

AUDIT QUALITY: THE ROLE OF AUDIT TENURE AND AUDIT COMMITTEE IN THE CONSTRUCTION & MATERIAL INDUSTRY IN INDONESIA

KHEISTA CHINTA UTAMA
PAULINE ANGEL LUIN
KENNY FERNANDO

Sampoerna University, Pancoran, Jakarta Selatan, DKI Jakarta, Indonesia
kenny.fernando@sampoernauniversity.ac.id (correspondence author)

Received: March 12, 2026; Revised: March 30, 2026; Accepted: April 01, 2026

Abstract: This research aims to analyze the influence of audit tenure and audit committee characteristics on audit quality in companies in the construction and materials sectors listed on the Indonesia Stock Exchange (IDX). Audit quality is measured using Audit Report Lag (ARL), which represents the time difference between the fiscal year-end and the issuance date of the independent audit report, reflecting the efficiency and timeliness of the audit process. The high risk of financial reporting in this sector, combined with several cases of financial statement manipulation by state-owned construction companies in recent years, highlights the importance of strengthening governance mechanisms through external auditors and audit committees. Based on Agency Theory, this study examines how the continuity of the auditor–client relationship and the oversight capacity of the audit committee influence audit timeliness. Using panel data from 31 companies during the period 2019–2024 and applying a Fixed Effects regression model with robust estimation, the results show that audit tenure has a significant negative effect on audit report lag, indicating that longer auditor–client relationships improve audit efficiency and audit quality. In contrast, the audit committee does not exhibit a significant effect on audit quality. Furthermore, firm size and profitability are found to have a positive and significant effect on audit report lag, suggesting that larger and more profitable firms tend to experience longer audit completion due to higher operational complexity, while leverage does not show a significant influence. These findings indicate that audit quality is influenced by both governance mechanisms and firm-specific characteristics, although their effects vary across variables.

Keywords: Audit Quality, Audit Report Lag, Audit Tenure, Audit Committee

Abstrak: Penelitian ini bertujuan untuk menganalisis pengaruh audit tenure dan karakteristik komite audit terhadap kualitas audit pada perusahaan sektor konstruksi dan material yang tercatat di Bursa Efek Indonesia (BEI). Kualitas audit diukur menggunakan Audit Report Lag (ARL), yaitu selisih waktu antara akhir tahun fiskal dengan tanggal terbitnya laporan audit independen, yang mencerminkan efisiensi dan ketepatan waktu proses audit. Tingginya risiko pelaporan keuangan pada sektor ini, ditambah dengan beberapa kasus manipulasi laporan keuangan oleh perusahaan konstruksi milik negara dalam beberapa tahun terakhir, menegaskan pentingnya penguatan mekanisme tata kelola melalui auditor eksternal dan komite audit. Berlandaskan Agency Theory, penelitian ini mengkaji bagaimana kesinambungan hubungan auditor–klien serta kapasitas pengawasan komite audit memengaruhi ketepatan waktu audit. Dengan menggunakan data panel dari 31 perusahaan selama periode 2019–2024 serta model regresi Fixed Effects dengan estimasi robust, hasil penelitian menunjukkan bahwa audit tenure berpengaruh negatif signifikan terhadap audit report lag, yang mengindikasikan bahwa hubungan auditor–klien yang lebih panjang meningkatkan efisiensi dan kualitas audit. Sebaliknya, komite audit tidak menunjukkan

pengaruh yang signifikan terhadap kualitas audit. Selain itu, ukuran perusahaan dan profitabilitas ditemukan berpengaruh positif dan signifikan terhadap audit report lag, yang menunjukkan bahwa perusahaan yang lebih besar dan lebih menguntungkan cenderung membutuhkan waktu penyelesaian audit yang lebih lama akibat kompleksitas operasional yang lebih tinggi, sementara leverage tidak menunjukkan pengaruh yang signifikan. Temuan ini menunjukkan bahwa kualitas audit dipengaruhi oleh mekanisme tata kelola maupun karakteristik spesifik perusahaan, meskipun pengaruhnya bervariasi antarvariabel.

Kata kunci: Kualitas Audit, Audit Report Lag, Audit Tenure, Komite Audit

INTRODUCTION

Auditing plays a crucial role in ensuring the credibility and reliability of financial reporting, thereby reducing information asymmetry between management and stakeholders and enabling more informed decision-making. The importance of audit quality has become increasingly evident in Indonesia's construction and materials sector, particularly following a number of financial reporting issues. In 2023, PT Waskita Karya (WSKT) was found to have manipulated its financial reports, followed by scrutiny of PT Wijaya Karya (WIKI), whose shares were temporarily suspended, and PT PP (PTPP), which restated its annual report due to accounting inaccuracies. These cases highlight ongoing concerns regarding the reliability of audits and their impact on stakeholder confidence (Salman & Setyaningrum, 2023). Consequently, enhancing audit quality in this sector has become an important issue for both regulators and market participants.

The construction and materials sector is characterized by complex project structures, particularly in revenue recognition and cost estimation, which increase the risk of material misstatement (Shanti et al., 2023). These conditions pose additional challenges for auditors and emphasize the need for high-quality auditing processes. In addition, this sector is selected because it is highly exposed to long-term contracts, significant government involvement, and large-scale infrastructure projects, which require considerable managerial

judgment and increase the risk of estimation errors. The complexity and high financial risk in this industry make it an appropriate context for examining audit quality. To assess audit quality, this study uses Audit Report Lag (ARL), which is defined as the number of days between the fiscal year-end and the issuance of the audit report. Compared to traditional proxies such as Big Four classification, ARL provides a more objective indicator that reflects audit efficiency, complexity, and the level of auditor effort in completing the audit process (Lala et al., 2022). Therefore, ARL has been widely adopted as a relevant proxy for audit quality, particularly in the context of emerging markets.

Previous literature highlights that audit quality is significantly influenced by two governance mechanisms, such as long-term auditor tenure and the effectiveness of the audit committee. Auditor tenure has long been a topic of discussion in literature, with its benefits and dangers being explored. The long audit tenure may strengthen auditor's understanding towards the client's business, but may also undermine auditor independence in terms of familiarity bias (Sabandar et al., 2024; Salman & Setyaningrum, 2023). Moreover, extended tenure may also increase the risk of excessive familiarity between auditors and management, which could potentially reduce the auditor's professional skepticism when evaluating financial reporting practices. On the other hand, a larger or more competent audit committee can strengthen supervision over the audit process. (Elmashtawy

et al., 2024; Sobhan et al., 2025). An effective audit committee is expected to be able to monitor the financial reporting process, support auditor independence, and ensure that the external audit is conducted in accordance with the professional standards.

Even though these variables have been widely studied, most prior studies have focused on the manufacturing and financial sector (Elmashtawy et al., 2024; Sobhan et al., 2025). In the Indonesian context, research specifically examining on audit quality in construction & materials is still limited, this sector has diverse risk characteristics (Morasa et al., 2024). The construction and materials industry operates under unique business conditions compared with other sectors, especially due to the nature of the long-term infrastructure project, complex contract structure, and significant uncertainty in cost estimation and revenue recognition. These characteristics may create higher risk of errors in financial reporting or managerial discretion in recognizing project revenues and expenses. These conditions increase the importance of effective monitoring mechanisms, including external auditors or audit committees, to ensure the reliability of financial reporting. Given these characteristics, the relationship between audit tenure, audit committee, and audit quality based on ARL in a single empirical in Indonesia has not been fully explored, which strengthen the reason for the importance of this research.

Expanding on this gap, the current research investigates the impact of audit tenure and audit-committee attributes on audit quality in Indonesian publicly listed construction and materials firms. This study explores how the continuity of external auditors and the internal oversight function of the audit committee work together to improve the reliability of financial reporting based on agency theory as the

underlying theoretical framework. In this context, the research offers a theoretical contribution by implementing audit-quality frameworks in a sectoral context that is still under-explored in Indonesia. It additionally provides useful insights for regulators, investors, and professionals aiming to enhance governance practices. To address this objective, this study utilizes data ranging from 2019-2024 that consist of 31 construction and materials companies that are listed on the Indonesia Stock Exchange, this study aims to provide an even more comprehensive understanding of the determinants of audit quality in an industry characterized by high reporting risk.

LITERATURE REVIEW

Agency Theory

Agency Theory is one of the most employed models for analyzing aspects of corporate governance and auditor behavior. Recent literature reconceptualizes the principal-agent relationship as a multi-level phenomenon, emphasizing information asymmetry, managerial opportunism, and monitoring mechanisms that evolve with an organization's life cycle (Amin et al., 2024). The theory rests on the assumption that managers, acting as agents for shareholders, may seek appropriate private benefits at the expense of owners. In scenarios where managers have greater access to internal information than shareholders, the risk of opportunistic practices and distorted financial reporting may increase. Consequently, effective monitoring mechanisms have become necessary to guarantee that managerial actions remain aligned with the interest of shareholders. In this context, independent external audits reduce agency costs and support credible financial reporting, functioning as a mechanism of accountability. Independent verification of financial statements is provided by external

auditors, helping to ensure that financial reports fairly represent the company's true economic condition and reduce the likelihood of material misstatement.

Morasa et al., (2024) emphasize that firm-level audit quality reflects the effectiveness of audit procedures that protect against agency conflicts through independent verification and professional skepticism. From this perspective, audit tenure (AT) is a crucial factor for determining audit quality as the length of auditors' engagement impacts their independence and client-specific knowledge. Longer relationships lead to a better understanding of client activities and internal controls, which enhances the ability to detect misstatements. For example, Sabandar et al., (2024) noted that audit quality is positively associated with longer auditor tenure where the auditors possess professional commitment. However, extended auditor-client relationships may also introduce potential agency risks. Salman & Setyaningrum, (2023) documented that a longer tenure will increase a risk of reducing auditor's objectivity and independence, especially in a weakly regulated environment. This two-sided nature of tenure highlights an irony in Agency Theory, whilst extended relationships narrow the information gap, they can also lessen auditors' motivation to confront management.

This tendency is particularly evident in the Indonesian construction sector, as evidenced by cases such as those involving PT Waskita Karya, PT Wijaya Karya, and PTPP that expose latent embedded risks in long-term auditor-client relationships, specifically referring to the length of the audit firm's engagement with the client (audit firm tenure). The contracting character of accounting in the sector and its use of potentially complex revenue recognition allow for

misreporting expenses because of agency conflicts. Against this background, it is business-critical as well as a valuable clue to uncover whether long-term auditor-client relationships strengthen or weaken audit quality. In modern Agency Theory, tenure serves as a proxy for the effectiveness of monitoring within relational governance, balancing control advantages gained from knowledge against independence maintained through professional distance.

Audit Report Lag

Audit Report Lag (ARL) is defined as the number of days between a company's fiscal year-end and the issuance date of the independent auditor's report. It is commonly used in auditing research as a proxy for audit quality, particularly in emerging markets where direct indicators of audit quality are difficult to observe. In this context, timeliness represents a key qualitative characteristic of financial reporting, as any delay in the release of information may reduce its relevance for stakeholders such as investors and creditors. A longer audit report lag may signal inefficiencies in the audit process or challenges in verifying financial information, which can reduce the usefulness and credibility of financial statements (Lala et al., 2022).

From an audit quality perspective, ARL is generally considered to be inversely associated with audit quality. A shorter ARL indicates that auditors are able to complete audit procedures efficiently while maintaining their effectiveness, thereby reflecting higher audit quality. Conversely, a longer ARL may indicate greater audit risk, increased complexity in financial reporting, or difficulties in obtaining sufficient audit evidence. Empirical studies suggest that delays in audit completion can reduce stakeholder confidence and signal potential issues related to financial reporting quality,

making ARL a relevant and objective indicator for audit quality (Wijaya & Permatasari, 2024).

Audit Tenure

Audit tenure refers to the length of time an auditor has continuously served a particular client, typically measured in consecutive years. Within the framework of agency theory, audit tenure contributes to reducing information asymmetry between management and shareholders. A longer tenure allows auditors to develop a deeper understanding of the client's operations, internal controls, and industry-specific risks, which may strengthen their ability to identify material misstatements and improve audit efficiency (Sabandar et al., 2024). This accumulated knowledge may result in a shorter audit report lag, thereby indicating improved audit quality.

However, extended audit tenure may also create risks to auditor independence. Long-term relationships between auditors and clients can give rise to familiarity threats, which potentially reduce professional skepticism and objectivity. Consequently, this may limit the auditor's ability to critically evaluate management and increase the likelihood of material misstatement going undetected. Prior studies highlight this dual effect, as it can enhance audit effectiveness while potentially compromising auditor independence, resulting in mixed implications for audit quality (Salman & Setyaningrum, 2023), the relationship between audit tenure and audit quality remains an empirical question that warrants further investigation.

Audit Committee

The audit committee is a key corporate governance mechanism responsible for overseeing the financial reporting process and supporting external audit activities. In this study, audit committee effectiveness is proxied by the size of the committee, which reflects its ability to

monitor management activities. A larger audit committee is generally associated with stronger oversight, as it offers greater resources and a broader range of expertise to supervise financial reporting and audit activities (Sobhan et al., 2025). This enhanced monitoring role can increase transparency and reduce information asymmetry between management and stakeholders.

From an agency theory perspective, an effective audit committee enhances internal governance by ensuring that financial statements are prepared accurately and that auditors perform their duties independently. Strong oversight may facilitate more efficient audit processes, reduce audit complications, and ultimately result in a shorter audit report lag. However, excessively large committees may lead to coordination challenges, which can reduce their overall effectiveness. Despite this limitation, prior research generally supports the role of audit committees in enhancing audit quality through stronger governance and monitoring mechanisms (Elmashtawy et al., 2024).

The Relationship Between Governance Mechanisms and Audit Quality

The relationship between governance mechanisms and audit quality, proxied by Audit Report Lag (ARL), reflects the extent to which monitoring mechanisms are effective in reducing information asymmetry. Within the framework of agency theory, mechanisms such as audit tenure and audit committees are designed to enhance audit efficiency and improve the reliability of financial reporting. Accordingly, effective monitoring is expected to be associated with a shorter ARL, indicating higher audit quality. However, the effectiveness of these mechanisms depends on achieving a balance between auditor knowledge, independence, and oversight capacity (Morasa et al., 2024).

Audit tenure and audit committees have distinct yet interconnected effects on audit quality. Longer audit tenure may enhance audit efficiency through accumulated knowledge, but excessive tenure can impair auditor independence due to familiarity threats. Similarly, audit committees strengthen oversight and support the audit process, but their effectiveness depends on their ability to operate efficiently without coordination constraints. In complex industries such as construction and materials, where financial reporting involves greater levels of uncertainty, effective governance mechanisms are essential to ensure timely audit completion and a reduction in ARL. Therefore, variations in audit tenure and audit committee effectiveness are expected to influence audit quality, as reflected in the timeliness of audit reporting (Lala et al., 2022).

Research Gap and Hypotheses Development

Although considerable research on audit quality predictors has been developed, some gaps still lag in the literature. First, most of the existing research regarding governance and audit quality has been performed in the manufacturing or financial sectors (Elmashtawy et al., 2024; Sobhan et al., 2025), thus not fully considering project-based characteristics and the inherent risk profile in the construction and materials sector. Second, previous empirical research tends to examine the influence of audit tenure or the effectiveness of audit committees separately, with only a limited number of studies incorporating both variables within one analytical model or exploring how they may jointly influence audit quality. Third, recent cases of financial statement misstatement in construction companies in Indonesia emphasized the importance of obtaining empirical evidence that is relevant to the specific context, especially within a sector linked to government ownership,

long-term infrastructure projects, and complex revenue-recognition practices (Morasa et al., 2024).

Prior research generally indicates that governance mechanisms are associated with improvements in audit quality. For instance, longer audit tenure has been found to enhance audit effectiveness by improving auditors' understanding of client operations, thereby facilitating the detection of misstatements (Shanti et al., 2023). Similarly, audit committee characteristics such as size, expertise, and active involvement have been shown to positively affect audit quality by enhancing oversight and supporting the audit process (Sobhan et al., 2025). In addition, certain corporate governance factors, including board structure and audit committee activities, have been found to significantly affect audit outcomes, indicating that stronger governance mechanisms contribute to enhanced audit performance (Maharani & Redjo, 2023). These findings support the view that effective monitoring mechanisms are essential in enhancing audit quality.

However, other studies report inconsistent or even insignificant findings regarding the relationship between governance mechanisms and audit quality. Some research suggests that extended audit tenure may compromise auditor independence due to familiarity threats, potentially diminishing audit quality despite increased client knowledge (Shanti et al., 2023). Additionally, the reputation of public accounting firms has been found to have no significant association with audit report lag, suggesting that larger or more reputable auditors do not necessarily result in higher audit quality (Wijaya & Permatasari, 2024). Furthermore, empirical evidence indicates that certain factors, such as company size and

governance attributes, do not consistently relate to audit outcomes, highlighting the presence of context-specific variations and measurement constraints (Lala et al., 2022). These mixed findings highlight that the relationship between governance mechanisms and audit quality remains inconclusive and highly dependent on contextual factors.

These inconsistencies suggest that the relationship between governance mechanisms and audit quality remains inconclusive, particularly in high-risk industries such as construction and materials in Indonesia, thereby justifying further empirical investigation.

Therefore, based on the mixed empirical findings and theoretical arguments, the following hypotheses are proposed:

H1: Audit tenure has a significant effect on audit quality.

Longer auditor–client relationships may enhance audit efficiency and client-specific knowledge, but they may also reduce auditor independence due to familiarity threats.

H2: Audit committee effectiveness has a positive effect on audit quality.

An effective audit committee enhances oversight, supports auditor independence, and improves the reliability of financial reporting.

In examining these propositions, this study offers refreshed empirical insights into audit quality in the Indonesian construction and materials industry.

RESEARCH METHOD

Data Collection and Sample Selection

This research uses an explanatory quantitative approach to examine the impact of audit tenure and audit committee size on audit

quality in Indonesian construction companies. Quantitative research makes it possible to test hypotheses empirically, which leads to objective and replicable results. According to Sobhan et al. (2025), “Quantitative-explanatory designs are suitable to study corporate governance since they help in making explicit cause-and-effect relationships and measurable data.”

The study employs secondary data obtained through the analysis of fully published audited financial statements. Such archived information is reliable because all figures have been professionally audited and verified by the Financial Services Authority (OJK). We gathered the financial data from Refinitiv Thomson Reuters, while the non-financial data were obtained from the companies’ annual reports, and independent auditors’ opinions for the financial years 2019 to 2024, which provide a broader scope for the research period.

Since not all listed companies disclose complete governance data, purposive sampling was used to include only those fulfilling the following conditions:

- a. Listed on the IDX from 2019 to 2024.
- b. Release detailed annual financial statements for every year.
- c. Reveal the name of the auditor and the audit-committee composition (a total count of members).
- d. Produce statements in accordance with IFRS-based guidelines.

After screening, 31 firms met these criteria, resulting in 182 firm-year observations. Purposive sampling is justified as it rules out entities lacking sufficient transparency or publicly available audit-governance data. This method has also been used in prior Indonesian audit-quality studies Sabandar et al., (2024). Focusing specifically to the construction and

materials industry also reduces sector-related bias by controlling characteristics such as project cost capitalization, and presence of government ownership, which may influence audit tenure, audit committee composition, and audit quality.

Furthermore, the initial sample was identified based on all construction companies listed on the Indonesia Stock Exchange (IDX). However, after applying a screening and filtering process based on data availability, completeness, and consistency across the

observation period, only 31 companies were retained in the final sample. The dataset is structured as unbalanced panel data, considering that not all firms consistently disclose complete governance and financial information for each year during the 2019–2024 period. The final dataset, which consists of 182 firm-year observations, reflects the application of several selection criteria to ensure that only firms with reliable and sufficient data are included in the analysis. The final sample obtained through this screening and filtering process is summarized in Table 1.

Table 1. Research Sample Selection

No	Description	Sum
1	Number Indonesian companies listed on Refinitiv Thomson Reuters during 2019-2024	973
2	Number of Indonesian companies in Constructions and Materials sector	270
3	Number of companies that has complete audit report data	31
Year (unbalance)	Year (unbalance)	6
Final Sample Observation	Final Sample Observation	182

Source: Processed by the authors (2026)

Variables

To examine the proposed relationships, six variables are employed: one dependent variable (audit quality), two independent variables (audit tenure and audit committee size), and three control variables (firm size, profitability, and leverage).

The dependent audit quality (AQ) is proxied by Audit Report Lag (ARL), which refers to the number of days between the fiscal year-end and the issuance date of the independent auditor's report. ARL reflects the timeliness and efficiency of the audit process. A shorter ARL indicates a more efficient audit process, while a longer ARL may signal higher audit complexity or lower audit effectiveness (Lala et al., 2022; Muhammad Tipin Natakusuma & Retno Yuni Nur Susilowati, 2025).

The independent variable audit tenure (AT) represents the number of years an independent auditor has examined a company in consecutive terms. Longer time periods mean more knowledge of clients and efficiency in audits, but it can also decrease independence due to overfamiliarity Sabandar et al., (2024).

The other independent variable, audit committee (AC), is based on the number of members in the audit committee at the firm (Sobhan et al., 2025). Additional members on the audit committee bring more diversity in expertise, reinforce control, and intensify communication with external auditors.

Control variables are introduced to isolate the effects of firm-specific factors. SIZE is a size proxy, computed as the natural logarithm of assets. ROA (profitability) is net income divided

by total assets, and LEV (leverage) is the ratio of total debt to total equity. Larger and more profitable companies usually face stricter audit tests, but greater leverage could force managers to manipulate financial reports that, in turn, affect the quality of auditing (Morasa et al., 2024).

These variable definitions and hypothesized relationships reflect Agency

Theory, which argue that adequate monitoring and good governance mechanisms are factors that can enhance audit credibility and financial accountability. Table 2 below presents the variables used in this study, along with their operational definitions, formulas, expected relationships, and references.

Table 2. Variables and Measurements

Variable type	Variable	Measurement	Reference
Dependent	Audit Quality (Audit Report Lag)	Number of days between fiscal year-end and audit report date (Hand Collected)	(Lala et al., 2022; Muhammad Tipin Natakusuma & Retno Yuni Nur Susilowati, 2025)
Independent	Audit Tenure (AT)	Consecutive years the same auditor serves the client (Hand Collected)	(Sabandar et al., 2024)
Independent	Audit Committee (AC)	Total number of audit committee members (Hand Collected)	(Sobhan et al., 2025)
Control	Firm Size (SIZE)	SIZE= Ln (Total Assets) (Thomson Reuters)	(Morasa et al., 2024)
Control	Profitability (ROA)	ROA=Net IncomeTotal Assets (Thomson Reuters)	(Morasa et al., 2024)
Control	Leverage (LEV)	LEV=Total DebtTotal Equity (Thomson Reuters)	(Sobhan et al., 2025)

Data Analysis

This research uses multiple linear regression to analyze how audit committee size, audit report lag, firm size, leverage, and profitability influence audit tenure, given that audit report lag, as the dependent variable, is continuous in nature. Linear regression is appropriate when both dependent and independent variables are measured on a continuous scale, as this technique allows researchers to assess the contribution of each independent variable towards the dependent variable by examining the relationships among these variables.

Equations:

$$ARL = \alpha + \beta_1 AT + \beta_2 AC + \beta_3 SIZE + \beta_4 ROA + \beta_5 LEV + \epsilon$$

Where:

ARL = Audit Report Lag

α =Constant

β = Regression coefficient

AT= Audit Tenure (number of consecutive years the same auditor audits the firm)

AC= Audit Committee (total number of the audit committee members)

SIZE=Firm Size (natural logarithm of total assets)

ROA=Profitability (net income ÷ total assets)

LEV=Leverage (total liabilities ÷ total debt)

ϵ =Error term

A positive regression coefficient (β) indicates that an increase in an independent variable is associated with a longer audit report lag, whereas a negative coefficient means that higher values of the predictor contribute to a shorter audit report lag. In regression analysis, the sign and extent of the coefficient help clarify both the direction and strength of the correlation between the independent variables and the dependent variable. A positive coefficient suggests that the variable rise extends the duration of audit completion, while a negative coefficient implies that the variable may support faster audit completion. For instance, a positive β_2 would illustrate that a larger audit committee size is associated with slower audit completion, while a negative β_1 would suggest that longer audit tenure may help reduce audit delay. Furthermore, statistical significance tests are similarly used to determine whether the observed relationships are meaningful and influenced by random variation in the data, which is commonly assessed in empirical audit research using regression analysis (Morasa et al., 2024).

Statistical analysis will be performed using the SPSS (Statistical Package for Social Sciences) ver. 29. Model significance will be assessed using the F-test and t-test, while explanatory power will be evaluated using the adjusted R^2 . Classical assumption tests, including multicollinearity ($VIF < 10$), normality, heteroscedasticity, and linearity, will be conducted to ensure the validity of the regression model. Such diagnostic tests are commonly implemented in quantitative audit research using regression analysis to confirm that the estimated relationship between variables are statistically credible, as likewise demonstrated in prior empirical studies such as

Sabandar et al., (2024). Data reliability and validity are upheld by cross-checking financial data from IDX filings, annual reports, and independent external auditor opinion. Multiple official sources are used to ensure accuracy and consistency of the collected financial information. As this research relies on secondary data and does not involve any private information concerning individuals or firm competitiveness, there are no confidentiality or ethical considerations pertaining to this study.

RESULT AND DISCUSSION

Descriptive Statistic Analysis

The descriptive statistics are presented in Table 3, based on 182 firm-year observations on construction and materials companies listed on the Indonesia Stock Exchange, with data obtained from Refinitiv Thomson Reuters. In this study, audit quality is measured using Audit Report Lag (ARL) as the main variable. The result shows that ARL has an average value of 108.6374 days, which indicates that companies typically require approximately three to four months to complete the audit process. The minimum ARLD of 36 days is observed in PT PP Presisi Tbk (2019), audited by HGK (Hertanto, Grace, Karunawan), indicating a relatively efficient audit process. In contrast, the maximum ARL of 1580 days is recorded in PT Indonesia Pondasi Raya Tbk (2020), audited by BDO (Tanubrata, Sutanto, Fami, Bambang dan Rekan), indicating a substantial delay in audit completion and potentially suggesting complexities in financial reporting or audit procedures. This wide range indicates considerable variation in audit timeliness across the sample, which may reflect differences in audit quality among firms.

Table 3. Descriptive Statistic

Variable	Obs	Mean	Std. Dev.	Min	Max
Audit Report Lag	182	108.6374	152.6065	36	1580
Audit Tenure	182	2.642857	1.631502	1	6
Audit Committee	182	3.093407	.4296477	2	5
Total Assets	182	7.97e+08	1.73e+09	5291114	8.75e+09
Return on Asset	182	-.008093	.1671129	-1.277256	.2516921
Leverage	182	1.245727	4.0994	-20.94946	35.4656

Source: Processed with STATA 17 by the authors (2026)

Regarding the independent variables, the audit tenure has mean value of 2,642857 years, with a minimum of 1 year and maximum of 6 years, which indicates a variation in the of auditor–client relationships between auditor and client among the 31 companies in sample. The audit committee variable shows an average of approximately 3 members, with a minimum of 2 and a maximum of 5 members, indicating the variation in governance structures across firms. For the control variables, firm size, measured by total assets, varies substantially accross the sample. The smallest firm is PT Meta Epsi Tbk (2019), audited by IGAL (Herman Dody Tanumihardja dan Rekan), while the largest firm is PT Jasa Marga (Persero) Tbk (2019), audited by EY (Purwantono, Sungkoro, & Surja). Profitability (ROA) shows variation across the sample, with the lowest value recorded in PT Meta Epsi Tbk (2022), audited by IAN (Iskandar dan Sulaeman), and the highest value observed in PT Dana Brata Luhur Tbk (2021), audited by Moore (Mirawati Sensi Idris). This variation reflects differences in firms' operational performance. Meanwhile, leverage varies considerably across the sample, with the lowest value observed in PT Acset Indonusa Tbk (2019)

and the highest value in the same company in 2024, both audited by PwC (KAP Tanudiredja, Wibisana, Rintis & Rekan). This pattern indicates fluctuations in the firm's capital structure over time.

Classical Assumption Test

Prior to conducting the regression analysis, the data were winsorized to reduce the influence of extreme outliers that could distort the results. Financial data, particularly in the construction materials sector, tends to exhibit high variability, which makes them prone to extreme values. By restricting extreme observations within a specified range, winsorization improves the stability of the data distribution and enhances the reliability and robustness of the regression model. Following this treatment, classical assumption tests were conducted, starting with the multicollinearity test based on the Pearson correlation matrix. As reported in Table 5, all correlation coefficients among the independent variables remain below 0.80, indicating the absence of strong correlations. Therefore, the model does not exhibit multicollinearity and is considered suitable for further regression analysis.

Table 5. Multicollinearity Test

Variables	(1)	(2)	(3)	(4)	(5)
ARL	1.000				
Audit Tenure	-0.1397*	1.0000			
Audit Committee	-0.1085	-0.0231	1.000		
Total Assets	-0.1172	-0.0568	0.4610	1.000	
ROA	-0.0733	-0.0625	0.0610	0.0768	1.000
Leverage	-0.0538	0.2396***	-0.0054	0.1542	0.1292

*** Highlights	*** Highlights	*** Highlights	*** Highlights	*** Highlights	*** Highlights
significance level at	significance level at	significance level at	significance level at	significance level at	significance level at
< 1%. **	< 1%. **	< 1%. **	< 1%. **	< 1%. **	< 1%. **
Highlights	Highlights	Highlights	Highlights	Highlights	Highlights
significance level at	significance level at	significance level at	significance level at	significance level at	significance level at
< 5%. * Highlights	< 5%. * Highlights	< 5%. * Highlights	< 5%. * Highlights	< 5%. * Highlights	< 5%. * Highlights
significance level at	significance level at	significance level at	significance level at	significance level at	significance level at
< 10%.	< 10%.	< 10%.	< 10%.	< 10%.	< 10%.

Source: Processed with STATA 17 by the authors (2026)

Furthermore, the heteroscedasticity test indicates that the model does not meet the homoscedasticity assumption, as the probability value is below 0.05, suggesting the presence of heteroscedasticity. To address this issue, robust standard errors are applied to ensure consistent estimation results. Lastly, the serial correlation test shows that the probability value is greater than 0.05, indicating that there is no autocorrelation problem in the model. Overall, despite the presence of heteroscedasticity, the regression model remains valid and suitable for further analysis after applying robust adjustments.

Regression Analysis

To determine the appropriate panel data model, the Hausman test was conducted to compare the Fixed Effects and Random Effects models. The results indicates that the probability value is 0.0454, which is below the significance level of 0.05, leading to the rejection of the null hypothesis. This indicates that the Fixed Effects

model is more appropriate for this study, as it provides consistent estimates when individual effects are correlated with the independent variables. This suggests that unobserved firm-specific characteristics, such as managerial practices or internal policies, are better controlled under the Fixed Effects model, making it more appropriate for this study.

However, the classical assumption test reveals the presence of heteroscedasticity in the model. To address this issue, the regression is estimated using robust standard errors, specifically through the `vce(robust)` or `vce(cluster id)` approach, which corrects the standard errors and ensures that the resulting p-values remain reliable. This adjustment is important to avoid biased statistical inference, ensuring that the significance of the regression results remains valid despite the presence of heteroscedasticity. Therefore, the regression results presented in Table 4 are based on the Fixed Effects model with robust estimation.

Table 4. Regression Result Using ARL for Robustness Test

ARL	Coef	p-value	Sig
Audit Tenure	-4.743978	0.006	***
Audit Committee	-.1553068	0.953	
Total Assets	8.67e-09	0.007	***
Return on Assets	35.73335	0.006	***
Leverage	.4324559	0.495	
Constant	95.84653	0.000	

*** Highlights significance level at < 1%. ** Highlights significance level at < 5%. *	*** Highlights significance level at < 1%. ** Highlights significance level at < 5%. *	*** Highlights significance level at < 1%. ** Highlights significance level at < 5%. *	*** Highlights significance level at < 1%. ** Highlights significance level at < 5%. *
Highlights significance level at < 10%.	Highlights significance level at < 10%.	Highlights significance level at < 10%.	Highlights significance level at < 10%.

Source: Processed with STATA 17 by the authors (2026)

Based on the regression results presented in Table 4, audit tenure is found to have a significant effect on audit quality, as proxied by Audit Report Lag (ARL), with a p-value of 0.006 and a coefficient of -4.743978. This negative coefficient indicates that longer auditor–client relationships are associated with shorter audit report lag, suggesting improved audit quality due to increased auditor familiarity and efficiency. This finding supports H1, which states that audit tenure has a significant effect on audit quality, indicating that longer auditor–client relationships enhance audit efficiency and effectiveness. On the other hand, the audit committee variable does not show a significant effect on ARL (p-value = 0.953), indicating that the number of audit committee members does not directly influence the timeliness of audit completion. This suggests that audit committee size alone may not be sufficient to enhance audit effectiveness. This result does not support H2, suggesting that audit committee effectiveness cannot be adequately measured by size alone. Instead, the qualifications of audit committee members, such as financial expertise, independence, and active involvement, are more important in enhancing audit quality than merely the number of members.

Furthermore, among the control variables, total assets and return on assets (ROA) are both statistically significant at the 1% level, with coefficients of 8.67e-09 and 35.73335, respectively. The positive coefficients indicate that larger and more profitable firms

tend to experience longer audit report lag, possibly due to greater operational complexity and more extensive audit procedures. This implies that a longer audit report lag in such firms does not necessarily indicate lower audit quality, but rather reflects the complexity and depth of the audit process. Meanwhile, leverage shows a positive but insignificant effect on ARL (p-value = 0.495), suggesting that a firm's capital structure does not significantly influence audit timeliness. Overall, the results indicate that while audit tenure plays a significant role in improving audit quality, the impact of governance mechanisms is not uniform, and firm-specific characteristics such as size and profitability also contribute to variations in audit report lag.

Research Discussion

The findings suggest that governance and firm-specific factors contribute to explaining variations in audit quality, particularly through the influence of audit tenure, firm size, and profitability. The significant effect of audit tenure indicates that longer auditor–client relationships can improve audit efficiency and effectiveness, as auditors develop a deeper understanding of the client's operations and internal controls. From an agency theory perspective, this finding supports the argument that lower information asymmetry enables auditors to perform their monitoring role more effectively. This result is consistent with prior studies that highlight the positive role of audit tenure in enhancing audit performance and improving the detection of misstatements (Shanti et al., 2023)

In addition, firm size and profitability are found to have a significant effect on audit quality, indicating that firm characteristics also contribute to determining audit outcomes. Larger and more profitable firms tend to operate in more complex audit environments, which may require more extensive audit procedures and greater coordination efforts. This suggests that audit quality is not solely driven by governance mechanisms but is also influenced by operational complexity and financial conditions. These findings are consistent with prior research highlighting that firm-specific factors, such as size and financial performance, are important determinants of audit processes and reporting timeliness (Maharani & Redjo, 2023).

In contrast, the results show that not all governance mechanisms contribute uniformly to audit quality. The audit committee variable does not exhibit a significant effect, suggesting that the number of audit committee members alone may not adequately capture its effectiveness in monitoring financial reporting. This finding suggested that qualitative aspects such as expertise, independence, and the level of engagement may be more critical than committee size. The result is in line with prior studies that report inconsistent evidence regarding the effectiveness of governance mechanisms, indicating that their impact depends on how they are structured and implemented (Lala et al., 2022).

Identically, leverage is found to have no meaningful impact on audit quality, indicating that a firm's capital structure does not necessarily affect audit processes or reporting timeliness. This suggests that auditors may apply consistent audit procedures regardless of the firm's debt level, restricting the direct impact of leverage on audit outcomes. This finding is consistent with previous research showing that

certain financial characteristics do not consistently influence audit quality due to contextual differences across firms and industries (Wijaya & Permatasari, 2024). Overall, these results reinforce the notion that the relationship between governance mechanisms and audit quality is complex and context-dependent, particularly in high-risk sectors such as construction and materials.

CONCLUSIONS

This research aims to investigate the effect of audit tenure and audit committee on audit quality, proxied by Audit Report Lag (ARL), in construction and materials industries listed on the Indonesian Stock Exchange from Refinitiv Thomson Reuters during the period 2019–2024. Utilizing panel data regression with the Fixed Effect model and robust estimations, the findings reveal that audit tenure has a significant negative effect on ARL. This indicated that longer auditor–client relationships improve audit quality by reducing audit report lag, demonstrating greater audit efficiency and better client-specific understanding. On the other hand, the audit committee variable does not show a significant effect on audit quality, suggesting that the number of audit committee members alone is inadequate to enhance audit effectiveness.

Furthermore, the control variables provide more insights into the determinants of audit quality. Firm size and profitability are found to possess a positive and significant effect on ARL, indicating that larger and more profitable companies tend to experience longer audit completion time, to be expected due to higher operational complexity and more extensive audit procedures. Meanwhile, leverage does not have a significant effect on audit quality, suggesting that a firm's capital structure does not directly influence audit timeliness. Altogether, the results indicate that audit quality in the construction and

materials sector is influenced not only by governance mechanisms but also by firm-specific characteristics.

From a theoretical viewpoint, these findings moderately support Agency Theory. Audit tenure is proven to decrease information asymmetry and increase audit efficiency, consistent with its role as a monitoring mechanism. However, the insignificant effect of the committee suggests that governance mechanisms do not always perform effectively in improving audit quality, especially when measured only by structural indicators such as size. This underlines that audit quality is a complex and context-dependent phenomenon, especially in high-risk industries like construction and materials in Indonesia.

This study provides practical implications for both companies and stakeholders. For management, the results suggest that maintaining an optimal auditor tenure can enhance audit efficiency without necessarily compromising independence. For regulators, the findings indicate that strengthening audit committee effectiveness should focus not only on size but also on quality aspects, for instance, expertise and independence. For investors, this study offers insights into factors that influence audit timeliness, which can be used to assess the reliability of financial reporting.

Limitations

This research possessed several limitations. To begin with, the sample is restricted to construction and materials companies listed through the Indonesian Stock

Exchange from Refinitiv Thomson Reuters, which may limit the transferability of the findings to other sectors of countries. Next, audit quality is measured using Audit Report Lag (ARL), which mainly captures the timeliness aspect of audit quality and perhaps does not fully reflect other areas, such as audit accuracy or auditor independence. Subsequently, the measurement of the audit committee is limited to the number of members, which might not sufficiently represent its overall effectiveness, including factors such as expertise, independence, and meeting frequency. Finally, the observation period of 2019-2024 may not fully capture long-term trends or structural changes in audit practice.

Suggestions for Future Research

Derived from the limitation, some suggestions are proposed for future research. Future studies are encouraged to include a broader sample across different industries or conduct cross-country comparisons to enhance the generalizability of the findings. Furthermore, alternative proxies of audit quality, such as discretionary accruals, audit opinion, or audit fees, can be utilized to capture a more complete view of audit quality beyond timeliness. In addition, future research should consider incorporating more detailed audit committee characteristics, namely financial expertise, independence, and frequency of meetings, to better disclose its effectiveness. Lastly, increasing the observation period may help capture long-term dynamics and produce deeper insights into the relationship between governance mechanisms and audit quality.

REFERENCES:

- Amin, H., Malik, M., & Scheepers, H. (2024). An agency theory unpacking of how monitoring and evaluation affect international development project impact. *International Journal of Project Management*, 42(8). <https://doi.org/10.1016/j.ijproman.2024.102654>

- Elmashtawy, A., Che Haat, M. H., Ismail, S., & Almaqtari, F. A. (2024). Audit committee effectiveness and audit quality: the moderating effect of joint audit. *Arab Gulf Journal of Scientific Research*, 42(3), 512–533. <https://doi.org/10.1108/AGJSR-09-2022-0202>
- Lala, C., Kalangi, L., & Wangkar, A. (2022). Faktor-Faktor yang Mempengaruhi Audit Report Lag. *AKURASI: Jurnal Riset Akuntansi Dan Keuangan*, 4(3), 299–310. <https://doi.org/10.36407/akurasi.v4i3.768>
- Maharani, D. A., & Redjo, P. R. D. (2023). Corporate Governance Factors On Audit Report Lag. *JAS (Jurnal Akuntansi Syariah)*, 7(1), 58–72. <https://doi.org/10.46367/jas.v7i1.1084>
- Morasa, J., Bawono, I. R., & Laksana, R. D. (2024). Impact of a Company's Size and Audit Tenure on Audit Quality in Indonesia. *Journal of Hunan University Natural Sciences*, 51(3). <https://doi.org/10.55463/issn.1674-2974.51.3.7>
- Muhammad Tipin Natakusuma, & Retno Yuni Nur Susilowati. (2025). Pengaruh Struktur Kepemilikan Terhadap Audit Report Lag. *Jurnal Inovasi Ekonomi Syariah Dan Akuntansi*, 2(6), 93–103. <https://doi.org/10.61132/jiesa.v2i6.1713>
- Sabandar, S. Y., Sambara, K., Sipi, A. D. S., & Sasabone, L. (2024). The Influence of Audit Tenure, Audit Rotation, Public Accounting Firm Size, and Audit Opinion on Audit Quality (Study of Large Trading Companies Listed on the Indonesian Stock Exchange). *WSEAS Transactions on Business and Economics*, 21, 1988–1996. <https://doi.org/10.37394/23207.2024.21.161>
- Salman, K. R., & Setyaningrum, B. (2023). The Effects of Audit Firm Size, Audit Tenure, and Audit Rotation on Audit Quality Kautsar. *Ilomata International Journal of Tax & Accounting*, 4(1), 92–103.
- Shanti, Y. K., Sudarmadi, & Purwanti, T. (2023). Program Studi Akuntansi, Universitas Pamulang, Tangerang Selatan 3 Program Studi Akuntansi, Universitas Widyadharma, Klaten. *Edunomika*, 08(01), 1–16.
- Sobhan, R., Khatun, A., & Ikra, I. J. (2025). Audit committee characteristics and quality of audit: an interconnection from the perspective of an emerging economy. *Asian Journal of Accounting Research*, October, 1–17. <https://doi.org/10.1108/ajar-01-2024-0016>
- Wijaya, M., & Permatasari, A. P. (2024). The Influence of Public Accounting Firm Reputation on Audit Report Lag. *Jurnal Perspektif Manajerial Dan Kewirausahaan (JPMK)*, 3(7), 1525–1538. <https://doi.org/10.55927/fjsr.v3i7.10583>