many investment opportunities are available for companies (Aningrum & Muslim, 2020). Investors consider companies that are experiencing positive growth and have significant investment opportunities as investment options, with the hope of obtaining high stock returns in the future. IOS influences earnings quality. This is proven in the research by Arisonda (2018) and Indriana & Handayani (2021), showing that IOS affects earnings quality. However, Fathussalmi et al. (2019) and Wulandari et al. (2021) show different results; IOS does not affect the quality of earnings because investors have short-term motives in obtaining profits. Therefore, IOS does not become the center of attention of investors in making investment decisions. The research results regarding the influence of IOS on earnings quality still need to be clarified.

Besides the IOS, other factors affect the quality of earnings, namely leverage. Leverage refers to the company’s ability to meet financial obligations in the short term (Murniati et al., 2018). If a company has a high leverage, it relies more on debt in its capital structure and asset management. High leverage can indicate that the company is borrowing more money to generate greater profits or to expand its business operations. However, a high level of leverage also indicates that the company has a greater risk because it has to pay higher interest and debt repayments, and the inability to fulfill financial obligations can result in losses or even bankruptcy (Salma & Riska, 2020). The research results by Agustina & Mulyani (2019) and Amin & Firmansyah (2023) show that leverage affects earnings quality. However, Marsela & Maryono (2017) and Indriana & Handayani (2021) show different results;
namely, leverage does not affect earnings quality. The research results regarding the effect of leverage on earnings quality still need to be clarified.

The last factor that can trigger the effect of earnings quality is liquidity. Liquidity refers to a company's ability to meet its short-term financial obligations easily and quickly using available assets (Marlina & Idayanti, 2021). An excellent financial condition and being able to pay off all current liabilities promptly can be demonstrated by the company's high level of liquidity. A good level of liquidity can influence the quality of company earnings because these companies tend to be more open in disclosing profit information (Syawaluddin et al., 2019). This is due to the company's ability to meet its short-term debt obligations, which shows good financial performance and prevents the company from profit manipulation practices. Several researchers have carried out the effect of liquidity on earnings quality. The research by Ardianti (2018) and Safitri & Afriyenti (2020) shows that liquidity affects earnings quality. Companies with good liquidity tend to be more open in disclosing profit information. It differs from the research by Nandika & Sunarto (2022) and Anggraeni & Widati (2022), showing different results, namely that liquidity does not affect earnings quality. The results of research regarding the influence of liquidity on earnings quality still need to be clarified.

The diversity of research results and the phenomenon of earnings manipulation, which results in low earnings quality, occurs in the transportation sector involving PT. Garuda Indonesia (Persero), this research aims to re-examine the influence of investment opportunity set, leverage, and liquidity on the quality of earnings in transportation and logistics companies listed on the Indonesia Stock Exchange for 2018-2022.

2. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT
Agency Theory
Agency theory is initiated by Jensen & Meckling (1976), interpreting that an agency relationship is an agreement between a manager who acts as an agent and shareholders acting as principal. Agency theory states that the interpretation of the concept of earnings quality uses an agency theory approach that involves relationships or contracts between company members, especially between owners (principal) and agent management (agent) (Ardianti, 2018). The owner (principal) is in charge, and the agent (agent) is located as a party that is given responsibility in a partnership contract.

In this agency theory, managers are known to have more internal company information than shareholders or company owners (Mohmed et al., 2020). This is what causes problems between owners or shareholders and agents or managers. Owners or shareholders (principals) want the company’s earnings, and managers (agents) make wishes come to the actual principal by presenting positive financial information. However, under certain conditions, the manager presents financial information different from the actual conditions for his interests so that his performance
is considered good. However, the company’s earnings quality will be low. As a result of an information imbalance, there is a conflict of interest between the agent and the principal. Agents can aﬀect the accounting numbers presented in the financial statements by manipulating earnings. This is because the agent wants to make earnings for himself. If this happens, the resulting earnings will be of low quality because it is not presented realistically, and users of financial statements will be confused in making economic decisions.

**Earnings Quality**

Dechow et al. (2010) said that high-quality earnings must have three characteristics, which include being able to accurately reflect the company’s current operational performance, being able to provide a good indicator of company performance in the future, and being a good measure to assess company performance. Earnings quality can be defined as an evaluation of a company’s ability to earn profits consistently, which can reflect the actual financial performance of the company (Amanda & Erinos, 2023). Earnings that have quality are profit information that is presented under actual conditions without any manipulation practices. The quality of results is reflected in financial information that conforms to the characteristics set by financial accounting standards (Al-Vionita & Asyik, 2020). Current earnings are considered high quality if they serve as a good guide for the company’s long-term profits (Dichev et al., 2012).

**Investment Opportunity Set**

Investment opportunity set (IOS) is a growth opportunity for the company. IOS is used as the basis for determining the classification of company growth in the future (Arisonda, 2018). Companies with high IOS values tend to be positively assessed by investors because they have the prospect of greater profits in the future. So, when a company has a high IOS, the value of the company also increases because more and more investors are interested in investing in the hope of getting better returns in the future. IOS should be a future investment choice that generates higher returns. If the company has a high IOS, management will present these conditions to users of financial statements and attract investors. Management will report profits consistent with actual conditions, which indicate that the company has investment opportunities in the future and that the earnings generated are of high quality and can reflect the company’s stock price (Narita & Taqwa, 2020). Therefore, the first hypothesis proposed by this research is as follows.

\[ H_1: \text{Investment opportunity set influences earnings quality.} \]
Leverage
Leverage is a variable that refers to how much of a company’s capital is financed by its debt (Dewi et al., 2020). If the company has a high level of debt compared to its capital, then there is a high level of financial risk, and the company will likely default on its debts. This forces companies to incur many costs and impacts the low quality of company earnings, so company management tends to carry out earnings management. Therefore, the earnings generated by companies are of low quality. Leverage affects the quality of company earnings. The use of debt will be responded negatively by investors because investors will assume that companies will prioritize debt payments over dividends (Lusiani & Khafid, 2022). The high level of leverage makes investors afraid to invest in the company because investors want to avoid taking significant risks. Therefore, the second hypothesis proposed by this research is as follows.

H₂: Leverage affects earnings quality.

Liquidity
Liquidity means a company’s ability to meet its short-term debt (Safitri & Afriyanti, 2020). Wulansari (2013) states that companies with high liquidity will have a relatively low risk that creditors will feel confident lending to businesses, and investors will be interested in investing their capital in businesses because investors believe businesses can exist (not be liquidated). For example, a company’s liquidity is too large. In that case, the company can not manage its current assets to the maximum extent possible, so its financial performance becomes poor. There is a possibility of earnings management actions to increase these profits. As a result, investors react negatively to the company’s high level of liquidity (Ananda & Ningsih, 2016). Therefore, the third hypothesis proposed by this research is as follows.

H₃: Liquidity affects earnings quality.

3. RESEARCH METHODS
This research design uses a quantitative approach with secondary data derived from the annual reports of transportation and logistics companies listed on the Indonesia Stock Exchange (IDX) for 2018-2022. The research model used in this study is hypothesis testing to test the effect of the independent variables (investment opportunity set (IOS), leverage (LEV), liquidity (LIQ)) on the dependent variable (earnings quality (EQ)). Tests were carried out using the IBM SPSS version 25 application using descriptive statistical analysis, classic assumption test, and multiple linear regression analysis. The equation model for this research in testing the hypothesis is as follows.

\[ EQ = \beta_0 + \beta_1 \text{ IOS} + \beta_2 \text{ LEV} + \beta_3 \text{ LIQ} + e \]
Table 1
Sample Selection

<table>
<thead>
<tr>
<th>No.</th>
<th>Criteria</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Transportation and logistics sector companies listed on the Indonesia Stock Exchange (IDX) in 2018-2022</td>
<td>31</td>
</tr>
<tr>
<td>2.</td>
<td>Transportation and logistics sector companies that do not publish complete financial reports during 2018-2022</td>
<td>(14)</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td>Total observations</td>
<td>85</td>
</tr>
</tbody>
</table>

Source: Data processed in 2023

Population and Sample
The population is transportation and logistics companies listed on the Indonesia Stock Exchange (IDX) for 2018-2022, totaling 31 companies. The research sample was taken using a purposive sampling technique. The final sample was 17 companies. Table 1 presents the sample selection process.

Variable Operational Definitions

Earnings Quality
Earnings quality (EQ) refers to the ability of reported earnings to accurately reflect company profits, as well as the usefulness of reported earnings in predicting future earnings (Mohmed et al., 2020). In this study, earnings quality is measured using the Penman & Zhang (1999) model approach formula. Earnings quality is measured by the ratio of cash from operations to revenue or sales (Kurniawan & Aisah, 2020). According to Penman & Zhang (1999), the formula for calculating earnings quality is as follows:

$$EQ = \frac{Cash\ From\ Operation}{Net\ Income}$$

Investment Opportunity Set
The investment opportunity set (IOS) is a growth opportunity for the company, as well as a basis for determining the classification of future growth (Wulandari et al., 2021). In this study, IOS uses the capital expenditure to book value assets proxy (CE/BVA). This proxy is a ratio that compares an investment measurement that has been invested in the form of fixed assets or an operating result produced from the assets that have been invested. According to Jaya & Wirama 2017, CE/BVA is formulated as follows:

$$CE/BVA = \frac{Total\ Assets\ (t) - Total\ Assets\ (t - 1)}{Total\ Assets\ (t - 1)}$$
Leverage
Leverage (LEV) is a ratio used to determine how much a company’s assets are financed by its debt (Setiawan, 2017). Leverage can be determined using the debt-to-equity ratio (DER), which is a ratio that shows the relative proportion between equity and debt used to finance company assets (Isna, 2020). The DER formula, according to Sukmawati & Agustina (2014), is explained as follows:

$$\text{DER} = \frac{\text{Total Debt}}{\text{Equity}}$$

Liquidity
Liquidity (LIQ) measures a company’s ability to meet its short-term obligations (Syawaluddin et al., 2019). The current ratio formula is explained as follows (Warianto, 2014):

$$\text{CR} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

4. RESULTS AND DISCUSSION

Descriptive Statistics
Descriptive statistical tests produce minimum, maximum, mean, and standard deviation values. The resulting minimum, maximum, mean, and standard deviation values can be seen in Table 2.

Classical Assumptions
This research tests classic assumptions such as the normality test, multicollinearity test, heteroscedasticity test, and autocorrelation test. The Monte Carlo significance value is 0.321, which means $0.321 > 0.05$. The VIF value of the IOS variable is 1.002, leverage is 1.019, and liquidity is 1.019. The significance value of the IOS variable is 0.920, leverage is 0.879, and liquidity is 0.889 for the heteroscedasticity test. The DW value is 1.737, the DU value is 1.721, and the 4-DU value is 2.279 by the criteria, $1.721 < 1.737 < 2.279$. This research’s regression model has fulfilled all the classical assumptions.

<table>
<thead>
<tr>
<th>Table 2</th>
<th>Descriptive Statistics</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
</tr>
<tr>
<td>IOS</td>
<td>85</td>
</tr>
<tr>
<td>LEV</td>
<td>85</td>
</tr>
<tr>
<td>LIQ</td>
<td>85</td>
</tr>
<tr>
<td>EQ</td>
<td>85</td>
</tr>
<tr>
<td>Valid N (listwise)</td>
<td>85</td>
</tr>
</tbody>
</table>

Source: IBM SPSS 25, data processed in 2023
Tabel 3
Summary of Hypothesis Test Results

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>.332</td>
<td>.144</td>
</tr>
<tr>
<td>IOS</td>
<td>.456</td>
<td>.117</td>
</tr>
<tr>
<td>LEV</td>
<td>.232</td>
<td>.049**</td>
</tr>
<tr>
<td>LIQ</td>
<td>.232</td>
<td>.116</td>
</tr>
<tr>
<td>F Test</td>
<td>2.781**</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>85</td>
<td></td>
</tr>
<tr>
<td>Adj. R Square</td>
<td>.060</td>
<td></td>
</tr>
</tbody>
</table>

Note: *, **, and *** are signs that indicate significance levels of 10%, 5%, and 1% respectively. EQ is the quality of earnings, measured using the Penman & Zhang (1999) formula, namely cash from operations divided by net income. IOS uses the capital expenditure to book value assets proxy. LEV uses the debt-to-equity ratio proxy (Isna, 2020; Sukmawati & Agustina, 2014). LIQ is a ratio that can measure a company's ability to fulfill its short-term obligations (Syawaluddin et al., 2019), namely current assets divided by current liabilities.

Source: IBM SPSS 25, data processed in 2023

Hypothesis Test Results
Table 3 summarizes the results of this research’s hypothesis testing. The IOS variable has a coefficient of 0.456 and is not significant (0.117). The LEV variable has a coefficient value of 0.232 and is significant (0.049). The LIQ variable has a coefficient of 0.232 and is not significant (0.116). The results of this research show that the LEV variable is proven to be significant in earnings quality. The IOS and LEV variables were not proven to have a significant effect on earnings quality.

Effect of Investment Opportunity Set on Earnings Quality
The investment opportunity set is a collection of investment options that can be selected to identify investment alternatives in the future or as opportunities for growth (Al-Vionita & Asyik, 2020). The results of this study state that the investment opportunity set has no significant effect on earnings quality (Table 3). The IOS value is not the main focus of investors in making investment decisions. In other words, investors pay little attention to the IOS value of the company, but they focus more on the level of profit generated by the company (Ersanti, 2019). Investor's motivation in investing is not to get long-term profits but to get profits in a shorter period (Wulandari et al., 2021). The absence of an investment opportunity set effect on earnings quality indicates that the level of investment opportunity does not affect the increase or decrease in earnings quality. Investors need to consider the level of investment opportunity set in making investment decisions and focus more on the profit figures generated by the company. This will affect the views of investors and managers in analyzing earnings so that the opportunity to determine the direction of company profits is
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not influenced by the investment opportunity set (Fathussalmi et al., 2019). This is in line with the results of research conducted by Yulianti et al. (2020), Khasanah & Khafid (2020), Kepramareni et al. (2021), and Anam (2023), which prove that IOS has no significant effect on earnings quality. These results are in contrast to the research by Ersanti (2019), Yasa et al. (2019), Murniati (2019), and Andriani et al. (2021), which found that IOS affects earnings quality.

Effect of Leverage on Earnings Quality

The research results show that leverage has a positive and significant effect on earnings quality (Table 3). Leverage is defined as how much of a company’s assets are financed by its debt (Murniati et al., 2018). The results of this research are supported by the findings of previous research conducted by Sadiah et al. (2015), Anggraeni & Widati (2022), Warrad (2017), and Amin & Firmansyah (2023), which shows that leverage has a positive and significant influence on earnings quality. Facing debt that can be met has a positive impact on the company because this means the company can experience better growth. Companies that have high levels of debt have the opportunity to use this debt to fund the company’s operational activities, which in turn allows the company to generate significant earnings (Dewi et al., 2020). The earnings generated can then be used to pay off the debt, making the company more financially stable. In this regard, the greater the debt of a company, the greater the quality of earnings. A high level of leverage in a company will encourage management to improve performance to pay off the company’s debts. This follows agency theory, which states that management is tasked with realizing the principal’s desires by presenting positive financial information. If the debt can be fulfilled, then the positive impact will be felt by the company, which means the company will experience more rapid growth. These results are different from the findings of research conducted by Murniati (2019), Natasha et al. (2022), and Sofana et al. (2021), namely that leverage does not affect earnings quality.

Effect of Liquidity on Earnings Quality

The research results show that liquidity has no significant effect on earnings quality (Table 3). The company’s liquidity level does not influence the quality of the earnings report presented by company management. When the level of liquidity is low, this indicates that the company is having difficulty paying its short-term obligations (Valdiansyah & Murwaningsari, 2022). The main factor causing low liquidity is high short-term liabilities. To overcome this situation, companies need to take various steps, such as selling inventory, collecting receivables, or selling securities to meet their short-term obligations (Murniati et al., 2018). This liquidity problem will not encourage management to disclose earnings in a questionable manner or present earnings information that does not reflect the company’s actual condition. On the contrary, the company will commit to overcoming liquidity problems and taking preventive
measures so they do not happen again. This is in line with research by Murniati (2019), Wijaya (2020), Khasanah & Khafid (2020), and Kartika et al. (2023), which shows that liquidity has no significant effect on earnings quality. However, this is not supported by the research findings of Salma & Riska (2020), Alqam et al. (2022), and Valdiansyah & Murwaningsari (2022), who find that liquidity influences earnings quality.

5. CONCLUSIONS AND SUGGESTIONS
This research aims to examine several factors that influence earnings quality. The factors studied are investment opportunity set, leverage, and liquidity. The companies studied were 17 transportation and logistics companies registered on the IDX for 2018-2022. This research finds that leverage affects earnings quality. These findings imply that companies are expected to conduct regular evaluations and reviews in debt management to improve the quality of profits by considering the proportion between debt and equity and using debt for investments that produce cash flows more significant than the cost of debt itself so that profits are quality. The limitation of this research is that the coefficient of determination test has a low value, namely only 6%, so other variables outside this research influence the remaining 94%. So, the suggestion for future researchers is to add other variables influencing earnings quality, such as conservatism.

REFERENCES
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