

# The Effect of Audit Tenure, Company Growth, and Leverage on Audit Fees

Pradita Widi Aryani<sup>1</sup>, Ni Nyoman Alit Triani<sup>2</sup>

<sup>1,2</sup>Department of Accounting, Faculty of Economics and Business, Universitas Negeri Surabaya, Surabaya, Indonesia.  
Email: [pradita.22208@mhs.unesa.ac.id](mailto:pradita.22208@mhs.unesa.ac.id)<sup>1</sup>, [nyomanalit@unesa.ac.id](mailto:nyomanalit@unesa.ac.id)<sup>2</sup>

## ARTICLE HISTORY

Received: June 14, 2026  
Revised: July 20, 2026  
Accepted: July 21, 2026

## DOI

<https://doi.org/10.52970/grar.v7i1.2386>

## ABSTRACT

This study examines the effects of audit tenure, company growth, and leverage on audit fees, with firm size and profitability included as control variables. The population consists of infrastructure companies listed on the Indonesia Stock Exchange during 2020–2024. Using purposive sampling, 45 firms were selected, resulting in 225 firm-year observations. Panel data regression analysis was employed, with the Random Effects Model (REM) identified as the most appropriate estimation method. The results indicate that audit tenure and company growth do not significantly affect audit fees. In contrast, leverage has a positive effect on audit fees, suggesting that higher financial risk increases audit effort and pricing. Among the control variables, firm size is not associated with audit fees, while profitability has a significant positive influence, indicating that more profitable firms tend to demand greater audit assurance. Simultaneously, all variables significantly affect audit fees. The model explains a limited proportion of audit fee variation, implying that other determinants remain influential. This study contributes to the audit pricing literature by providing empirical evidence from Indonesia's infrastructure sector and highlighting the importance of leverage and profitability in audit fee determination. The findings offer practical insights for corporate management, auditors, and regulators in evaluating audit pricing and risk considerations. However, the study is limited to a single industry sector and a restricted set of variables. Future research should incorporate corporate governance, audit quality, auditor reputation, and industry specific factors to improve explanatory power.

**Keywords:** Audit Fees, Audit Tenure, Company Growth, Leverage, Firm Size.

**JEL Code:** E44, F31, F37, G15

## I. Introduction

Financial statements serve as an essential source of information for investors, creditors, regulators, and other stakeholders in evaluating a company's financial condition and performance. According to the IASB, (2018), the primary objective of financial statements is to provide useful information for investors, lenders, and other creditors in making economic decisions. To enhance the reliability of this information, companies engage independent auditors to provide assurance regarding the fairness of financial statement presentation (Arens et al., 2017). In obtaining these audit services, companies are required to pay audit fees as compensation for the professional services provided by Public Accounting Firms (Simunic, 1980). Audit fees represent the remuneration paid to external auditors for conducting financial statement audits within a specific period. According to (Simunic, 1980), audit fees reflect the level of audit effort, audit complexity, and audit risk borne by auditors during the engagement. Further argue that higher operational complexity and

greater audit risk generally lead to higher audit fees. Consequently, audit fees constitute an important aspect of the relationship between companies and auditors, as they are closely associated with audit quality, auditor independence, and the effectiveness of financial reporting oversight.

In this study, the independent variables consist of audit tenure, firm growth, and leverage. Audit tenure refers to the length of time, measured in years, during which a client company retains the same Public Accounting Firm (PAF) to perform its audit engagement (Bleibtreu et al., 2022). Audit tenure is considered an important factor influencing audit quality. Long-term audit engagements are often subject to public and media scrutiny because they may threaten auditor independence and potentially reduce audit quality (Xiong et al., 2024). In response to these concerns, regulatory bodies such as the European Union (EU) have introduced limitations on audit tenure to mitigate independence risks and maintain audit quality. From the client's perspective, economic considerations, particularly the pursuit of more competitive audit fees, are among the primary reasons for changing auditors. Company growth is another independent variable examined in this study and is commonly measured through changes in sales (Prasasti & Zulvia, 2026). Companies experiencing high growth generally face greater operational complexity due to market expansion, organizational changes, and increased transaction volumes. Such complexity requires additional audit effort, suggesting that firm growth is likely to increase audit fees (Mughtar et al., 2024). However, empirical findings on this relationship remain mixed, indicating the need for further investigation.

Leverage reflects a company's level of financial risk. Firms with higher leverage are generally exposed to greater default risk, which may increase audit risk from the auditor's perspective. According to audit pricing theory, auditors tend to charge higher audit fees to compensate for the additional risk associated with highly leveraged firms (Simunic, 1980). However, prior studies have reported mixed findings, with some identifying a significant positive relationship and others finding no significant effect, highlighting the need for further examination (Mughtar et al., 2024). This study also incorporates firm size and profitability as control variables. Firm size is one of the most consistent and significant determinants of audit fees identified in the literature (Widmann et al., 2021). Larger firms typically exhibit more complex operations and higher transaction volumes, requiring greater audit effort, time, and resources, which consequently increase audit fees. Therefore, firm size is included as a control variable to account for its established influence and to isolate the effects of the primary independent variables. This study also includes firm size and profitability as control variables. Firm size is widely recognized as one of the most consistent and significant determinants of audit fees (Bedi & Singh, 2024). Larger companies generally possess more complex operations and greater transaction volumes, requiring additional audit time and resources, which ultimately lead to higher audit fees. Therefore, firm size is incorporated as a control variable to account for its well-established influence and to isolate the effects of the primary independent variables.

In addition to firm size, profitability is an important control variable because it is frequently associated with going-concern risk and the quality of clients' financial reporting. Highly profitable firms may have stronger incentives to engage in earnings management, thereby increasing audit risk, whereas stable profitability may reduce going-concern concerns. As a result, auditors may adjust audit fees according to a client's profitability level to compensate for inherent or control risks related to earnings (Bedi & Singh, 2024). Profitability also reflects a company's ability to bear higher audit fees and may indicate stronger management quality and internal control systems, which can help mitigate audit risk (Ogundele et al., 2024).

## II. Literature Review and Hypothesis Development

### 2.1. Agency Theory

Agency Theory, developed by (Jensen & Meckling, 1976), explains the contractual relationship between principals (shareholders) and agents (management), in which decision-making authority is delegated to management. Due to information asymmetry and potential conflicts of interest, principals incur monitoring costs, including audit fees, to ensure that management acts in their best interests. External

auditors serve as an independent monitoring mechanism, and audit fees are therefore considered part of agency costs. Agency Theory provides a theoretical basis for understanding the determinants of audit fees. Firm growth can increase operational complexity and monitoring difficulties, leading to higher audit fees. Similarly, firms with higher leverage face greater audit risk, requiring additional audit effort and resulting in increased audit fees. Larger firms generally demand more extensive audit procedures because of their operational scale and complexity, thereby increasing audit costs. Profitability may also influence audit fees, as profitable firms often present greater incentives for earnings management, necessitating more intensive audit verification (Izzani & Khafid, 2022). Furthermore, Agency Theory identifies two main agency problems: conflicts of interest between principals and agents and differences in risk preferences between both parties (Ogundele et al., 2024). These issues reinforce the importance of external audits as a monitoring mechanism and support the role of audit fees in reducing agency-related risks.

## 2.2. Audit Production Function Theory

Audit Production Function Theory, pioneered by Simunic, (1980), views audit fees as a price determined by the interaction between client-related demand attributes and auditor-related supply attributes. This framework explains that audit fees are influenced by factors affecting the level of audit effort and audit risk. Firm size is recognized as one of the most consistent determinants, as larger firms are generally more complex and require greater audit effort, leading to higher audit fees (Widmann et al., 2021). Client risk factors, such as high leverage and low profitability, are categorized as demand attributes because they increase the likelihood of financial distress and debt covenant violations, requiring auditors to perform more extensive verification procedures and provide higher levels of assurance, which ultimately increase audit fees. Similarly, firm growth is considered a demand attribute, as expanding business activities increase operational complexity and audit workload, thereby raising audit costs (Muchtar et al., 2024). In contrast, audit tenure is classified as a supply attribute, reflecting the relationship between the duration of the auditor client engagement and audit fees, particularly regarding efficiency gains and fee adjustments over time. Collectively, these variables explain variations in audit fees through their effects on audit production costs and auditors' risk assessments. Consistent with the production function perspective, audit effort measured by labor and time inputs is transformed into audit assurance as the output, with client characteristics influencing the level of effort required to achieve a given level of assurance (Bleibtreu et al., 2022).

## 2.3. Low-Balling Theory

Low-Balling Theory explains a pricing strategy in which Public Accounting Firms (PAFs) intentionally offer audit fees below normal levels, particularly during the first year of an audit engagement, to attract new clients (Bleibtreu et al., 2022). The objective is to recover the initial investment and earn quasi-rents in subsequent years of the engagement. Incumbent auditors benefit from informational advantages, accumulated client knowledge, and lower transaction costs compared to potential replacement auditors, enabling them to increase audit fees in later years without substantially increasing the risk of client switching. The low-balling hypothesis predicts a nonlinear relationship between audit tenure and audit fees. Audit fees are expected to be relatively low during the initial engagement period due to discounted pricing and then increase in subsequent years as auditors recover initial costs and earn quasi-rents. However, mandatory audit firm rotation regulations in Indonesia, which limit the duration of audit engagements, may constrain the effectiveness of this strategy by shortening the period available for recovering quasi-rents (Izzani & Khafid, 2022).

This theory is particularly relevant to audit tenure because it explains how audit firms use lower initial fees to secure long-term client relationships. Despite concerns regarding extended audit tenure, evidence suggests that mandatory auditor rotation does not necessarily improve audit quality. Longer audit engagements may allow auditors to benefit from learning-curve effects, including greater efficiency and a

deeper understanding of client operations, while maintaining professional independence and audit quality (Bleibtreu et al., 2022).

#### 2.4. Audit Fee

Audit fee is defined as the monetary compensation paid to external auditors for professional audit services rendered (Susanto, 2023). In audit research, audit fees are viewed as a reflection of the resources expended and the level of risk assumed by auditors during an engagement. Empirical studies commonly measure this variable using the natural logarithm (Ln) of total audit fees to improve data normality. According to Simunic, (1980), audit fee determination is primarily influenced by two dimensions: the quantity of audit work required and the level of audit risk faced by the auditor. Factors affecting audit fees can be categorized into demand-side and supply-side attributes. On the demand side, firm size is one of the most significant determinants, as larger firms require greater audit resources and effort. Corporate complexity, including the presence of subsidiaries and international operations, also increases audit scope and costs (Izzani & Khafid, 2022).

Client risk characteristics, such as leverage and profitability, influence auditors' risk assessments and are incorporated into audit fee premiums. On the supply side, auditor characteristics also play an important role. Large and reputable audit firms, particularly the Big Four, generally charge higher audit fees due to their perceived audit quality and greater legal responsibilities (Maghfirah et al., 2025). Industry specialization may further justify premium fees because of the specialized expertise provided. Additionally, weaknesses in a company's internal control system often result in higher audit fees, as auditors must perform more extensive substantive testing to reduce audit risk and ensure audit quality.

#### 2.5. Audit Tenure

Audit tenure is a supply-side attribute that is commonly associated with audit fee determination. It refers to the length of the continuous relationship between a Public Accounting Firm (PAF) and its client, with its impact on audit fees being explained through two contrasting perspectives (Widmann et al., 2021). On one hand, longer audit tenure enables auditors to develop a deeper understanding of the client's operations and risks, improving audit efficiency and reducing unnecessary audit effort, which may lead to lower audit fees through a learning-curve effect. On the other hand, extended auditor-client relationships may create familiarity threats that weaken professional skepticism and raise concerns regarding auditor independence. In Indonesia, audit tenure is regulated under Government Regulation No. 20 of 2015 and POJK No. 13 of 2017 to preserve auditor independence. Audit tenure is measured as the number of consecutive years a Public Accounting Firm audits the same client, beginning with a value of one in the first year of engagement and increasing annually until auditor rotation occurs. When a firm changes auditors, the tenure count is reset to one. This measurement assumes a predictable relationship between the duration of the auditor-client relationship and audit fees (Ashar et al., 2025). While longer tenure may generate efficiency gains, concerns regarding independence can increase perceived audit risk. As a result, auditors may charge higher audit fees as a risk premium to compensate for potential independence-related risks. Nevertheless, prior evidence suggests that auditors generally maintain their independence throughout the audit process despite longer engagements (Xiong et al., 2024).

#### 2.6. Company Growth

Company growth, commonly reflected in the expansion of operations, increases in assets, or growth in sales over time, is generally associated with greater business complexity. Companies experiencing high growth tend to develop new processes, systems, and transaction structures that increase the complexity of their operations (Muchtar et al., 2024). This heightened complexity has important implications for auditors, as

it increases both audit risk and the amount of time and effort required to obtain and evaluate sufficient audit evidence. Given the higher risk and greater audit effort associated with rapidly growing company, audit literature generally predicts a positive relationship between company growth and audit fees. As business activities expand, auditors are expected to allocate additional resources to ensure audit quality, leading to higher audit fees. While Prasasti & Zulvia (2026) found that larger firms tend to pay higher audit fees, their findings also indicate that sales growth specifically may exhibit a negative relationship with audit fees, suggesting that the effect of company growth on audit pricing remains an area requiring further investigation.

## 2.7. Leverage

Leverage measures the extent to which a company relies on debt financing relative to equity and is commonly assessed using ratios such as the Debt to Equity Ratio (DER) and Debt to Asset Ratio (DAR). A high level of leverage indicates greater financial risk, particularly the risk of default, and increases the need for external stakeholders, especially creditors, to obtain assurance regarding the reliability of audited financial statements. Highly leveraged firms are also more likely to be subject to debt covenants, making financial reporting quality increasingly important (Muchtar et al., 2024). From an auditor's perspective, high leverage increases client risk due to the greater likelihood of debt covenant violations and financial distress. Consequently, auditors are required to perform more extensive audit procedures and devote additional effort to evaluating the company's financial condition. This increase in audit risk and audit effort leads auditors to charge higher audit fees as compensation for the additional risk undertaken (Muchtar et al., 2024). Therefore, leverage is generally expected to have a positive relationship with audit fees.

## 2.8. Firm Size

Firm size is recognized as one of the most consistent and significant determinants of audit fees and is commonly measured using the natural logarithm of total assets or total sales (Widmann et al., 2021). Larger firms generally exhibit greater organizational, operational, and transactional complexity, often reflected by factors such as the number of business segments (Junita & Pratiwi, 2023). This increased complexity requires greater audit effort and more audit hours, leading to higher audit fees. In addition, large firms face greater public visibility and litigation risk, which increases the demand for higher-quality audit services (Widmann et al., 2021). Due to their more complex transactions and greater agency conflicts, larger companies require more extensive audit procedures and monitoring. Consequently, firm size consistently demonstrates a positive and significant relationship with audit fees in the audit literature.

## 2.9. Profitability

Profitability, commonly measured using Return on Assets (ROA) or Net Income, has shown mixed associations with audit fees in the audit literature. From a risk perspective, higher profitability may indicate stronger financial health and a lower likelihood of material misstatements, thereby reducing audit risk (Aydoğmuş et al., 2022). However, exceptionally high profitability can also create incentives for earnings management, which may increase audit risk and require additional audit procedures. The concept of a valuable client also influences the relationship between profitability and audit fees. Highly profitable companies are often viewed as attractive long-term clients by Public Accounting Firms, which may be willing to offer relatively lower audit fees as part of a client-retention strategy (Widmann et al., 2021). Although its effect is generally less pronounced than that of firm size, profitability is often associated with healthier financial conditions, which can reduce audit effort related to going-concern assessments. Consequently, the relationship between profitability and audit fees remains inconclusive and may vary depending on the balance between reduced financial risk and increased incentives for earnings management.

### III. Research Method

This study employs a quantitative research approach to examine the effects of audit tenure, company growth, and leverage on audit fees in infrastructure companies listed on the Indonesia Stock Exchange (IDX) during the period 2020–2024. A quantitative approach is considered appropriate because the objective of this study is to test the causal relationship between independent variables and audit fees using measurable financial data. The study adopts an explanatory research design, which aims to explain the relationship between variables based on Agency Theory, Audit Production Function Theory, and Low-Balling Theory. According to Ghozali (2021), explanatory research is suitable for testing hypotheses and providing empirical evidence regarding the relationships among variables. The population of this study consists of all infrastructure companies listed on the Indonesia Stock Exchange during the observation period. The infrastructure sector was selected because it is characterized by substantial capital investments, long-term projects, and relatively complex operational activities that may affect audit pricing decisions. The sample was selected using a purposive sampling technique to ensure that the selected companies met the research objectives. The sampling criteria include: (1) infrastructure companies consistently listed on the Indonesia Stock Exchange during 2020–2024, (2) companies that published complete annual reports and audited financial statements throughout the observation period. Purposive sampling enables researchers to obtain samples that are most relevant to the objectives of the study (Ghozali, 2021). Based on these criteria, 45 infrastructure companies were selected as the final sample. With an observation period of five years, this study obtained 225 firm-year observations for further analysis.

This study utilizes secondary data obtained from annual reports and audited financial statements published through the official website of the Indonesia Stock Exchange and the official websites of the respective companies. Secondary data are considered reliable because they have undergone external auditing and are publicly accessible. Data collection was conducted using a documentation method by reviewing, recording, and compiling information related to the variables examined in this study. According to Sugiyono (2022), documentation is an appropriate data collection technique for research utilizing published corporate reports and financial information. The dependent variable in this study is audit fee, which refers to the remuneration paid by a company to an external auditor for audit services provided during a fiscal year. Following previous audit fee studies, audit fee is measured using the natural logarithm of the audit fee disclosed in the company's annual report. The use of logarithmic transformation is intended to reduce data heterogeneity and improve data distribution (Desmon et al., 2022).

The independent variables consist of audit tenure, company growth, and leverage. Audit tenure is measured by the number of consecutive years an audit firm has audited the same client company. A longer audit tenure allows auditors to gain greater client-specific knowledge and improve audit efficiency, which may influence audit pricing decisions (Widmann et al., 2021). Company growth is measured using annual sales growth, reflecting the company's ability to expand its business activities over time. Companies experiencing higher growth generally face increased operational complexity and transaction volume, requiring additional audit procedures and audit effort (Mughtar et al., 2024). Meanwhile, leverage is measured using the Debt to Asset Ratio (DAR), which reflects the proportion of company assets financed through debt. High leverage levels indicate greater financial risk and may increase auditors' risk assessments, resulting in higher audit fees. To improve the robustness of the empirical model, this study incorporates firm size and profitability as control variables. Firm size is measured using the natural logarithm of total assets. Larger companies generally possess more complex organizational structures, diversified business activities, and greater transaction volumes, requiring more extensive audit procedures (Widmann et al., 2021). Profitability is measured using Return on Assets (ROA), which reflects a company's ability to generate earnings from its assets. Profitability may influence audit risk assessments because highly profitable firms often attract greater scrutiny from stakeholders and regulators.

The data are analyzed using panel data regression because the dataset combines cross-sectional observations across companies and time-series observations over multiple years. Panel data analysis provides

greater variability, reduces collinearity among variables, and improves estimation efficiency compared to pure cross-sectional or time-series analysis (Ghozali, 2021). The analysis procedure begins with descriptive statistical analysis to provide an overview of the research variables. Subsequently, panel data model selection is conducted through the Chow test, Hausman test, and Lagrange Multiplier test to determine the most appropriate regression model. The selected model is then evaluated through classical assumption tests, including multicollinearity and heteroscedasticity tests. Finally, hypothesis testing is conducted using the coefficient of determination (Adjusted  $R^2$ ), F-test, and t-test to assess both the simultaneous and partial effects of audit tenure, company growth, leverage, firm size, and profitability on audit fees.

## IV. Results and Discussion

### 4.1. Analysis Result

#### a. Description Analysis Result

**Tabel 1. Descriptive Analysis Result**

| Variable     | Audit_Fee | Audit_Tenure | Company Growth | Leverage  | Firm Size | Profitability |
|--------------|-----------|--------------|----------------|-----------|-----------|---------------|
| Mean         | 13.97966  | 1.960000     | 0.094534       | 3.784246  | 28.61389  | -14.99328     |
| Median       | 19.92809  | 2.000000     | 0.050197       | 0.949734  | 28.77288  | 2.360000      |
| Maximum      | 25.15083  | 5.000000     | 9.197745       | 462.3950  | 32.57784  | 380.9100      |
| Minimum      | 0.000000  | 1.000000     | -1.000000      | -34.92999 | 21.06564  | -4165.120     |
| Std. Dev.    | 9.669644  | 0.965105     | 0.740771       | 32.46568  | 2.376892  | 280.8896      |
| Skewness     | -0.731564 | 0.736897     | 8.621943       | 13.00819  | -0.561831 | -14.43049     |
| Kurtosis     | 1.596898  | 2.929064     | 103.5908       | 180.4018  | 3.058504  | 213.7284      |
| Jarque-Bera  | 38.52597  | 20.41032     | 97648.77       | 301389.7  | 11.86910  | 424119.6      |
| Probability  | 0.000000  | 0.000037     | 0.000000       | 0.000000  | 0.002646  | 0.000000      |
| Sum          | 3145.423  | 441.0000     | 21.27022       | 851.4552  | 6438.126  | -3373.488     |
| Sum Sq. Dev. | 20944.45  | 208.6400     | 122.9183       | 236100.6  | 1265.514  | 17673367      |
| Observations | 225       | 225          | 225            | 225       | 225       | 225           |

Based on the descriptive statistics results, this study utilizes 225 observations derived from 45 infrastructure companies listed on the Indonesia Stock Exchange during the 2020–2024 period. The audit fee variable has a mean value of 13.9797 with a standard deviation of 9.6696, indicating considerable variation in audit fees among sample companies. The minimum value of 0.0000 suggests that several observations did not disclose audit fee information. Audit tenure has an average value of 1.96 years with a standard deviation of 0.9651, indicating that most companies maintain relatively short auditor-client relationships. Company growth records a mean value of 0.0945, suggesting that the sampled companies experienced positive growth during the observation period.

The leverage variable shows substantial variation among firms, indicating differences in financing structures and debt utilization. Meanwhile, firm size has a mean value of 28.6139 and a standard deviation of 2.3769, reflecting relatively homogeneous firm sizes across the sample. Profitability exhibits the highest variability, with a standard deviation of 280.8896 and a minimum value of -4165.1200, indicating significant differences in financial performance and the presence of extreme losses among several companies. Overall, the descriptive statistics demonstrate that audit fees, leverage, and profitability vary considerably across firms, whereas audit tenure and firm size are relatively more stable.

#### b. Chow Test

**Tabel 2. Chow Test**

| Effects Test    | Statistic | d.f.     | Prob.  |
|-----------------|-----------|----------|--------|
| Cross-section F | 8.682304  | (44.175) | 0.0000 |

|                          |            |    |        |
|--------------------------|------------|----|--------|
| Cross-section Chi-Square | 260.508973 | 44 | 0.0000 |
|--------------------------|------------|----|--------|

Based on the results of the Chow Test, all tested variables showed a cross-section F value of 0.0000 ( $p < 0.05$ ). Therefore, the selected model is the Fixed Effect Model, and this test must be continued using the Hausman Test.

c. Hausman Test

**Tabel 3. Hausman Test**

| Test Summary         | Chi-Sq. Statistic | Chi-Sq. d. f. | Prob.  |
|----------------------|-------------------|---------------|--------|
| Cross-section Random | 9.312377          | 2             | 0.0095 |

Based on the test results in the table, the random cross-section probability value that appears is 0.3109. This value is greater than 0.05. Therefore, the model to be used between FEM and REM is the Random Effects Model (REM). This is because the Random Effects Model (REM) is more efficient to use than the Fixed Effects Model (FEM). The REM model was chosen because it is able to account for the correlation structure, thus producing a smaller variance.

d. Lagrange Multiplier Test

**Tabel 4 Lagrange Multiplier Test**

|                      | Cross-section | Test Hypothesis Time | Both     |
|----------------------|---------------|----------------------|----------|
| Breusch-Pagan        | 156.4573      | 2.084963             | 158.5423 |
|                      | (0.0000)      | (0.1488)             | (0.0000) |
| Honda                | 12.50829      | 1.443940             | 9.865716 |
|                      | (0.0000)      | (0.0744)             | (0.0000) |
| King-Wu              | 12.50829      | 1.443940             | 4.993299 |
|                      | (0.0000)      | (0.0744)             | (0.0000) |
| Standardized Honda   | 12.88753      | 2.016488             | 5.919536 |
|                      | (0.0000)      | (0.0219)             | (0.0000) |
| Standardized King-wu | 12.88753      | 2.016488             | 2.640223 |
|                      | (0.0000)      | (0.0219)             | (0.0041) |
| Gourier, et al.      |               |                      | 158.5423 |
|                      |               |                      | (0.0000) |

Based on the test results in the table above, the Breusch-Pagan value is 0.0000. Because this value is less than 0.05, the Random Effects Model (REM) was selected. This model selection reaffirms that the Breusch-Pagan value is very low, making the REM model the most appropriate model for use in this study.

e. Panel Data Regression Test

**Tabel 5. Panel Data Regression Test**

| Variable       | Coefficients | Std. Error | t-Statistic | Prob.  |
|----------------|--------------|------------|-------------|--------|
| C              | 4.125538     | 12.51403   | 0.329673    | 0.7420 |
| Audit_Tenure   | 0.739349     | 0.456981   | 1.617900    | 0.1071 |
| Company Growth | 0.141500     | 0.609131   | 0.232298    | 0.8165 |
| Leverage       | 0.027186     | 0.014207   | 1.913589    | 0.0570 |
| Firm Size      | 0.292259     | 0.436309   | 0.669845    | 0.5037 |
| Profitability  | 0.004931     | 0.001640   | 3.007215    | 0.0029 |

| Effects Specifications                |          |                    |          |
|---------------------------------------|----------|--------------------|----------|
| Cross-section fixed (dummy variables) |          |                    |          |
| R squared                             | 0.061996 | Mean dependent var | 4.578233 |
| Adjusted R-squared                    | 0.040580 | S.D. dependent var | 6.083216 |
| S.E. of regression                    | 5.958510 | Sum squared resid  | 7775.341 |
| F-statistic                           | 2.894877 | Durbin-Watson stat | 1.057190 |
| Prob (F-statistic)                    | 0.014917 |                    |          |

#### 1) T-Test

The t-test is used to examine the effect of each independent variable individually (partially) on the dependent variable Audit Fee. The Prob. value is shown with a standard significance level of  $\alpha=0.05$  or  $\alpha=0.10$ . Based on the regression results from the Random Effect model, it can be explained that:

- The Audit Tenure variable, the Prob. value is 0.1071, indicating that it is greater than 0.05. Therefore, the independent variable, Audit Tenure, has no effect on Audit Fee at the 5% significance level. However, this variable is nearly significant using a 10% tolerance limit.
- For the Company Growth variable, the Prob. value is 0.8165, with a coefficient of 141500. Since  $0.8165 > 0.05$ , the Company Growth variable has no effect on Audit Fee.
- Leverage is a variable with a Prob. value of 0.0570, slightly above 0.05. Therefore, the leverage variable indicates that this variable has a positive effect on audit fees.
- The REM regression results show that the Firm Size variable has a Prob. value of 0.5037 with a coefficient of 0.292259. Since  $0.5037 > 0.05$ , firm size does not significantly influence audit fees.
- The Profitability variable has a Prob. value of 0.0029. Since  $0.0029 < 0.05$  (this value is less than 1%), Profitability has a statistically positive effect on audit fees.

#### 2) F-Test

The regression results from the REM method show an F-statistic of 2.8949 with a significance value of Prob(F-statistic) = 0.0149 ( $p < 0.05$ ). Overall, the independent variables influence the audit fee variable at a significance level of 5%. This regression model is suitable for use (goodness of fit is met).

#### 3) Coefficient of Determinants ( $R^2$ )

The Adjusted R-squared value of 0.04058 indicates that the variation in all independent variables (Audit Tenure, Company Growth, Leverage, Firm Size, and Profitability) only explains 4.06% of the variation in Audit Fees. The remaining 95.94% is explained by other variables outside the research model. This relatively low value is normal for panel data after weighting adjustments in the REM model.

### 4.2. Discussion

#### a. The Effect of Audit Tenure on Audit Fee

Based on the hypothesis testing results, audit tenure has a regression coefficient of 0.7393 with a probability value of 0.1071. Since the probability value exceeds the 5% significance level, the first hypothesis is rejected, indicating that audit tenure does not have a statistically significant effect on audit fees. Although the relationship is positive and approaches significance at the 10% level, the findings suggest that the length of the auditor client relationship is not a primary determinant of audit fee decisions within Indonesia's infrastructure sector. This result may be attributed to the implementation of audit tenure regulations under Government Regulation No. 20 of 2015, which limit the duration of audit engagements and reduce the

influence of tenure on audit pricing. The literature provides mixed evidence regarding the relationship between audit tenure and audit fees. While longer audit tenure may create a risk or quality premium that justifies higher fees due to accumulated client knowledge and switching costs, prior studies have reported both negative and positive effects (Junita & Pratiwi, 2023). The average audit tenure of the sampled firms was relatively short, at less than two years, indicating frequent auditor rotation. Such rotation limits opportunities for audit firms to implement aggressive pricing strategies, including low-balling in the early years or gradual fee increases in later years. Consequently, audit fee determination appears to be driven more by professional expertise, audit quality requirements, and auditor independence than by the duration of the auditor client relationship.

b. The Effect of Company Growth on Audit Fee

The regression results indicate that company growth has a regression coefficient of 0.1415 with a probability value of 0.8165. Since this probability value is substantially higher than the 5% significance level, the second hypothesis is rejected, indicating that company growth does not significantly affect audit fees. These findings suggest that changes in the sales growth of infrastructure companies during the 2020–2024 period were not directly associated with changes in audit fees. Although prior studies generally report a positive relationship between company growth and audit fees (Junita & Pratiwi, 2023), the growth levels observed in this study were relatively low, which may explain the absence of a significant effect. From the perspective of Audit Production Function Theory, increases in sales within the infrastructure sector often result from the execution of long-term contracts rather than the creation of new transactions or substantial operational changes requiring additional audit procedures. The sample data show that most observations exhibited growth values below one, with only a small proportion exceeding this threshold. Furthermore, the study period coincided with the post-COVID-19 economic recovery phase, during which higher sales activity did not necessarily reflect increased operational complexity, organizational expansion, or the establishment of new subsidiaries. At the same time, firms were likely focused on maintaining operational efficiency and controlling costs, including negotiating audit service fees to avoid significant increases. Consequently, company growth did not emerge as a significant determinant of audit fees in the infrastructure sector.

c. The Effect of Leverage on Audit Fee

The partial test results show that leverage has a regression coefficient of 0.0272 with a probability value of 0.0570. Although the variable is not significant at the conventional 5% significance level, it becomes significant at the 10% level and demonstrates a positive effect on audit fees. Therefore, the third hypothesis is accepted at the 10% significance level. The sample data indicate a relatively balanced distribution of leverage levels among infrastructure firms, suggesting that debt financing plays a substantial role within the sector. These findings are consistent with Agency Theory, which argues that higher leverage increases a company's financial risk and intensifies agency conflicts among shareholders, creditors, and management. As a capital-intensive industry, the infrastructure sector relies heavily on external debt financing to support long-term asset investments. Consequently, highly leveraged firms face greater risks related to debt covenant violations and going concern issues, which elevate audit risk. Previous studies have reported mixed evidence regarding the relationship between leverage and audit fees, with some identifying a positive effect and others finding no significant relationship (Muchtar et al., 2024). The positive relationship identified in this study suggests that auditors respond to increased financial risk by expanding substantive testing, allocating additional audit hours, and employing more specialized expertise. These additional audit efforts, together with the risk premium associated with highly leveraged firms, contribute to higher audit fees. Thus, leverage serves as an important indicator of audit risk and is associated with greater audit costs within the infrastructure sector.

d. The Effect of Firm Size on Audit Fee

Based on the Random Effects Model (REM) estimation, the results indicate that firm size has a regression coefficient of 0.2923 with a probability value of 0.5037. Since the probability value exceeds the 5%

significance level, the fourth hypothesis is rejected, indicating that firm size does not have a significant effect on audit fees. Although firm size was found to be significant under the Common Effect Model (CEM) and Fixed Effect Model (FEM), the effect became statistically insignificant after applying the REM, which was identified as the most appropriate panel data model. This finding may be explained by the high degree of homogeneity in asset size among the sampled infrastructure firms. Most companies in the sample were classified as large-scale entities, resulting in limited variation in firm size. Consequently, differences in total assets were insufficient to serve as a primary basis for distinguishing audit fees across firms (Chandra et al., 2024). From the perspective of Agency Theory, firm size is generally expected to have a positive relationship with audit fees because larger firms tend to exhibit greater operational complexity, higher agency risks, and a stronger demand for high-quality audit services, all of which require additional audit effort and increase audit costs (Ananzeh, 2024). However, the relatively low variation in firm size within this sample suggests that Public Accounting Firms perceive the operational complexity and risk profiles of large infrastructure companies as broadly comparable. As a result, firm size does not emerge as a significant determinant of audit fees in this context, despite the positive relationship commonly reported in prior studies.

e. The Effect of Profitability on Audit Fee

The statistical results indicate that profitability has a regression coefficient of 0.0049 with a probability value of 0.0029. Since this value is well below the 5% significance threshold, the fifth hypothesis is strongly supported, indicating that profitability has a positive and significant effect on audit fees. This finding suggests that highly profitable infrastructure firms tend to have more complex, active, and dynamic financial transactions, requiring greater audit effort and more extensive verification procedures. The positive relationship can also be explained through Signaling Theory. Companies with strong profitability have greater incentives to demonstrate the credibility of their financial performance to investors, shareholders, and other stakeholders. To strengthen this signal, profitable firms may engage reputable audit firms and be willing to pay higher audit fees to enhance confidence in the reliability of their financial statements. As a result, higher profitability is associated with greater demand for audit quality and assurance. Although previous studies have reported differing results, with some finding no significant relationship and others suggesting a negative association between profitability and audit fees (Ananzeh, 2024), the findings of this study indicate otherwise. Within the infrastructure sector, firms generating higher returns generally exhibit more intensive financial activities, including revenue recognition, operational expenditures, taxation, and contractual arrangements, all of which require additional audit time and expertise. Consequently, auditors devote more resources to these engagements, leading to higher audit fees. Furthermore, profitable firms may be more willing to pay premium audit fees to maintain corporate reputation and signal the reliability of their reported earnings, reinforcing the positive relationship between profitability and audit fees.

## V. Conclusion

This study examines the effects of audit tenure, company growth, and leverage on audit fees, with firm size and profitability serving as control variables, among infrastructure companies listed on the Indonesia Stock Exchange during the 2020–2024 period. The results indicate that audit tenure and company growth do not significantly affect audit fees, suggesting that the duration of auditor-client relationships and changes in company growth are not primary considerations in audit pricing decisions within the infrastructure sector. In addition, firm size is found to have no significant effect on audit fees, which may be attributed to the relatively homogeneous asset sizes of the sampled companies. Conversely, leverage demonstrates a positive effect on audit fees at the 10% significance level, indicating that companies with higher debt levels tend to require greater audit effort due to increased financial risk. Furthermore, profitability has a positive and significant effect on audit fees, implying that companies with stronger financial performance generally face more complex transactions and have greater incentives to obtain high-quality audit services to enhance the credibility of their financial reporting. These findings support Agency Theory and Audit Production Function

Theory by demonstrating that financial risk and profitability are important considerations in determining audit fees. The study also provides practical implications for corporate management and auditors, emphasizing the importance of financial risk assessment and profitability conditions in audit fee determination. Companies should maintain transparency and strong financial reporting practices to facilitate the audit process and strengthen stakeholder confidence, while auditors should continue to align audit pricing with engagement risk and audit effort. Future research is recommended to expand the scope of analysis by including companies from other sectors and incorporating additional variables, such as corporate governance mechanisms, audit quality, auditor reputation, ownership structure, and business complexity, to provide a more comprehensive understanding of audit fee determinants in Indonesia.

## References

- Ananzeh, H. (2024). The impact of internal control of non-financial reporting-related weaknesses on audit fees: does external audit size matter? *Discover Sustainability*, 5(1), 189. <https://doi.org/10.1007/s43621-024-00376-2>
- Arens, A. A., Elder, R. J., & Beasley, M. S. (2017). *Auditing and Assurance Services: An Integrated Approach*. Pearson.
- Ashar, M., Reskiamalia, A. A., Amiruddin, A., & Syamsuddin, S. (2025). The Effect of Audit Tenure and Audit Opinion on Audit Report Lag: A Study of Indonesian Manufacturing Companies. *Golden Ratio of Auditing Research*, 6(1), 11–24. <https://doi.org/10.52970/grar.v6i1.1305>
- Aydoğmuş, M., Gülay, G., & Ergun, K. (2022). Impact of ESG Performance on Firm Value and Profitability. *Borsa Istanbul Review*, 22, S119–S127.
- Bedi, A., & Singh, B. (2024). Exploring the Impact of Carbon Emission Disclosure on Firm Financial Performance: Moderating Role of Firm Size. *Management Research Review*, 47(11), 1705–1721.
- Bleibtreu, C., Königsgruber, R., & Lanzi, T. (2022). Financial Reporting and Corporate Political Connections: An Analytical Model of Interactions. *Journal of Accounting and Public Policy*, 41(3). <https://doi.org/10.1016/j.jaccpubpol.2022.106921>
- International Accounting Standards Board. (2018). *Conceptual Framework for Financial Reporting*. IFRS Foundation.
- Chandra, K., Margaretha, F., Purba, Y. E., & Nalurita, F. (2024). The Effect of Leverage on Company Value in Consumer Goods Industry Companies. *Proceedings of the International Conference on Entrepreneurship, Leadership and Business Innovation (ICELBI 2022)*, 380.
- Desmon, A. S., Subiyantoro, H., & Alie, M. S. (2022). The Influence of Insurance Financial Health Level, Capital Structure, Asset Growth, On Company Net Profit Growth. *ICLSSEE 2022 Proceedings*, 382.
- Ghozali, I. (2021). *Aplikasi Analisis Multivariate dengan Program IBM SPSS dan EVIEWS*. Badan Penerbit Universitas Diponegoro.
- Izzani, A. F., & Khafid, M. (2022). Pengaruh Dewan Komisaris, Ukuran Perusahaan, Profitabilitas Perusahaan, dan Risiko Perusahaan Terhadap Audit Fee. *Business and Economic Analysis Journal*, 2(1), 1–13.
- Jensen, M. C., & Meckling, W. H. (1976). Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure. *Journal of Financial Economics*, 3(4), 305–360. [https://doi.org/10.1016/0304-405X\(76\)90026-X](https://doi.org/10.1016/0304-405X(76)90026-X)
- Junita, E., & Pratiwi, D. (2023). What Factors Influence the Determination of Audit Fees? *Dinasti International Journal of Economics, Finance and Accounting*, 4(1), 11–20. <https://doi.org/10.38035/dijefa.v4i1>
- Maghfirah, A. T., Jannah, M., Amiruddin, A., & Syamsuddin, S. (2025). The Influence of Audit Fees and Audit Rotation on Audit Quality in Chemical Sub-Sector Manufacturing Companies Listed on The Indonesia Stock Exchange. *Golden Ratio of Auditing Research*, 6(1), 1–10. <https://doi.org/10.52970/grar.v6i1.1388>
- Muchtar, A., Saftiana, Y., & Thamrin, K. M. H. (2024). The Effect of Company Characteristics on Audit Fees in State-Owned Enterprise Companies. *Management Studies and Entrepreneurship Journal*, 5(2), 8387–8397.

- Ogundele, O. S., Ifunanya, N. L., Innocent, M. K., & Muhammad, S. (2024). Moderating Role of Audit Tenure in the Relationship Between Audit Fees and Financial Performance: Evidence from the Nigerian Banking Sector. *International Conference of Accounting & Business*, 573–589.
- Prasasti, Y., & Zulvia, Y. (2026). Relationship Between Corporate Social Responsibility (CSR) and Firm Value with Profitability as a Mediating Factor in Indonesian Mining Companies (2021–2023). *Golden Ratio of Auditing Research*, 6(1), 436–447. <https://doi.org/10.52970/grar.v6i1.1641>
- Simunic, D. A. (1980). The Pricing of Audit Services: Theory and Evidence. *Journal of Accounting Research*, 18(1), 161–190. <https://doi.org/10.2307/2490397>
- Sugiyono. (2022). *Metode Penelitian Kuantitatif, Kualitatif, dan R&D*. Alfabeta.
- Susanto, E. (2023). Can Audit Fees and Auditor Competence Affect Auditor Motivation? *Advances in Managerial Auditing Research*, 1(1), 14–22.
- Widmann, M., Follert, F., & Wolz, M. (2021). What Is It Going to Cost? Empirical Evidence from a Systematic Literature Review of Audit Fee Determinants. *Management Review Quarterly*, 71(4), 787–826. <https://doi.org/10.1007/s11301-020-00190-w>
- Xiong, X., Zheng, R., Liu, Y., & Huang, X. (2024). International Accounting Network Memberships and Audit Fees: Evidence from China. *PLOS ONE*, 19(1), e0296304. <https://doi.org/10.1371/journal.pone.0296304>