American Journal of Economic and Management Business
e-ISSN: 2835-5199
Vol. 5 No. 9 September 2026

The Effect of Work Culture, Organizational Structure, and Human Resource Competence on Bank Indonesia's Public Service Operationalization Strategy: the Mediating Role of the Fraud Auditing System

Lukas Harwiadi*, Rosalendro Eddy Nugroho
Universitas Mercu Buana, Indonesia
Email: 55125110174@student.mercubuana.ac.id*, rosalendro.eddy@mercubuana.ac.id

Keyword: work culture; organizational structure; human resource competence; fraud auditing system; public service operationalization strategy; PLS-SEM.

Abstract

Bank Indonesia’s currency management function has faced a widening gap between operational workload and the resources allocated to cash services: between 2024 and 2025, the value of unfit banknotes destroyed rose by 47.32% to IDR 94.79 trillion, whereas expenditure on cash distribution and services declined by 8.42%. This study examined the effects of work culture, organizational structure, and human resource (HR) competence on Bank Indonesia’s public service operationalization strategy, with the fraud auditing system as a mediating variable. A quantitative explanatory survey was conducted among 145 employees of the Currency Management Department, drawn purposively from a population of 225 on the basis of the Slovin formula at a 5% margin of error. Data were collected using a five-point Likert questionnaire comprising 63 indicators and analyzed with partial least squares structural equation modeling (PLS-SEM) in SmartPLS 4.0, using two-tailed bootstrapping with 5,000 subsamples. Nine of the ten hypotheses were supported. Work culture ($\beta = 0.282$) and HR competence ($\beta = 0.229$) significantly affected the operationalization strategy, whereas organizational structure had no significant direct effect ($\beta = -0.101$; $p = 0.125$). All three internal factors significantly strengthened the fraud auditing system, which emerged as the strongest determinant of the operationalization strategy ($\beta = 0.495$). All indirect paths were significant, with HR competence showing the largest indirect effect ($\beta = 0.176$); work culture and HR competence were therefore partially mediated, whereas organizational structure was fully mediated. The model explained 52.9% of the variance in the fraud auditing system and 61.9% of the variance in the operationalization strategy (GoF = 0.626; SRMR = 0.050). The full mediation of organizational structure constitutes the principal contribution of this study: structural arrangements improve public service operationalization only when they are translated into stronger control mechanisms. Internal organizational reform should therefore be pursued together with, rather than separately from, the strengthening of the fraud auditing system.

INTRODUCTION

Banking institutions occupy a strategic position in sustaining Indonesia’s economic activity, and as the country’s central bank, Bank Indonesia bears direct responsibility for maintaining the payment system and the monetary stability that underpin the national economy (Fadila et al., 2024). In an increasingly digitalized environment, organizations are expected to adapt rapidly to external change, and one of the most pressing areas of adaptation is human resource management, particularly the organization of employees' work; Bank Indonesia has responded to this need through a series of institutional restructuring and work-culture initiatives (Bank Indonesia, 2022). Human resources are essential to all organizations but are especially important in public-service institutions responsible for meeting citizens' basic needs, because employees plan, execute, and evaluate the achievement of institutional objectives (Astuti et al., 2024). Nevertheless, human resource management in the banking sector continues to face persistent challenges, including limited adaptation to technological change (Pahira & Rinaldy, 2023). Human resource development—encompassing education, training, and the development of technical and interpersonal competencies—therefore remains a core component of effective personnel management and a strategic asset whose contribution can be reflected in organizational outcomes (Zurnali & Sujanto, 2021).

The urgency of this research stems from the standards that Bank Indonesia is expected to uphold: as a central bank, it must provide high-quality public services while maintaining integrity and resilience against fraud in the digital era. An effective public service operationalization strategy requires a strong work culture, an efficient organizational structure, and competent human resources, while the fraud auditing system functions not merely as a detection tool but also as the mechanism through which these internal factors are translated into secure, accountable, and efficient services. Three empirical phenomena motivated the model examined in this study. First, workload and resource allocation moved in opposite directions. Between 2024 and 2025, the value of unfit banknotes destroyed rose by 47.32%, from IDR 64.34 trillion to IDR 94.79 trillion, whereas the number of banknotes destroyed increased by only 6.08% and currency in circulation grew by 12.90% (Bank Indonesia, 2025, 2026a, 2026b). This divergence reflected a shift toward higher denominations, which increased the financial consequences of any processing error. Over the same period, expenditure on cash distribution, cash services, and counterfeit countermeasures fell by 8.42%, even though total cash payment-system expenditure rose by 51.03%, largely absorbed by currency planning, procurement, and printing, and the number of cash-operations staff decreased from 452 to 420 (Bank Indonesia, 2026a). Quarterly workloads also became more volatile: the busiest quarter of 2025 carried 9.1 times the workload of the lightest quarter, compared with 5.8 times in 2024, and the peak shifted from the first to the third quarter, so that the previous year's pattern could no longer guide planning. The authors' observations of service delivery in 2026 showed how these pressures surfaced at the point of service: booking through the Rupiah exchange application (PINTAR) took an average of 10 minutes against a 5-minute service standard, and demand for mobile cash services reached approximately 150% of the available quota.

Second, a pre-survey of 30 cash-service employees conducted in June 2026 showed that most respondents disagreed that each of the five research variables had been adequately implemented in daily practice: 66.7% for work culture, 63.3% for organizational structure, 60.0% for HR competence, 56.7% for the fraud auditing system, and 53.3% for the public service operationalization strategy. The ordering itself was informative: respondents judged the internal organizational factors to be more problematic than service outcomes, while the fraud auditing system occupied an intermediate position consistent with its hypothesized mediating role. Preliminary semi-structured interviews with five key informants representing the operational, supervisory, and internal audit levels supported these findings. Three of the five informants identified structural bottlenecks—lengthy approval chains, overlapping job descriptions across units, and non-institutionalized coordination channels—as the most immediate obstacles to timely service delivery, while the remaining two pointed to inconsistent procedural compliance in the field and uneven technical certification among staff. Third, although the Audit Board of the Republic of Indonesia (BPK RI) has issued an unqualified opinion on Bank Indonesia's annual financial statements for 23 consecutive years, the audit report explicitly states that this opinion does not express a view on the effectiveness of internal control, which is assessed in a separate report (Bank Indonesia, 2026a). Moreover, the number of BPK RI audit findings on Bank Indonesia's annual financial statements increased from 11 in both 2023 and 2024 to 16 in 2025, indicating that internal-control weaknesses persisted despite the absence of publicly disclosed fraud cases.

These three strands of evidence—rising and unevenly distributed workloads amid shrinking service resources, employees' perceptions that internal organizational conditions had not kept pace with operational demands, and an increasing number of internal-control findings despite an unqualified audit opinion—converged on the same concern: the relevant risk lay in organizational exposure rather than in disclosed fraud incidents. The fraud auditing system was therefore positioned as the mechanism for mitigating this exposure. Viewed through the fraud diamond framework of pressure, opportunity, rationalization, and capability, the widening imbalance between workload and resources represented pressure; the substantial value of cash handled through the service process (IDR 94.79 trillion in unfit banknotes destroyed and IDR 260.53 trillion in cash holdings), accompanied by a decline in the ratio of cash holdings to currency in circulation from 22.06% to 19.16%, represented opportunity; recurring audit findings attributed to inconsistent procedural execution rather than to missing rules, together with uneven year-to-year realization of work-culture indicators, could create conditions for rationalization; and uneven technical certification among employees reflected differences in capability. These conditions did not imply that fraud was suspected or had occurred at Bank Indonesia. Rather, they provided a basis for examining how effectively the existing fraud-prevention system functioned under increasingly constrained operating conditions and how much it contributed to public service operationalization. This perspective is consistent with Bank Indonesia's fraud risk management framework, which encompasses governance arrangements, policy formulation, employee communication, deterrence strategies, and continuous monitoring (Bank Indonesia, 2026a).

This study draws on three interrelated fields of management. Strategic management provides the framework for examining organizational structure and the resulting public service strategy; human resource management provides the basis for examining work culture and HR competence and supplies the study's grand theory, Contingency Theory; and operations management frames the public service operationalization strategy and the fraud auditing system as mechanisms of process control. Contingency Theory proposes that management practices cannot be applied uniformly across organizations because internal factors, such as structure, culture, and strategy, and external factors, such as industry conditions, technology, and regulation, vary across organizational contexts. Accordingly, the mechanisms through which internal organizational conditions are translated into outcomes should be examined empirically rather than assumed. In banking institutions characterized by strict regulation, high operational risk, and a strong public-service orientation, fraud risk may arise from conflicts of interest and information asymmetry, particularly when agents act in their own interests rather than those of their principals. This agency problem provides a classical rationale for a strong internal audit function (Bangun et al., 2024; Hilal et al., 2024). As an independent assurance function, auditing is intended not only to detect irregularities after they occur but also to strengthen organizational governance through assurance and consulting activities; internal audit contributes specifically through risk assessment, the evaluation of internal controls, and recommendations for improvement (Caroline et al., 2023; Utami et al., 2023).

Work culture refers to the shared values, beliefs, and practices that shape employee behavior and distinguish one organization from another (Robbins & Judge, 2023). It establishes behavioral standards, shapes work quality, and provides norms that guide employees in performing their responsibilities; even when deviations do not result in formal sanctions, organizational members may still feel morally obliged to comply (Anwar et al., 2023). This study adopted the four-dimensional framework of Muhamad and Manik (2023)—integrity, professionalism, collaboration, and innovation—which previous research has associated with improved public service quality (Herdina et al., 2024; Malik, 2024). Organizational structure refers to the formal arrangement of managerial processes, responsibilities, authority, and coordination mechanisms that shape an organization's day-to-day operations and influence both performance and employee behavior (Ahmadi et al., 2024). It was operationalized through four dimensions—formalization, centralization, specialization, and coordination—following McShane and Von Glinow (2018), with additional support from Robbins and Judge (2023) and from the McKinsey 7S-based explanation by Nugroho et al. (2025) of how structure shapes work systems, communication, authority, and delegation in support of strategy implementation. Empirical studies have associated well-designed structures with stronger service quality through improved coordination and communication, although these effects depend on how structures are implemented in specific contexts, and stakeholder communication, accountability, and internal control have been positively associated with public-sector performance (Esther et al., 2020; Herwinda et al., 2025; Kårtvedt, 2024; Krasnykov, 2023). HR competence refers to the knowledge, skills, abilities, and work attitudes that enable individuals to perform their responsibilities effectively and was operationalized following the five-dimensional framework of Anugrah (2023): knowledge, skills, technical ability, soft skills, and certification. The dependent variable, the public service operationalization strategy, refers to the translation of service policies into fast, secure, accountable, and accessible day-to-day service practices and was operationalized through five dimensions used in this study—service speed, transaction security, data integrity, service accessibility, and public trust—with public-service quality considerations supported by Harisman and Khairul (2023) and

Bank Indonesia (2026a). The mediating variable, the fraud auditing system, was operationalized through four dimensions—whistleblowing and reporting channels, continuous monitoring, fraud risk assessment, and an ethics and integrity (anti-fraud) culture drawing on Esmeralda and Fadhilah (2026) and Bank Indonesia (2026a), while its underlying logic draws on the fraud triangle of incentive or pressure, opportunity, and rationalization (Arens et al., 2015).

Previous studies have consistently reported positive associations of work culture and HR competence with public service quality and organizational performance (Harits & Bhagya, 2021; Herdina et al., 2024; Malik, 2024), and internal control has been shown to link organizational and human factors to fraud prevention (Dewi et al., 2025; Nugroho et al., 2023; Putri & Rachman, 2024). However, comparatively little research has examined how these internal organizational factors jointly shape a public institution's service operationalization strategy through the mediating role of a fraud auditing system, particularly within a central bank's currency management function, where the workload and resource pressures described above are especially pronounced. This study addressed that gap by integrating human resource management, strategic management, and operations management perspectives within a single mediated model. Based on the empirical phenomena, the theoretical framework, and previous research, ten hypotheses were proposed: work culture (H1), organizational structure (H2), and HR competence (H3) affect the public service operationalization strategy; work culture (H4), organizational structure (H5), and HR competence (H6) affect the fraud auditing system; the fraud auditing system affects the public service operationalization strategy (H7); and the fraud auditing system mediates the effects of work culture (H8), organizational structure (H9), and HR competence (H10) on the public service operationalization strategy.

METHOD

Research Design

This study employed a quantitative, explanatory, cross-sectional survey design to examine the causal relationships among the study variables (Creswell, 2014; Sekaran & Bougie, 2016). The analysis assessed the direct and indirect effects of work culture, organizational structure, and HR competence on Bank Indonesia's public service operationalization strategy, with the fraud auditing system as a mediating variable. An explanatory design was considered the most appropriate because it allows a complex structural model with mediating paths to be tested rather than merely describing the phenomena.

Population, Sample, and Data Collection

The population comprised the 225 employees of Bank Indonesia's Currency Management Department directly involved in the operationalization of public services related to Rupiah currency management. This scope was deliberately narrower than Bank Indonesia's total workforce so that the unit of analysis genuinely represented service-operationalization staff. The minimum sample size was determined with the Slovin formula, $n = N / (1 + Ne^2)$, at a 5 percent margin of error: $n = 225 / (1 + 225 \times 0.05^2) = 144$, rounded up to 145 respondents. Respondents were selected through purposive sampling on five criteria: permanent employment status in the

Currency Management Department; direct involvement in at least one stage of Rupiah currency management (planning, printing, issuance, circulation, withdrawal, or destruction); a minimum of six months' tenure in the relevant unit; prior exposure to internal control or fraud-audit mechanisms in that unit; and willingness to participate. Data were collected through a structured questionnaire using a five-point Likert scale (1 = strongly disagree to 5 = strongly agree) covering 63 indicators across the five research variables (Sugiyono, 2020, 2022; Silaen, 2018).

Operationalization of Variables

All five variables are latent constructs measured through indicators derived from established theory. Table 1 summarizes the dimensions, number of indicators, and theoretical sources underlying each variable; the complete indicator wording followed the theoretical sources cited in the Introduction and was cross-checked against each variable's dimensions to ensure no indicator lacked a theoretical basis.

Table 1. Operationalization of Research Variables

Variable	Dimensions	Indicators	Theoretical Source
Work Culture (X1)	Integrity; Professionalism; Collaboration; Innovation	10	Muhamad & Manik (2023)
Organizational Structure (X2)	Formalization; Centralization; Specialization; Coordination	13	McShane & Von Glinow (2018); Robbins & Judge (2023); Nugroho et al. (2025)
HR Competence (X3)	Knowledge; Skills; Technical ability; Soft skills; Certification	12	Anugrah (2023)
Fraud Auditing System (Z)	Reporting channel; Continuous monitoring; Fraud risk assessment; Ethics & integrity culture	13	Esmeralda & Fadhilah (2026); Bank Indonesia (2026a); Arens et al. (2015)
Public Service Operationalization Strategy (Y)	Service speed; Transaction security; Data integrity; Service accessibility; Public trust	15	Harisman & Khairul (2023); Bank Indonesia (2026a)

Source: developed by the authors (2026).

Data Analysis Technique

Data were analyzed using variance-based partial least squares structural equation modeling (PLS-SEM) in SmartPLS 4.0. PLS-SEM was chosen because it does not require multivariate normality, accommodates complex models with mediating paths, and performs well with moderate sample sizes through bootstrapping (Ghozali, 2021; Hair et al., 2022). The measurement model (outer model) was evaluated for convergent validity (outer loadings ≥ 0.70, with loadings between 0.50 and 0.70 tolerable provided that the average variance extracted [AVE] exceeds 0.50), discriminant validity (cross-loadings, the Fornell–Larcker criterion, and the heterotrait–monotrait ratio [HTMT] below 0.90), and internal consistency reliability (Cronbach's alpha and composite reliability above 0.70). The structural model (inner model) was evaluated using the variance inflation factor (VIF < 5.00) for collinearity; the coefficient of determination (R^2), with values of 0.75, 0.50, and 0.25 indicating substantial, moderate, and weak explanatory power; effect size (f^2), with values of 0.02, 0.15, and 0.35 indicating small, medium, and large effects; the goodness-of-fit (GoF) index, calculated manually as the square root of the product of mean AVE and mean R^2, with values of 0.10, 0.25, and 0.36 indicating small, medium, and large fit (Tenenhaus et al., 2005); the standardized root mean square residual (SRMR < 0.08); and Q^2predict (> 0) for predictive relevance. Hypotheses were tested using two-tailed bootstrapping with 5,000 subsamples at the 5% significance level. Because PLS-SEM makes no distributional assumptions, the critical value of 1.96 was taken from the standard normal distribution, and a path was deemed significant when $t > 1.96$ and $p < 0.05$. Mediation was classified as full when the indirect effect was significant but the direct effect was not, and as partial when both effects were significant (Hair et al., 2022).

RESULTS AND DISCUSSION

Respondent Profile

All 145 questionnaires met the respondent criteria and were retained, with no missing data. Of the respondents, 115 (79.3%) were male and 30 (20.7%) were female. Most were aged 36–40 years (73; 50.3%), followed by those older than 40 years (46; 31.7%) and those aged 31–35 years (26; 17.9%), indicating a mature workforce with substantial work experience. Nearly all respondents were married (140; 96.6%). All respondents were university graduates: 88 (60.7%) held a bachelor's degree and 57 (39.3%) held a master's degree, a profile expected to support accurate comprehension of the questionnaire items. Descriptive analysis showed that every indicator across the five constructs fell within the moderate category, with item means ranging from 2.828 (monitoring of employee compliance, Z7, and reporting of fraudulent acts, Z12) to 3.262 (speed and accuracy in responding to complaints, Y15). Respondents therefore perceived work culture, organizational structure, HR competence, the fraud auditing system, and the operationalization strategy as functioning but with clear room for improvement rather than as already operating at a high level.

Measurement Model (Outer Model)

Convergent validity was established. All outer loadings exceeded 0.70, ranging from 0.723 (X3.11, HR competence) to 0.901 (X1.1, work culture), so no indicator was removed, and AVE values exceeded 0.50 for every construct, ranging from 0.647 (HR competence) to 0.697 (operationalization strategy). Discriminant validity was also supported: each indicator loaded most strongly on its intended construct; the square root of each construct's AVE (0.804–0.835) exceeded its correlations with the other constructs, the highest of which was 0.712 between the fraud auditing system and the operationalization strategy; and all HTMT values (0.261–0.736) were below the 0.90 threshold. Internal consistency reliability was high, with Cronbach's alpha ranging from 0.950 to 0.969 and composite reliability (rho_c) ranging from 0.956 to 0.972 (Table 2). The measurement model was therefore judged valid and reliable, and the analysis proceeded to the structural model.

Table 2. Convergent Validity and Reliability of the Measurement Model

Construct	Outer Loading Range	AVE	Cronbach's Alpha	Composite Reliability (rho_c)
Work Culture	0.751–0.901	0.694	0.951	0.958
Organizational Structure	0.787–0.900	0.687	0.962	0.966
HR Competence	0.723–0.865	0.647	0.950	0.956
Public Service Operationalization Strategy	0.751–0.885	0.697	0.969	0.972
Fraud Auditing System	0.736–0.877	0.687	0.962	0.966

Source: authors' analysis (2026). All values meet the recommended thresholds of outer loading ≥ 0.70, AVE > 0.50, and Cronbach's alpha and composite reliability > 0.70 (Ghozali, 2021; Hair et al., 2022).

Structural Model (Inner Model)

Collinearity among the predictor constructs was not a concern: VIF values ranged from 1.123 (organizational structure → fraud auditing system) to 2.124 (fraud auditing system → operationalization strategy), well below 5.00 and even below the more conservative threshold of 3.00. The model showed moderate explanatory power. R^2 was 0.619 (adjusted $R^2 = 0.608$) for the operationalization strategy, meaning that work culture, organizational structure, HR competence, and the fraud auditing system jointly explained 61.9% of its variance, and 0.529 (adjusted $R^2 = 0.519$) for the fraud auditing system, explained by the three exogenous constructs. The effect sizes (Table 4) showed that the fraud auditing system made the largest contribution to the operationalization strategy ($f^2 = 0.302$), followed by the effects of HR competence ($f^2 = 0.227$), organizational structure ($f^2 = 0.224$), and work culture ($f^2 = 0.164$) on the fraud auditing system and the effect of work culture on the operationalization strategy ($f^2 = 0.154$), all of which were medium. The direct effects of HR competence ($f^2 = 0.095$) and organizational structure ($f^2 = 0.020$) on the operationalization strategy were small. With a mean AVE of 0.682 and a mean R^2 of 0.574, the GoF index was 0.626, indicating a large overall fit. The SRMR was 0.050 for both the saturated and estimated models, below the 0.08 cutoff, indicating an adequate fit between the observed and model-implied correlation matrices. Q^2predict values were positive for both endogenous constructs—0.506 for the fraud auditing system (RMSE = 0.710; MAE = 0.580) and 0.479 for the operationalization strategy (RMSE = 0.729; MAE = 0.595)—confirming predictive relevance; because no linear-model benchmark was estimated, predictive power was not classified further. Table 3 summarizes these indicators, and Figure 1 presents the structural model with standardized path coefficients.

Table 3. Structural Model Evaluation Summary

Indicator	Fraud Auditing System (Z)	Operationalization Strategy (Y)
R^2 (adjusted)	0.529 (0.519)	0.619 (0.608)
Q^2predict	0.506	0.479
Goodness of Fit (GoF)	0.626 — strong model fit	
SRMR (saturated / estimated)	0.050 / 0.050 — acceptable fit	
VIF range across all paths	1.123 – 2.124 — no multicollinearity	

Source: authors' analysis (2026).

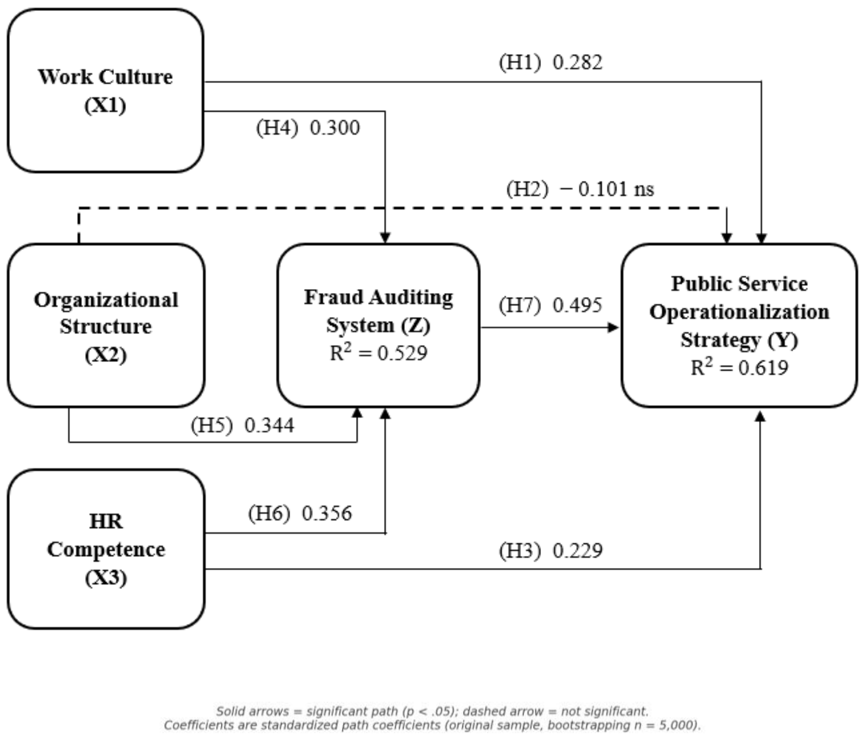

Figure 1. Structural Model Results (Standardized Path Coefficients and R^2)

Source: authors' PLS-SEM analysis, SmartPLS 4.0 (2026).

Hypothesis Testing

Direct-effect hypotheses were tested using bootstrapping with 5,000 subsamples (Table 4). Work culture had a significant positive effect on both the operationalization strategy (H1: $\beta = 0.282$, $t = 4.362$, $p < 0.001$) and the fraud auditing system (H4: $\beta = 0.300$, $t = 4.666$, $p < 0.001$). Organizational structure had no significant direct effect on the operationalization strategy, and its coefficient was negative (H2: $\beta = -0.101$, $t = 1.536$, $p = 0.125$); however, it significantly affected the fraud auditing system (H5: $\beta = 0.344$, $t = 5.624$, $p < 0.001$). HR competence significantly affected both the operationalization strategy (H3: $\beta = 0.229$, $t = 3.429$, $p = 0.001$) and the fraud auditing system (H6: $\beta = 0.356$, $t = 6.292$, $p < 0.001$), the latter being the strongest of the three exogenous effects on the mediator. The fraud auditing system significantly affected the operationalization strategy (H7: $\beta = 0.495$, $t = 6.225$, $p < 0.001$), the largest path coefficient in the model. Thus, six of the seven direct-effect hypotheses were supported.

Table 4. Direct Effects (Bootstrapping Results)

H	Path	β (O)	t-Statistic	p-Value	f²	Result
H1	Work Culture → Operationalization Strategy	0.282	4.362	0.000	0.154	Supported
H2	Organizational Structure → Operationalization Strategy	−0.101	1.536	0.125	0.020	Not supported
H3	HR Competence → Operationalization Strategy	0.229	3.429	0.001	0.095	Supported

H	Path	β (O)	t-Statistic	p-Value	f²	Result
H4	Work Culture → Fraud Auditing System	0.300	4.666	0.000	0.164	Supported
H5	Organizational Structure → Fraud Auditing System	0.344	5.624	0.000	0.224	Supported
H6	HR Competence → Fraud Auditing System	0.356	6.292	0.000	0.227	Supported
H7	Fraud Auditing System → Operationalization Strategy	0.495	6.225	0.000	0.302	Supported

Source: authors' analysis, SmartPLS 4.0 bootstrapping with 5,000 subsamples (2026). Critical t = 1.96 (α = 5%, two-tailed); f² = effect size.

Indirect-effect hypotheses tested the mediating role of the fraud auditing system (Table 5). All three indirect paths were significant: work culture → fraud auditing system → operationalization strategy (H8: $\beta = 0.148$, $t = 3.874$, $p < 0.001$), organizational structure → fraud auditing system → operationalization strategy (H9: $\beta = 0.170$, $t = 3.978$, $p < 0.001$), and HR competence → fraud auditing system → operationalization strategy (H10: $\beta = 0.176$, $t = 4.386$, $p < 0.001$), the last being the strongest indirect path in the model. Read together with the direct effects, the results reveal two mediation patterns (Table 6). Work culture and HR competence were partially mediated because both their direct effects (H1 and H3) and their indirect effects (H8 and H10) were significant and positive; each therefore improves the operationalization strategy directly and by strengthening the fraud auditing system. Organizational structure was fully mediated because its direct effect was not significant (H2), whereas its indirect effect was (H9); its entire contribution to service operationalization therefore operates through the fraud auditing system, meaning that restructuring alone, without stronger control mechanisms, is unlikely to improve service delivery. Overall, nine of the ten hypotheses were supported.

Table 5. Indirect Effects (Mediation Testing)

H	Path	β (O)	t-Statistic	p-Value	Result
H8	Work Culture → FAS → Operationalization Strategy	0.148	3.874	0.000	Supported
H9	Organizational Structure → FAS → Operationalization Strategy	0.170	3.978	0.000	Supported
H10	HR Competence → FAS → Operationalization Strategy	0.176	4.386	0.000	Supported

Source: authors' analysis, SmartPLS 4.0 bootstrapping with 5,000 subsamples (2026). FAS = fraud auditing system.

Table 6. Mediation Pattern of the Fraud Auditing System

Exogenous Variable	Direct Effect	Indirect Effect	Mediation Pattern
Work Culture	Significant (β = 0.282)	Significant (β = 0.148)	Partial mediation
Organizational Structure	Not significant (β = −0.101)	Significant (β = 0.170)	Full mediation
HR Competence	Significant (β = 0.229)	Significant (β = 0.176)	Partial mediation (strongest indirect path)

Source: authors' analysis (2026).

Work culture and the operationalization strategy. The significant positive effect of work culture (H1) is consistent with Herdina et al. (2024), Malik (2024), and Herwinda et al. (2025), who likewise found that work or organizational culture contributes positively to public service quality. Work culture functions as a behavioral control that operates without direct supervision. Because much of the work in currency management—counter transactions, banknote processing, and mobile cash services—cannot be continuously observed by supervisors, internalized values of integrity, professionalism, collaboration, and innovation enable employees to maintain consistent standards on their own. This is particularly relevant for Bank Indonesia, where currency management demands high precision with very little tolerance for error. An adaptive work culture also makes the organization more responsive to changing public needs and technologies, so that the service strategy is enacted at the point of service rather than remaining a policy document.

Organizational structure and the operationalization strategy. Organizational structure had no significant direct effect on the operationalization strategy (H2), and the negative sign of its coefficient suggests that adding structural layers without a corresponding strengthening of control may slow rather than improve service delivery. Four considerations help explain this result. First, structural arrangements in a central bank are formally codified and applied uniformly across units, which may limit their capacity to account for differences in perceived service operationalization, as reflected in the small effect size ($f^2 = 0.020$). Second, the negative sign is consistent with the preliminary evidence: three of the five informants pointed to lengthy approval chains, overlapping job descriptions, and informal coordination, and 63.3% of pre-survey respondents judged the allocation of tasks, authority, and coordination to be suboptimal. Additional layers may strengthen control, but they simultaneously lengthen waiting times at the point of service. Third, structure matters through a different channel: it significantly strengthens the fraud auditing system (H5), and its indirect path to the operationalization strategy is significant (H9). Fourth, service operationalization appears to be shaped more by the conduct and capabilities of front-line staff than by the design of the organization chart; work culture and HR competence both had significant direct effects, whereas structure did not. Structure thus provides a framework, but that framework yields better service only when it is populated by appropriate behavior and skills. This pattern is consistent with evidence that well-designed structures strengthen coordination and communication but that their effects on service quality depend on how they are implemented (Kårtvedt, 2024), and that stakeholder communication, accountability, and internal control are what convert structural design into better public-sector performance (Esther et al., 2020; Krasnykov, 2023).

Human resource competence and the operationalization strategy. HR competence significantly affected the operationalization strategy (H3), confirming that mastery of job knowledge, technical skills, and procedures translates directly into the accuracy and speed with which service tasks are completed. This finding is consistent with Harits and Bhagya (2021), who reported that civil servant competence improves organizational performance in government offices, and with Mariyani et al. (2023), who linked HR competence to employee performance in a regional financial agency. In currency management, competent employees complete counting, sorting, verification, and exchange processes more precisely, which is reflected in the service quality experienced by the public. The comparatively small effect size of this direct path ($f^2 = 0.095$), however, indicates that a substantial part of the contribution of competence is channeled through the fraud auditing system, as discussed below.

Work culture, organizational structure, and HR competence as drivers of the fraud auditing system. All three exogenous variables significantly strengthened the fraud auditing system (H4, H5, and H6), consistent with Nugroho et al. (2023), who found that organizational culture and HR competence support fraud prevention, and with Putri and Rachman (2024), who showed that internal control links organizational factors to fraud prevention. For work culture (H4), the core mechanisms of the audit system function only when they are embedded in organizational behavior: a reporting channel is useful only if employees are willing to use it, and that willingness reflects a culture that places honesty above interpersonal comfort, while continuous monitoring depends on honest day-to-day record-keeping at the operational level. For organizational structure (H5), the relationship is direct because internal control is largely an expression of structure. Segregation of authorization, custody, and recording duties makes collusion more difficult; formalized procedures give auditors a benchmark against which to assess compliance; and orderly coordination allows information about irregularities to reach the oversight unit quickly. Conversely, excessively layered structures can obstruct whistleblowing channels, so a proportionate span of control and an internal audit function that reports independently of the units it audits are essential for timely and objective fraud reporting (Dinata et al., 2018; Megawati & Reskino, 2023; Nugroho & Afifi, 2022). Among the three predictors, the effect of work culture on the fraud auditing system was the smallest ($\beta = 0.300$), that of organizational structure was intermediate ($\beta = 0.344$), and that of HR competence was the largest (H6: $\beta = 0.356$). Competent employees make fuller use of technology-assisted audit techniques and are better able to recognize anomalies and irregularities in the service process (Dewi et al., 2025). Nevertheless, competence must be accompanied by integrity, because weak competence can itself create opportunities for data manipulation even when a reporting system is formally in place (Isniawati et al., 2022; Kuntadi et al., 2022).

The fraud auditing system and the operationalization strategy. The fraud auditing system had the largest path coefficient (H7: $\beta = 0.495$) and the largest effect size ($f^2 = 0.302$) in the model, operating through two channels. First, it narrows the scope for resource leakage, so that budgets and staff time are devoted to service delivery. Second, credible oversight builds public trust, which is itself one of the dimensions of the operationalization strategy measured in this study. The fraud auditing system therefore functions not as an administrative burden that slows service delivery but as a foundation that supports it, consistent with evidence that organizational and system-level strength in fraud prevention safeguards the integrity of budget management (Rahmarta et al., 2024) and that effective internal control enables public institutions to allocate resources transparently and sustain public trust (Puspita & Ratnadi, 2023).

Mediation. The mediation results (H8–H10; Table 6) constitute the central finding of this study and are consistent with Contingency Theory, which holds that internal organizational factors do not affect performance automatically but through context-specific mechanisms; in a public institution that manages high-value assets, that mechanism is the control system. The partial mediation of work culture (H8) indicates that a culture founded on honesty, objectivity, and accountability strengthens the operationalization strategy both by shaping day-to-day conduct and by sustaining a whistleblowing system that employees are willing to use to protect institutional credibility (Anjani Herawati & Purnamasari, 2022). The full mediation of organizational structure (H9) is the most consequential result. Because the direct effect of structure is not significant whereas its indirect effect is, the contribution of structural design to service operationalization depends entirely on whether clear authority and task allocation are used to strengthen continuous monitoring, reporting channels, and fraud risk assessment. Rigorous oversight prevents budget leakage and thereby protects service quality (Anggraeni et al., 2021), while front-line units still require sufficient delegated authority to respond quickly to public needs within established rules (Dinata et al., 2018). Without the mediating variable, the analysis would have concluded that structure is irrelevant, whereas it actually operates through a different pathway. The partial mediation of HR competence (H10), which has the strongest indirect coefficient among the three predictors, confirms that employees who understand procedures and risks are better able to detect irregularities in the service process; this strengthens continuous monitoring, reporting, and fraud risk assessment, and the resulting control effectiveness carries through to better service operationalization.

Managerial Implications

The findings suggest four priorities for Bank Indonesia. First, because the fraud auditing system is the strongest determinant of the operationalization strategy, continued investment in data-driven continuous monitoring of cash processes, stronger confidentiality guarantees for the reporting channel, and scheduled fraud risk assessments for each service unit should be treated as an investment in service quality rather than as a compliance cost. Second, because HR competence affects service operationalization both directly and through the strongest indirect path, competence gaps should be mapped for each stage of Rupiah currency management, technical certification should become a requirement for counter and processing assignments, and structured mentoring should be provided for new employees. Third, because work culture also exerts both direct and mediated effects, integrity should be reinforced through daily supervision, recognition of procedural compliance, and performance appraisals that reflect service conduct rather than output alone. Fourth, because the contribution of organizational structure is realized entirely through the fraud auditing system, restructuring should focus narrowly on simplifying operational decision authority—delegating routine decisions to supervisors within defined limits, clarifying task boundaries between units, and standardizing coordination for service scheduling—rather than on broad reorganization. These measures can reasonably be sequenced by strengthening competence and simplifying operational authority in the short term (0–12 months), followed by optimizing the fraud auditing system and reinforcing an integrity-based work culture in the medium term (12–24 months). Together, they also support Sustainable Development Goal (SDG) targets 4.4, 16.5, 16.6, 16.7, and 8.10.

Indicator-level bootstrapping results provide more specific targets. All indicators were highly significant ($t > 17$), but the least stable indicator within each construct points to where improvement efforts should be directed: employees' participation in contributing ideas for work culture (t = 19.639), the standardization of operating procedures for organizational structure (t = 21.304), the ability to communicate ideas for HR competence (t = 17.435), periodic fraud-risk identification for the fraud auditing system (t = 17.393), and the speed and accuracy of complaint handling for the operationalization strategy (t = 17.885). Corresponding actions include regular idea forums with assigned follow-up responsibilities, annual updating of cash-service procedures with input from counter staff, communication training for service personnel, a binding quarterly fraud risk assessment schedule reported to unit heads, and time standards for complaint follow-up that are monitored through a dashboard and embedded in unit performance indicators.

CONCLUSION

This study confirmed that work culture and HR competence significantly and directly strengthened Bank Indonesia's public service operationalization strategy, whereas organizational structure had no significant direct effect and influenced the strategy entirely through the fraud auditing system. All three internal organizational factors significantly strengthened the fraud auditing system, which in turn was the strongest determinant of the operationalization strategy, confirming its role as the mechanism that links internal organizational conditions to service implementation. Nine of the ten hypotheses were supported, and the model demonstrated moderate explanatory power and a strong overall fit. The full mediation of organizational structure constitutes the principal contribution of this study: structural arrangements alone do not improve public service operationalization unless they are translated into stronger control mechanisms. Accordingly, improving service operationalization in a central bank depends less on formal structure alone than on the combined effectiveness of human resource readiness and internal control, and internal organizational reform should not be pursued separately from strengthening the fraud auditing system.

This study has several limitations that suggest directions for future research. First, the data relied on employees' self-reported perceptions, which may be subject to common-method and social-desirability bias; future studies could triangulate survey data with recorded operational data, such as service-time logs from the PINTAR application and BI-SILK reconciliation records. Second, the analysis was confined to a single work unit, so replication across Bank Indonesia's regional offices, which face different workloads and capacities, would test the generalizability of the model. Third, the cross-sectional design limits causal inference over time; longitudinal designs with repeated measurements, for example before and after peak-demand periods, could reveal whether control effectiveness weakens under heavy workloads. Fourth, the model included only three exogenous variables and assessed service operationalization solely from the provider's perspective; future research could incorporate variables such as employee engagement, leadership style, and digital readiness, test the moderating role of the fraud auditing system, and include service users as respondents to capture gaps between provider and user perceptions.

ACKNOWLEDGEMENTS

The authors thank the employees of Bank Indonesia's Currency Management Department who participated as respondents, and the Master of Management Program, Faculty of Economics and Business, Universitas Mercu Buana, for institutional support during this research. This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

REFERENCES

Ahmadi, N. S., Anwar, S., Supriadi, B., & Triatmanto, B. (2024). Building organizational commitment through transformational leadership and organizational culture in the public service. KnE Social Sciences. https://doi.org/10.18502/kss.v9i28.17196

Anggraeni, N. M., Sailawati, S., & Malini, N. E. L. (2021). Pengaruh whistleblowing system, sistem pengendalian internal, budaya organisasi, dan keadilan organisasi terhadap pencegahan kecurangan. Jurnal Akuntansi Keuangan dan Bisnis, 14(1). https://doi.org/10.35143/jakb.v14i1.4613

Anjani Herawati, T., & Purnamasari, P. (2022). Pengaruh perilaku etis karyawan dan kesesuaian kompensasi terhadap pencegahan kecurangan (fraud). Bandung Conference Series: Accountancy, 2(2). https://doi.org/10.29313/bcsa.v2i2.3169

Anugrah, D. N. (2023). Pengaruh kompetensi dan pelatihan terhadap produktivitas karyawan PT. Honda Lampung Raya [Undergraduate thesis, Institut Informatika dan Bisnis Darmajaya].

Anwar, Perkasa, D. H., Harini, H., Parashakti, R. D., & Wuryandari, N. E. R. (2023). Budaya kerja, motivasi kerja dan kepuasan kerja terhadap komitmen kerja. Journal of Management and Business (JOMB), 5, 1–14.

Arens, A. A., Elder, R. J., & Beasley, M. S. (2015). Auditing and assurance services: An integrated approach (15th ed.). Pearson Education.

Astuti, W. D., Jaya, L. J., & Wasir, R. (2024). Strategi dan tantangan SDM kesehatan di masa depan: Menghadapi perubahan global dan lokal. Indonesian Journal of Health Science, 4(6S). https://doi.org/10.54957/ijhs.v4i6s.1217

Bangun, D. F. B., Hulu, Y. Y. H., Laia, M., Handayani, P., Rezeki, S. I., Pangga, I. D., & Aliah, N. (2024). Peran audit internal dalam upaya pencegahan fraud. Jurnal Bisnis Mahasiswa, 4(1), 88–97.

Bank Indonesia. (2022). Panduan program budaya kerja 2022 [Internal policy document]. Bank Indonesia.

Bank Indonesia. (2025). Peraturan Bank Indonesia Nomor 1 Tahun 2025 tentang jumlah dan nilai nominal uang Rupiah yang dimusnahkan tahun 2024. Lembaran Negara Republik Indonesia Tahun 2025. https://www.bi.go.id/id/publikasi/peraturan/Pages/PBI_012025.aspx

Bank Indonesia. (2026a). Laporan keuangan tahunan Bank Indonesia tahun 2025. Bank Indonesia. https://www.bi.go.id

Bank Indonesia. (2026b). Peraturan Bank Indonesia Nomor 1 Tahun 2026 tentang jumlah dan nilai nominal uang Rupiah yang dimusnahkan tahun 2025. Lembaran Negara Republik Indonesia Tahun 2026. https://www.bi.go.id/id/publikasi/peraturan/Pages/PBI_012026.aspx

Caroline, E., Kuntadi, C., & Pramukty, R. (2023). Pengaruh pengalaman auditor, dukungan manajemen, dan efektivitas pengendalian internal terhadap efektivitas fungsi audit internal. Jurnal Economina, 2(6), 1487–1497.

Creswell, J. W. (2014). Research design: Qualitative, quantitative, and mixed methods approaches (4th ed.). SAGE Publications.

Dewi, K. W., Uum, H. C., Langu, H. R. L. K. R., & Zulfikar, M. S. (2025). The influence of human resource competence on fraud prevention with internal control system as a moderating variable in Yogyakarta City government. Proceedings of the 1st International Conference on Social Environment Diversity. https://doi.org/10.2991/978-2-38476-366-5_14

Dinata, R. O., Irianto, G., & Mulawarman, A. D. (2018). Revealing cultural causes of fraud: An ethnographic study in public company. Jurnal Economia, 14(1).

Esmeralda, A. P., & Fadhilah, N. H. K. (2026). Fraud detection and machine learning in auditing: A systematic literature review. Educational Studies and Research Journal, 3(1).

Esther, O. Y., Sanni, M., Lateef, S. A., & Aliu, I. D. (2020). The relationship between organization structures and performance in the Nigerian public sector. Journal of Accounting, Management and Economic Business, 4(2), 49–62. https://doi.org/10.51263/JAMEB.V4I2.98

Fadila, F., Saputra, A., & Etika, C. (2024). Integration of digital-based banking services on customer satisfaction (study of Indonesian Islamic banks). Proceedings of the 1st International Conference on Islamic Economics, Business Development and Studies, 628–644.

Ghozali, I. (2021). Aplikasi analisis multivariate dengan program IBM SPSS 26 (10th ed.). Badan Penerbit Universitas Diponegoro.

Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2022). A primer on partial least squares structural equation modeling (PLS-SEM) (3rd ed.). SAGE Publications.

Harisman, A., & Khairul, K. (2023). Tingkat indeks kepuasan masyarakat terhadap kualitas pelayanan publik Surat Keterangan Catatan Kepolisian (SKCK) di Polres Payakumbuh. Jurnal Mirai Management, 8(1), 322–332. https://doi.org/10.37531/mirai.v8i1.5059

Harits, B., & Bhagya, T. G. (2021). The influence of civil servant competence and bureaucratic reform on organizational performance at the government offices in Cianjur. Proceedings of the First International Conference on Science, Technology, Engineering and Industrial Revolution (ICSTEIR 2020), 17–22. https://doi.org/10.2991/assehr.k.210312.003

Herdina, F., Wanta, W., & Romli, A. D. (2024). Pengaruh budaya kerja dan kompetensi pegawai terhadap kualitas pelayanan publik di Dinas Kependudukan dan Pencatatan Sipil Kabupaten Karawang. Journal of Economic, Business and Accounting (COSTING), 7(3), 3986–3993. https://doi.org/10.31539/costing.v7i3.7497

Herwinda, Kamaruddin, S., Hardianti, & Barisan. (2025). Pengaruh budaya organisasi terhadap kualitas pelayanan pegawai di Kantor Desa Puncak Harapan Kecamatan Maiwa Kabupaten Enrekang. SOSMANIORA: Jurnal Ilmu Sosial dan Humaniora, 4(3), 626–636. https://doi.org/10.55123/sosmaniora.v4i3.5295

Hilal, F., Irawan, R. A. I., Wati, I., & Nurhaliza, N. (2024). Peran audit internal (APIP) dalam meningkatkan efektivitas pengawasan dan pencegahan korupsi di Indonesia. Jurnal Sosial Humaniora Sigli, 7(2), 28–37.

Isniawati, A., Salsabella, A., & Heningtyas, O. S. (2022). Analisis sistem pengendalian internal dan good corporate governance dalam mencegah kecurangan dengan mediasi moralitas individu. Financial: Jurnal Akuntansi, 8(1), 50–57. https://doi.org/10.37403/financial.v8i1.386

Kårtvedt, L. E. (2024). Explaining coordination quality in public service delivery. Journal of Public Service Management. https://doi.org/10.1080/15309576.2024.2315016

Krasnykov, Y. (2023). Communicative approaches to support desired organizational changes in quality of public services. Aktual′nì Problemi Deržavnogo Upravlìnnâ, 99–113. https://doi.org/10.26565/1684-8489-2023-1-06
Kuntadi, C., Puspita, B. A., & Taufik, A. (2022). Faktor-faktor yang memengaruhi pencegahan kecurangan: Sistem pengendalian internal, kompetensi sumber daya manusia, kesesuaian kompensasi. Jurnal Ekonomi Manajemen Sistem Informasi, 3(5), 530–539.
Malik, D. (2024). Pengaruh kompetensi, budaya kerja dan sosialisasi terhadap kualitas pelayanan pada Pelayanan Administrasi Terpadu Kecamatan (PATEN) Babelan Kabupaten Bekasi. Journal of International Multidisciplinary Research, 2(1), 219–227.
Mariyani, M., Aripin, S., & Darmanto, D. (2023). The influence of HR competence and organizational culture on employee performance in the Regional Financial and Asset Board of Paser Regency. International Journal of Community Service & Engagement, 4(1), 1–15. https://doi.org/10.47747/ijcse.v4i1.1047
McShane, S. L., & Von Glinow, M. A. (2018). Organizational behavior: Emerging knowledge, global reality (8th ed.). McGraw-Hill Education.
Megawati, & Reskino. (2023). Pengaruh pengendalian internal, whistleblowing system, dan komitmen organisasi terhadap pencegahan kecurangan dengan moralitas individu sebagai variabel mediasi. Jurnal Akuntansi Trisakti, 10(1), 31–50. https://doi.org/10.25105/jat.v10i1.15818
Muhamad, M., & Manik, C. D. (2023). Pengaruh budaya organisasi dan loyalitas karyawan terhadap kinerja karyawan pada Firma Am Badar & Am Badar Jakarta Pusat. Jurnal EMT KITA, 7(2), 325–333. https://doi.org/10.35870/emt.v7i2.927
Nugroho, D. A., Sari, R., & Kuntadi, C. (2023). Factors affecting fraud prevention: Organizational culture, human resource competence and the role of the internal auditor. Dinasti International Journal of Education Management and Social Science, 4(4). https://doi.org/10.31933/dijemss.v4i4
Nugroho, D. H., & Afifi, Z. (2022). Pengaruh pengendalian internal dan good corporate governance terhadap pencegahan fraud. Yudishtira Journal: Indonesian Journal of Finance and Strategy Inside, 2(3), 1–10. https://doi.org/10.53363/yud.v2i3.42
Nugroho, R. E., Riyanto, S., Mulyana, B., & Elmi, F. (2025). Manajemen strategik korporat. Penerbit Andita Mas.
Pahira, S. H., & Rinaldy, R. (2023). Pentingnya manajemen sumber daya manusia (MSDM) dalam meningkatkan kinerja organisasi. Comserva: Jurnal Penelitian dan Pengabdian Masyarakat, 3(3). https://doi.org/10.59141/comserva.v3i03.882
Puspita, N. K. M. C., & Ratnadi, N. M. D. (2023). Kompetensi, sistem pengendalian internal, locus of control, dan pencegahan fraud pengelolaan dana desa. E-Jurnal Akuntansi, 33(2), 346.
Putri, I. F., & Rachman, A. A. (2024). The influence of organizational culture, organizational commitment to fraud prevention with internal control as an intervening variable in the South Sumatra provincial government. International Journal of Finance Research, 5(4), 582–598. https://doi.org/10.47747/ijfr.v5i4.2480
Rahmarta, V., Pontoh, G. T., & Said, D. (2024). Kekuatan organisasional dan sistem dalam pencegahan fraud: Suatu tinjauan system literature review. Substansi: Sumber Artikel Akuntansi Auditing dan Keuangan Vokasi, 8(1), 28–43. https://doi.org/10.31092/subs.v8i1.2604
Robbins, S. P., & Judge, T. A. (2023). Organizational behavior (19th ed.). Pearson Education.

Sekaran, U., & Bougie, R. (2016). Research methods for business: A skill-building approach (7th ed.). Wiley.

Silaen, S. (2018). Metodologi penelitian sosial untuk penulisan skripsi dan tesis. In Media.

Sugiyono. (2020). Metode penelitian kuantitatif, kualitatif dan R&D. Alfabeta.

Sugiyono. (2022). Metode penelitian kuantitatif, kualitatif dan R&D (4th ed.). Alfabeta.

Tenenhaus, M., Esposito Vinzi, V., Chatelin, Y.-M., & Lauro, C. (2005). PLS path modeling. Computational Statistics & Data Analysis, 48(1), 159–205. https://doi.org/10.1016/j.csda.2004.03.005

Utami, A. P., Vinalia, N., Febriyan, I., Putra, B. G., & Manurung, H. (2023). Peran audit internal terhadap kualitas pemeriksaan laporan keuangan. Jurnal Rimba: Riset Ilmu Manajemen Bisnis dan Akuntansi, 2(1), 54–63.

Zurnali, C., & Sujanto, A. (2021). Penerapan electronic human resource management di perusahaan. Jurnal Ilmiah Infokam, 17(1). https://doi.org/10.53845/infokam.v17i1.285