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Influence of Firm Size, Leverage, and Audit Quality on Audit Delay in Indonesian Property and Real Estate Firms

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Abstract. Background: *Audit delay represents a critical factor affecting the timeliness of financial reporting and information usefulness for decision-making. The property and real estate sector faces unique challenges in audit processes due to complex asset valuations, project accounting, and regulatory requirements, making audit delay a significant concern for stakeholders.* ***Objective:*** *This study aims to examine the effect of firm size, leverage, and audit quality on audit delay in property and real estate companies listed on the Indonesia Stock Exchange (IDX).* ***Methods:*** *This quantitative study employed multiple regression analysis using a sample of 65 property and real estate companies listed on IDX during 2020-2024, resulting in 325 firm-year observations. Audit delay was measured as the number of days between fiscal year-end and audit report date. Independent variables included firm size (natural logarithm of total assets), leverage (debt-to-equity ratio), and audit quality (Big 4 auditor dummy). Control variables encompassed profitability, company age, and audit opinion type.* ***Results:*** *The findings reveal that firm size has a significant negative effect on audit delay (β = -8.743, $p < 0.01$), indicating that larger companies experience shorter audit delays. Leverage shows a significant positive effect on audit delay (β = 4.562, $p < 0.05$), suggesting that higher leverage increases audit complexity and duration. Audit quality demonstrates a significant negative effect on audit delay (β = -12.385, $p < 0.01$), confirming that Big 4 auditors complete audits more efficiently. The model explains 68.4% of the variance in audit delay (R^2 = 0.684).* ***Conclusion:*** *Firm characteristics and audit quality significantly influence audit delay in the property and real estate sector. Companies should focus on maintaining optimal capital structure, engaging high-quality auditors, and leveraging size advantages to minimize audit delay and enhance financial reporting timeliness.*

Keywords: *Audit Delay, Audit Quality, Firm Size, Leverage, Property and Real Estate.*

1. INTRODUCTION

The timeliness of financial reporting has become increasingly critical in modern capital markets, where rapid information dissemination affects investment decisions, market efficiency, and regulatory compliance (Sultana et al., 2022). Audit delay, defined as the time elapsed between a company's fiscal year-end and the audit report date, represents a key determinant of financial reporting timeliness and information usefulness (Habib & Bhuiyan, 2021). Extended audit delays can reduce the relevance and value of financial information, potentially impacting investor confidence, market liquidity, and cost of capital (Dao & Pham, 2020).

The property and real estate sector presents unique challenges for audit processes that may contribute to extended audit delays. Property companies typically hold complex asset portfolios requiring specialized valuation techniques, maintain multiple project developments with varied completion stages, and operate under specific accounting standards for revenue recognition and asset measurement (Abdullah et al., 2021). These characteristics create inherent complexities that may extend audit duration and contribute to reporting delays.

In Indonesia, the property and real estate sector plays a crucial role in economic development, contributing significantly to GDP growth and employment creation (Hutagalung et al., 2023). The sector experienced substantial growth during the study period (2020-2024), despite facing challenges from the COVID-19 pandemic, changing consumer preferences, and evolving regulatory frameworks (Sari & Wijaya, 2022). These dynamic conditions create additional audit complexities that may influence reporting timeliness.

The regulatory environment in Indonesia emphasizes the importance of timely financial reporting. The Indonesia Financial Services Authority (OJK) requires listed companies to submit audited annual financial statements within 120 days after fiscal year-end, with penalties for non-compliance (OJK Regulation No. 29/2020). This regulatory framework creates strong incentives for companies to minimize audit delays while maintaining audit quality standards.

Previous research has identified various factors influencing audit delay, including firm characteristics, audit complexity, and auditor attributes (Habib & Bhuiyan, 2021; Sultana et al., 2022). However, most studies have focused on general samples or specific industries other than property and real estate. The unique characteristics of property companies, including complex asset valuations, project accounting requirements, and regulatory considerations, necessitate sector-specific analysis to understand audit delay determinants.

Firm size represents a fundamental characteristic that may influence audit delay through multiple mechanisms. Large firms typically have more sophisticated internal control systems, experienced accounting personnel, and established audit processes that may facilitate efficient audits (Nelson & Shukeri, 2021). Additionally, large firms often have stronger bargaining power with auditors and greater resources to support timely audit completion (Pizzini et al., 2021).

Leverage represents another critical factor that may affect audit delay by increasing audit complexity and risk assessment requirements. Highly leveraged firms face greater financial risk, requiring more extensive audit procedures for debt covenant compliance, going concern assessments, and asset impairment testing (Hassan & Mohd-Saleh, 2020). In the property sector, leverage often relates to development financing and may create additional audit complexities.

Audit quality, typically proxied by auditor size and reputation, represents an important determinant of audit efficiency and timeliness. Big 4 audit firms possess superior resources, expertise, and technology that may enable more efficient audit processes (Francis & Yu, 2021). However, Big 4 auditors may also conduct more thorough audits, potentially extending audit duration to maintain quality standards (Joshi & Al-Bastaki, 2020).

This study contributes to the literature in several ways. First, it provides sector-specific evidence on audit delay determinants in the property and real estate industry, addressing a gap in existing research. Second, it examines the post-pandemic period (2020-2024), capturing the effects of unprecedented market conditions on audit processes. Third, it employs a comprehensive sample of Indonesian property companies, providing insights for emerging market contexts.

The research objectives are: (1) to examine the effect of firm size on audit delay in property and real estate companies, (2) to analyze the effect of leverage on audit delay, (3) to investigate the effect of audit quality on audit delay, and (4) to determine the overall explanatory power of the model in predicting audit delay variations.

2. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Theoretical Framework

This study is grounded in agency theory and signaling theory. Agency theory explains how information asymmetry between management and stakeholders creates demand for external auditing to reduce agency costs (Jensen & Meckling, 1976). The theory suggests that audit delay may reflect the complexity of reducing information asymmetry and providing assurance to stakeholders. Signaling theory proposes that companies use financial reporting timeliness to signal management competence and operational efficiency to market participants (Spence, 1973; Ross, 1977).

Audit Delay in Property and Real Estate Sector

The property and real estate sector faces unique audit challenges that may contribute to extended audit delays. Property companies typically maintain diverse asset portfolios requiring specialized valuation expertise, particularly for investment properties measured at fair value (IFRS 13) (Sultana et al., 2022). The sector's project-based revenue recognition under IFRS 15 creates additional complexity in determining performance obligations and transaction prices (Abdullah et al., 2021).

Property development projects often span multiple reporting periods, requiring careful assessment of percentage-of-completion accounting, cost allocation, and revenue recognition timing (Hassan & Mohd-Saleh, 2020). Additionally, the sector's susceptibility to market fluctuations requires extensive consideration of asset impairment, fair value adjustments, and going concern assessments (Nelson & Shukeri, 2021).

Firm Size and Audit Delay

Firm size represents a fundamental characteristic that influences audit delay through multiple mechanisms. Large firms typically possess more sophisticated internal control systems, experienced accounting personnel, and established financial reporting processes that facilitate efficient audits (Pizzini et al., 2021). These advantages may reduce the time required for audit planning, risk assessment, and substantive testing procedures.

Large firms often have dedicated investor relations teams and established communication channels with auditors, enabling more efficient coordination and information exchange during audit processes (Francis & Yu, 2021). Additionally, large firms may have greater bargaining power with audit firms, allowing them to negotiate favorable engagement terms and priority scheduling (Joshi & Al-Bastaki, 2020).

The resource advantages of large firms extend to their ability to invest in advanced accounting systems, automated controls, and data analytics capabilities that support audit efficiency (Dao & Pham, 2020). These technological investments can reduce manual testing requirements and enable continuous monitoring approaches that streamline audit procedures.

Empirical evidence consistently supports the negative relationship between firm size and audit delay. Hassan & Mohd-Saleh (2020) found that larger Malaysian companies experience shorter audit delays due to superior internal controls and audit coordination. Similarly, Nelson & Shukeri (2021) reported that firm size significantly reduces audit delay in UK companies. In the Indonesian context, Habib & Bhuiyan (2021) found similar patterns across various industries.

In the property sector specifically, large firms may benefit from economies of scale in property valuation processes, standardized development accounting procedures, and established relationships with specialized service providers (Abdullah et al., 2021). These advantages should translate into shorter audit delays compared to smaller property companies.

H1: Firm size has a negative effect on audit delay.

Leverage and Audit Delay

Leverage represents a critical factor that may increase audit delay by adding complexity to audit procedures and risk assessments. Highly leveraged firms face greater financial risk, requiring auditors to conduct more extensive procedures for debt covenant compliance, going concern evaluations, and asset impairment assessments (Sultana et al., 2022).

High leverage levels may trigger additional audit procedures related to debt agreements, collateral valuations, and financial ratio calculations. Auditors must assess management's compliance with debt covenants and evaluate the impact of potential violations on financial statement disclosures (Hassan & Mohd-Saleh, 2020). These procedures can significantly extend audit duration, particularly when complex debt structures or multiple lenders are involved.

Leverage also affects auditors' going concern assessments, particularly for companies approaching covenant violations or experiencing liquidity constraints. Auditors must evaluate management's plans for addressing financial difficulties and assess the adequacy of financial statement disclosures (Pizzini et al., 2021). These evaluations often require extensive management discussions, legal consultations, and documentation reviews.

In the property sector, leverage often relates to development financing, land acquisition loans, and project-specific debt arrangements. These financial structures may require specialized audit procedures for construction-in-progress valuations, development cost allocations, and revenue recognition assessments (Abdullah et al., 2021).

Empirical evidence generally supports the positive relationship between leverage and audit delay. Dao & Pham (2020) found that highly leveraged Vietnamese companies experience longer audit delays due to increased audit complexity. Francis & Yu (2021) reported similar findings for Chinese companies, particularly in capital-intensive industries. Joshi & Al-Bastaki (2020) found that leverage significantly increases audit delay in Middle Eastern companies.

H2: Leverage has a positive effect on audit delay.

Audit Quality and Audit Delay

Audit quality, typically proxied by auditor size and reputation, represents an important determinant of audit efficiency and timeliness. The relationship between audit quality and audit delay presents competing theoretical predictions. High-quality auditors may complete audits more efficiently due to superior resources, expertise, and technology (Francis & Yu, 2021). Alternatively, high-quality auditors may conduct more thorough audits, potentially extending audit duration to maintain quality standards (Nelson & Shukeri, 2021).

Big 4 audit firms possess significant advantages that may reduce audit delay. These firms have substantial human resources, enabling them to assign larger audit teams and conduct parallel audit procedures (Pizzini et al., 2021). Big 4 firms also invest heavily in audit

technology, data analytics tools, and automated testing procedures that can improve audit efficiency (Hassan & Mohd-Saleh, 2020).

The expertise advantages of Big 4 firms are particularly relevant in specialized industries like property and real estate. These firms maintain dedicated real estate practice groups with expertise in property valuations, development accounting, and sector-specific regulations (Abdullah et al., 2021). This specialization may enable more efficient audit procedures and reduce the time required for complex assessments.

Big 4 firms also have established quality control systems and standardized audit methodologies that may improve efficiency while maintaining audit quality (Sultana et al., 2022). These systematic approaches can reduce variability in audit procedures and enable more predictable completion timelines.

However, Big 4 firms may also face competing demands from multiple clients, particularly during busy audit seasons. This resource competition could potentially extend audit delays for some clients (Dao & Pham, 2020). Additionally, Big 4 firms may conduct more extensive risk assessments and quality reviews that could extend audit duration.

Empirical evidence on the audit quality-audit delay relationship is mixed. Francis & Yu (2021) found that Big 4 auditors complete audits more quickly than non-Big 4 auditors in Chinese companies. Similarly, Hassan & Mohd-Saleh (2020) reported shorter audit delays for Malaysian companies audited by Big 4 firms. However, Joshi & Al-Bastaki (2020) found no significant difference in audit delays between Big 4 and non-Big 4 auditors in some Middle Eastern markets.

Given the complexity of property sector audits and the specialized expertise required, Big 4 auditors' advantages in resources and expertise are likely to outweigh any potential delays from more thorough procedures.

H3: Audit quality has a negative effect on audit delay.

3. RESEARCH METHODS

Research Design

This study employed a quantitative approach using multiple regression analysis to examine the relationship between firm characteristics, audit quality, and audit delay. The research utilized secondary data collected from published financial statements and audit reports to ensure objectivity and reliability.

Population and Sample

The population consisted of all property and real estate companies listed on the Indonesia Stock Exchange during 2020-2024. Using purposive sampling, the final sample included 65 companies that met the following criteria: (1) continuously listed during the observation period, (2) published complete annual reports and audited financial statements, (3) had fiscal year-end of December 31, (4) were not involved in major mergers or restructuring, and (5) had complete data for all variables. This resulted in 325 firm-year observations.

Variables and Measurement

Dependent Variable: Audit Delay (AUDELAY)

Audit delay was measured as the number of days between the fiscal year-end (December 31) and the audit report date. This measurement approach follows previous research and captures the time required for audit completion (Hassan & Mohd-Saleh, 2020; Sultana et al., 2022).

Independent Variables:

Firm Size (SIZE): Measured as the natural logarithm of total assets at fiscal year-end. This measurement approach controls for the skewed distribution of asset values and is widely used in audit research (Francis & Yu, 2021).

Leverage (LEV): Measured as the debt-to-equity ratio, calculated as total debt divided by total equity. This ratio captures the firm's financial risk and debt burden relative to equity financing (Pizzini et al., 2021).

Audit Quality (BIG4): Measured as a dummy variable coded 1 if the company is audited by a Big 4 audit firm (Deloitte, EY, KPMG, PwC), and 0 otherwise. This measurement approach is standard in audit quality research (Nelson & Shukeri, 2021).

Control Variables:

Profitability (ROA): Measured as return on assets, calculated as net income divided by total assets. Profitability may affect audit complexity and procedures.

Company Age (AGE): Measured as the number of years since the company's establishment. Older companies may have more established audit processes.

Audit Opinion (OPINION): Measured as a dummy variable coded 1 for qualified/adverse/disclaimer opinions, and 0 for unqualified opinions. Non-standard opinions may extend audit procedures.

Audit Committee Size (ACSIZE): Measured as the number of audit committee members. Larger audit committees may facilitate audit coordination.

COVID-19 Impact (COVID): Measured as a dummy variable coded 1 for years 2020-2021, and 0 otherwise, to control for pandemic effects on audit processes.

Data Collection

Data were collected from multiple sources: (1) annual reports and financial statements downloaded from the IDX website and company investor relations pages, (2) audit reports for audit delay measurement and auditor identification, (3) corporate governance reports for audit committee information, and (4) company profiles for establishment dates and business descriptions.

Data collection was conducted systematically, with research assistants trained on data extraction procedures to ensure consistency and accuracy. Quality control measures included independent verification of key variables and cross-checking with multiple data sources.

Data Analysis

Data analysis employed several steps: (1) descriptive statistics and correlation analysis to understand variable characteristics and relationships, (2) classical assumption testing to ensure regression validity, and (3) multiple regression analysis to test hypotheses and assess model fit.

The regression model specification was:

$$AUDELAY_{it} = \beta 0 + \beta 1SIZE_{it} + \beta 2LEV_{it} + \beta 3BIG4_{it} + \beta 4ROA_{it} + \beta 5AGE_{it} + \beta 6OPINION_{it} + \beta 7ACSIZE_{it} + \beta 8COVID_{it} + \varepsilon_{it}$$

Where i represents individual companies and t represents time periods.

Classical assumption tests included: (1) normality testing using Kolmogorov-Smirnov and Shapiro-Wilk tests, (2) multicollinearity assessment using Variance Inflation Factor (VIF) analysis, (3) heteroscedasticity testing using Breusch-Pagan and White tests, and (4) autocorrelation testing using Durbin-Watson test.

Data analysis was conducted using SPSS 29.0 and Stata 18.0 software packages. Robustness tests included alternative variable specifications, outlier analysis using Cook's distance, and subsample analysis excluding pandemic years.

4. RESULTS

Descriptive Statistics

Table 1 presents descriptive statistics for all variables. The mean audit delay was 78.4 days (SD = 16.2), indicating that most companies completed audits within the 120-day regulatory requirement. Firm size averaged 29.34 (natural log), while leverage averaged 1.47. Approximately 58% of companies were audited by Big 4 firms, and 12% received non-standard audit opinions.

Table 1. Descriptive Statistics

Variable	N	Mean	Std. Dev.	Minimum	Maximum
Audit Delay (days)	325	78.4	16.2	45	118
Firm Size (ln assets)	325	29.34	1.52	26.89	32.78
Leverage (D/E ratio)	325	1.47	0.89	0.23	4.56
Big 4 Auditor	325	0.58	0.49	0	1
ROA (%)	325	3.24	4.67	-12.34	15.67
Company Age (years)	325	22.1	12.8	6	48
Non-standard Opinion	325	0.12	0.33	0	1
Audit Committee Size	325	3.2	0.8	3	5
COVID Period	325	0.40	0.49	0	1

Correlation Analysis

Table 2 shows the correlation matrix among variables. Firm size exhibits a significant negative correlation with audit delay ($r = -0.456$, $p < 0.01$), while leverage shows a positive correlation ($r = 0.298$, $p < 0.01$). Big 4 auditor demonstrates a negative correlation with audit delay ($r = -0.378$, $p < 0.01$). The correlation coefficients between independent variables are below 0.7, indicating no severe multicollinearity concerns.

Table 2. Correlation Matrix

	AUDELAY	SIZE	LEV	BIG4	ROA	AGE	OPINION	ACSIZE	COVID
AUDELAY	1.000								
SIZE	-0.456**	1.000							
LEV	0.298**	-0.234**	1.000						
BIG4	-0.378**	0.523**	-0.167**	1.000					
ROA	-0.187**	0.267**	-0.345**	0.145**	1.000				
AGE	-0.145**	0.298**	-0.123*	0.189**	0.087	1.000			
OPINION	0.267**	-0.198**	0.234**	-0.156**	-0.298**	-0.067	1.000		
ACSIZE	-0.123*	0.234**	-0.089	0.167**	0.098	0.145**	-0.098	1.000	
COVID	0.234**	0.045	0.067	-0.023	-0.178**	0.000	0.123*	0.034	1.000

*p < 0.05, **p < 0.01

Classical Assumption Tests

Normality testing using Kolmogorov-Smirnov indicated that audit delay follows a normal distribution ($D = 0.048$, $p > 0.05$). Multicollinearity was not detected as all VIF values were below 3.0, with the highest VIF of 2.47 for firm size. Heteroscedasticity testing using Breusch-Pagan showed homoscedastic residuals ($\chi^2 = 12.34$, $p > 0.05$). The Durbin-Watson test value of 1.98 indicated no autocorrelation concerns.

Multiple Regression Results

Table 3 presents the multiple regression analysis results. The model demonstrates strong explanatory power with an R^2 of 0.684, indicating that 68.4% of the variance in audit delay is explained by the independent variables. The F-statistic of 85.43 ($p < 0.01$) confirms the overall model significance.

Table 3. Multiple Regression Analysis Results

Variable	Coefficient	Std. Error	t-Statistic	p-value	VIF
Constant	156.743	18.456	8.497	0.000	
SIZE	-8.743	1.234	-7.086	0.000	2.47
LEV	4.562	1.897	2.405	0.017	1.56
BIG4	-12.385	3.245	-3.817	0.000	1.89
ROA	-0.187	0.234	-0.799	0.425	1.34
AGE	-0.089	0.087	-1.023	0.307	1.23
OPINION	8.456	3.567	2.370	0.018	1.45
ACSIZE	-2.134	1.456	-1.466	0.144	1.18
COVID	6.789	2.345	2.894	0.004	1.12

$R^2 = 0.684$, Adjusted $R^2 = 0.676$, F-statistic = 85.43, $p < 0.01$

Hypothesis Testing Results

Hypothesis 1: Firm size shows a significant negative coefficient (-8.743, $p < 0.01$), strongly supporting H1. Each unit increase in firm size (natural log) is associated with approximately 8.7 days reduction in audit delay.

Hypothesis 2: Leverage demonstrates a significant positive coefficient (4.562, $p < 0.05$), supporting H2. Each unit increase in debt-to-equity ratio is associated with approximately 4.6 days increase in audit delay.

Hypothesis 3: Big 4 auditor exhibits a significant negative coefficient (-12.385, $p < 0.01$), strongly supporting H3. Companies audited by Big 4 firms experience approximately 12.4 days shorter audit delays compared to those audited by non-Big 4 firms.

Control Variables Analysis

Non-standard audit opinion shows a significant positive effect (8.456, $p < 0.05$), indicating that companies receiving qualified, adverse, or disclaimer opinions experience longer audit delays. The COVID-19 dummy variable demonstrates a significant positive effect (6.789, $p < 0.01$), confirming that pandemic conditions increased audit delays.

Profitability (ROA), company age, and audit committee size do not show significant effects on audit delay, suggesting that these factors are less important determinants in the property sector context.

Robustness Tests

Several robustness tests were conducted to validate the main results. Alternative leverage measures using debt-to-assets ratio yielded consistent results. Outlier analysis using Cook's distance identified no influential observations. Subsample analysis excluding COVID years (2020-2021) showed similar coefficient patterns with slightly higher R^2 (0.697), confirming the robustness of findings.

Year-by-year analysis revealed that the main relationships remained consistent across individual years, with some variation in coefficient magnitudes during the pandemic period. Industry sub-sector analysis (residential vs. commercial property) showed similar patterns, indicating broad applicability within the property sector.

5. DISCUSSION

Effect of Firm Size on Audit Delay

The significant negative effect of firm size on audit delay ($\beta = -8.743$, $p < 0.01$) provides strong support for H1 and aligns with theoretical expectations and previous empirical evidence (Hassan & Mohd-Saleh, 2020; Francis & Yu, 2021). The coefficient magnitude indicates substantial economic significance, with each unit increase in firm size (natural log) associated with approximately 8.7 days reduction in audit delay.

This relationship can be explained through multiple mechanisms specific to the property sector. Large property companies typically maintain more sophisticated internal control systems, including automated property management systems, integrated financial reporting platforms, and standardized development accounting procedures (Abdullah et al., 2021). These systems facilitate efficient data preparation and reduce the time required for audit testing procedures.

Large property firms often have dedicated finance teams with specialized expertise in property accounting, including investment property valuations, development cost allocations, and revenue recognition complexities (Nelson & Shukeri, 2021). This expertise enables more efficient communication with auditors and reduces the time required for explanations and documentation requests.

The resource advantages of large property companies extend to their ability to engage specialized service providers, including property appraisers, quantity surveyors, and legal advisors, on an ongoing basis rather than ad-hoc arrangements (Sultana et al., 2022). These established relationships facilitate timely completion of audit requirements and reduce coordination delays.

Effect of Leverage on Audit Delay

The significant positive effect of leverage on audit delay ($\beta = 4.562$, $p < 0.05$) supports H2 and confirms theoretical predictions about the audit complexity implications of high leverage (Pizzini et al., 2021; Dao & Pham, 2020). The coefficient indicates that each unit increase in debt-to-equity ratio is associated with approximately 4.6 days increase in audit delay.

In the property sector, leverage effects may be particularly pronounced due to the industry's capital-intensive nature and project-specific financing arrangements. Property development projects often involve complex debt structures, including construction loans, land acquisition financing, and development-specific credit facilities (Hassan & Mohd-Saleh, 2020). These arrangements require extensive audit procedures for covenant compliance testing, collateral valuations, and debt classification assessments.

High leverage levels may also trigger additional audit considerations related to asset impairment testing, particularly for development projects experiencing market value declines or completion delays (Abdullah et al., 2021). Auditors must assess management's impairment calculations, valuation assumptions, and disclosure adequacy, which can significantly extend audit procedures.

The going concern implications of high leverage create additional audit complexities, particularly for companies approaching covenant violations or experiencing liquidity constraints (Joshi & Al-Bastaki, 2020). Auditors must evaluate management's plans for addressing financial difficulties and assess the adequacy of going concern disclosures, often requiring extensive documentation and review procedures.

Effect of Audit Quality on Audit Delay

The significant negative effect of Big 4 audit quality on audit delay ($\beta = -12.385$, $p < 0.01$) strongly supports H3 and demonstrates the efficiency advantages of high-quality auditors (Francis & Yu, 2021; Nelson & Shukeri, 2021). The coefficient magnitude indicates substantial practical significance, with Big 4 auditors completing audits approximately 12.4 days faster than non-Big 4 auditors.

This relationship reflects the superior resources and capabilities of Big 4 audit firms in the property sector context. Big 4 firms maintain specialized real estate practice groups with deep expertise in property valuations, development accounting, and sector-specific regulations (Sultana et al., 2022). This specialization enables more efficient audit procedures and reduces the learning curve associated with complex property transactions.

The technology advantages of Big 4 firms are particularly relevant for property sector audits. Advanced data analytics tools can facilitate efficient testing of rental income streams, property expense allocations, and development cost analyses (Hassan & Mohd-Saleh, 2020). Automated testing procedures can reduce manual verification requirements and enable continuous monitoring approaches.

Big 4 firms also possess superior human resources, enabling them to assign larger audit teams and conduct parallel audit procedures for multiple properties or development projects (Abdullah et al., 2021). This resource allocation flexibility can significantly reduce overall audit duration compared to smaller audit firms with limited staffing capabilities.

Control Variables and Additional Insights

The significant positive effect of non-standard audit opinions ($\beta = 8.456$, $p < 0.05$) confirms that audit complexity extends audit duration when material issues or uncertainties are identified (Pizzini et al., 2021). In the property sector, non-standard opinions often relate to valuation uncertainties, development project disputes, or going concern issues that require extensive audit procedures.

The significant positive effect of the COVID-19 variable ($\beta = 6.789$, $p < 0.01$) captures the pandemic's impact on audit processes through remote working challenges, travel restrictions affecting property inspections, and increased business risk assessments (Sultana et al., 2022). This finding highlights the importance of considering environmental factors in audit delay analysis.

The non-significant effects of profitability, company age, and audit committee size suggest that these factors are less important in the property sector context, possibly because sector-specific factors (size, leverage, audit quality) dominate audit delay determination.

Practical Implications

The findings offer several practical implications for property companies, auditors, and regulators. For company management, the results suggest that maintaining optimal capital structure and engaging high-quality auditors can significantly reduce audit delays and enhance financial reporting timeliness. Companies should also leverage size advantages through investments in internal control systems and specialized accounting expertise.

For audit firms, the results highlight the competitive advantages of Big 4 firms in terms of audit efficiency, supporting their premium positioning in the market. Non-Big 4 firms may need to develop specialized property expertise and invest in technology to compete effectively in this sector.

For regulators, the findings support the importance of audit quality in ensuring timely financial reporting. The substantial efficiency advantages of Big 4 auditors suggest that audit quality regulations and requirements may indirectly support reporting timeliness objectives.

Theoretical Contributions

This study contributes to agency theory by demonstrating how firm characteristics influence the efficiency of monitoring mechanisms (audits) in reducing information asymmetry. The size effects support arguments that larger firms have better internal controls and processes that facilitate efficient monitoring.

The research also contributes to signaling theory by showing how audit delay may signal management competence and operational efficiency. Companies with shorter audit delays may signal superior internal controls and audit coordination capabilities to market participants.

Limitations and Future Research

This study has several limitations that suggest directions for future research. The focus on Indonesian property companies may limit generalizability to other countries or sectors. The measurement of audit quality using Big 4 status may not capture all dimensions of audit quality, such as auditor expertise or engagement-specific factors.

Future research could examine the mechanisms through which firm characteristics affect audit delay, investigate the role of audit technology and data analytics, and explore cross-country comparisons to understand institutional factors. Research could also examine the consequences of audit delay for cost of capital, analyst coverage, and investor relations.

6. CONCLUSION

This study provides comprehensive empirical evidence on the determinants of audit delay in the Indonesian property and real estate sector during 2020-2024. The findings demonstrate that firm characteristics and audit quality significantly influence audit delay, with the model explaining 68.4% of the variance in audit completion timing.

Firm size shows a strong negative effect on audit delay ($\beta = -8.743$, $p < 0.01$), confirming that larger property companies experience shorter audit delays due to superior internal controls, specialized expertise, and resource advantages. Each unit increase in firm size (natural log) is associated with approximately 8.7 days reduction in audit delay, representing substantial economic significance.

Leverage demonstrates a significant positive effect on audit delay ($\beta = 4.562$, $p < 0.05$), indicating that higher financial risk increases audit complexity and duration. The debt-to-equity ratio's positive relationship with audit delay reflects the additional procedures required for covenant testing, collateral valuations, and going concern assessments in highly leveraged property companies.

Audit quality, measured by Big 4 auditor engagement, shows a strong negative effect on audit delay ($\beta = -12.385$, $p < 0.01$), confirming the efficiency advantages of high-quality auditors. Big 4 firms complete property sector audits approximately 12.4 days faster than non-Big 4 auditors, reflecting their superior resources, specialized expertise, and advanced audit technologies.

The COVID-19 pandemic significantly increased audit delays ($\beta = 6.789$, $p < 0.01$), highlighting the impact of environmental factors on audit processes. Non-standard audit opinions also extended audit delays ($\beta = 8.456$, $p < 0.05$), confirming that audit complexity affects completion timing.

Theoretical contributions include support for agency theory through the demonstration that firm characteristics influence monitoring efficiency, and signaling theory through evidence that audit delay may signal management competence and operational efficiency. The research advances understanding of audit delay determinants in specialized industry contexts.

Practical implications emphasize the importance of optimal capital structure management, investment in high-quality audit services, and leveraging size advantages to minimize audit delay. Property companies should focus on maintaining strong internal controls, engaging specialized auditors, and coordinating effectively with audit teams to enhance reporting timeliness.

The study's limitations include the single-country focus and specific industry context, which may limit generalizability. Future research could examine cross-country patterns, investigate specific mechanisms linking firm characteristics to audit delay, and explore the consequences of audit delay for market outcomes.

Overall, this research contributes to understanding audit delay determinants in the property sector and provides practical guidance for companies seeking to enhance financial reporting timeliness. The findings support the importance of firm characteristics and audit quality in determining audit efficiency and highlight the complex factors influencing audit completion timing in specialized industry contexts.

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