Indonesian Interdisciplinary Journal of Sharia Economics (IIJSE) Vol. 9. No. 1 (2026)
e-ISSN: 2621-606X Page: 979-990

THE INFLUENCE OF ARTIFICIAL INTELLIGENCE, AUDIT INFORMATION SYSTEM, AND REMOTE AUDIT ON AUDITOR PERFORMANCE

Fidel Muhammad Purwadi[1]
Universitas Trisakti, Jakarta, Indonesia
fidelmuhammad010103@gmail.com

Murtanto[2]
Universitas Trisakti, Jakarta, Indonesia
murtanto@trisakti.ac.id

Abstract

This study aims to analyze the influence of Artificial Intelligence, Audit Information Systems, and Remote Audits on Auditor Performance by adopting the Theory of Planned Behavior and the Technology Acceptance Model. The research uses primary data obtained through questionnaires distributed to auditors who hold a bachelor's degree, work at Public Accounting Firms (KAP), and have knowledge of Artificial Intelligence, Audit Information Systems, and Remote Audits. The sampling technique employed is purposive sampling. The results show that all three independent variables have a positive and significant influence on auditor performance. Artificial Intelligence has been proven to enhance the efficiency and effectiveness of auditors' work. Audit Information Systems support a more structured and accurate audit process, while the implementation of Remote Audits provides greater flexibility and accessibility in audit execution. These findings indicate that the optimal use of digital technology can significantly improve overall auditor performance.

Keywords: Artificial Intelligence, Audit Information System, Remote Audit, Auditor Performance

INTRODUCTION

The reliability of a company's financial statements depends on the quality of its auditors. When the public or clients evaluate audit findings, auditor performance becomes a key factor to consider (Arfah & Dahniar, 2019). Effective auditors not only comply with all rules and regulations but are also able to detect signs of fraud and propose ways to improve business productivity. Ensuring that audits provide value and trust to stakeholders is the fundamental reason for evaluating auditor performance. However, numerous challenges can hinder auditors' effectiveness in today's complex and ever-changing corporate environment. This phenomenon highlights a gap between what is expected of auditors and what is observed in practice, particularly regarding timeliness, efficiency, and accuracy in identifying irregularities.

Recently, Artificial Intelligence (AI) has been proposed as a means to improve auditor efficiency. AI can identify trends and outliers that might be overlooked by human auditors due to its superior speed and accuracy in processing large datasets (Triatmaja, 2019). Enhancing audit efficiency and accuracy while reducing human workload for auditors is a key driving force behind the adoption of AI in auditing. Nevertheless, studies examining the usefulness of AI in auditing and its overall impact on auditor performance remain limited. Further research is needed to fully understand the practical implications of the emerging phenomenon of AI adoption in the auditing profession.

The purpose of the Audit Information System (AIS) is to facilitate the audit process by providing resources for efficient data management. According to Elpitasari et al. (2022), auditors can use AIS to help determine the quality of systems. The main objective of using AIS is to simplify the auditing process and minimize human error. Unfortunately, current knowledge is lacking regarding the specific ways AIS usage can enhance auditor performance across different organizational settings. Despite the widespread adoption of AIS, the phenomenon shows substantial heterogeneity in acceptance and effectiveness.

The COVID-19 pandemic forced many organizations to embrace remote work, making Remote Auditing increasingly important. By reducing the need for auditors to be physically present, remote auditing enables audit teams to divide and manage responsibilities both physically and virtually (Allens et al., 2002). The ability to conduct audits despite travel restrictions, along with cost-effectiveness and flexibility, are among the reasons for the growing adoption of remote audits. However, studies exploring the advantages and disadvantages of remote auditing—including data access limitations and information security concerns—remain scarce. Although remote auditing offers numerous benefits, this phenomenon highlights the need for further research into its impact on auditor performance and potential solutions to its limitations.

Users also derive varying value from technologies such as AI, AIS, and remote inspection, as different firms possess varying technological capacities. Regarding the ease and benefits of these technologies, users hold diverse opinions. The idea behind the Technology Acceptance Model (TAM)—a unique framework for explaining the acquisition of new knowledge related to technology and work processes—is consistent with this condition (Davis, 1989). This framework is used to ensure user proficiency in understanding and operating new technological systems. Each individual's situation, the technology they use, and the timing of adoption all influence how quickly new technologies are embraced

(Noor Ardiansah et al., 2020). Perceived usefulness and perceived ease of use are the two main indicators shaping TAM.

According to Davis (1989), perceived ease of use refers to the degree to which a person believes that using a particular system would be free of effort. Users report that technology is easy to use when it is simple to understand, requires only a few steps to operate effectively, and does not require external assistance. Several studies indicate that users tend to continue using a technology if it is easy to use (Davis, 1989; Hansen et al., 2018; Tahar et al., 2020). Interest in adopting technology increases when it is perceived as easy to use and decreases when it is perceived as difficult to use (Kumala et al., 2020). User interest in utilizing AI, AIS, and Remote Audit technologies is directly proportional to how intuitive and user-friendly these technologies are.

Conversely, users' perception of a technology's usefulness increases when they perceive it as easy to use. Efficiency and performance improve when the technology is user-friendly, allowing users to experience its benefits more quickly (Nugroho & Fajar, 2017). People can complete more work in less time if the technology is not overly complex (Chi, 2018). According to multiple studies (Chi, 2018; Punnoose, 2012; Walczuch et al., 2007), perceived benefits of technology will increase if it is easy to use.

The purpose of this study is to address the knowledge gap in existing literature by investigating how auditor performance is influenced by AI, AIS, and Remote Auditing. It is crucial to assess how these technologies can be effectively leveraged to enhance auditor performance, as their use is growing rapidly within the auditing industry. In addition to contributing to the academic literature, this study aims to provide actionable recommendations for accounting and auditing firms on improving audit performance through technology adoption.

This study differs from prior research by simultaneously examining the effects of Artificial Intelligence (AI), Audit Information System (AIS), and Remote Audit on auditor performance, which are typically studied separately. It employs the Technology Acceptance Model (TAM) to assess technology adoption intentions and how ease of use and effectiveness directly affect auditor performance. Moreover, this study is conducted amid accelerated technological adoption in the post-pandemic era, making it more practically relevant and providing meaningful recommendations for accounting and auditing institutions.

LITERATURE REVIEW

Theory of Planned Behavior

In 1991, Ajzen developed the *Theory of Planned Behavior* (TPB). As an extension of the *Theory of Reasoned Action*, the Theory of Planned Behavior incorporates a third component—beliefs about the existence of variables that can facilitate or hinder the performance of a behavior—into the intention to perform that activity (Ajzen, 2006).

Technology Acceptance Model

The most influential and widely used hypothesis for explaining why people are willing to adopt new information systems is the *Technology Acceptance Model* (TAM). TAM is an extension of the original *Theory of Reasoned Action*. According to TAM, all technology users will choose a product or service based on its perceived usefulness and ease of use. This idea was cited by Pambudi (2019) from the work of Lee, Kozar, and Larsen (2016).

Artificial Intelligence

In computer science, *Artificial Intelligence* (AI) refers to software that mimics human intelligence in terms of thought processes and behavior. By using AI, auditors can perform their tasks more quickly, accurately, and efficiently within the auditing industry.

Audit Information System

An *Audit Information System* (AIS) is the process of examining and evaluating the information systems used by an organization or company. The data and information management infrastructure of an organization consists of hardware, software, computer networks, and human resources.

Remote Audit

A *Remote Audit* is the process of conducting an audit from a distance without the physical presence of the auditor at the company's location. During a conventional audit, auditors physically visit the company to review files, interview staff, and inspect systems and procedures.

RESEARCH METHOD

Research Design

Data analysis, examination of the research variables, and explanation of the interactions among these factors form the basis for decision-making in this study's quantitative research approach, which is grounded in hypothesis testing. This research aims to examine how Artificial Intelligence (AI), Audit Information System (AIS), and Remote Audit affect Auditor Performance. The subjects of this study are auditors, using individuals as the unit of analysis. These auditors work in Public Accounting Firms (KAP) located in Jakarta.

Sampling Technique and Data Collection

The sampling method used in this study is *purposive sampling*, a non-probability sampling technique where samples are selected based on specific purposes or criteria relevant to the research.

The sample characteristics are as follows:

- The respondents are auditors working at Public Accounting Firms headquartered in Jakarta.
- The auditors work in firms that have implemented Remote Auditing, Artificial Intelligence (AI), and Audit Information Systems (AIS).

RESULT AND DISCUSSION

Respondent Characteristics

This study aims to examine how AI, Audit Information Systems, and Remote Auditing Impact Auditor Performance. Primary data for this study was obtained by distributing questionnaires using Google Forms. Of the 150 questionnaires distributed, 115 respondents returned. Of these 115, 5 had incomplete data, resulting in a final sample of 110 respondents. The distribution of this data is shown in the table below:

Table 1.
Respondent Profile

Gender	**Frequency**	**Percentage (%)**
Male	58	52.7%
Female	52	47.3%
Age	**Frequency**	**Percentage (%)**
25 - 40 years	78	70.9%
41 - 49 years	30	27.3%
> 50 years	2	1.8%
Education	**Frequency**	**Percentage (%)**
High School/Vocational School/Equivalent	31	28.2%
Diploma	6	5.5%
S1	60	54.5%
S2	13	11.8%
Income	**Frequency**	**Percentage (%)**
1 - 5 years	57	51.8%
6 - 10 years	50	45.5%
15 - 20 years	3	2.7%

Based on the data presented, the majority of respondents in this study were male (58 respondents) (52.7%), while 52 were female (47.3%). In terms of age, the majority of respondents were between 25 and 40 years old (78 respondents) (70.9%), followed by 30 respondents aged 41–49 (27.7%), and only 2 (1.8%) were over 50. Based on education level, the majority of respondents had a bachelor's degree (60), followed by 31 high school graduates (28.2%), 13 master's degrees (11.8%), and 6 diplomas (5.5%). Meanwhile, based on length of service, the majority of respondents had 1–5 years of service (57 respondents) (51.8%), 50 respondents had 6–10 years of service (45.5%), and 3 respondents had 15–20 years of service (2.7%).

Instrument Test Results

Validity Test Results

The validity test in this study was conducted using SPSS 25 for Windows software. This can be seen from the test criteria, which include:

1. If the calculated r > r-table (with a 2-sided test with a significance level of 0.05), then the question items correlate significantly with the total score or value (declared valid).
2. If the calculated r < r-table (with a 2-sided test with a significance level of 0.05), then the question items do not correlate significantly with the total score or value (declared invalid).

Table 2.
Artificial Intelligence Validity Test Results

Indicator	Pearson Correlation	P-value	Decision
The AI system in auditing can help enhance my professional skepticism.	0.697**	0.000	Valid
The use of AI systems and tools in auditing will automate routine audit processes and procedures, allowing more time to focus on significant assessment areas.	0.845**	0.000	Valid
The use of AI systems will improve my understanding of the audited entity and the ongoing audit process.	0.764**	0.000	Valid
The use of AI systems and tools in auditing will facilitate better risk assessment.	0.751**	0.000	Valid
Using AI systems and tools in auditing will enable me to test large or complex datasets that would be impossible to analyze manually.	0.807**	0.000	Valid
The use of AI systems and tools in auditing will allow independent re-performance of complex calculations and modeling.	0.749**	0.000	Valid
The use of AI systems and tools in auditing will enhance consistency and centralized supervision in group audits.	0.729**	0.000	Valid
The use of AI systems and tools in auditing will identify potential fraud cases.	0.714**	0.000	Valid
The use of AI systems and tools in auditing will identify unusual patterns that may not be visible using more traditional audit techniques.	0.776**	0.000	Valid

From the validity test results above, it can be seen that the calculated r-value of the nine indicators is greater than 0.5, and the probability value is less than 0.5. Therefore, it can be concluded that the nine indicators used to measure the Artificial Intelligence variable are valid.

Table 3.
Information System Audit Validity Test Results

Indicator	Pearson Correlation	P-value	Decision
The use of the Audit Information System makes audit work faster.	0.732**	0.000	Valid
The use of the Audit Information System increases auditor productivity.	0.722**	0.000	Valid

The use of the Audit Information System makes auditors' work easier.	0.806**	0.000	Valid
The Audit Information System is beneficial for auditors.	0.859**	0.000	Valid
The Audit Information System is easy for auditors to learn.	0.812**	0.000	Valid
The Audit Information System is easy to control.	0.773**	0.000	Valid
The Audit Information System is easy to understand.	0.814**	0.000	Valid
The Audit Information System is easy to use.	0.712**	0.000	Valid
The use of the Audit Information System makes audit work faster.	0.732**	0.000	Valid

From the validity test results above, it can be seen that the calculated r-value of the eight indicators is greater than 0.5, and the probability value is less than 0.5. Therefore, it can be concluded that the nine indicators used to measure the **Audit Information System** variable are valid.

Table 4.
Results of the Remote Auditing Validity Test

Indicator	Pearson Correlation	P-value	Decision
Remote auditing meetings become effective when auditors use supporting technology.	0.891**	0.000	Valid
Document review in the remote auditing process takes longer to convert records into reviewable file formats (such as PDF) and to upload those files.	0.902**	0.000	Valid
The use of technology during the field inspection stage helps improve audit quality in the remote auditing process.	0.725**	0.000	Valid
In remote interview processes, video calls are more effective than voice calls.	0.903**	0.000	Valid

From the validity test results above, it can be seen that the calculated r-value of the four indicators is greater than 0.5, and the probability value is less than 0.5. Therefore, it can be concluded that the four indicators used to measure the **remote auditing** variable are valid.

Table 6.
Results of the Auditor Performance Validity Test

Indicator	Pearson Correlation	P-value	Decision
The results of my audit work are always evaluated positively.	0.732**	0.000	Valid

I carry out audit examinations in accordance with established procedures and policies.	0.795**	0.000	Valid
I am able to complete more audit tasks within a certain period compared to my colleagues.	0.811**	0.000	Valid
Maintaining and improving relationships with clients is an important part of my job.	0.713**	0.000	Valid
In performing audit work, I can achieve optimal performance while saving time and costs.	0.804**	0.000	Valid
I create plans and schedules in my audit work because they affect the timeliness and quality of the results for which I am responsible.	0.775**	0.000	Valid

From the validity test results above, it can be seen that the calculated r-value of the six indicators is greater than 0.5, and the probability value is less than 0.5. Therefore, it can be concluded that the four indicators used to measure the auditor performance variable are valid.

Reliability Test

In addition to validity testing, model measurements are also conducted to test the reliability of a construct. Reliability testing is conducted to assess the accuracy, consistency, and precision of the instrument in measuring the construct. The threshold typically used to assess construct reliability is a Cronbach's alpha value greater than 0.6.

Table 7.
Reliability Test Results

Variable	Cronbach Alpha	Decision
Artificial Intelligence	0.898	Reliable
Audit Information System	0.902	Reliable
Remote Audit	0.875	Reliable
Audit Quality	0.862	Reliable

The reliability test results show that all variables have a Cronbach's alpha value greater than 0.6, indicating good reliability for all indicators used.

Hypothesis Testing

This study used statistical methods, employing structural analysis. According to Sekaran and Bougie (2016), this method can predict changes in the dependent variable associated with changes in the independent variable. The error tolerance limit used was 5% (α=0.05), with the following decision-making basis:

1. If the p-value is <0.05, then H_o is rejected, indicating a significant effect. The conclusion is that the hypothesis is accepted.
2. If the p-value is >0.05, then H_o is accepted, indicating no significant effect. The conclusion is that the hypothesis is rejected.

Table 8.
Hypothesis Testing Results

Hypothesis	Prediction	B	p-Value (one-tailed)	Decision
H1: Artificial Intelligence has a positive effect on Auditor Performance	(+)	0.255	0.033	Ha Supported
H2: Audit Information System has a positive effect on Auditor Performance	(+)	0.528	0.000	Ha Supported
H3: Remote Audit has a positive effect on Auditor Performance	(+)	0.156	0.036	Ha Supported
Adjusted R Square	0.501			
Prob F	0.000			

Based on Table 8 above, the regression equation is as follows:

KA = 0.080 + 0.0255 AI + 0.528 AIS + 0.156 RA

Where:
AI = Artificial Intelligence
AIS = Audit Information System
RA = Remote Auditing
KA = Audit Quality

H1: Artificial intelligence has a positive effect on auditor performance

The hypothesis testing results show that the significance value for artificial intelligence on auditor performance is 0.033 < 0.05, with an influence value of 0.255. Therefore, it can be concluded that artificial intelligence has a positive and significant effect on auditor performance, thus supporting Hypothesis 1.

H2: Audit Information Systems have a positive effect on Auditor Performance

The results of the hypothesis testing indicate that the significance value for audit information systems on auditor performance is 0.000 < 0.05, with an influence value of 0.528. This concludes that there is a positive and significant influence of audit information systems on auditor performance, thus supporting Hypothesis 2.

H3: Remote Audits have a positive effect on Auditor Performance

The results of the hypothesis testing indicate that the significance value for remote auditing on auditor performance is 0.036 < 0.05, with an influence value of 0.156. This concludes that there is a positive and significant influence of re-note auditing on auditor performance, thus supporting Hypothesis 3.

Coefficient of Determination Test

The purpose of this analysis is to determine the extent to which the dependent variable can be explained by the independent and control variables. Because there is more than one independent variable, the test uses a modified α2 value. The explanatory power of the independent and control variables on the dependent variable is indicated by the adjusted *R*2 value approaching 1. The following are the decision-making requirements:

1. If the adjusted *R*2 value approaches 1, the independent and control variables' ability to explain the dependent variable is increasing.

2. If the adjusted $R2$ value approaches 0, the independent and control variables' ability to explain the dependent variable is decreasing.

The results of the Coefficient of Determination Test show that the adjusted R2 value is 0.501, indicating that 50.1% of the audit quality variable can be explained by the independent variables, consisting of artificial intelligence, audit information systems, and remote audits. The remaining 49.9% is explained by variables outside the research model.

Model Test (F-test)

This test determines whether there is a statistically significant relationship between the independent and dependent variables.

The hypotheses in the F-test are stated as follows:

a. If the p-value ≤ α (significant): Reject H0 and accept H1. This means that statistically there is sufficient evidence to conclude that there is a linear relationship between the independent and dependent variables. The regression model may not fit the data well.
b. If the p-value > α (significant): Fail to reject H0. This means that statistically there is insufficient evidence to conclude that there is a linear relationship between the independent and dependent variables. The regression model may not fit the data well.

The table above shows that the probability value is 0.0000, which is less than α = 0.05, so H0 is rejected. This means that at least one regression coefficient is not equal to zero (there is a linear relationship between the independent and dependent variables), and the model is said to be fit.

Discussion of Research Findings

H1. Artificial Intelligence Positively Influences Auditor Performance

The test results show that artificial intelligence has a positive influence on auditor performance. This suggests that the use of artificial intelligence will improve auditor performance. This finding is possible because AI makes audits more efficient and accurate. By automating tedious and repetitive processes, auditors can devote their time and energy to more complex and valuable analyses, which are enabled by AI. AI also enables faster data collection and analysis of more complex yet accurate data, which will improve auditor performance. The impact of AI on audit quality is also related to the TPB theory, which indicates that subjective norms, or how a person interprets societal standards, also influence behavioral intentions. Furthermore, according to the TPB, people are more likely to act in a certain way if they perceive a high level of control over it. User intentions and choices can be predicted by AI using data on attitudes, subjective norms, and perceived behavioral control. All of the above indicate that AI will be used if users find it easy to handle, perceive it as having several advantages, and can implement it relatively easily.

This research aligns with research conducted by Smiths (2020), which showed a positive and significant impact of artificial intelligence on auditor performance.

H2. Audit Information Systems Have a Positive Effect on Auditor Performance

The test results show that Audit Information Systems have a positive effect on auditor performance. This suggests that the use of Audit Information Systems will improve auditor performance. This is because the "Audit Information System (AIS) has a positive effect on auditor performance" developed from the knowledge that AIS can make audits more efficient and effective, which in turn makes auditors feel satisfied with their work. With the use of AIS tools and technology, auditors can automate routine operations, gain real-time data access, and perform more in-depth data analysis. The relationship between TPB and Audit

Information System is that, in TPB, attitude is an individual's perception of an action, in this case, the use of AIS. If auditors feel that AIS improves work efficiency, they are more likely to use it. Then there is subjective norm, which relates to AIS and includes factors such as the impact of superiors, peers, or industry norms on AIS users. The likelihood that auditors will use AIS increases if they see that their superiors and peers support the practice or if rules specifically require its use. In addition, there is the concept of perceived behavioral control, which is the degree to which an individual believes they can influence or direct certain behaviors. This control relates to auditors' perceptions of their own capacity to use AIS; if they are confident in their knowledge of the system and feel encouraged by the surrounding environment, they are more likely to use it. Results This research is in line with research conducted by Brown (2019) which found an influence of the Audit Information System on Auditor Performance.

H3: Remote Auditing Positively Influences Auditor Performance

The test results show that remote auditing positively influences auditor performance. This suggests that the use of remote auditing in audit activities will improve auditor performance. This occurs because remote auditing increases the flexibility and efficiency that come from using remote audits. With remote audits, auditors can view and evaluate data without leaving their current location, saving time and avoiding tiring physical travel. The audit team and client can communicate and collaborate more efficiently thanks to the collaboration capabilities provided by this technology. The relationship between the TPB and Remote Auditing is that auditors can use the TPB to better understand how to conduct audits remotely, without being physically present. Auditors' perspectives on the efficacy and efficiency of remote auditing determine their attitudes toward such audits. The likelihood of adopting remote auditing increases if it is perceived to offer several benefits. Second, the auditor's perceived level of behavioral control over remote auditing determines the extent to which remote auditing is used; if perceived as competent, remote auditing is likely to be used, but if perceived as incompetent, remote auditing is unlikely to be used. The primary factor determining whether or not an action is taken within the TPB is the perpetrator's objective. Auditors are more likely to implement it if they possess a positive attitude, a high level of control, and other supporting elements. The results of this study align with research conducted by Johnson (2021), which demonstrated the influence of audit renotes on auditor performance.

CONCLUSION

This study aims to examine the influence of artificial intelligence, audit information systems, and remote audits on auditor performance. The results show that:

1. Artificial intelligence has a positive and significant influence on auditor performance.
2. Audit information systems have a positive and significant influence on auditor performance.
3. Remote audits have a positive and significant influence on auditor performance.

REFERENCES

Arfah, E. A., & Dahniar, A. (2019). Moderasi kecerdasan emosional: Pengaruh role stress terhadap Kinerja Auditor. ATESTASI: Jurnal Ilmiah Akuntansi, 2(2), 135–147.

https://doi.org/10.33096/atestasi.v2i2.327

Brown, T. (2019). The Role of Audit Information Systems in Enhancing Auditor Performance. *Journal of Information Systems*, 33(2), 189-210.

Chi, T. (2018). Understanding Chinese consumer adoption of apparel mobile commerce: An extended TAM approach. Journal of Retailing and Consumer Services, 44(July), 274–284. https://doi.org/10.1016/j.jretconser.2018.07.019

Davis, F. D. (1989). Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology. MIS Quarterly, September, 319–339. https://doi.org/https://doi.org/10.2307/249008

Elpitasari, S., Andrean, V. D., Zulfa, P., & Khoiriawati, N. (2022). Pemanfaatan Audit terhadap Sistem Informasi Akuntansi. Research in Accounting Journal (RAJ), 2(3), 420-425.

Hansen, J. M., Saridakis, G., & Benson, V. (2018). Risk, trust, and the interaction of perceived ease of use and behavioral control in predicting consumers' use of social media for transactions. Computers in Human Behavior, 80, 197–206. https://doi.org/10.1016/j.chb.2017.11.010

Johnson, M. (2021). The Impact of Remote Auditing on Auditor Performance and Attitudes. *International Journal of Auditing*, 28(4), 334-352.

Noor Ardiansah, M., Chariri, A., Rahardja, S., & Udin. (2020). The effect of electronic payments security on e-commerce consumer perception: An extended model of technology acceptance. Management Science Letters, 10(7), 1473–1480. https://doi.org/10.5267/j.msl.2019.12.020

Nugroho, M. A., & Fajar, M. A. (2017). Effects of Technology Readiness Towards Acceptance of Mandatory Web-Based Attendance System. Procedia Computer Science, 124, 319–328. https://doi.org/10.1016/j.procs.2017.12.161

Triatmaja, M. F. (2019). Dampak artificial intelligence (AI) pada profesi akuntan. Seminar Nasional dan The 6th Call For Syariah Paper (SANCALL) 2019.