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INVESTIGATING THE IMPACT OF INTERNAL AUDIT COMPETENCE AND QUALITY ON BANK PERFORMANCE

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Abstract

Banking is a highly regulated industry. Hence, it must comply with the regulations. To ensure compliance, an internal audit must exist. This study aims to check and analyze three associated impacts. The first and second are the effects of internal audit competence (IAC) on internal audit quality (IAQ) and bank performance (BP). The third is the influence of IAQ and BP. The population comes from the internal auditors of banks in Jakarta. Because of employing the quantitative approach, this study utilized at least 200 people as the sample. Advantageously, it can obtain 205 auditors based on the snowball sampling technique. Hence, the structural equation model based on covariance is applicable. After processing and examining their response, this study demonstrates that the model fits the data and concludes that (1) IAC and IAQ are positively related, (2) IAC and BP are positively associated, and (3) IAQ and BP are positively connected. Operationally, this study suggests that banks train their internal auditors by inviting experts, aiming to find deviations; therefore, the heads of related departments can fix them. If all departments can do it, the bank will perform well.

INTRODUCTION

A bank is a financial intermediary contributing to economic growth (Rolle et al., 2020). Furthermore, the bank lends money to the companies based on their deposit accounts created (Rolle et al., 2020). According to the circular flow of economic activity, companies use this money to invest in projects that generate employment for society (Samuelson & Nordhaus, 2021). Unfortunately, this lending activity will cause the bank to suffer if the borrowers cannot pay the interest and principal of their debt, reflected by the increase in non-performing loans (Vuong et al., 2023). Conversely, the bank will be profitable if the borrowers meet their obligations (Le, 2020).

Regarding intermediary function, liquidity regulation exists. It intends to maintain the money availability for depositors when banks must get profits by creating loans to society. The rule is the loan-to-deposit ratio (Vuong et al., 2023). In Indonesia, the idyllic ratio is between 78% and 92%, as established by the Financial Service Authority (Laras, 2022). The higher this ratio, the lower the banking liquidity, which worsens the ability of banks to provide money for depositors (Christanto & Susanto, 2024).

For commercial banks, the performance becomes their focus. Therefore, they must manage their assets and liabilities well to balance fund mobility, including their distribution, attaining sufficient liquidity and profitability to survive in the long term (Nuzula et al., 2024). Moreover, profitable banks can hold the earnings, raise core capital (Klein & Weill, 2022), strengthen capital to cover the risk (Setiawan & Muchtar, 2021), pay dividends to shareholders (Zelalem & Abebe, 2022), and expand their



business (Rizki, 2019)

One of the departments in the bank is internal auditing (Al-Dalaien et al., 2023; Zhang et al., 2024). This auditing function ensures bank compliance with the rules. Banks can also spot and prevent fraud and indiscretions through this function. Consequently, the public will trust them, leading to financial stability in banking (Dharmawati et al., 2024). The audit function is understandable through the agency theory of Jensen and Meckling (1976). According to Jensen and Meckling (1976), auditing is one of the elements of bonding cost. Moreover, the managers must bear these costs to align with public shareholder interest. Furthermore, Adams (1994) explains that internal auditing is another element of bonding costs when applying the accountability principle.

According to Ta and Doan (2022), internal audit effectiveness is noticeable through competence and quality. Numerous scholars try to investigate this relationship by utilizing internal auditors from Vietnam (Ta & Doan, 2022), Malaysia (Singh et al., 2021), Iraq (Alsaeedi & Kamyabi, 2023), and Indonesia (Hermawan & Bustomi, 2022; Lubis, 2021; Novatiani et al., 2024; Sembel & Mulya, 2022), and China (Zhang et al., 2024). Unfortunately, these results are inconsistent, reflected by a positive association between internal audit competence and quality, as Lubis (2021), Singh et al. (2021), Hermawan and Bustomi (2022), Ta and Doan (2022), Alsaeddi and Kamyabi (2023), Novatiani et al. (2024), and Zhang et al. (2024) demonstrate, and a non-significant connection, as Sembel and Mulya (2022) conclude.

Additionally, the relationship between internal audit quality (IAQ) and company performance has become the attention of several scholars utilizing capital market-based secondary data from Saudi Arabia (Al-Matari & Mgammal, 2019) and Tunisia (Dellai, 2023), as well as primary responses from Southern Ethiopia (Deyganto, 2019), Jordan (Magablih, 2022), and Saudi Arabia, Yemen, Sudan, Somalia, and Djibouti (Hazaea et al., 2024). Also, the contrary results happen. In their research, Al-Matari and Mgammal (2019), Deyganto (2019), Magablig (2022), and Dellai (2023) show a positive propensity, but Hazaea et al. (2024) declare no association between IA attainment and bank performance.

Likewise, the association between internal audit competence (IAC) and company performance becomes the focus of the investigators using capital market-based secondary data from Kosovo (Ahmeti et al., 2022), Nigeria (Kolawole et al., 2020), India (Gupta & Mahakud, 2021), Indonesia (Bahari, 2024; Zarefar & Narsa, 2023), and twelve African countries (Umar et al., 2024). However, various results occur. In their investigation, Ahmeti et al. (2022), Kolawole et al. (2020), Gupta and Mahakud (2021), and Zarefar and Nasa (2023) find a positive propensity of IAC toward company performance. However, Bahari (2024) locates a negative relationship between internal audit committee expertise (IACE) and ROE and a trivial connection between IACE and ROA.

Unlike the investigations with secondary data (Ahmeti et al., 2022; Al-Matari & Mgammal, 2019; Bahari, 2024; Dellai, 2023; Gupta & Mahakud, 2021; Kolawole et al., 2020; Umar et al., 2024), this study uses primary responses based on the perspective of banking internal auditors in Jakarta. For Indonesia, Jakarta is the center of the government and economy (Karim et al., 2019), reinforced by financial institutions (Suhartadi, 2024), including commercial banks (Limakrisna & Yoserizal, 2016). Utilizing this primary response function enriches the research using secondary data and confirms the consistency of results. Specifically, this study reexamines three related associations because of the opposite evidence explained previously. Therefore, this study aims to examine and analyze (1) the impact of internal audit quality on competence and bank performance and (2) the relationship between internal audit competence and bank performance.

HYPOTHESIS DEVELOPMENT

The Effect of Internal Audit Competence on Audit Quality

In their study, Kurniawan et al. (2024) apply the attribution theory from Heider (1958) to explain the relationship between internal audit competence and quality. According to Heider (1958), this theory aims to understand how individuals determine the causes of special moments or behaviors. In the auditing behavioral context, Kurniawan et al. (2024) explain competence as the internal attribution of auditors that leads to respectable audit quality.

Additionally, three pieces of competence (knowledge, experience, and skills) belonging to internal auditors are vital. With this competence, supported by communication skills, internal auditors collaborate with other audited departments to meet the quality (Afzal, 2023), where financial expertise



is one of the backgrounds (Umar et al., 2024). Using correlation analysis, Ta and Doan (2022) found a positive relationship between internal audit competence and quality. In their investigation, Hermawan and Bustomi (2022), Alsaeddi and Kamyabi (2023), Novatiani et al. (2024), and Zhang et al. (2024), with a regression model, affirm a positive effect of internal audit competence on its quality. Equally, Lubis (2021), Singh et al. (2021), and Kurniawan et al. (2024) confirm this positive tendency using a structural equation model. Based on this evidence, hypothesis one is as follows.

H₁: Internal audit competence positively affects its quality.

The Effect of Internal Audit Quality on Bank Performance

Agency theory enlightens that the internal audit monitors managerial activities. Its members report the auditing results based on managerial compliance with the policies formulated by the supervisory board to this board (Colbert & Jahera Jr., 1988). This audit quality depends on the objectivity and independence of the internal auditors to perform their tasks (Nguyen et al., 2020). The more compliant the audit findings, the more compliant the audited departments in the bank, leading to overall performance (Dharmawati et al., 2024). Deyganto (2019) utilized the data survey to prove a positive association between internal audit quality (IAQ) and public sectoral organizational performance. Magablih (2022) confirms the same propensity, using publicly listed firm employees. Al-Matari and Mgammal (2019) measure IAQ by the total certified internal auditors and return and assets (ROA) to quantify bank and insurance company performance from the Saudi Arabian capital market. They find a positive relationship between IAQ and ROA. Similarly, Dellai (2023) confirms this propensity by utilizing Q-Tobin to measure firm performance. Based on this evidence, hypothesis two is as follows.

H₂: Internal audit quality positively affects bank performance.

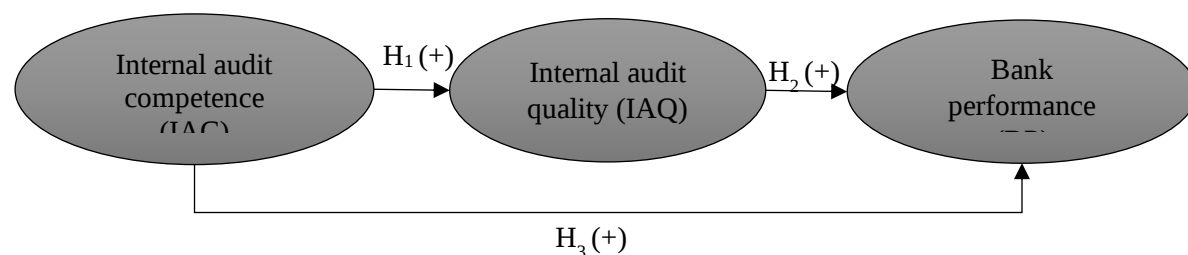
The Effect of Internal Audit Competence on Bank Performance

Agency theory explains that the internal audit aims to confirm the managerial performance affecting organizational attainment based on managerial compliance (Colbert & Jahera Jr., 1988). Hence, the internal audit members need competence (Kolawole et al., 2020). In their secondary data-based research in the Nigerian capital market, Kolawole et al. (2020) demonstrate a positive relationship between internal audit professionals and company performance, quantified by ROA and return on equity (ROE). Utilizing 79 banks from 12 African countries, Umar et al. (2024) found a positive connection between audit committee financial expertise and bank performance, measured by ROE. This positive sign is also obtainable based on Gupta and Mahakud (2021) when investigating the effect of audit committee members with professional financial education on bank performance, quantified by ROA, ROE, net interest margin, and the operating profit to asset ratio. From Indonesia, Zarefar and Narsa (2023) affirm a similar tendency when quantifying the firm performance: Tobin-Q and market-to-book value ratio. Then, Ahmeti et al. (2022) confirm the same tendency based on secondary data from insurance companies in Kosovo. Based on this evidence, hypothesis three is as follows.

H₃: Internal audit competence positively affects bank performance.

The Model of Study

By denoting three hypotheses, this study proposes the model in Figure 1. In this figure, all variables are directly unobservable. Therefore, the oval presents, as Junaidi (2021) explains.



Source: Hypothesis Development

Figure 1.
The model of this study

RESEARCH METHOD

Variable Definition

By symbolizing Figure 1, this study utilizes internal audit competence (IAC) as an exogenous variable, where its indicators belong to Ta and Doan (2022). Besides, it employs internal audit quality and firm performance as endogenous variables, mentioning Ta and Doan (2022) and Santa et al. (2022), respectively (see the details in Table 1).

Table 1.

The Indicators of Internal Audit Competence, Quality, and Bank Performance

Variable	Indicators	Source
Internal audit competence	I am experienced enough to understand and evaluate my bank system (AIC1)	Ta & Doan (2022)
	I have internal audit knowledge and skills (IAC2)	
	The bank where I work has a policy for training internal auditors (IAC3)	
	I participate in ongoing internal Audit professional development (IAC4)	
	I always plan to take short-term training in internal Audit (IAC5)	
	I get clear instructions for internal audits (IAC6)	
	I receive professional training from qualified instructors (IAC7).	
	Due to its competence, bank management considers input from internal auditors to follow up on audit findings (IA8).	
	The bank where I work consistently invests funds in internal auditor training and development courses (IAC9).	
Internal audit quality	Internal auditors ultimately plan the annual Audit (IAQ1).	Ta & Doan (2022)
	The areas audited are substantial to the organization (IAQ2).	
	The internal audit can handle all departments and their issues (IAQ3).	
	The internal auditors regularly follow up on suggestions to solve problems (IAQ4).	
Bank performance	The net interest margin of this bank increases yearly (BP1).	Modified from Santa et al. (2022)
	This bank offers loans at competitive interest rates (BP2).	
	This bank can get additional interest and fee-based income (BP3).	
	The return on assets of this bank increases yearly (BP4).	
	The market share of this bank increases yearly (BP5).	

Population and Samples

This study utilizes the internal auditors of the commercial banks in Jakarta as the population. Because the total is unknown, it sets at least 200 respondents based on theoretical verification, according to the covariance-based structural equation model (CBSEM) (Ghozali, 2021), processed by IBM AMOS 19 (Junaidi, 2021). Additionally, it employs snowball sampling based on the respectable relationship, as Pandjaitan et al. (2021) and Hadiananto et al. (2023) carried out, where the author contacts some of them and asks the contacted people to share the questionnaire with the other workmates who work in the same or different banks. Furthermore, to handle the possible bias, the author ensures that the names of the respondents are employed as the internal auditors in banks in Jakarta by detecting them on Google.com.

Data Collectio, Examine Validity and Reliability

This study surveys the auditors to obtain the response, quantified by a five-point Likert scale: One and five reflect non-agreement and agreement, respectively, as Sugiyono (2022) explains. Indeed, this response functions to equip the researchers using secondary data. Hence, the validity and reliability examinations are vital:

- a. This study utilizes confirmatory factor analysis to determine the valid answer. The accurate response happens if the loading factor (LF) and average variance extracted exceed 0.5



(Junaidi, 2021). The related item is removable if the LF is the same as or lower than 0.5 (Ghozali, 2017).

- b. This study employs Cronbach's Alpha and composite reliability to test the consistent answer. This response occurs if they are above 0.7 (Junaidi, 2021).

Data Analyzing

This study utilizes CBSEM to analyze the data with statistical features to test the hypothesis. Unlike SEM, which is based on partial least squares (PLS) emphasizing prediction, CBSEM is a stronger model for examining the cause-and-effect relationship and gives an ideal scientific portrayal of data analysis. Therefore, CBSEM needs larger samples than SEM-PLS (Ghozali, 2021). By mentioning Figure 1, Equations 1 and 2 are below:

$$IAQ = \gamma_1 IAC + \xi_1 \text{ (Equation 1)}$$

$$BP = \beta_1 IAQ + \gamma_2 IAC + \xi_2 \text{ (Equation 2)}$$

As the CBSEM requirement, the model must fit the data by referring to measurements, such as Chi-square divided by degree of freedom (CMIN/DF), parsimony goodness of fit index (PGFI), comparative fit index (PCFI), normed fit index (PNFI) (Dash & Paul, 2021), parsimony ratio (P-Ratio) (Junaidi, 2021), and root mean square residual (RMR) (Shah et al., 2023), based on acceptable values in Table 2.

Table 2.

Acceptable Values f Model Fitness

Measure	Acceptable value	Source
CMIN/DF	Between 3 and 5	Dash and Paul (2021)
PGFI	Above 0.50	
PCFI	Above 0.50	
PNFI	Above 0.50	
P-Ratio	Above 0.50	Junaidi (2021)
RMR	Below 0.08	Shah et al. (2023)

Finally, this study likens the probability (1-tailed) of the critical ratio with a 5% significance level to examine each hypothesis. The hypothesis is tolerable if this probability is lower than 5% (Hadiananto et al., 2023).

RESEARCH RESULTS AND DISCUSSION

Statistisc Description

The data collection started from March to June 2024 and got 205 internal auditors in several banks in Jakarta. Then, 205 auditors are classified based on gender, age, education, and tenure (see Table 3).

- a. The most significant portion of internal auditors based on gender and age belongs to females (51.22%) and from 36 to 40 (39.51%). Mostly, they have a bachelor's degree (87.80%) and tenure between 11 and 15 years (42.44%).
- b. The smallest percentage of internal auditors, based on gender and age, is male (48.78%) and between 41 and 45 (23.90%). Last of all, they have a master's degree (12.20%) and tenure between 16 and 20 years (23.41%).

Table 3.

Statistics Description

Feature	Portrayal	Total	Portion
Gender	Male	100	48.78%
	Female	105	51.22%
Age	From 30 to 35	75	36.59%
	From 36 to 40	81	39.51%

Feature	Portrayal	Total	Portion
Education	From 41 to 45	49	23.90%
	Bachelor	180	87.80%
	Master	25	12.20%
Tenure	From 5 to 10 years	70	34.15%
	From 11 to 15 years	87	42.44%
	From 16 to 20 years	48	23.41%

Source: Data Prosessed PLS, 2025

Validity and Reliability Examining Results

Table 4 presents the validity and reliability results of internal audit competence (IAC), quality (IAQ), and bank performance (BP):

- The loading factor (LF) from IAC1 to IAC9, IAQ1 to IAQ4, and BP1 to BP5 exceeds 0.5: 0.648, 0.788, 0.691, 0.673, 0.723, 0.665, 0.652, 0.790, 0.759, 0.738, 0.809, 0.611, 0.886, 0.699, 0.855, 0.730, 0.889, and 0.822. Hence, an accurate response exists for these indicators, strengthened by AVE higher than 0.5 for IAC, IAQ, and BP: 0.507, 0.589, and 0.644.
- Composite reliability and Cronbach's Alpha are more significant than 0.7: 0.965 and 0.874 for IAC, 0.849 and 0.834 for IAQ, and 0.900 and 0.993 for BP. Thus, a reliable answer to each indicator occurs.

Table 4.

Validity and Reliability of IAC, IAQ, and BP

Variable	Indicator	LF	AVE	Composite reliability	Cronbach Alpha
Internal audit competence	IAC1	0.648	0.507	0.965	0.874
	IAC2	0.788			
	IAC3	0.691			
	IAC4	0.673			
	IAC5	0.723			
	IAC6	0.665			
	IAC7	0.652			
	IAC8	0.790			
	IAC9	0.759			
Internal audit quality	IAQ1	0.738	0.589	0.849	0.834
	IAQ2	0.809			
	IAQ3	0.611			
	IAQ4	0.886			
Bank performance	BP1	0.699	0.644	0.900	0.993
	BP2	0.855			
	BP3	0.730			
	BP4	0.889			
	BP5	0.822			

Source: Data Prosessed PLS, 2025

The Goodness of Fit and CBSEM Estimated Results

After attaining the validity and reliability testing, the model goodness of fit detection becomes the subsequent phase, and Panel A of Table 5 shows the result and its fulfillment. CMIN/DF is between 3 and 5: 3.807. Similarly, PGFI, PCFI, and PNFI are above 0.5: 0.636, 0.744, and 0.710. P-ratio is beyond 0.5: 0.863, and RMR is below 0.08: 0.052. Furthermore, the estimated result of CBSEM is in Panel B of Table 5. Research hypotheses one, two, and three proposed are recognizable because the one-tailed probability is lower than 5%: 0.000, 0.000, and 0.009, reinforced by a positive path coefficient.



Table 5.
The statistical features of CBSEM

The statistical features of GSEM

Panel A. Goodness of the fit detection result						
CMIN/DF	3.807	PCFI	0.744	P-Ratio	0.863	
PGFI	0.636	PNFI	0.710	RMR	0.052	
Panel B. The model estimation result						
Hypothesis	Causality	Path Coefficient	Standard Error	Critical Ratio	Probability 2-tailed	1-tailed
One	IAC → IAQ	0.757	0.110	6.855	0.000	0.000
Two	IAQ → BP	0.775	0.093	8.342	0.000	0.000
Three	IAC → BP	0.213	0.091	2.351	0.019	0.009

Source: Data Prosessed PLS, 2025

Discussion

The first hypothesis is acceptable: Internal audit competence positively influences quality, indicating that through education, training, experience, and continuous professional development, internal auditors can perform this duty well. High-quality audit functions recommend crucial things for top managers. Therefore, this study confirms the attribution theory stating that competence is the internal aspect of the auditors to perform qualified audits, including the research using a similar commercial bank in China (37 senior IAs, 34 department heads, 52 (internal auditors/IAs), and 13 internal auditor assistants) (Zhang et al., 2024), and the different firms, such as non-financial companies in Vietnam (144 IAs) (Ta & Doan, 2022), a military weapon company in Bandung, Indonesia (60 IAs) (Hermawan & Bustomi, 2022), 33 Indonesian state-owned enterprises (185 accounting managers, 160 employees of internal supervising units, and 130 audit committee members) (Novatiani et al., 2024), the inspectorate in Medan City (IAs) (Lubis, 2021), and 12 multinational corporations in Malaysia (60 IAs) (Singh et al., 2021). Additionally, this positive tendency supports Alsaeddi and Kamyabi (2023) and Kurniawan et al. (2024) after researching 86 IAs in Iraq and 58 auditors of 10 public accounting companies in Malang, Indonesia, respectively. Methodologically, this study applies CBSEM, differing from Hermawan and Bustomi (2022), Alsaeddi and Kamyabi (2023), Novatiani et al. (2024), and Zhang et al. (2024), employing a regression model; Ta and Doan (2022), using correlation analysis; as well as Lubis (2021), Singh et al. (2021); and Kurniawan et al. (2024), utilizing SEM-PLS.

Moreover, the second hypothesis is distinguishable: Internal audit quality positively affects bank performance. It indicates that high audit quality can detect deviations and recommend actions for the managers to fix them. Hence, it enables the audited bank to perform. Therefore, this fact affirms the agency theory applied by Colbert and Jahera Jr. (1988). Considering this positive evidence, these serveral studies confirms the investigation utilizes different objects, like publicly listed corporations in Jordan (32 financial managers, 46 internal audit managers, 71 internal auditors, and 34 heads of accounting departments) (Magablih, 2022) and public sector companies in Southern Ethiopia (112 respondents) (Deyganto, 2019). Although using primary data, this study supports Al-Matari and Mgammal (2019) and Dellai (2023), employing secondary data from the capital market-listed companies in Saudi Arabia and Tunisia, respectively. Methodologically, this study applies CBSEM, which differs from Al-Matari and Mgammal (2019), Deyganto (2019), Magablih (2022), and Dellai (2023), employing the regression model.

Additionally, the third hypothesis is acceptable: Internal audit competence positively affects business performance. This situation demonstrates that internal auditors with astonishing competence (education and training) can directly contribute to bank performance. Furthermore, to keep these qualified internal auditors, this bank must compensate them fairly. Based on this positive proof, this study confirms the agency theory employed by Colbert and Jahera Jr. (1988)

and the investigation using secondary capital market data from the public-listed companies in Nigeria (Kolawole et al., 2020), Kosovo (Ahmeti et al., 2022), 12 African countries (Umar et al., 2024), India (Gupta & Mahakud, 2021), and Indonesia (Zarefar & Narsa, 2023). Methodologically, this study applies CBSEM, which differs from Kolawole et al. (2020), Ahmeti et al. (2022), Gupta and Mahakud (2021), and Zarefar and Narsa (2023), employing the regression model.

Having these facts, this study contributes to the auditing theory, especially for elevating banking performance through the internal audit quality and competence by affirming the attribution and agency theory. Finally, these facts are useful for banks to equip their internal auditors with qualified knowledge to detect nonconformity with audit clauses. Based on these factors, banks can fix the problem to improve their performance.

CONCLUSION

This study intends to prove and analyze the impact of internal audit competence (IAC) on internal audit quality (IAQ) and bank performance (BP), followed by the association between IAQ and BP. After utilizing and examining 205 auditors-related responses from commercial banks in Jakarta by a structural equation based on covariance, this study concludes a positive influence of IAC on IAQ and bank performance. Equally, this positive sign occurs after investigating the relationship between IAQ and BP. Realistically, competence is mandatory when the internal auditors perform this function. Therefore, the banks must train the internal auditors with updated information by inviting experts, leading to the delivery of audit findings to improve bank performance. Theoretically, this study suggests the succeeding scholars (1) formally examine the internal audit quality to mediate the association between internal audit quality and company performance based on the Sobel technique if they intend to use a similar model and add other factors of internal audit quality and company performance, like internal audit objectiveness and independence, internal control and accounting information systems, information technology, and the female director ratio. Additionally, they should use a probability sampling technique to take a sample to get a better result for generalization.

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