

The Role of Internal Audit in Fraud Prevention and Financial Mismanagement in Local Governments in Indonesia

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Abstract

This study aims to analyze the role of internal audit in strengthening local government resilience against fraud and financial misconduct. The focus of the study is on the efforts of internal audit in detecting and preventing fraud, addressing resource limitations, and leveraging audit technology to improve oversight effectiveness. This research uses a qualitative approach with a case study method. Data were collected through in-depth interviews with 15 internal auditors from various government agencies, direct observations of audit practices, and document analysis. Data analysis was conducted inductively using data reduction, presentation, and conclusion drawing techniques, as well as validation through source triangulation. The findings of the study reveal three key conclusions. First, internal audit functions as a preventive and early detection mechanism through strengthening internal control systems and educating personnel. Second, resource limitations, both in terms of budget and the number and competence of auditors, have weakened audit effectiveness, resulting in some fraud going undetected. Third, the use of technology has the potential to increase audit efficiency and accuracy; however, its adoption is still hindered by limited infrastructure, low technical capacity, and resistance from senior auditors. The implications of this study emphasize the need to strengthen internal audit through improving human resource capacity, adequate budget allocation, legal protection for auditors, and the modernization of technology-based audit systems. This study provides an original contribution by offering a holistic approach that combines human, institutional, and technological aspects in analyzing the effectiveness of internal audits in local governments. Thus, this research enhances academic understanding and provides practical recommendations for public financial governance policies that are more transparent and accountable.

Keywords: internal audit; fraud; financial misconduct; local government; audit technology.

Abstrak

Penelitian ini bertujuan untuk menganalisis peran audit internal dalam memperkuat resiliensi pemerintah daerah terhadap praktik fraud dan penyimpangan keuangan. Fokus penelitian diarahkan pada upaya audit internal dalam mendeteksi dan mencegah kecurangan, mengatasi keterbatasan sumber daya, serta memanfaatkan teknologi audit untuk meningkatkan efektivitas pengawasan. Penelitian ini menggunakan pendekatan kualitatif dengan metode studi kasus. Data diperoleh melalui wawancara mendalam dengan 15 auditor internal dari berbagai lembaga pemerintah, observasi langsung praktik audit, serta analisis dokumen. Analisis data dilakukan secara induktif dengan teknik reduksi, penyajian, dan penarikan kesimpulan, serta validasi melalui triangulasi sumber. Hasil penelitian menunjukkan tiga temuan utama. Pertama, audit internal berfungsi sebagai mekanisme preventif dan deteksi dini melalui penguatan sistem pengendalian internal serta edukasi aparatur. Kedua, keterbatasan sumber daya, baik dalam aspek anggaran maupun jumlah dan kompetensi auditor, terbukti melemahkan efektivitas audit sehingga sebagian fraud tidak terdeteksi. Ketiga, pemanfaatan teknologi berpotensi meningkatkan efisiensi dan akurasi audit, namun adopsinya masih terkendala oleh infrastruktur yang terbatas, rendahnya kapasitas teknis, serta resistensi auditor senior. Implikasi penelitian ini menegaskan bahwa audit internal perlu diperkuat melalui peningkatan kapasitas SDM, alokasi anggaran yang memadai, perlindungan hukum bagi auditor, serta modernisasi sistem audit berbasis teknologi. Penelitian ini memberikan kontribusi orisinal dengan menawarkan pendekatan holistik yang memadukan aspek manusia, kelembagaan, dan teknologi dalam menganalisis efektivitas audit internal di pemerintah daerah. Dengan demikian, penelitian ini

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menambah pemahaman akademis sekaligus memberikan rekomendasi praktis bagi kebijakan tata kelola keuangan publik yang lebih transparan dan akuntabel.

Kata Kunci: audit internal; fraud; penyimpangan keuangan; pemerintah daerah; teknologi audit.

INTRODUCTION

The local governments are entrusted with managing public finances derived from taxes and central government transfers (ElMassah & Mohieldin, 2020). This responsibility encompasses financial planning, budgeting, expenditure, and accountability for fund utilization (Hope & Vyas, 2017). Ideally, these processes should contribute to sustainable development, promote local economic growth, and improve public service quality. However, the implementation of financial governance at the regional level is often challenged by weak internal controls, limited resources, and the persistence of fraudulent practices (Nalukenge et al., 2017).

Empirical evidence underscores the urgency of these challenges. The Supreme Audit Agency (*Badan Pemeriksa Keuangan-BPK*) (2023) in 2023 reported that approximately 20% of local governments in Indonesia face serious issues related to fraud and financial irregularities. These include inaccurate financial reporting, misuse of funds, and non-compliance with established procedures. In total, BPK identified 9,158 findings and 15,674 issues with a potential value of IDR 18.37 trillion. Of these, 7,020 cases relate to weaknesses in the internal control system (SPI), 8,116 involve legal non-compliance, and 538 concern inefficiency and ineffectiveness (BPK RI, 2024).

Table 1. Findings and Issues According to the Supreme Audit Agency Report, 2023

No	Category	Number of Findings	Number of Issues	Value (Trillion IDR)
1	Weaknesses in SPI	7,020	-	-
2	Legal Non-Compliance	8,116	-	17.33
3	Economic Non-Compliance	538	-	1.04
4	Losses, Potential Losses, Revenue Shortfalls	5,465	17.33	-
5	Administrative Deviations	2,651	-	-

Source: BPK RI, (2023)

Follow-up actions during the examination process included monetary deposits and asset handovers amounting to IDR 2.41 trillion, or 13.9% of the total irregularities.

Table 2. Entity Follow-up Realization, 2023

No	Type of Follow-Up	Value (Trillion IDR)	Percentage (%)
1	Deposit of Money/Asset Handover	2.41	13.9

Source: BPK RI, (2023)

Fraud and financial mismanagement not only disrupt regional financial stability but also erode public trust in governance. BPK data shows recurring issues such as inaccurate reporting, misuse of funds, and procedural non-compliance across hundreds of local governments.

Table 3. Cases of Fraud and Financial Misconduct in Local Governments (BPK-RI, 2023)

No	Province/District/City	Forms of Fraud	Severity Level
1	342	Inaccurate Reporting	High
2	320	Misuse of Funds	Medium
3	421	Procedural Non-Compliance	High

Source: BPK RI, (2023)

These findings demonstrate systemic weaknesses that, if left unaddressed, threaten not only financial integrity but also the credibility of public service delivery.

Research on the role of internal audit in fraud prevention and financial accountability can generally be grouped into three tendencies. First, quantitative studies on audit effectiveness, such as Novita (2022), applied regression analysis to examine the influence of internal audit on fraud detection in financial statements. The findings showed a 46.7% effect of internal audit on fraud detection, although external factors not captured in the study accounted for the majority of the variance. This suggests that while internal audit has measurable impacts, its scope remains limited without systemic support. Second, descriptive and institutional case studies provide insights into how internal audits operate within local government structures. Rambing et al. (2018), for example, examined the Inspectorate of North Sulawesi Province and demonstrated its significant role in supervising financial management through the internal control apparatus (APIP). Similar conclusions were reached by Wulandari & Sisdianto (2025) and Fatimah & Pramudyastuti (2022), who emphasized the role of internal audits in ensuring compliance with organizational objectives. However, these studies largely describe practices without addressing broader systemic challenges such as resource constraints and technological adaptation. Third, research has highlighted the importance of technology in strengthening audit practices. Muflihah & Sisdianto (2024) argue that advances in information technology are essential to support internal supervision. While these works stress the need for digital integration, they do not sufficiently explore how auditors adapt to technological limitations or how such dynamics shape resilience against fraud.

Taken together, these streams of research underline the positive role of internal audit in promoting accountability, yet reveal critical gaps. Few studies adopt a holistic approach that integrates human resources, institutional capacity, and technology adoption. Moreover, qualitative perspectives that capture the lived experiences of internal auditors in local governments remain scarce, leaving room for further exploration.

This study seeks to fill these gaps by analyzing the role of internal audit in enhancing resilience against fraud and financial mismanagement in regional governments. Specifically, it explores how internal audit functions contribute to strengthening internal control systems, how resource constraints limit effectiveness, and how technology can serve as both a barrier and an enabler of accountability.

Based on the literature and empirical data, this study argues that internal audit plays a dual role: as a preventive mechanism against fraud risks and as a capacity-building function that strengthens resilience in local government financial management. The preliminary assumption is that the effectiveness of internal audit is significantly shaped by the interplay between resources (budget and personnel) and the

adoption of technology. Where these elements are optimized, internal audit can make a greater contribution to transparency, accountability, and sustainable governance.

RESEARCH METHODS

The unit of analysis in this study is the internal audit function within local governments in Indonesia, with particular emphasis on its role in strengthening resilience against fraud and financial mismanagement. The research focuses on the experiences, practices, and challenges faced by internal auditors in ensuring accountability and transparency in regional financial management.

This study employed a qualitative approach with a case study design (Bernard & Bernard, 2013; Yin, 2009). A qualitative method was selected because it allows for an in-depth exploration of complex social phenomena and provides nuanced insights into the lived experiences of practitioners. The case study approach was chosen to capture the unique characteristics of internal audit implementation in the public sector, enabling a holistic understanding of both its strengths and limitations.

The primary data were obtained from 15 participants, consisting of seven local government internal audit officials, auditors from the Supreme Audit Agency (*Badan Pemeriksa Keuangan*—BPK), and representatives of inspectorates. These participants were purposively selected to reflect diversity in job level, educational background, and work experience. Secondary data were collected from official reports, financial audit documents, and government regulations related to internal control systems and financial accountability.

Data were collected using three techniques: (1) in-depth interviews, which explored participants' perceptions of the role of internal audit in detecting and preventing fraud; (2) observations, which provided direct insights into how audit practices are implemented in daily operations; and (3) document analysis, which examined audit reports, regulations, and financial management documentation. Triangulation of these methods ensured a comprehensive understanding of the subject.

The data were analyzed inductively using thematic analysis (Neuendorf, 2018). The process included three stages: data reduction, data display, and conclusion drawing. Through this iterative cycle, patterns and themes emerged that reflected both opportunities and challenges in internal audit practices. Triangulation across interviews, observations, and documents enhanced the validity of the findings, ensuring that the conclusions drawn are both credible and contextually grounded (Kasmawati et al., 2022).

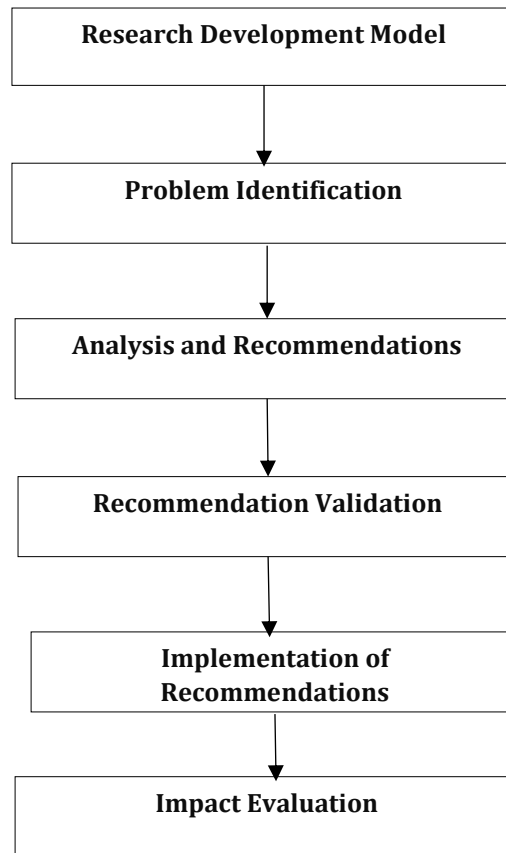


Figure 1. Research Development Model

This study applied a cyclical research development model to ensure that the findings are both empirically grounded and practically applicable (Kim, 2021). The process begins with problem identification, where key issues in local government financial management and fraud resilience are defined. This is followed by analysis and recommendations, which involve interpreting the collected data to formulate strategic measures. The next stage is recommendation validation, in which the proposed strategies are reviewed and refined based on participant feedback and triangulated data. Once validated, the model proceeds to the implementation of recommendations, highlighting how suggested improvements could be applied in local government contexts. Finally, the cycle culminates in impact evaluation, which assesses the effectiveness of the implemented strategies in enhancing accountability, transparency, and fraud resilience. This iterative framework ensures that the research does not merely describe problems but also provides actionable solutions and evaluates their potential impact.

RESULTS AND DISCUSSION

The Role of Internal Audit in Fraud Detection and Prevention

The findings of this study indicate that internal audit plays a crucial role in detecting and preventing fraud in local government environments. Based on in-depth interviews, observations, and document

analysis, most respondents emphasized the function of internal audit as the frontline in strengthening internal control systems and building a culture of accountability within each working unit.

One regional inspectorate auditor explained that internal audit does not merely function to “check after a problem occurs,” but rather to ensure that control mechanisms are in place from the outset. He stated: *“If the controls are strong from the beginning, the potential for fraud can be minimized as much as possible. Therefore, we emphasize prevention more than simply uncovering cases”* (Interview, R1, July 2023).

Data from internal examination documents also reveal patterns of routine reviews of financial statements and procurement procedures. Through these examinations, internal audit teams are able to identify anomalies at an early stage, such as discrepancies between procurement documents and actual implementation in the field. One auditor noted: *“Sometimes there are simple inconsistencies, for example, reported prices of goods do not match market standards. From these small details, early indications of manipulation can be detected”* (Interview, R3, July 2023).

Another significant finding is that internal audit also serves as an *educational instrument* for local government officials. In several cases, auditors preferred to provide guidance and recommend corrective actions rather than immediately resorting to legal measures. *“We usually provide corrective recommendations first. The goal is to help them understand what went wrong and fix it. If everything is immediately subject to legal action, it does not educate”* (Interview, R5, July 2023).

Observations in one local government further show that internal audits are conducted periodically through *thematic audits* in sectors considered vulnerable to irregularities, such as healthcare procurement or infrastructure projects. This strategy proved effective in preventing state losses. *“We already have a list of vulnerable areas. In the health sector, for example, drug procurement is often prone to markups. Therefore, we intervene earlier in that sector”* (Interview, R7, July 2023).

Several respondents emphasized the importance of internal audit in maintaining the integrity of local government financial reports. They argued that without internal audit involvement, financial reports could easily be manipulated for political or personal interests. *“There is sometimes political pressure, for example, to beautify reports. This is where the role of internal audit becomes crucial, ensuring that the figures remain objective”* (Interview, R9, July 2023).

Documentary evidence demonstrates that after the strengthening of internal audits, the number of major fraud cases decreased significantly. However, minor cases of administrative deviations were still frequently found. This indicates that internal audit has been effective in curbing large-scale fraud, although technical-level challenges remain.

Interestingly, some auditors noted that the success of fraud detection is highly dependent on the courage and independence of the auditors themselves. *“Sometimes we know there are irregularities, but confronting powerful officials is not easy. Therefore, the independence of auditors is extremely decisive”* (Interview, R11, July 2023).

Beyond its supervisory role, internal audit also contributes to improving the financial literacy of local government officials. Through *socialization, workshops, and technical guidance*, auditors assist financial staff in understanding proper procedures. *“Many treasurers or financial staff actually do not fully know the detailed regulations. Without guidance, they can easily make mistakes. Here, the auditor’s role becomes that of a mentor”* (Interview, R13, July 2023).

Findings from observations also show that internal audit mechanisms are increasingly oriented toward a *risk-based audit* approach. Under this approach, audits focus on areas with the greatest potential losses so that limited resources can be utilized more effectively. *“Now we no longer examine everything*

equally. The focus is on high-risk areas, such as large-scale projects or units that frequently face problems" (Interview, R2, July 2023).

Table 4. Interview Quotes Related to the Role of Internal Audit in Detecting and Preventing Fraud

No	Respondent Code	Focus of Finding	Interview Quote
1	R1	Prevention from the start	<i>"If controls are strong from the beginning, the potential for fraud can be minimized as much as possible. Therefore, we emphasize prevention more than just uncovering cases."</i>
2	R3	Detecting document anomalies	<i>"Sometimes there are simple inconsistencies, for example, the reported price of goods not matching market standards. From these small things, early indications of manipulation can be seen."</i>
3	R5	Educational approach	<i>"We usually provide corrective recommendations first. The goal is to help them understand what went wrong and fix it. If everything is immediately subject to legal action, it does not educate."</i>
4	R7	Thematic audit of high-risk sectors	<i>"We already have a list of high-risk areas. In the health sector, for example, drug procurement is often prone to markup. So we intervene earlier in that sector."</i>
5	R9	Maintaining report objectivity	<i>"There is sometimes political pressure, for example, to beautify reports. This is where the role of internal audit becomes important, to ensure that the figures remain objective."</i>
6	R11	Auditor independence challenges	<i>"Sometimes we know there are irregularities, but confronting officials with power is not easy. Therefore, the independence of auditors is extremely crucial."</i>
7	R13	Financial staff mentoring	<i>"Many treasurers or financial staff actually do not know the detailed rules. If they are not mentored, they can make mistakes. Here, the role of the auditor is to act as a mentor."</i>
8	R2	Risk-based approach	<i>"Now we no longer check everything equally. The focus is on high-risk areas, such as large projects or units that frequently face issues."</i>

Table 4 above summarizes the key quotes from interviews, illustrating the role of internal audit in preventing and detecting fraud. Overall, respondents emphasized prevention as the primary focus. For example, R1 highlighted that strong controls from the outset can minimize fraud risks, while R5 emphasized the role of auditors in educating staff by offering corrective recommendations before resorting to legal action.

In addition to prevention, early detection also emerged as a significant focus. R3 noted that simple discrepancies in documents, such as price differences, often serve as early indications of manipulation.

Meanwhile, R7 elaborated on the effectiveness of thematic audits targeting high-risk sectors, such as healthcare procurement, in preventing state losses.

Other respondents stressed the importance of integrity and independence in audits. R9 revealed that political pressures often affect financial reports, making the role of internal audit crucial in maintaining objective figures. However, R11 warned that the courage and independence of auditors are key challenges, especially when confronting powerful officials.

Another finding pointed to the contribution of internal audit in building the financial literacy of local government staff. R13 highlighted that many financial officers are unaware of the technical rules, making auditor mentorship crucial to prevent administrative mistakes that could lead to fraud. R2 added that adopting a risk-based audit approach allows the audit focus to be directed at high-risk areas, thus making better use of limited resources.

Overall, this table indicates that internal audit plays a multi-dimensional role: as a fraud prevention mechanism, anomaly detector, staff educator, and guardian of financial report integrity. These findings emphasize that the success of internal audit in preventing fraud relies not only on technical procedures but also on the professional attitude of auditors, institutional support, and the courage to maintain objectivity.

The role of internal audit in local governments has proven to be highly strategic in detecting and preventing fraud. Research data shows that internal audit functions not only as a monitoring mechanism but also as a preventive tool, educator, and guardian of financial report integrity. By strengthening internal controls, detecting anomalies early, mentoring staff, and applying a risk-based approach, internal audit enhances the resilience of local governments against fraudulent practices. Therefore, internal audit can be viewed as a cornerstone in building transparent, accountable, and sustainable financial governance in local governments.

Budget and Resource Constraints in Internal Audit Implementation

This study found that one of the biggest obstacles in the implementation of internal audits in local governments is the limitation of budget and human resources. Almost all informants emphasized that this factor directly impacts audit effectiveness, both in terms of audit scope, depth of analysis, and speed of completion.

An internal auditor from one of the regional inspectorates stated that the limited budget often prevents the audit team from conducting audits according to ideal standards. He said: *“Ideally, one SKPD could be audited once a year. But in reality, due to budget constraints, we can only audit two or three SKPDs per year”* (Interview, R4, July 2023). This statement shows how the limited budget allocation affects the extent of monitoring that can be carried out.

Human resource limitations also emerge as a key issue. The number of auditors in the region is far fewer than the number of units that need to be audited. One informant explained: *“The ratio between the number of auditors and the number of SKPDs is very imbalanced. For example, there are only 10 auditors, while there are more than 60 units to audit. It’s clear that we can’t cover everything”* (Interview, R8, July 2023).

In addition to the number, the competence of auditors also became a point of concern. Some auditors lack the technical competencies needed, especially in modern audit technology. One respondent emphasized: *“The problem is not only the number but also the ability. Many auditors are not familiar with IT-based audit applications, so the audits are still manual and take a long time”* (Interview, R10, July 2023).

The limitation of training and capacity building further exacerbates the situation. Auditors often do not have access to continuous training due to budget constraints. R12 shared: *"The last training I attended was more than two years ago. Meanwhile, regulations and technologies are always evolving. Without refreshers, our skills will inevitably fall behind"* (Interview, R12, July 2023).

Observational findings show that under these limitations, internal audits are often conducted in an administrative manner rather than substantively. This means auditors only review documents without being able to carry out comprehensive field verifications. *"We often only review documents because there is not enough funding to go to the field. In fact, many fraud cases only become visible when we check the physical evidence"* (Interview, R6, July 2023).

Budget constraints also affect the use of technology. Many regions are unable to update hardware or software supporting the audit process. R14 stated: *"The audit software we use is outdated and incompatible with the latest data. But due to limited funds, updates are difficult to carry out"* (Interview, R14, July 2023).

From an accountability standpoint, resource limitations also weaken auditors' ability to ensure transparency in public fund management. Another informant emphasized: *"Accountability cannot be maintained if the audit itself is limited. In the end, the public only gets formal reports, but the substance may not be adequately monitored"* (Interview, R15, July 2023).

Despite these limitations, auditors still strive to maintain credibility by utilizing available resources as effectively as possible. One strategy used is prioritizing audits in high-risk units. *"Because we can't audit everything, we focus on high-risk units, such as large-value procurement or programs with recurring issues"* (Interview, R2, July 2023).

However, these limitations often put auditors in a dilemma. On one hand, they are expected to produce thorough and accountable audits. On the other hand, the realities on the ground force them to work with minimal resources. *"We want to be ideal, but the conditions in the field do not allow it. If forced, the result is just a formality, not a truly in-depth audit"* (Interview, R7, July 2023).

Thus, budget and human resource limitations are key factors that hinder the effectiveness of internal audits in local governments. Without adequate support, internal audits struggle to perform optimally, both in ensuring accountability and in preventing and detecting fraud. Therefore, improving human resource capacity and increasing budget support are crucial prerequisites for internal audits to contribute meaningfully to transparency and the integrity of local government financial governance.

Table 5. Interview Quotes Related to Budget and Resource Constraints in Internal Audit

No	Respondent Code	Focus of Finding	Interview Quote
1	R4	Budget Constraints in Audit	<i>"Ideally, one SKPD should be audited once a year. But in reality, due to budget limitations, we can only audit two or three SKPDs per year."</i>
2	R8	Imbalance in Auditor Ratio	<i>"The ratio between the number of auditors and the number of SKPDs is very imbalanced. For example, there are only 10 auditors, while there are more than 60 units to audit."</i>
3	R10	Low Technological Competence	<i>"The problem is not only the number but also the ability. Many auditors are not familiar with IT-based"</i>

			<i>audit applications, so the audits are still manual and take a long time."</i>
4	R12	Lack of Continuous Training	<i>"The last training I attended was more than two years ago. Meanwhile, regulations and technologies are always evolving."</i>
5	R6	Administrative-Only Audit	<i>"We often only review documents because there is not enough funding to go to the field. In fact, many fraud cases only become visible when we check the physical evidence."</i>
6	R14	Technology Infrastructure Constraints	<i>"The audit software we use is outdated and not compatible with the latest data. But due to limited funds, updates are difficult to carry out."</i>
7	R15	Impact on Public Accountability	<i>"Accountability cannot be maintained if the audit itself is limited. In the end, the public only gets formal reports, but the substance may not be adequately monitored."</i>
8	R2	Risk-Based Priority Approach	<i>"Because we can't audit everything, we focus on high-risk units, such as large procurement or programs with recurring issues."</i>
9	R7	Auditor Dilemma	<i>"We want to be ideal, but the conditions on the ground do not allow it. If forced, the result is just a formality, not a truly in-depth audit."</i>

Table 5 above shows various interview quotes that highlight how budget and human resource constraints are the primary barriers to implementing effective internal audits in local governments. R4 and R8 highlight the quantitative aspects: limited budget makes the audit coverage restricted, while the number of auditors is far from adequate to monitor all SKPDs. This leads to many units not being audited regularly, thus increasing the risk of undetected fraud.

From the perspective of human resource quality, R10 and R12 emphasize the auditors' lack of technical capacity. The absence of skills in using modern audit technology, coupled with limited continuous training, results in slow and manual audits. This impacts audit effectiveness, especially when dealing with the complexity of modern financial data.

The table also shows that budget limitations affect the audit methodology, which often becomes purely administrative. R6 reveals that audits often stop at reviewing documents without on-the-ground verification. This weakens the audit function in detecting fraud, which is often hidden in the execution of projects.

Technology constraints are also reflected in R14's quote, stating that the audit software used is outdated and not compatible with the latest data. This worsens the budget limitations since there is no funding for infrastructure updates. R15 adds that this situation leads to a decline in public accountability; financial reports often become formalities with no substantial oversight.

However, despite these limitations, auditors continue to seek adaptive strategies. R2 emphasizes that the audit team prioritizes risk-based audits, thus allowing limited resources to be focused on high-risk

areas. Meanwhile, R7 describes the dilemma auditors face: they are expected to maintain audit quality, but the realities of limited budget and human resources often reduce audits to mere formalities.

In conclusion, budget and human resource limitations remain key factors hindering the effectiveness of internal audits in local governments. The insufficient allocation of funds, the disproportionate number of auditors compared to the workload, the lack of technological competence, and the absence of continuous training result in audits often becoming administrative and failing to address substantive issues. This not only narrows the scope of supervision but also weakens public accountability and the effectiveness of fraud prevention. Although auditors strive to adapt through risk-based strategies, the structural limitations still place internal audits in a vulnerable position. Therefore, strengthening human resource capacity, increasing budget support, and modernizing audit infrastructure are urgent necessities to ensure that internal audits can effectively fulfill their role in safeguarding transparency and the integrity of local government financial governance.

The Role of Technology in Enhancing Audit Effectiveness

The findings of this study show that technology plays a crucial role while also presenting a significant challenge in enhancing the effectiveness of internal audits in local governments (Huang & Gao, 2024; Rulinawaty et al., 2025). On one hand, technological advancements allow audits to be conducted faster, more accurately, and comprehensively. However, limitations in infrastructure and auditors' competence in utilizing digital tools have prevented the full potential of technology from being realized.

One internal auditor from a regional inspectorate explained that the use of audit software remains quite limited. *"We still rely heavily on manual Excel spreadsheets. Even though there are data analytics-based audit applications, not all auditors can use them effectively"* (Interview, R3, July 2023). This highlights a skill gap that restricts the optimal use of technology.

Observation data reveals that technology-based audits can detect irregularities in financial transactions much faster. However, challenges arise as not all regions have access to the latest software. R14 mentioned: *"The audit software we use is outdated and cannot read the latest financial data. But due to limited funding, updates are difficult to carry out"* (Interview, R14, July 2023).

In addition to software, infrastructure issues often hinder the audit process. Some auditors complained about limited internet connectivity and outdated computers. *"The computers in our office still have low specifications. When we need to process large data sets, the system often freezes. This hampers our work"* (Interview, R11, July 2023). With these conditions, the efficiency that technology should offer has not been fully realized.

Auditors also emphasized the importance of training to keep up with technological advancements. R12 stated: *"We need specific training to master digital audit applications. If we only rely on past experience, we will fall behind"* (Interview, R12, July 2023). This statement shows that without improving human resource capacity, technology adoption will merely be a formality.

Despite many challenges, the findings of this study also show tangible benefits from the application of technology. In one case, the audit team successfully detected indications of financial statement manipulation through digital analysis of thousands of transactions in a short period. One respondent noted: *"If we checked manually, it might take months. With software, it only took a few days to identify suspicious patterns"* (Interview, R7, July 2023).

Budget limitations once again emerged as a key barrier to the modernization of audit technology. R4 revealed: *"We actually submitted a proposal to procure new software, but it always lost priority to other*

needs. As a result, we continue to use the old system" (Interview, R4, July 2023). This shows that while technology is acknowledged as important, budgetary support has not been consistent.

Furthermore, resistance to change also presents a cultural barrier in technology adoption. Some senior auditors feel more comfortable using the manual approach than adapting to new tools. *"Some colleagues who have been working for a long time are reluctant to learn new applications. They say it's complicated and that the old way is faster"* (Interview, R9, July 2023). This resistance slows down the digital transformation of internal auditing.

However, younger auditors tend to be more adaptive to technology. R2 said: *"The new generation is more open to technology. We actually encourage expanding this digital-based audit"* (Interview, R2, July 2023). This generational difference highlights that technological transformation requires an inclusive change management approach.

From all these findings, it is clear that technology has the potential to be a significant enabler in improving the accuracy, speed, and effectiveness of internal audits. However, the success of technology utilization depends on three factors: (1) the availability of adequate infrastructure, (2) continuous training for auditors, and (3) consistent budgetary support from local governments.

Table 6. Challenges in Leveraging Technology for Internal Audit in Local Governments

No	Challenge Aspect	Problem Description	Impact on Internal Audit
1	Technology Infrastructure	Low-spec computers, limited internet, outdated software	Slow audit process, data cannot be comprehensively processed
2	Human Resource Competence	Auditors not familiar with IT-based audit applications	Audit remains manual, prone to errors, takes more time
3	Budget	Limited funds for hardware, software, and training updates	Outdated software, infrequent training sessions
4	Resistance to Change	Some senior auditors reluctant to adapt to new systems	Slow technology adoption, hindered productivity
5	Local Government Priorities	Audit technology modernization falls lower in priority compared to other programs	Delayed procurement of audit technology, suboptimal effectiveness
6	Change Management	No systematic strategy for transitioning to digital audits	Generational gap in auditors, leading to adoption gaps

Table 6 above highlights the six main challenges faced by local governments in utilizing technology to improve the effectiveness of internal audits. First, the technology infrastructure aspect is a fundamental obstacle. Many auditors still use low-spec computers, have limited internet access, and rely on outdated audit software. This condition results in slow audit processes, and data analysis cannot be done comprehensively. Second, the human resource competence limitation exacerbates the situation. Most auditors are not accustomed to using IT-based audit applications, which means that audits are still performed manually. This not only extends the audit time but also increases the potential for human error. Third, the budget factor is a major barrier to modernization. Limited funds make it difficult for local governments to update hardware or software, and training for auditors is rarely held. As a result, the technological capacity for auditing remains stagnant. Moreover, cultural factors, such as resistance to change, are also significant. Some senior auditors are reluctant to leave behind manual methods because

they feel more comfortable with traditional approaches. This attitude slows the adoption of technology and potentially reduces audit productivity.

Fifth, local government priorities often place audit technology modernization lower in priority compared to other development needs. As a result, the procurement of audit software and infrastructure is often delayed. Lastly, change management issues arise, as there is no systematic strategy for transitioning to digital audits. This results in a generational gap, where younger auditors are more adaptable to technology, but senior auditors remain more conservative.

Overall, this table emphasizes that leveraging technology in internal audits faces structural (budget and policy), technical (infrastructure and competence), and cultural (resistance to change) challenges. To optimize technology use, local governments need to adopt a comprehensive approach that includes strengthening infrastructure, enhancing auditor capacity, supporting budgetary policies, and implementing inclusive change management strategies. In this way, technology can truly function as an enabler in strengthening the resilience of local governments against fraud.

Discussion

The findings of this study highlight three main conclusions regarding the role of internal audit in strengthening local government resilience against fraud and financial misconduct. First, internal audit functions as a prevention and early detection mechanism by strengthening internal control systems and educating personnel. Second, resource limitations, including budget, as well as the number and competence of auditors, remain serious barriers that weaken the effectiveness of audits. Third, technology has shown great potential to enhance the efficiency and accuracy of audits, but its adoption is still hindered by infrastructure limitations, skills gaps, and resistance to change.

These findings align with the internal audit principles set forth by the *Institute of Internal Auditors* (IIA) (1983), including integrity, objectivity, confidentiality, professional competence, and sustainability. This study shows that internal audit does not only act as a financial report watchdog but also as an agent of fraud prevention through strengthening internal control systems and risk assessments. This perspective is in line with Albrecht et al. (2008), who emphasize the role of internal audit in using forensic techniques to detect financial statement manipulation and unlawful fund diversion, as well as Singleton et al., who stress the importance of a proactive approach to fraud prevention. Thus, internal audit serves as more than just a compliance mechanism but also as a pillar of financial integrity in local government.

On the other hand, this study strengthens the concept of financial resilience as explained by Lienert (2024), asserting that local governments need to be able to withstand and adapt to financial pressures through strong governance. In this view, internal audit plays a role not only in short-term financial risk management but also in ensuring compliance with institutional fiscal rules, as emphasized by Shah (2022). In the framework of agency theory, internal audit can minimize information asymmetry between local governments and the public through effective, technology-based oversight. Therefore, investments in human resource development, audit information systems, and community participation are strategic steps to strengthen the effectiveness and proactivity of internal audit in building financial resilience in local governments.

When compared to previous studies, these findings demonstrate continuity as well as novelty. Novita (2022) used a quantitative approach to show that internal audit does indeed influence fraud detection, although its impact is limited without external support factors. This study reinforces that finding with qualitative evidence that external factors such as budget, human resources, and technology are indeed key variables. Descriptive studies by Rambing et al. (2018), Wulandari & Sisdiyanto (2025), and

Fatimah & Pramudyastuti (2022) also emphasize the important role of inspectorates in local government financial oversight, but they tend to stop at describing practices without exploring structural challenges. This study adds that resource limitations are the most crucial factor that limits oversight effectiveness. Meanwhile, Muflihah & Sisdianto (2024) emphasize the importance of technology in supporting audits but have not explored the dynamics of auditor adaptation. This study complements the literature by demonstrating how infrastructure limitations, skills gaps, and resistance from senior auditors to technology affect the success of audit digitalization.

Historically, this study shows that internal audit in public governance has undergone a fundamental shift: from a technical compliance tool to a strategic role in safeguarding the financial integrity of local governments. This transition reflects efforts to strengthen public accountability, especially in combating fraud practices that have long undermined public trust in government institutions. A similar pattern is observed in international studies, such as in Poland, where internal audit in the early 2000s was still limited to financial compliance before evolving into an instrument for broader organizational performance evaluation (Ćwieląg, 2024). Similarly, in Romania, pressure from the European Union forced a restructuring of the internal control system, making internal audit an integral part of public governance reform (Ghita, 2009).

This expanded role is also evident in Portugal, where internal audit directly influences decision-making processes in local government (Ribeiro et al., 2024), as well as in Australia, where there has been a shift from a rule-based approach to a principle-based accountability framework (Rana, 2018). These developments show that internal audit is now viewed as a strategic partner within organizations, not only assessing compliance but also managing risks, addressing technological challenges, and fostering a culture of integrity (Handoyo, 2024; Yanuarisa et al., 2025). However, this progress is still accompanied by limitations. As indicated in the literature on Indonesia, resource limitations, institutional capacity, and auditor training continue to hinder the effectiveness of internal audits, with many oversight practices remaining at an administrative level (Nugraha Ibrahim M. A. Ahmad B. & Sukri., 2025; Setyaningrum et al., 2025). Therefore, this study confirms that the success of internal audit largely depends on the institution's ability to adapt to the complexities of modern governance through investments in human resources, enhanced technological capacity, and the integration of audit within a broader fiscal policy framework (Cracel Viana Moreira J. A. & Alves P., 2022; De Barra, 2023).

Socially, the findings emphasize that the effectiveness of internal audit contributes to the creation of a culture of integrity within local government bureaucracies. With independent, transparent, and risk-based audits, the public gains assurance that public funds are managed accountably. This contributes to the strengthening of public trust, which is a critical social asset in regional development. In line with the research by Kacani et al. (2025), internal audit functions not only as a monitor but also as an educational and consultative service to decision-makers, which in turn strengthens good governance. This role is crucial because ensuring legal compliance and efficient management of public funds is the foundation of public trust (Nedyalkova, 2020).

Furthermore, transparency created through internal audit practices has been shown to enhance public sector accountability. For instance, the implementation of *Key Audit Matters* (KAMs) in state-owned enterprises in South Africa has improved stakeholder engagement and promoted financial reporting transparency (Kgalamone et al., 2025). However, this effectiveness is highly influenced by trust in auditors, including their competence, integrity, and independence (Eshet, 2023). Institutional support is also vital, as auditors who receive professional legitimacy from their organizations are more likely to expand their role to meet public expectations (Natan-Krup & Mizrahi, 2024). To strengthen this, collaboration between

internal and external auditors has been shown to improve audit quality and provide a positive impact on fraud prevention, which ultimately increases public trust in the bureaucracy (Mahouat et al., 2024).

Ideologically, internal audit emerges as an agent of change challenging corruption and abuse of power. The courage of auditors to maintain their independence despite political pressure indicates that internal audit is not merely a state tool, but a part of the governance ideology that places accountability and transparency as core values. Thus, internal audit plays a role in building a governance paradigm oriented towards integrity, sustainability, and fairness in the management of public finances.

The findings of this study are consistent with international literature that highlights the role of internal audit in combating corruption. Bari et al. (2024) assert that internal auditors hold a strategic position in detecting control weaknesses, preventing fraud, and upholding organizational ethics. A study in Brazil shows that the use of AI-based internal audits (the ALICE tool) strengthened transparency in public procurement and encouraged more cautious decision-making (Mencke et al., 2024). Moreover, the integration of audit technologies, including data analytics, *blockchain*, and *machine learning*, further enhances the capacity of internal auditors to uncover anomalies and hidden transaction networks (Genest, 2025).

In addition to technological approaches, the combination of internal audit with forensic auditing has also proven effective in creating a comprehensive risk management system. Patskan et al. (2025) show that integrating internal audit, forensic diagnostics, and anti-corruption audits ensures financial stability while increasing organizational transparency. However, the effectiveness of internal audit in combating corruption still faces classic challenges, such as staffing shortages, undefined procedures, and political resistance. Research by Boufounou et al. (2024) emphasizes that strong institutional frameworks and full support for auditors' professional authority are critical to ensuring that internal audit truly functions as a front-line anti-corruption tool. This is particularly relevant in the Indonesian context, where the effectiveness of fraud prevention in the public sector still heavily relies on the quality of internal controls and commitment to good governance (Ait Novatiani et al., 2022; Lubis et al., 2024).

From a reflective perspective, this study shows the functions and dysfunctions of internal audit. Its positive function is the ability to prevent fraud through early detection, educating personnel, and integrating technology. However, dysfunction occurs when budget and human resource limitations reduce audits to mere administrative formalities. This imbalance leads to the consequence that some fraud cases remain undetected, weakening public accountability. This condition is in line with the findings of Nugraha et al. (2025) in South Sulawesi, which show an imbalance in the number of auditors—only two senior auditors compared to 20 intermediate auditors—thus limiting the formation of an effective audit team. In addition to the number, auditor competence is also a critical factor; studies in Vietnam and Saudi Arabia highlight that the competence of auditors is positively correlated with the effectiveness of internal audits (Al-Wadai et al., 2025; Lam et al., 2025).

In addition to human resource limitations, budget issues also pose a significant obstacle. Although there are mandatory expenditure policies, budget allocations in many regions remain insufficient to meet growing operational demands (Nugraha et al., 2025). A study in Morocco even shows that limitations in human, financial, and material resources directly impact audit quality (Gharrafi et al., 2024). Another factor that affects effectiveness is weak management support. Research in Ghana and Saudi Arabia shows that without support from top leadership, the independence of internal auditors is compromised, making audits ineffective (Alzeban & Gwilliam, 2014; Mensah et al., 2020).

On the other hand, structural challenges also emerge in the form of a lack of legal protection for auditors. Without legal guarantees, auditors often find themselves in vulnerable positions when their

findings contradict leadership interests (Nugraha et al., 2025). This highlights the importance of a regulatory framework that protects the independence of auditors. Furthermore, technological support is also a determining factor in audit effectiveness. The implementation of ERP systems in Jordan and IT environments in Taiwan has been shown to improve internal audit quality by enhancing organizational operations and supporting senior management (Bataineh & Alrjoub, 2023; Tsai et al., 2020). In fact, the use of continuous audit modules has been proven to increase efficiency by reducing external audit hours while improving the reliability of audit results (Malaescu & Sutton, 2015).

Organizational and external factors also exacerbate these limitations. The existence of silos between departments hinders communication and access to critical information, while resistance to audit recommendations prevents continuous improvement of practices (Gharrafi et al., 2024). On the other hand, public companies facing internal and external pressures can benefit when internal audit functions effectively, as it helps improve overall organizational performance (Jaber et al., 2024). Thus, budget, human resource, and technology limitations are not just technical issues, but also structural and managerial challenges that directly weaken the effectiveness of internal audit in maintaining public accountability.

As a follow-up to the identified dysfunctions, a policy action plan is needed to emphasize strengthening the capacity of internal audits in a structural, financial, and technological manner. First, local governments need to increase budget allocations specifically for internal audit functions, not only for routine operations but also for the development of auditor capacity through continuous training. Second, institutional reform must ensure clear legal protections for auditors to maintain their independence from political pressures. Third, audit technology modernization strategies through the procurement of ERP systems, continuous audit modules, and cross-departmental data integration need to be prioritized to improve audit efficiency and accuracy. Fourth, top management must be required to provide full support, both in terms of resources and professional legitimacy, so that auditors' recommendations can be consistently followed up. With this combination of policies, internal audit is expected to transform from a purely administrative function into a key pillar of financial resilience and public accountability in local governments.

CONCLUSION

This study emphasizes that internal audit plays a highly strategic role in strengthening local government resilience against fraud and financial misconduct. The main findings indicate that, first, internal audit functions as an effective prevention and early detection mechanism through strengthening internal control systems and educating personnel. Second, resource limitations, both in terms of budget and the number and competence of auditors, remain significant barriers that hinder audit effectiveness. Third, the use of technology has proven to improve the efficiency and accuracy of audits, but its adoption is still constrained by limited infrastructure, low technical capacity, and resistance from some auditors.

The scientific contribution of this study lies in its holistic approach that combines aspects of human resources, institutional support, and the use of technology in analyzing the effectiveness of internal audits in the public sector. By integrating empirical perspectives from auditors' field experiences, this study expands the literature on local government financial governance by emphasizing that the success of internal audit is not only about administrative compliance but also about institutional and cultural processes that build financial resilience in local governments. This study also provides strategic recommendations regarding investments in human resource training, strengthening the legal framework, and modernizing audit technology as prerequisites for accountable and transparent public governance.

However, this study has limitations in terms of geographic scope and the number of participants, meaning that the findings cannot be fully generalized to all local governments in Indonesia. Furthermore, the local political dynamics that affect auditor independence have not been explored in depth. Therefore, future research is recommended to expand the geographic scope, involve more informants across different levels of government, and examine in more detail the role of political and organizational culture factors in influencing the effectiveness of internal audits.

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