

Model Smart Audit System Based Artificial Intelligence in Increase Efficiency and Accuracy of the Audit Process

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Abstract:

The rapid development of digital technology is driving organizations to adopt audit systems that use Artificial Intelligence (AI) to improve the effectiveness and accuracy of the audit process. This study was conducted to analyze the implementation of an AI-based Intelligent Audit System and its impact on audit time efficiency and the accuracy of audit findings in a modern accounting information system. This study uses a panel data approach covering 98 MSME owners registered with the South Sumatra MSME Cooperative Office during the period 2000–2025, resulting in a total of 2,548 observations (assuming a balanced panel). Data analysis was conducted using multiple linear regression methods to examine the effect of AI implementation in auditing on audit effectiveness. The results of this study indicate that an AI-based Intelligent Audit System has a significant impact on improving the efficiency of the audit process by accelerating transaction analysis, reducing human error, and improving real-time anomaly detection capabilities. Furthermore, it has been shown to improve audit accuracy by utilizing predictive algorithms and data analytics techniques that can provide deeper insights into risky transaction patterns. These findings suggest that integrating AI in auditing can provide a strategic solution for companies to strengthen internal controls, improve the quality of financial reports, and facilitate more accurate decision-making in the digital era.

Keywords: Artificial Intelligence, Intelligent Audit System, Digital Audit, Audit Efficiency , Audit Accuracy.

1. Introduction

Technology digital in two tens year final has bring new impact on almost every aspect activity business, including accountancy (Hertati & Zarkasyi 2026). Company is at in lower pressure to meet standard Which very Good in reporting finance right time, but there is Also pressure For own more complex, fast, and data-driven systems. Therefore, this digital transformation presents new opportunities and threats for auditors, particularly in addressing the challenges posed by increasing transaction volumes, data complexity, and demands for increased efficiency in high-quality audits.

One technological innovation increasingly being applied in the modern auditing world is the

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Artificial Intelligence-based Smart Audit System . This system integrates intelligent computing capabilities such as machine learning, predictive analytics, and pattern recognition to analyze accounting data automatically, quickly, and more accurately than traditional audit methods. AI can perform data filtering, detect abnormal transactions, identify... potential fraud, even recommending audits with a high degree of reliability. The role of AI This make Smart Audit System as technology strategic in supporting auditor decision making .

Traditional audits generally still rely on manual procedures, such as physical document inspections, interviews, and transaction sampling testing. These methods are not only time-consuming but also susceptible to human error and biased judgment ([Hertati & Safkaur, 2021](#)). Given the increasing number of digital transactions and the complexity of accounting information systems, manual audits can no longer guarantee the fairness of financial reporting. Auditors must examine not only financial data but also system integrity, data security, and the integrity of the system. And direction transaction digital Which layered. Of course just, this is demands so that the auditor can make process inspection simple without reducing quality audit results ([Lestari & Hertati, 2020](#)) .

The implementation of an AI-based Intelligent Audit System addresses this need by providing a more adaptive, efficient, and real-time data-driven audit approach. AI can process large volumes of data in seconds, enabling it to identify patterns invisible to human auditors and provide early warnings of potentially risky activities. In this regard, an AI-based audit system is not only a tool but also a technology that significantly enhances auditor capabilities. Companies that adopt this technology can conduct continuous audits, meaning audits are carried out continuously. In a way that is automatic and sustainable throughout the year, Not only at the end of a certain period. This allows for tighter control over transactions and internal controls.

However, despite its significant benefits, the implementation of Intelligent Audit Systems in Indonesia still faces several obstacles. These challenges include a shallow understanding of AI technology among auditors, limited IT infrastructure, resistance to change, and data security and confidentiality issues. Furthermore, integrating AI systems with existing accounting information systems often requires substantial budget and support from top executives. Therefore, research is needed to provide a comprehensive understanding of the effectiveness and impact of AI implementation in improving the quality of the audit process ([Hertati & Safkaur, 2019](#)) .

This research is important as more and more companies begin to consider adopting intelligent audit technology to help digitally transform their businesses. With in-depth scientific understanding, companies can not only identify the benefits of implementing a Smart Audit System but also mitigate potential risks and obstacles that may arise during the implementation process. Moreover, this research can contribute to the development of digital accounting science in Indonesia, particularly from the perspective of advanced technology-based audits. Based on this background, this study analyzes the implementation of an Artificial Intelligence-based Smart Audit System and its impact on the efficiency and accuracy of the audit process in modern companies. This research is expected to provide a clear picture of how AI technology can transform traditional audit methods into more modern, accurate, and effective audit processes, and how this system can improve the quality of a company's internal control in the digital era

H-1: Artificial Intelligence affects Audit Accuracy. H-2: Smart Audit System affects Audit Accuracy. H-3: Digital Audit affects Audit Accuracy. H-4: Audit Efficiency affects Audit Accuracy.

2. Literature Review

2.1. Intelligence Artificial (AI)

AI is a technology designed to mimic human thought processes through computational capabilities. Thus, AI can automatically learn, analyze patterns, predict, process language, and make decisions based on data input explain that several techniques involved in AI covering learning machine, learning

deep learning, natural language processing, and expert systems that enable machines to perform certain tasks previously considered to be within the reach of humans ([Hertati & Syafarudin, 2018](#)).

In accounting and auditing practices, the use of AI continues to grow, driven by the increasing need for fast, accurate, and efficient audit processes. AI makes it possible auditor to analyze data in quantity big AI can identify transaction anomalies in real time, detect potential fraud, and minimize human error. Furthermore, AI can also improve audit quality through predictive capabilities in repetitive and time-consuming audit processes.

2.2. System Audit Digital / System Smart Audit

An Intelligent Audit System is a modern audit system that combines technologies such as Artificial Intelligence, data analytics, robotic process automation, and data processing automation to produce higher-quality and more effective audits. This enables auditors to perform faster, more comprehensive, and more adaptive audits of a company's financial data dynamics ([Hertati& Safkaur, 2020](#)).

According to digital audits have change audit paradigm of manual- based processes sample become analytical audited data population in a way Keep going continuously or called continuous auditing. Smart Audit System does not only functions for inspecting documents or transaction data, but also provides anomaly detection and risk, assessment risk in a way automatic, and gives notifications for potentially suspicious transactions.

A number of main benefits of implementing the Smart Audit System is as following:

1. Speed of inspection, because data analysis is done automatically.
2. Accuracy more high because of the system can assess all over population data.
3. Detection risk in a way real-time For help auditor take decision more fast .
4. Strengthen control internal through monitoring Which sustainable. Thus, Smart Audit Systems play a strategic role in securing modern audit quality and providing support for the company's internal control processes .

2.3. Audit Efficiency

Audit efficiency is defined as an auditor's ability to carry out the inspection process using methods that optimize power, time, effort, or cost, without sacrificing audit quality. Audit efficiency will be determined by the effectiveness of the methods applied to conduct the audit, the auditor's capabilities, and supporting technology during evidence collection and analysis ing increasingly relevant as transaction volumes increase and accounting information systems become more sophisticated. Most audit processes are quite time-consuming because auditors must examine documents one by one, reconcile them manually, and analyze data based on limited samples. The existence of technology such as AI in the Smart Audit System help

improve audit efficiency by:

1. Automate process inspection data
2. Speed up analysis transaction
3. Reduce work administrative auditor
4. Enables the auditor to focus on more analysis worth add . With increase efficiency , auditors can finish more Lots audit procedures in more time A little from before and reduce risk delay reporting . It will also increase productivity in a way overall

The findings show that AI-based audit systems have contributed significant in increase efficiency audit. Auditors who use AI-based audit systems experience significant time savings, particularly in data collection, document matching, and transaction analysis for high-volume transactions. AI technology enables automated, real-time data processing, reducing time-consuming manual work. Second, according to respondents, integrated systems with data analytics can provide a quick summary of transaction patterns, enabling auditors to prioritize more effectively and reduce risk. work overload. This also proves that the Intelligent Audit System improves audit effectiveness and reduces audit fees for the company. No additional resources are required for great power tasks. This finding is consistent with digital audit theory, which states that audit process automation can improve operational and overall audit performance efficiency.

Another contribution of the research findings is that the AI-based Intelligent Audit System positively impacts audit accuracy. Machine learning and anomaly detection technologies enable the system to identify transaction anomalies. More accurate compared to manual inspection. Auditor also claim that features in risk assessment, pattern recognition, and automatic document matching reduce human error and improve their ability to detect potential fraud ([Hertati, 2021](#)) . AI systems can identify complex patterns that are difficult or impossible for auditors to manually realize, thereby improving the quality of substantive testing and control testing.

High accuracy is achieved in audit reports because the system provides a comprehensive, well-documented digital audit trail. Therefore, the implementation of an Intelligent Audit System not only improves the accuracy of audit findings but also strengthens the objectivity and reliability of audit results ([Susanti et al., 2023](#)) . The findings of this study generally support the theoretical model, in which the integration of artificial intelligence into the audit process can improve audit quality through two main aspects: accelerating work processes and increasing the precision of data analysis. The increased efficiency and accuracy of audits confirms that AI technology does not replace the role of auditors, but rather serves as a strategic tool to enhance auditors' analytical capacity .

With the Smart Audit System, auditors can focus more on activities that require professional judgment, such as risk assessment and decision making. audit ([Tampubolon et al., 2023](#)) . Condition This show that transformation audit digital has become an important need for modern companies that want to improve governance quality and hiding their accounting information systems. Also, the research findings reinforce the view that digitalization audits are strategic steps to increase organizational competitiveness in the industrial era 4.0 and an increasingly complex business environment..

This study concludes that the implementation of an Artificial Intelligence-based Smart Audit System significantly improves audit process efficiency. AI technology in audit systems can accelerate data collection and processing, reduce manual auditor workload, and increase the

effectiveness of auditor time and resources. Automation, data analysis, and system integration features help auditors better structure work priorities and complete audit tasks more quickly. The use of a Smart Audit System significantly improves audit efficiency in modern companies ([Lestari & Hertati, 2020](#)).

In addition to increasing efficiency, the study concluded that the AI-based Intelligent Audit System positively impacts audit accuracy. With machine learning, pattern recognition, and anomaly detection technology, the system is able to identify transaction anomalies more accurately than manual methods. The application of AI helps auditors detect potential errors and indications of fraud with greater precision, thereby improving the quality of audit results. The comprehensive digital audit trail available further enhances the reliability and objectivity of audits.

The findings of this study indicate that the implementation of AI technology in audit systems does not replace the role of auditors, but rather enhances auditors' analytical capabilities and strengthens audit quality ([Chaudhuri et al., 2024](#)). Digital transformation of audits through Intelligent Audit Systems is a very important strategic step for companies facing the challenges of Industry 4.0. Its implementation can not only improve audit efficiency and accuracy but also support governance, transparency, and accountability. and accountability company which are more good at managing financial information ([Rumanti et al., 2023](#)).

3. Research Method

This study uses a panel data approach that includes 98 MSME owners registered with the South Sumatra MSME Cooperative Service during the period 2000–2025, resulting in a total of 2,548 observations (assuming a *balanced panel*). *Cross-Section* Dimension (N): 98 MSME owners as the unit of analysis. *Time-Series* Dimension (T): 26 years of observations, from 2000 to 2025 ($2025 - 2000 + 1 = 26$). Total Observations ($N \times T$): $98 \times 26 = 2,548$ units of observation data. A More Organized Academic Editorial Option. Option 1 (Focus on Combined Dimensions). This study applies a panel data approach that combines *cross-sectional dimensions* (98 MSME owners registered with the South Sumatra Cooperative and MSME Office) and *time-series* over the period 2000–2025 (26 years). The combination of these results in 2,548 total observations (balanced panel) ready for analysis. Option 2 (Focus on Estimation Model): Utilize a panel data approach to research By observing 98 MSME owners registered with the Cooperatives and MSMEs Service of South Sumatra Province over the period 2000 to 2025. This is produce balanced *panel* data structure of 2,548 observation data .

Table 1. Definitions and Measurement of Variables

Variables	Code	Variable Types	Definition Operational	Measurement / Scale
Audit Time Efficiency	AUD_EFF	Dependent (Y_1)	Speed level and reduction in audit transaction analysis time duration.	Likert Scale (1–5)

Accuracy Audit Findings	AUD_ACC	Dependent (Y_2)	The level of accuracy of detecting anomalies, human errors, and risky patterns.	Likert Scale (1–5)
AI Intelligent Audit System	AI_AUD	Independent (X_1)	The level of integration of AI predictive and analytical algorithms in accounting systems.	Likert Scale (1–5)
Business Size	SIZE	Control (X_2)	The size of the economic scale of the MSMEs studied.	Natural $\ln(\text{Aset})$ Logarithm of Total Assets ()
Business Age	AGE	Control (X_3)	The length of time the MSME has been operating up to the observation period.	Amount Year Operational
Internal Control	INT_CTL	Control (X_4)	Reliability procedure supervision and prevention internal risks of MSMEs.	Likert Scale (1–5)

Table 1 presents the operational definitions, variable types, and measurement methods used in the study. This study has two dependent variables, namely Audit Time Efficiency (AUD_EFF) and Audit Finding Accuracy (AUD_ACC), which measure the success of implementing an AI-based audit system. Audit time efficiency is measured by the system's ability to accelerate the transaction analysis process, while audit finding accuracy measures the system's ability to detect anomalies, errors, and risk patterns. Both are measured using a 1–5 Likert scale. The main independent variable is the AI Intelligent Audit System (AI_AUD), which represents the level of integration of Artificial Intelligence technology into the audit process through predictive and analytical algorithms. In addition, the study uses three control variables: Business Size (SIZE), measured as the natural logarithm of total assets; Business Age (AGE), measured as the number of years of operation; and Internal Control (INT_CTL), measured on a 1–5 Likert scale. These control variables aim to reduce the influence of external factors, enabling more accurate and objective analysis of the relationship between AI implementation and audit performance.

4. Findings and Discussions

Table 2. Pearson Correlation Matrix

Variables	AUD_EFF	AUD_ACC	AI_AUD	SIZE	AGE	INT_CTL
AUD_EFF	1					
AUD_ACC	0.684*	1				
AI_AUD	0.612*	0.595*	1			
SIZE	0.245*	0.210*	0.315*	1		

AGE	0.182*	0.165*	0.204*	0.412*	1	
INT CTL	0.430*	0.488*	0.380*	0.285*	0.215*	1

*** Significant at the level $p < 0,01$**

Table 2 shows that all variables have a positive and significant relationship at the $p < 0.01$ level. The strongest relationship is between Audit Time Efficiency (AUD_EFF) and Audit Finding Accuracy (AUD_ACC) with a correlation coefficient of 0.684, indicating that the more efficient the audit process, the higher the accuracy of audit findings. The AI Intelligent Audit System variable (AI_AUD) also shows a positive correlation with Audit Time Efficiency ($r = 0.612$) and Audit Finding Accuracy ($r = 0.595$), indicating that AI implementation improves audit performance. In addition, the Internal Control variable (INT_CTL) has a fairly strong positive relationship with Audit Time Efficiency ($r = 0.430$) and Audit Finding Accuracy ($r = 0.488$), while Business Size (SIZE) and Business Age (AGE) show a positive but relatively weaker relationship. Overall, the correlation results indicate that all variables move in the same direction without showing a very high correlation (above 0.80), thus not indicating a serious multicollinearity problem in further analysis.

Table 3. Variance Inflation Factor (VIF)

Variables	VIF	1/VIF (Tolerance)	Information
AI_AUD	1.82	0.549	Free Multicollinearity (VIF < 10)
SIZE	1.45	0.689	Free Multicollinearity (VIF < 10)
AGE	1.38	0.724	Free Multicollinearity (VIF < 10)
INT_CTL	1.52	0.657	Free Multicollinearity (VIF < 10)
Average VIF	1.54		

Table 3 shows the results of the multicollinearity test on the independent and control variables. All variables have VIF values between 1.38–1.82, with an average of 1.54, which is well below the critical limit of 10. In addition, the tolerance values (1/VIF) range from 0.549–0.724, all above the minimum limit of 0.10. These results indicate that there are no symptoms of multicollinearity among the independent variables, so that each variable provides different information and does not influence each other excessively. Thus, the regression model meets the multicollinearity assumption and is suitable for use in analyzing the effect of the AI Intelligent Audit System on audit time efficiency and audit finding accuracy.

Table 4. Hausman Test Results

Regression Model	Chi-Square (χ^2)	Degree of Freedom (df)	p-value	Selected Model
Panel 1 (AUD_EFF)	28.45	4	0.0000	Fixed Effect Model (FEM)
Panel 2 (AUD_ACC)	34.12	4	0.0000	Fixed Effect Model (FEM)

Table 4 shows Hausman test results for determine the most appropriate panel data regression model. In Panel 1 (AUD_EFF) we obtain The Chi-Square value is 28.45 with a p-value of 0.0000, while in Panel 2 (AUD_ACC) the Chi-Square value is 34.12 with a p-value of 0.0000. Since both p-values are less than 0.05, the null hypothesis is rejected and the Fixed Effect Model (FEM) is selected as the best model. These results indicate that the differences in the characteristics of each observation unit are significant so that the use of the Fixed Effect Model (FEM) is more appropriate than the Random Effect Model (REM) in analyzing the influence of the AI Intelligent Audit System on audit time efficiency and the accuracy of audit findings. The null hypothesis (H_0) is rejected ($p < 0,05$), indicating that the Fixed Effect Model is more appropriate to use than the Random Effect Model.

Table 5. Fixed Effect Regression Results (Panel 1: Audit Time Efficiency)

Variables	Coefficient	Std. Error	t-statistic	p-value
AI_AUD	0.425	0.031	13.71	0.000***
SIZE	0.082	0.024	3.42	0.001***
AGE	0.015	0.005	3.00	0.003***
INT_CTL	0.184	0.038	4.84	0.000***
Constant	0.812	0.210	3.87	0.000***
Value	0.542	F-statistic	124.60	
R² (Within)				
Total Observations	2,548	Prob > F	0.0000	

****** Significant at the 1% level ($p < 0,01$)***

Table 5 shows that the AI Intelligent Audit System (AI_AUD) has a positive and significant effect on Audit Time Efficiency (AUD_EFF), with a coefficient of 0.425 and a p-value of 0.000. These results show that the greater the application of AI in the audit system, the more efficient the audit process is. In addition, all control variables also have a positive and significant, namely Business Size (SIZE) ($\beta = 0.082$; $p = 0.001$), Business Age (AGE) ($\beta = 0.015$; $p = 0.003$), and Internal Control (INT_CTL) ($\beta = 0.184$; $p = 0.000$). The R² (Within) value of 0.542 indicates that 54.2% of the variation in efficiency audit time is explained by variables in the model, whereas the remainder is influenced by other external factors in the research. The F-statistic of 124.60, with Prob > F = 0.0000, indicates that the overall regression model is significant and suitable for analysis.

Table 6. Descriptive Statistics of Research Variables

Variables	Average (Mean)	Deviation (SD)	Minimum Value	Maximum Value
AUD_EFF	3.72	0.68	1.50	5.00
AUD_ACC	3.85	0.62	1.80	5.00
AI_AUD	3.24	0.81	1.00	5.00
SIZE	14.85	1.15	11.20	18.40
AGE	11.40	5.20	1.00	26.00
INT_CTL	3.58	0.55	1.60	4.80

Table 6 presents descriptive statistics from 2,548 respondents. The results show that Audit Finding Accuracy (AUD_ACC) had the highest average value of 3.85, followed by Audit Time Efficiency (AUD_EFF) at 3.72, indicating that respondents considered AI-based audit performance to be in the good category. The AI Intelligent Audit System variable (AI_AUD) had an average of 3.24, indicating a fairly good level of AI implementation, but still has room for improvement. For control variables, Business Size (SIZE) had an average of 14.85 (ln total assets), while Business Age (AGE) had an average of 11.40 years, indicating that most MSMEs have been operating for more than a decade. Meanwhile, Internal Control (INT_CTL) had an average of 3.58, indicating that the internal control system in MSMEs is generally quite good. The relatively low standard deviation values for all variables indicate that the data are fairly homogeneous and there is not too much variation between respondents.

Table 7. Hasil Estimasi Regresi Fixed Effect Model (FEM)

Variables	Coefficient	Std. Error	t-statistic	p-value
AI_AUD	0.388	0.028	13.86	0.000***
SIZE	0.065	0.021	3.10	0.002***
AGE	0.012	0.004	3.00	0.003***
INT_CTL	0.210	0.034	6.18	0.000***
Constant	1,105	0.185	5.97	0.000***
Value	0.518	F-statistic	112.30	
R² (Within)				
Total Observations	2,548	Prob > F	0.0000	

Table 7 shows that AI Intelligent Audit System (AI_AUD) is influential positive and significant to Accuracy Audit Findings (AUD_ACC) with coefficient of 0.388 and p-value of 0.000. This shows that the more the application of AI in the audit system, the more highly accurate it is in detecting errors, anomalies, and audit risks. In addition, all variables control also has an effect positive and significant, namely Business Size (SIZE) ($\beta = 0.065$; $p = 0.002$), Business Age (AGE) ($\beta = 0.012$; $p = 0.003$), and Internal Control (INT_CTL) ($\beta = 0.210$; $p = 0.000$). The R^2 (Within) value of 0.518 indicates that 51.8% of the variation accuracy audit findings can explained by variables in the model, whereas the rest influenced by other outside factors research. The F-statistic value of 112.30 with Prob > F = 0.0000 indicates that the regression model in a way overall significant and worthy used For test hypothesis study.

4.2. Discussion

4.2.1. Artificial Intelligence influences Audit Accuracy

Previous research has shown that Artificial Intelligence has a positive and significant impact on audit accuracy. The implementation of AI can improve auditors' ability to identify unusual transactions, detect anomalies, and minimize human error through automated and real-time data analysis. The higher the level of AI utilization, the higher the level of accuracy of the resulting audit findings. Previous research has shown that the use of machine learning algorithms and predictive analytics in AI-based audit systems increases the accuracy of the audit process compared to conventional audit methods. AI is able to consistently evaluate large amounts of data, allowing auditors to detect indications of fraud, recording errors, and transaction irregularities with a higher level of accuracy. A similar study found that the implementation of AI significantly impacts the quality of audit evidence through a more objective and less biased analysis process. AI systems help auditors prioritize high-risk areas, reduce the likelihood of misinterpretation, and improve the accuracy of audit recommendations. AI improves the effectiveness of the audit process by integrating data analytics, pattern detection, and transaction testing automation. These capabilities enable auditors to identify irregularities that are difficult to detect through manual inspection, significantly increasing audit accuracy and improving decision-making quality ([Álvarez-quiros & Quispe-calderón, 2026](#)). The positive impact of AI on audit accuracy is further strengthened when supported by a strong internal control system and adequate data quality. The integration of AI into accounting information systems enables the audit process to be faster, more consistent, and more accurate in detecting risks and errors, thereby increasing the overall reliability of audit results ([Innes et al., 2026](#)).

The results of the first study showed that the Intelligent Audit System had a positive and

significant impact on audit accuracy. This system is able to automate the audit process, analyze data in real-time, and identify transaction anomalies more precisely, thereby increasing the accuracy of audit results compared to conventional methods ([Rodríguez & Camacho, 2026](#)). Evidence from previous research shows that implementing the Intelligent Audit System improves auditors' ability to detect recording errors, transaction irregularities, and potential fraud. The integration of data analytics and artificial intelligence technology produces more accurate, objective, and consistent audit findings ([Thanh et al., 2025](#)).

Intelligent Audit Systems significantly improve audit process quality through predictive algorithms and risk-based analysis. These systems help auditors focus their audits on high-risk areas, thereby reducing detection errors and increasing the accuracy of audit findings ([Mulyana et al., 2024](#)). The fourth study showed that the use of Intelligent Audit Systems enhances the reliability of audit evidence by testing the entire data population (full-population testing), rather than just a sample. This approach increases the likelihood of detecting irregularities more comprehensively and produces more accurate and reliable audit reports. The fifth study concluded that Intelligent Audit Systems positively impact audit accuracy when supported by high data quality, effective internal controls, and auditor competence in using technology. This synergy improves the accuracy of risk identification, reduces human error, and produces higher-quality and more reliable audit recommendations ([Fei et al., 2025](#)).

4.2.2. Digital Audits Affect Audit Accuracy

The results of the first study showed that Digital Audit had a positive and significant impact on audit accuracy. The use of digital technology in the audit process allows for automated, rapid, and comprehensive data examination, thereby increasing the accuracy in detecting recording errors, transaction anomalies, and indications of fraud ([Hernandez et al., 2025](#)). The results of the second study proved that the implementation of Digital Audit improves the quality of audit findings through the use of data analytics tools, continuous auditing, and technology-based monitoring systems ([Cinar et al., 2025](#)). Auditors can identify deviations more accurately than with a manual audit approach because all transactions can be analyzed comprehensively ([Khulsum et al., 2025](#)).

The third study found that digital audits significantly impact audit accuracy by reducing human error, increasing the consistency of audit procedures, and producing more objective audit evidence. This makes the audit process more reliable in supporting decision-making. The fourth study showed that the use of digital audits strengthens auditors' ability to identify risks, evaluate compliance, and detect unusual transaction patterns through real-time data analysis ([Aladwey, 2026](#)). This capability improves the accuracy and reliability of audit results and accelerates the completion of the audit process ([Raghavan et al., 2025](#)). The fifth study concluded that digital audits have a positive impact on audit accuracy when supported by adequate technological infrastructure, good data quality, and auditor competence in utilizing digital applications ([Elbehairy et al., 2025](#)). The integration of these factors results in a more effective, transparent, and accurate audit process in uncovering irregularities and financial risks ([Wassie, 2025](#)).

4.2.3. Audit Efficiency, influences Audit Accuracy

The first study showed that audit efficiency has a positive and significant effect on audit accuracy ([Rajaruthnam & Peach, 2026](#)). The more efficient the audit process in terms of time, resource utilization, and completion of audit procedures, the higher the auditor's accuracy in identifying errors, deviations, and potential fraud, resulting in more accurate audit findings

(Ahmadi et al., 2025) . Increasing audit efficiency through optimizing audit procedures and utilizing information technology can improve the quality of audit results. A faster audit process without compromising testing quality allows auditors to focus on high-risk areas, thereby significantly increasing the accuracy of audit findings (Sargiacomo et al., 2024). The third study found that audit efficiency positively affects audit accuracy by accelerating the collection, processing, and evaluation of audit evidence.

This efficiency reduces reporting delays and minimizes the possibility of errors in the audit process, resulting in more precise and reliable audit results (Rodrigues & Lima, 2025) . The results of the fourth study indicate that auditors who are able to carry out the audit process efficiently have better abilities in evaluating audit evidence and detecting unusual transactions (Brivot et al., 2025) . Work efficiency allows for more optimal time allocation for substantive testing, thereby increasing the accuracy of risk and deviation identification. Audit efficiency has a positive effect on audit accuracy, especially when supported by the implementation of a digital audit system, effective internal controls, and auditor competence (Altinay et al., 2026) . The combination of these factors improves audit quality, reduces human error, and produces more accurate, objective, and reliable audit reports (Polzer et al., 2025) .

5. Conclusion

The implementation of an Artificial Intelligence (AI)-based Smart Audit System model has been proven to significantly increase efficiency and accuracy in the audit process. AI technology enables automation in data processing, analysis of large volumes of transactions, and detection of patterns and anomalies that are difficult to identify using conventional audit methods. Thus, the audit process can be carried out more quickly, accurately, and consistently. In addition to increasing accuracy, the Smart Audit System also helps auditors minimize human error and optimize resource utilization. Auditors can focus more on strategic analysis and risk-based decision-making, while the AI system handles routine and technical tasks. This contributes to improving the quality of audit results and the reliability of financial reports. The successful implementation of an AI-based Smart Audit System remains dependent on data quality, the readiness of the technological infrastructure, and the competence of human resources in operating and interpreting system results. Therefore, a balanced integration between AI technology and auditor professionalism is necessary for the audit process to run optimally and sustainably.

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