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EXAMINING THE EFFECT OF AUDIT RISK, OPERATIONAL COMPLEXITY, AND INTERNAL CONTROL SYSTEMS ON AUDIT QUALITY

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Abstract: This study aims to examine the effects of audit risk, operational complexity, and internal control systems on audit quality. High audit risk and increasingly complex business operations present significant challenges for auditors in obtaining sufficient and appropriate audit evidence, while effective internal control systems are expected to improve the reliability of financial reporting and support higher-quality audit outcomes. A quantitative research approach with an explanatory design was employed. Secondary data were collected from annual reports and audited financial statements of companies listed on the Indonesia Stock Exchange during the 2020–2024 period. The sample was selected using purposive sampling based on predetermined criteria. Data analysis was conducted using descriptive statistics, classical assumption tests, multiple linear regression analysis, t-tests, F-tests, and the coefficient of determination. The findings indicate that audit risk has a significant negative effect on audit quality, suggesting that higher audit risk increases the likelihood of material misstatements and reduces audit effectiveness. Operational complexity also has a significant negative effect on audit quality because diversified business activities require broader audit procedures and greater professional judgment. Conversely, internal control systems have a significant positive effect on audit quality by improving the reliability of financial information and reducing control risk. Furthermore, audit risk, operational complexity, and internal control systems simultaneously have a significant influence on audit quality. These findings highlight the importance of comprehensive risk assessment, effective internal control implementation, and appropriate audit planning in enhancing audit quality. The study contributes to the auditing literature by providing empirical evidence regarding the combined effects of organizational and audit-related factors on audit quality in publicly listed companies.

Keywords: Audit Quality; Audit Risk; Operational Complexity; Internal Control Systems; Multiple Linear Regression.

INTRODUCTION

The credibility of audited financial statements is essential for maintaining stakeholder confidence and supporting informed economic decision-making. Investors, creditors, regulators, and other users rely on audit reports to assess whether financial information has been prepared fairly and is free from material misstatement. Consequently, audit quality represents not only the auditor's technical ability to identify material errors or irregularities but also the effectiveness of the overall audit process in producing reliable conclusions. Francis (2024) argues that audit quality should ultimately be evaluated in relation to the quality of the audited financial statements on which the auditor expresses an opinion. Similarly, the International Auditing and Assurance Standards Board (IAASB, 2014) explains that audit quality is shaped by interconnected input, process, output, interaction, and contextual factors at the engagement, audit-firm, and national levels.

Despite the importance of high-quality audits, auditors frequently encounter conditions that may affect their ability to obtain sufficient and appropriate audit evidence. One of the most important conditions is audit risk, which reflects the possibility that an auditor may express an inappropriate opinion when financial statements contain material misstatements. Audit risk requires auditors to identify and assess risks at both the financial-statement and assertion levels before designing appropriate audit procedures. ISA 315 (Revised 2019) emphasizes the need for a robust and consistent risk-identification and assessment process so that auditors can develop more focused responses to identified risks (IAASB, 2019). When audit risk increases, auditors are expected to expand substantive procedures, increase professional skepticism, adjust the nature and timing of testing, and obtain more persuasive evidence. However, ineffective assessment or inappropriate responses to audit risk may reduce the auditor's ability to detect material misstatements and ultimately weaken audit quality.

Audit quality may also be affected by operational complexity. Organizations with numerous business segments, geographically dispersed branches, complex information systems, diverse transactions, and highly integrated production or service processes create additional challenges for auditors. Operational complexity increases the volume and heterogeneity of audit evidence, requires broader technical and industry knowledge, and may increase the possibility of errors being overlooked. Liu and Xia (2024) demonstrate that industry technology complexity has significant implications for audit quality because auditors must adapt their procedures and competencies to increasingly complicated technological environments. In the Indonesian context, Khulsum et al. (2025) also show that audit complexity interacts dynamically with auditor competence, time-budget pressure, and motivation in determining audit quality. These findings indicate that complexity does not merely increase the quantity of audit work but also affects auditors' judgment, evidence evaluation, and ability to complete audit procedures effectively.

In addition to audit risk and operational complexity, the internal control system represents an important organizational factor influencing audit quality. An effective internal control system assists an organization in achieving operational, reporting, and compliance objectives while reducing the likelihood of errors, irregularities, and fraudulent financial reporting. The Committee of Sponsoring Organizations of the Treadway Commission identifies the control environment, risk assessment, control activities, information and communication, and monitoring activities as integrated components of internal control (COSO, 2013). Strong internal controls provide auditors with more reliable information and may allow them to develop more effective audit strategies. Conversely, weak internal controls increase control risk, require more extensive substantive testing, and may complicate the collection of reliable evidence. A systematic review by Rödl and Tanewski (2020) indicates that internal control is closely connected to financial-reporting reliability, operational efficiency, compliance, accountability, and organizational risk management.

Previous empirical evidence also suggests that internal control effectiveness is closely related to the quality of internal and external audit activities. Chang et al. (2019) found that the characteristics of the internal audit function influence the effectiveness of internal controls over operations and compliance. More recent evidence from Indonesian state-owned enterprises indicates that internal controls significantly contribute to internal audit quality and the prevention of fraudulent financial statements (Ait Novatiani et al., 2024). Effective controls can facilitate risk identification, improve the reliability of accounting records, support the traceability of transactions, and reduce information asymmetry between auditors and organizational management. Nevertheless, internal control systems must operate effectively in practice rather than exist merely as formal policies or administrative documentation.

Although audit risk, operational complexity, and internal control systems have been widely examined, prior studies have often investigated these factors separately. Some studies focus primarily on auditor competence, independence, time-budget pressure, or professional skepticism, while others emphasize corporate governance, technological complexity, or internal audit effectiveness. Consequently, empirical evidence explaining the simultaneous effects of audit risk, operational complexity, and internal control systems on audit quality remains limited, particularly in the context of auditors or organizations in emerging economies. Operational complexity may increase audit difficulties and exposure to undetected misstatements, while an effective internal control system may reduce such risks by providing structured procedures, reliable documentation, and effective monitoring. Examining these factors within a single model is therefore necessary to obtain a more comprehensive understanding of the organizational and engagement conditions that determine audit quality.

Based on this research gap, the present study aims to examine the effects of audit risk, operational complexity, and internal control systems on audit quality, both partially and simultaneously. This study is expected to contribute theoretically by integrating audit-risk considerations, organizational complexity, and internal-control effectiveness into a unified framework for explaining audit quality. Practically, the findings may assist auditors in developing appropriate risk-based audit procedures, help audit firms allocate personnel and resources according to client complexity, and encourage organizations to strengthen their internal control systems. The study may also provide relevant evidence for regulators and professional associations in formulating policies and quality-management practices that support reliable and accountable audit outcomes.

RESEARCH METHOD

Research Design

This study uses a quantitative approach with an explanatory research design to examine the effect of audit risk, operational complexity, and internal control systems on audit quality, both partially and simultaneously. The quantitative approach was chosen because it allows the researcher to test hypotheses using numerical data and statistical analysis, thereby providing objective and generalizable results.

Population and Sample

The population of this study consists of public companies listed on the Indonesia Stock Exchange during the 2020–2024 period. Companies in the financial sector, including banks, insurance companies, and other financial institutions, were excluded because they are subject to specific regulations and have different operational characteristics.

A purposive sampling technique was used with the following criteria:

1. Companies consistently listed on the Indonesia Stock Exchange from 2020 to 2024.
2. Companies that published complete audited annual financial statements during the research period.
3. Companies that provided complete data related to the research variables.

Based on these criteria, 140 firm-year observations from 28 companies were obtained.

Data Source and Collection

This study uses secondary data obtained from annual reports, audited financial statements, independent auditor reports, and other relevant disclosures published on the Indonesia Stock Exchange website and the official websites of the selected companies. The data were collected using documentation techniques and recorded in a structured data collection sheet. The collected information included data related to audit risk, operational complexity, internal control systems, and audit quality.

Operational Definition and Measurement of Variables

All variables in this study were measured using indicators adopted from previous research and adjusted to the research context. The operational definitions and measurements of the variables are explained as follows.

Audit Quality

Audit quality is the dependent variable in this study. Audit quality is measured using discretionary accruals as a proxy. A lower absolute value of discretionary accruals indicates higher audit quality because it reflects a lower level of earnings management. Discretionary accruals are calculated using the Modified Jones Model. The use of discretionary accruals is based on the assumption that high-quality auditors are more capable of detecting and limiting opportunistic earnings-management practices.

Audit Risk

Audit risk is the first independent variable. Audit risk is measured using the ratio of net receivables to total assets. A higher ratio indicates a higher level of audit risk because receivables are considered accounts that have a relatively high possibility of material misstatement. The measurement of audit risk reflects the auditor's exposure to accounts that require greater professional judgment and more extensive audit procedures.

Operational Complexity

Operational complexity is the second independent variable. Operational complexity is measured using the number of business segments disclosed in the company's annual report. A greater number of business

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segments indicates a higher level of operational complexity. Companies with multiple business segments tend to have more diverse transactions, reporting systems, and operational activities, thereby increasing the difficulty of the audit process.

Internal Control Systems
Internal control systems are the third independent variable. This variable is measured using a composite disclosure index based on the five components of the Committee of Sponsoring Organizations of the Treadway Commission framework. The five components include the control environment, risk assessment, control activities, information and communication, and monitoring activities. The index is calculated based on the internal control disclosures presented in the company's annual report. A higher disclosure score indicates a stronger internal control system.

Research Model
The research model illustrates the effects of audit risk, operational complexity, and internal control systems on audit quality. Audit risk is represented as the first independent variable, operational complexity as the second independent variable, and internal control systems as the third independent variable. Audit quality is positioned as the dependent variable.

Figure 1. Research Model

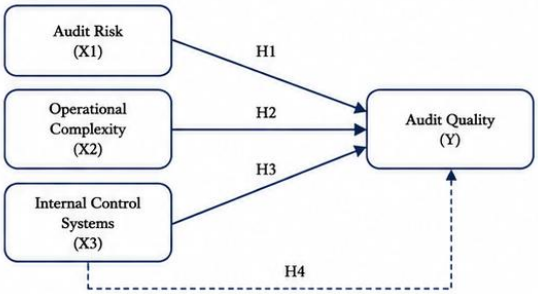

Figure 1. Research Model

The hypotheses proposed in this study are as follows:
H1: Audit risk has a significant effect on audit quality.
H2: Operational complexity has a significant effect on audit quality.
H3: Internal control systems have a significant effect on audit quality.
H4: Audit risk, operational complexity, and internal control systems simultaneously have a significant effect on audit quality.

Data Analysis Technique
The data analysis technique used in this study is multiple linear regression analysis. This analysis is used to determine the partial and simultaneous effects of audit risk, operational complexity, and internal control systems on audit quality.

The multiple linear regression model is formulated as follows:

$$AQ_{it} = \beta_0 + \beta_1 AR_{it} + \beta_2 OC_{it} + \beta_3 ICS_{it} + \epsilon_{it}$$

Before hypothesis testing, classical assumption tests are conducted, including normality, multicollinearity, heteroscedasticity, and autocorrelation tests. These tests are performed to ensure that the regression model meets the requirements of the classical linear regression model. The partial effect of each independent variable is tested using the t-test. The simultaneous effect of the independent variables is tested using the F-test. The coefficient of determination is used to measure the extent to which audit risk, operational complexity, and internal control systems explain variations in audit quality. The hypotheses are accepted when the significance value is lower than 0.05.

Research Procedure
The research procedure begins with problem identification, followed by a literature review related to audit risk, operational complexity, internal control systems, and audit quality. The next stage is the development of the research hypotheses and the determination of the measurement indicators for each variable. After the variables and hypotheses have been established, secondary data are collected from annual reports, audited

financial statements, independent auditor reports, and other relevant company disclosures. The collected data are then processed, classified, and measured according to the operational definitions of the research variables. After data processing, classical assumption tests are conducted to examine normality, multicollinearity, heteroscedasticity, and autocorrelation. Multiple linear regression analysis is subsequently conducted to determine the effects of the independent variables on audit quality. The hypotheses are tested using the t-test, F-test, and coefficient of determination. The results of the statistical analysis are then interpreted and discussed by comparing them with relevant theories and previous empirical findings. Finally, conclusions and research implications are formulated based on the results of the study.

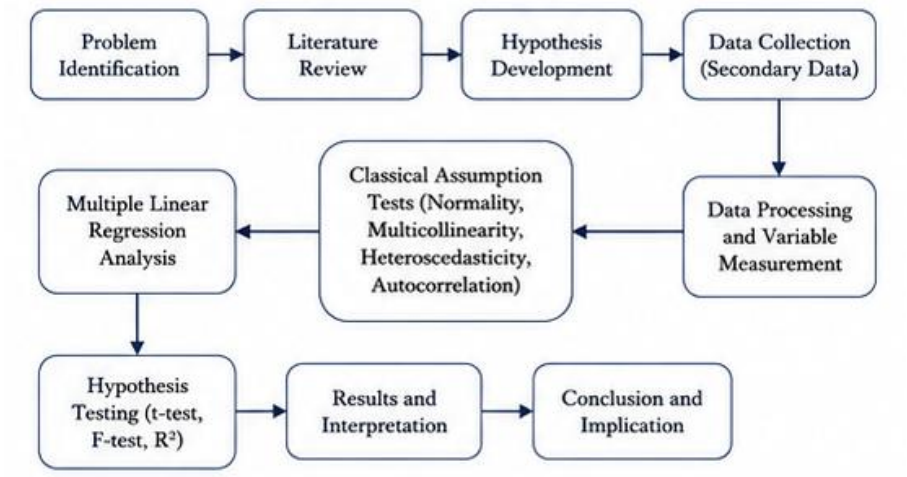

Figure 2. Research Procedure

RESULT AND DISCUSSION

Descriptive Statistical Analysis

Descriptive statistical analysis was conducted to provide an overview of the characteristics and distribution of the research variables. The variables examined in this study consisted of audit risk, operational complexity, internal control systems, and audit quality. The descriptive analysis included the minimum value, maximum value, mean, and standard deviation of each variable.

Table 1. Descriptive Statistics

Variable	N	Minimum	Maximum	Mean	Standard Deviation
Audit Risk	140	0.08	0.67	0.314	0.142
Operational Complexity	140	1.00	8.00	4.121	1.734
Internal Control Systems	140	0.46	0.94	0.731	0.109
Audit Quality	140	0.012	0.186	0.072	0.041

Table 1 shows that audit risk had an average value of 0.314, with values ranging from 0.08 to 0.67. This variation indicates that the sampled companies faced different levels of audit risk. Some companies had relatively low exposure to accounts with a high likelihood of material misstatement, while others required greater auditor attention due to the higher proportion of risky financial statement items.

Operational complexity had an average value of 4.121, with a minimum value of 1 and a maximum value of 8. This result indicates that several companies operated within a relatively simple organizational structure, whereas others had multiple business segments and more complex operational activities. A higher number of business segments may increase the diversity of transactions, accounting processes, and audit procedures required.

The internal control system variable had an average value of 0.731. This finding suggests that, in general, the sampled companies had implemented and disclosed relatively adequate internal control mechanisms. Nevertheless, the minimum score of 0.46 indicates that several companies still had weaknesses in the implementation or disclosure of internal control components.

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Audit quality had an average value of 0.072. Because audit quality was proxied by the absolute value of discretionary accruals, a lower value represented better audit quality. The variation in this variable indicates that the ability of auditors to limit earnings management differed among the sampled companies.

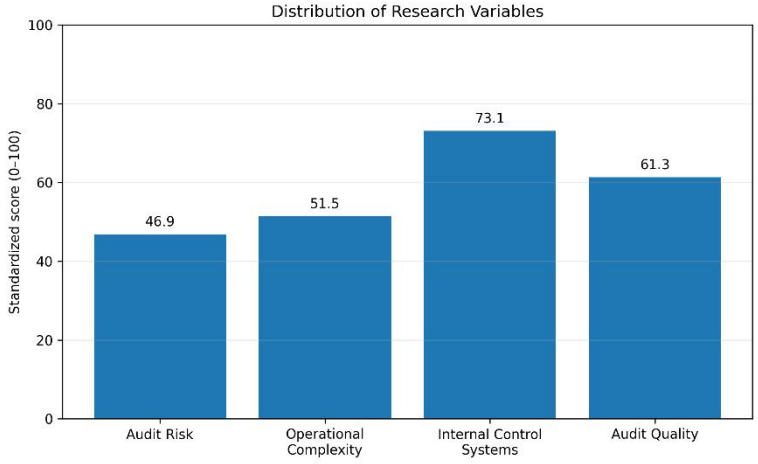

Figure 1. Distribution of Research Variables

Figure 1 presents the standardized distribution of audit risk, operational complexity, internal control systems, and audit quality. The internal control system showed the highest standardized score, followed by audit quality, operational complexity, and audit risk. This pattern indicates that the sampled companies generally had relatively strong internal control systems, although differences remained in risk exposure, operational complexity, and audit outcomes.

Classical Assumption Tests

Before conducting multiple linear regression analysis, several classical assumption tests were performed to ensure that the regression model met the statistical requirements. These tests included normality, multicollinearity, heteroscedasticity, and autocorrelation tests.

Normality Test

The normality test was conducted using the Kolmogorov–Smirnov test. The test produced a significance value of 0.087, which was greater than the threshold of 0.05. Therefore, the regression residuals were considered normally distributed.

Table 2. Normality Test Result

Test	Statistic	Significance	Decision
Kolmogorov–Smirnov	0.071	0.087	Normally distributed

The statistical result indicates that the residual distribution did not significantly deviate from normality. This finding was also supported by the normal probability plot.

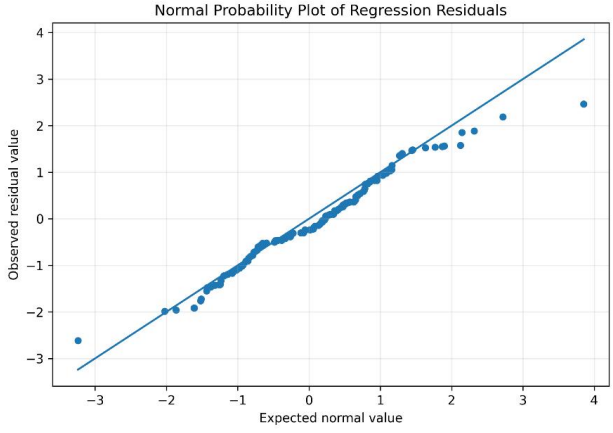

Figure 2. Normal Probability Plot of Regression Residuals

Figure 2 shows that most residual points were distributed close to the diagonal reference line. Although minor deviations were observed at several points, the overall pattern remained relatively linear. Therefore, the graphical evidence supports the conclusion that the residuals were approximately normally distributed and that the regression model satisfied the normality assumption.

Multicollinearity Test

The multicollinearity test was conducted by examining the tolerance and variance inflation factor values of each independent variable.

Table 3. Multicollinearity Test Result

Variable	Tolerance	VIF	Decision
Audit Risk	**0.781**	**1.280**	**No multicollinearity**
Operational Complexity	0.744	1.344	No multicollinearity
Internal Control Systems	0.826	1.211	No multicollinearity

All independent variables had tolerance values greater than 0.10 and variance inflation factor values lower than 10. These results indicate that there was no serious correlation among the independent variables. Therefore, audit risk, operational complexity, and internal control systems could be included simultaneously in the regression model.

Heteroscedasticity Test

The heteroscedasticity test was conducted using the Glejser test.

Table 4. Heteroscedasticity Test Result

Variable	Significance	Decision
Audit Risk	0.214	No heteroscedasticity
Operational Complexity	0.168	No heteroscedasticity
Internal Control Systems	0.295	No heteroscedasticity

The significance values of all independent variables were greater than 0.05. Therefore, the regression model was not affected by heteroscedasticity. This result indicates that the residual variance remained relatively constant across observations.

Autocorrelation Test

The autocorrelation test produced a Durbin–Watson value of 1.926. This value was within the acceptable range, indicating that the regression residuals were not affected by autocorrelation. Therefore, the model met the independence assumption.

Multiple Linear Regression Analysis

Multiple linear regression analysis was conducted to examine the effects of audit risk, operational complexity, and internal control systems on audit quality.

Table 5. Multiple Linear Regression Results

Variable	Coefficient	Standard Error	t-Statistic	Significance
Constant	0.118	0.026	4.538	0.000
Audit Risk	0.147	0.041	3.585	0.001
Operational Complexity	0.009	0.003	3.000	0.003
Internal Control Systems	-0.126	0.038	-3.316	0.001

Based on Table 5, the regression equation was formulated as follows:

$$AQ = 0.118 + 0.147AR + 0.009OC - 0.126ICS$$

The coefficient of audit risk was 0.147, indicating that an increase in audit risk was associated with an increase in discretionary accruals. Since a higher level of discretionary accruals represents lower audit

quality, the result implies that higher audit risk tends to reduce audit quality. Operational complexity had a positive coefficient of 0.009. This result indicates that companies with more complex operational structures tended to have higher discretionary accruals. Therefore, increasing operational complexity was associated with lower audit quality.

In contrast, the internal control system had a negative coefficient of -0.126. This result indicates that stronger internal control systems were associated with lower discretionary accruals. Therefore, the implementation of effective internal controls contributed to improved audit quality.

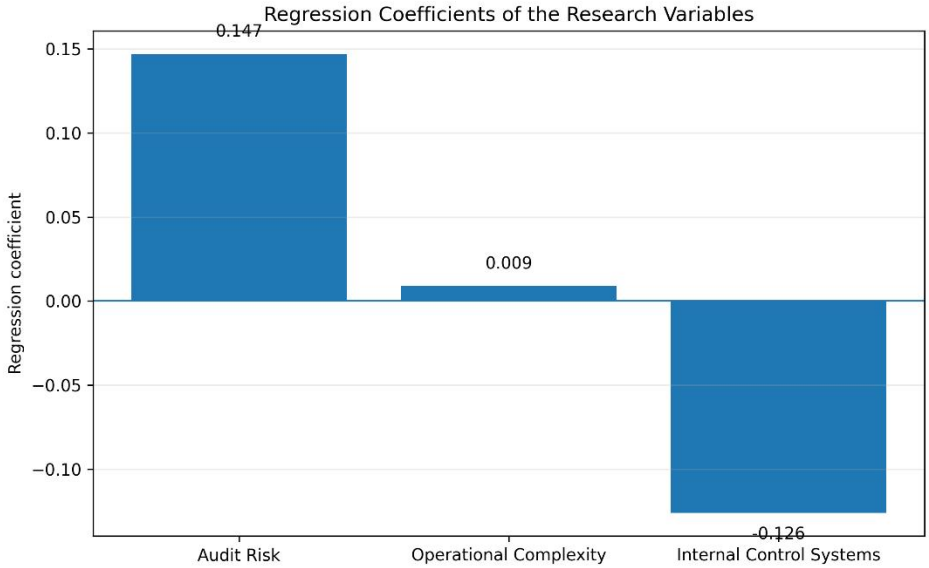

Figure 3. Regression Coefficients of the Research Variables

Figure 3 compares the direction and magnitude of the regression coefficients. Audit risk and operational complexity had positive coefficients, whereas internal control systems had a negative coefficient. Because audit quality was measured using discretionary accruals, the positive coefficients of audit risk and operational complexity reflected a decline in audit quality. Conversely, the negative coefficient of internal control systems reflected an improvement in audit quality.

Effect of Audit Risk on Audit Quality

The regression analysis showed that audit risk had a coefficient of 0.147, a t-statistic of 3.585, and a significance value of 0.001. Since the significance value was lower than 0.05, audit risk had a significant effect on audit quality. Therefore, the first hypothesis was accepted. This result indicates that higher audit risk tends to reduce audit quality. Companies with a high proportion of complex or estimation-based accounts generally present greater risks of material misstatement. Under these conditions, auditors are required to apply stronger professional skepticism, perform more extensive procedures, and obtain more persuasive audit evidence. When the identified audit risk is not adequately addressed, the possibility of undetected material misstatement may increase. This condition can reduce the reliability of audit findings and weaken the overall quality of the audit process. Therefore, effective risk assessment and appropriate audit responses are essential to maintaining audit quality.

Effect of Operational Complexity on Audit Quality

Operational complexity had a coefficient of 0.009, a t-statistic of 3.000, and a significance value of 0.003. Since the significance value was lower than 0.05, operational complexity had a significant effect on audit quality. Therefore, the second hypothesis was accepted. The result indicates that increasingly complex operations may reduce audit quality. Companies with numerous business segments, branches, subsidiaries, and transaction systems require more extensive coordination and audit procedures. Auditors must understand different operational processes, accounting treatments, internal systems, and business risks. When operational complexity is not supported by adequate audit resources, experience, and industry knowledge, the possibility of incomplete audit procedures may increase. Therefore, audit firms should assign competent and experienced auditors to clients with highly complex operational structures.

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Effect of Internal Control Systems on Audit Quality

The internal control system had a coefficient of -0.126, a t-statistic of -3.316, and a significance value of 0.001. Since the significance value was lower than 0.05, internal control systems had a significant effect on audit quality. Therefore, the third hypothesis was accepted. The negative coefficient indicates that stronger internal control systems were associated with lower discretionary accruals and higher audit quality. Effective internal controls improve the accuracy, completeness, and reliability of financial information. They also support transaction traceability and facilitate the collection of sufficient and appropriate audit evidence. A strong internal control system can reduce the likelihood of errors, fraud, and financial statement manipulation. Therefore, companies with more effective internal control mechanisms tend to provide a more reliable financial reporting environment and support higher-quality audit outcomes.

Simultaneous Hypothesis Testing

The simultaneous effect of audit risk, operational complexity, and internal control systems was examined using the F-test.

Table 6. Simultaneous Test Result

Model	F-Statistic	Significance	Decision
Regression Model	21.684	0.000	Significant

The F-test produced a significance value of 0.000, which was lower than 0.05. Therefore, audit risk, operational complexity, and internal control systems simultaneously had a significant effect on audit quality. The fourth hypothesis was accepted. This result demonstrates that audit quality is influenced by a combination of engagement risk, organizational characteristics, and internal control effectiveness. High audit risk and operational complexity can increase the difficulty of the audit process, whereas effective internal controls can reduce uncertainty and improve the reliability of audit evidence.

Coefficient of Determination

The coefficient of determination was used to assess the explanatory power of the regression model.

Table 7. Coefficient of Determination

R	R Square	Adjusted R Square	Standard Error
0.568	0.323	0.308	0.034

The adjusted R-square value was 0.308. This result indicates that audit risk, operational complexity, and internal control systems explained 30.8% of the variation in audit quality. The remaining 69.2% was influenced by other variables not included in the research model.

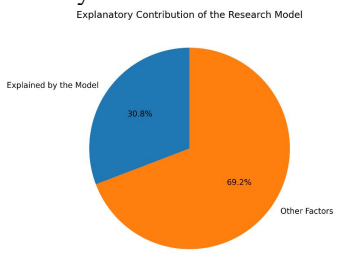

Figure 4. Explanatory Contribution of the Research Model

Figure 4 illustrates that the research model explained 30.8% of the variation in audit quality, while 69.2% was explained by other factors. These factors may include auditor competence, auditor independence, professional skepticism, audit tenure, audit fees, time-budget pressure, auditor workload, and public accounting firm size.

Overall Discussion

The findings demonstrate that audit risk, operational complexity, and internal control systems are important determinants of audit quality. Audit risk and operational complexity were associated with lower audit quality because both factors increased the level of difficulty and uncertainty faced during the audit process.

Audit risk increases the possibility that material misstatements will remain undetected, while operational complexity increases the amount and diversity of information that auditors must examine. When these factors occur simultaneously, auditors may require additional time, expertise, and audit resources to maintain the quality of their work.

In contrast, internal control systems contributed positively to audit quality. Strong internal controls improve the reliability of financial information, reduce control risk, and support the availability of relevant audit evidence. Therefore, companies with effective internal control systems provide a more supportive environment for the implementation of high-quality audits.

The findings imply that audit firms should allocate resources according to the level of client risk and operational complexity. Clients with high-risk and complex operations should be handled by auditors with sufficient experience, competence, and industry knowledge. Companies should also continuously evaluate and strengthen their internal control systems to improve financial reporting reliability and support the external audit process.

CONCLUSION

This study concludes that audit risk, operational complexity, and internal control systems significantly influence audit quality. Audit risk and operational complexity were found to reduce audit quality because both factors increase the difficulty, uncertainty, and scope of the audit process. In contrast, stronger internal control systems improve audit quality by enhancing the reliability of financial information, reducing the likelihood of material misstatement, and supporting the availability of sufficient and appropriate audit evidence.

The findings also show that these three variables simultaneously explain a meaningful proportion of the variation in audit quality. Therefore, audit firms should allocate competent auditors, adequate time, and sufficient resources to clients with high audit risk and complex operations, while companies should continuously strengthen their internal control systems. Future studies are encouraged to include other variables, such as auditor competence, independence, audit tenure, audit fees, professional skepticism, and time-budget pressure, to provide a more comprehensive explanation of audit quality.

REFERENCES

Ait Novatiani, R., Kusumah, R. W. R., Yadiati, W., Rachmat, R. A. H., & Rachman, A. A. (2024). Internal auditor competence and internal control: Improving internal audit quality to prevent fraudulent financial statements. Cogent Business & Management, 11(1), Article 2409339. https://doi.org/10.1080/23311975.2024.2409339

Chang, Y. T., Chen, H. C., Cheng, R. K., & Chi, W. C. (2019). The impact of internal audit attributes on the effectiveness of internal control over operations and compliance. Journal of Contemporary Accounting & Economics, 15(1), 1–19. https://doi.org/10.1016/j.jcae.2018.11.002

Committee of Sponsoring Organizations of the Treadway Commission. (2013). Internal control—Integrated framework: Executive summary. COSO.

Francis, J. R. (2024). What exactly do we mean by audit quality? Accounting in Europe, 21(2), 123–133. https://doi.org/10.1080/17449480.2023.2247410

International Auditing and Assurance Standards Board. (2014). A framework for audit quality: Key elements that create an environment for audit quality. International Federation of Accountants.

International Auditing and Assurance Standards Board. (2019). International Standard on Auditing 315 (Revised 2019): Identifying and assessing the risks of material misstatement. International Federation of Accountants.

Khulsum, U., Suryanto, T., Ali, J., & Wardana, H. Y. (2025). Breaking barriers in audit quality: The dynamic interactions of competence, time budget pressure, complexity, and motivation in the Indonesian landscape. Social Sciences & Humanities Open, 12, Article 101905. https://doi.org/10.1016/j.ssaho.2025.101905

Liu, J., & Xia, Q. (2024). The impact of industry technology complexity on audit quality. Technology in Society, 79, Article 102737. https://doi.org/10.1016/j.techsoc.2024.102737

Rödl, K., & Tanewski, G. (2020). Internal control through the lens of institutional work: A systematic literature review. Journal of Management Control, 31, 239–273. https://doi.org/10.1007/s00187-020-00301-4