



## **Effect of artificial intelligence on transparency and efficiency in government accounting**

Nwanoro, JULIET Adaku<sup>1</sup>, Ogune Oke<sup>2</sup>, & Ven. Prof. Onuora, J.K.J<sup>3</sup>

<sup>1,2,&3</sup> Department of Accountancy, Faculty of Management Sciences , Chukwuemeka Odumegwu Ojukwu University, Igbariam, Anambra State Nigeria

**Corresponding Author:** Nwanoro, JULIET Adaku

**Corresponding Author Email:** [ja.nwanoro@coou.edu.ng](mailto:ja.nwanoro@coou.edu.ng)

### **Article Info**

**Volume No:** 1

**Issue No:** 2

**Page No:** 72-89

**Received:** 15-10-25

**Accepted:** 21-11-25

**Published:** 29-12-25

### **Abstract**

This study examined the impact of artificial intelligence on transparency and efficiency in government accounting in Nigeria. The specific objectives were to evaluate the extent to which AI expert systems enhance transparency, assess their effect on accounting efficiency, and investigate how implementation challenges influence efficiency in public sector operations. A survey research design was employed, targeting employees involved in accounting, finance, and administrative functions across federal public institutions, with a sample size of 400 respondents selected using snowball sampling from population of 720,000 federal workers. Data were collected through a structured questionnaire and analyzed using simple linear regression to test the research hypotheses at a 5% significance level. The findings revealed that: AI expert systems have a positive and significant effect on transparency in government accounting processes in Nigeria ( $\beta = 0.817$ ,  $p = 0.000$ ); AI expert systems have a positive and significant effect on the efficiency of government accounting operations ( $\beta = 0.558$ ,  $p = 0.000$ ); challenges in implementing AI expert systems negatively and significantly affect the efficiency of government accounting operations ( $\beta = -0.819$ ,  $p = 0.000$ ). The study concluded that adopting and properly integrating AI expert systems can strengthen financial management in public institutions, though addressing implementation challenges is essential for maximizing their benefits. Therefore, the study recommended that the Office of the Accountant General of the Federation should actively expand the adoption of AI expert systems across all federal public institutions. This will ensure that financial records are more accessible and verifiable, reducing opportunities for misreporting and improving accountability in government operations.

**Keywords:** Artificial Intelligence, Transparency, Efficiency, Government Accounting.

---

## INTRODUCTION

The evolution of technology has transformed the way organizations operate, with governments increasingly relying on digital tools to manage public resources, monitor expenditures, and improve service delivery. Accounting in the public sector is a critical function that ensures taxpayer funds are properly utilized, financial statements are accurate, and public trust is maintained (Siahay, 2023). Traditionally, government accounting relied on manual processes that were labor-intensive, time-consuming, and prone to human error (Nworie et al., 2022). In recent years, however, the adoption of advanced technologies has begun to reshape this terrain, offering new opportunities for efficiency and accountability (Cifuentes-Faura, 2024). Artificial intelligence, particularly in the form of AI expert systems, has emerged as a powerful tool capable of automating complex tasks, analyzing large datasets, and identifying patterns that may not be apparent to human accountants. This transformation is occurring against a backdrop of growing demands for greater transparency in government operations. Citizens, oversight bodies, and other stakeholders increasingly expect governments to operate in a way that is open, verifiable, and accountable. In this context, the integration of artificial intelligence into government accounting presents both opportunities and challenges, offering potential solutions to long-standing inefficiencies while raising questions about reliability, ethical use, and the management of digital systems in public administration.

In today's business environment, artificial intelligence has become more than just a technological innovation; it represents a strategic resource that can influence organizational performance. For government accounting, the relevance of AI lies in its ability to process complex financial data at speeds far beyond human capacity, detect anomalies in transactions, and generate reports that are both timely and accurate (Maione et al., 2021). This capability directly affects transparency, as AI systems can ensure that records are consistent, traceable, and accessible to relevant stakeholders. Transparency in government accounting is essential for fostering trust between public institutions and citizens, reducing opportunities for corruption, and supporting informed decision-making (Amalia, 2023). Similarly, efficiency is a central concern in public sector financial management. Government accounting often involves repetitive tasks such as reconciling accounts, preparing budgets, and auditing expenditures. AI expert systems can automate these functions, freeing up accountants to focus on strategic analysis and oversight. As governments face increasing pressure to optimize resource allocation, improve fiscal discipline, and respond rapidly to economic changes, the application of AI in accounting provides a means to achieve these goals while maintaining the integrity and accountability of financial information (Igbokwe et al., 2025). The relevance of AI in this context is therefore not merely technical but also strategic, influencing how governments plan, implement, and monitor their financial operations.

Artificial intelligence has the potential to significantly enhance both transparency and efficiency in government accounting. By automating routine processes, AI reduces the likelihood of errors and inconsistencies that can compromise the accuracy of financial reports (Shaban et al., 2025). Expert systems, in particular, are designed to mimic the decision-making processes of experienced accountants, allowing for complex evaluations of transactions, compliance checks, and risk assessments (Emetaram & Uchime, 2021). This capability strengthens transparency by providing a verifiable audit trail for financial activities, enabling both internal and external stakeholders to assess the legitimacy and accuracy of accounting records. Efficiency is also improved as AI can process vast amounts of data quickly, identify irregularities, and generate useful hints without the delays associated with manual processing. In addition, AI systems can support predictive analytics, helping

government agencies anticipate financial trends, allocate resources more effectively, and detect potential fraud before it escalates (Bello & Olufemi, 2024). The impact of AI extends beyond the immediate accounting functions to the broader governance framework, as transparent and efficient financial management enhances public confidence, reduces administrative costs, and supports policy implementation. By integrating AI into government accounting, public institutions can achieve a higher level of operational performance while ensuring that financial information remains accessible, reliable, and accountable to all stakeholders (Maione et al., 2021). This shift marks a critical step toward modernizing public financial management and aligning government practices with the expectations of a digitally connected society.

Government accounting plays a crucial role in ensuring that public funds are properly managed, financial reports are accurate, and citizens can trust that their resources are being used responsibly (Igbokwe et al., 2025). In a well-functioning system, financial transactions are recorded systematically, budgets are monitored closely, and audits are conducted regularly to confirm compliance with established regulations. Public officials are able to access reliable information quickly, enabling them to make informed decisions, allocate resources efficiently, and detect irregularities before they escalate. Transparency is maintained through clear documentation and accessible reporting, while efficiency is supported by streamlined processes that minimize delays and reduce the likelihood of errors (Aldemir et al., 2025). In this environment, government accounting not only safeguards public funds but also promotes accountability and public confidence in the management of financial resources.

In reality, many government accounting systems face challenges that hinder transparency and efficiency. Manual processes, outdated software, and fragmented record-keeping often result in delays, inaccuracies, and difficulties in reconciling financial information. Financial reports may be incomplete or inconsistent, and auditing procedures can be slow and resource-intensive, leaving room for errors and potential misuse of funds. The lack of timely and reliable information prevents public officials from making fully informed decisions, while citizens and oversight bodies struggle to access clear and verifiable records of government expenditures. These challenges are compounded by growing volumes of financial data and increasing demands for accountability, making it difficult for traditional systems to keep pace with modern requirements. The consequences of these challenges are significant. Inefficiencies in government accounting can lead to misallocation of resources, reduced effectiveness of public programs, and weakened public trust in government institutions. Delays in detecting errors or irregularities increase the risk of financial mismanagement, fraud, or corruption (Igbokwe et al., 2025). The inability to access accurate and timely information also hampers strategic planning and decision-making, limiting the government's capacity to respond to economic changes or public needs effectively. Hence the justification for this study.

### **Objective of the Study**

The main objective of the study was to examine the impact of artificial intelligence, specifically AI expert systems, on transparency and efficiency in government accounting. The specific objectives are:

1. To evaluate the extent to which AI expert systems enhance transparency in government accounting processes in Nigeria.
2. To assess the degree to which AI expert systems improves the efficiency of government accounting operations in Nigeria.
3. To investigate the effect of challenges of implementation of AI expert systems on the efficiency of government accounting operations in Nigeria.

### **Research Hypotheses**

H<sub>01</sub>: AI expert systems have no significant effect on transparency in government accounting processes in Nigeria.

H<sub>02</sub>: AI expert systems have no significant effect on the efficiency of government accounting operations in Nigeria.

H<sub>03</sub>: The effect of challenges of implementation of AI expert systems do not significantly affects the efficiency of government accounting operations in Nigeria.

## **LITERATURE REVIEW**

### **Conceptual Review**

#### ***Artificial Intelligence***

Artificial intelligence refers to the ability of machines or computer systems to perform tasks that typically require human intelligence (Mmadubuobi et al., 2024). These tasks include recognizing patterns, learning from data, making decisions, and adapting to new situations. Artificial intelligence allows systems to process large amounts of information quickly and accurately, often performing functions that would be difficult or time-consuming for humans (Igbokwe et al., 2025). Over time, artificial intelligence has evolved from simple rule-based programming to sophisticated systems capable of learning and improving their performance over time. Its presence is visible in a range of applications, from automated customer service to predictive analytics in finance, healthcare, and public administration. Artificial intelligence does not merely follow a set of instructions but can examine data, identify trends, and respond in ways that reflect a form of problem-solving ability (Ikwuo et al., 2024). The technology has been instrumental in transforming how organizations operate, enhancing decision-making, reducing errors, and creating efficiencies across various domains. In public administration, artificial intelligence offers opportunities for streamlining operations, improving accuracy in reporting, and supporting complex analyses that inform policy and resource allocation (Aldemir et al., 2025). By simulating aspects of human reasoning, artificial intelligence enables systems to anticipate outcomes, evaluate alternatives, and respond to changes in real time. Its use has grown in prominence as data volumes increase and the demand for quick, accurate processing becomes more critical. As a field, artificial intelligence combines elements of computer science, mathematics, and logic, producing systems that are not only automated but capable of adapting to circumstances and continuously refining their performance. Its presence in modern government and business operations highlights its potential to reshape how decisions are made and how information is managed.

#### ***AI Expert Systems***

AI expert systems are computer programs designed to mimic the decision-making abilities of human experts in specific areas (Gaba, 2022). They operate by applying a structured set of rules or a knowledge base to analyze information, solve problems, and provide recommendations (Berdiyeva et al., 2021). Unlike general artificial intelligence, expert systems are focused on a particular field, making them highly specialized and capable of handling complex tasks that would typically require human judgment. These systems rely on logical reasoning, comparisons with historical cases, and the application of established rules to offer solutions or guidance. AI expert systems are widely used in situations where consistency, speed, and accuracy are essential. In accounting and finance, for instance, they can evaluate transactions, flag inconsistencies, and ensure compliance with regulations (Emetaram & Uchime, 2021). The systems function by assessing inputs, consulting their knowledge base, and producing outputs that can guide decision-making processes. Their use reduces reliance on manual labor for repetitive tasks while providing a reliable and systematic approach to problem-solving. Expert systems also support learning within organizations, as their rules and knowledge can be updated based on new information or emerging best practices. By simulating the thought processes of experienced professionals, these systems

enhance operational performance and improve the quality of outputs. In government accounting, AI expert systems can assist in managing large volumes of financial data, verifying the accuracy of entries, and ensuring that reporting standards are maintained. They offer a level of consistency and objectivity that is difficult to achieve with human judgment alone. Their integration into operations reflects a broader trend of using technology to enhance decision-making, reduce errors, and provide a transparent record of activities.

### ***Transparency in Government Accounting***

Transparency in government accounting refers to the practice of making financial information clear, accessible, and understandable to relevant stakeholders, including citizens, oversight agencies, and public officials (Amalia, 2023). It involves the open presentation of financial records, reports, and transactions in a manner that allows for verification and accountability (Shaban et al., 2025). Transparent accounting ensures that all activities related to the collection, allocation, and expenditure of public funds can be examined and monitored by those responsible for oversight as well as by the public. This openness builds confidence in government operations and reduces opportunities for misuse of resources or corruption. Transparency in government accounting requires that records are maintained accurately and consistently, providing a complete view of financial activities over time. It also ensures that information is communicated clearly, enabling stakeholders to understand the rationale behind financial decisions and to trace funds from collection to expenditure. By allowing stakeholders to access reliable data, transparency strengthens the ability to evaluate government performance and hold officials accountable (Shaban et al., 2025). It also fosters trust, as citizens are reassured that resources are being managed responsibly. In practical terms, transparency is demonstrated through regular reporting, audits, and clear documentation of transactions and processes. The approach emphasizes clarity, accuracy, and accessibility, allowing financial activities to withstand scrutiny and evaluation (Amalia, 2023). Governments that prioritize transparency in accounting create an environment where decisions can be justified and monitored, contributing to better governance and public confidence in financial management systems.

### ***Efficiency of Government Accounting***

Efficiency of government accounting relates to the ability to manage financial processes in a way that maximizes productivity, reduces waste, and ensures timely and accurate recording of transactions (Lyezia & Katamba, 2024). It emphasizes completing accounting tasks with minimal delays while maintaining high standards of accuracy and compliance. Efficient government accounting ensures that budgets are monitored effectively, expenditures are tracked, and reports are produced on schedule. It enables public institutions to allocate resources appropriately and respond quickly to financial requirements or changes. Efficiency also involves the optimal use of personnel, technology, and systems to achieve the intended outcomes without unnecessary duplication of effort or resource expenditure (Bhawna & Gupta, 2025). In government operations, this quality is critical because delays, errors, or mismanagement of funds can have wide-reaching consequences for public services and citizen trust. Efficient accounting practices include streamlined processes, automated record-keeping, and systematic checks to prevent errors. By improving the flow of information and minimizing redundancies, efficiency contributes to faster decision-making, better resource utilization, and enhanced oversight (Kuswara et al., 2024). In addition, efficient accounting allows for timely identification of discrepancies and supports proactive management of public funds. Governments that maintain efficiency in accounting operations can deliver programs and services more reliably, ensure compliance with regulations, and foster confidence among stakeholders. The focus on speed, accuracy, and effective resource use highlights the role of efficiency in strengthening the overall performance of public financial management.

### ***Challenges of Implementation of AI Expert Systems***

The challenges of implementing AI expert systems refer to the difficulties and obstacles that organizations encounter when integrating these systems into existing operations (Aldemir & Uçma, 2025). These challenges can be technical, organizational, financial, or human in nature. Technical challenges include ensuring that the system is compatible with existing infrastructure, managing data quality, and maintaining system reliability (Maione et al., 2021). Organizational challenges involve aligning the system with established processes, obtaining buy-in from staff, and addressing resistance to change. Financial challenges relate to the costs of acquiring, customizing, and maintaining the system (Okafor & Nworie, 2025; Nworie et al., 2022), which can be significant for large-scale government operations. Human challenges include training staff to use the system effectively and ensuring that knowledge is transferred appropriately. The implementation process often requires careful planning, testing, and monitoring to ensure that the system performs as intended (Bhawna & Gupta, 2025). Without proper management, the introduction of AI expert systems can disrupt workflows, create confusion, and fail to deliver the anticipated improvements in performance. These challenges also include ethical considerations, such as ensuring that automated decisions remain accountable and do not disadvantage certain stakeholders. In government accounting, the difficulty of handling large volumes of historical financial data, integrating new systems with traditional processes, and ensuring transparency and accuracy adds complexity to the implementation process. Addressing these challenges requires a combination of technical expertise, organizational support, and ongoing evaluation to ensure that the system functions effectively and contributes to improved accounting outcomes (Aldemir & Uçma, 2025).

### **Theoretical Framework**

The Technology Acceptance Model was developed by Fred Davis in 1986 as part of his doctoral research at the Massachusetts Institute of Technology (Martin, 2022). The model emerged from the broader field of information systems research and was designed to explain and predict how individuals adopt and use new technologies. Davis built upon earlier work on behavioral theories, particularly the Theory of Reasoned Action, to create a framework that focused specifically on technology use. The model was introduced as a way to understand why people accept or reject information technology and to identify the factors that influence their decisions. Since its inception, TAM has been widely applied in studies involving computers, software, and other technological innovations, providing a foundation for evaluating user behavior and system implementation in organizational settings.

The main postulations of the Technology Acceptance Model revolve around two key factors: perceived usefulness and perceived ease of use (Davis, 1989). Perceived usefulness refers to the degree to which a person believes that using a particular system will enhance their job performance or achieve specific goals more effectively. Perceived ease of use, on the other hand, refers to the degree to which an individual believes that using the system will be free of effort (Martin, 2022). These two factors jointly influence an individual's attitude toward using a technology, which in turn shapes their behavioral intention to adopt it. The model also recognizes that external variables, such as system design, training, and support, can affect perceptions of usefulness and ease of use (Nworie & Okafor, 2023). By examining these relationships, TAM provides a framework for understanding how users form attitudes about new technologies and how these attitudes translate into actual use within an organization.

The Technology Acceptance Model is highly relevant to the study of artificial intelligence, specifically AI expert systems, in government accounting. The adoption and successful integration of these systems depend largely on the perceptions of accounting staff and public officials. If users perceive that AI expert systems will improve transparency, streamline reporting, and reduce errors, they are more likely to embrace the technology. Similarly, if the systems are seen as easy to operate and compatible with existing processes, adoption rates are

likely to increase. TAM provides a lens for examining the factors that influence acceptance, highlighting the importance of user perceptions in determining the effectiveness of AI implementation. By applying this theory, the study can better understand the relationship between technology adoption and improvements in transparency and efficiency in government accounting, offering hints into how these systems can be introduced and utilized successfully.

### **Empirical Review**

Igbokwe et al. (2025) explored the contribution of artificial intelligence in improving administrative accountability and reporting in four selected public organizations in Enugu State, including the Enugu State Transport Company (ENTRACO), Enugu State Water Corporation, Enugu State Fire Service, and Enugu State Vegetable Oil Product Limited, covering the period from 2016 to 2024. The study focused on assessing the level of AI adoption and use in these organizations, examining its role in enhancing administrative transparency, and determining its effectiveness in reducing corrupt practices. The research employed a survey design, targeting a population of 6,308 employees across the four organizations, with a sample of 306 respondents selected using Taro Yamane's sampling method. Data were analyzed using simple percentages, while chi-square tests were applied to test the hypotheses at a 0.05 significance level. The results showed that the adoption and use of AI in the selected public organizations were relatively low. However, AI was found to have a significant positive effect on enhancing administrative transparency and reducing corruption, demonstrating its potential to improve governance practices in public organizations in Enugu State.

Shaban et al. (2025) examined how AI-driven financial transparency impacts corporate governance and regulatory reform in Jordan. The study collected data from 564 corporate professionals across key sectors using a stratified random sampling approach. Analysis through structural equation modeling and multiple regression revealed that AI adoption significantly improves corporate governance effectiveness, enhances risk management, and strengthens stakeholder engagement. The study also highlighted that AI facilitates regulatory compliance by automating monitoring processes and reducing human errors in financial reporting. Despite these benefits, challenges such as algorithmic bias, data privacy concerns, and the need for regulatory adjustments were identified, emphasizing the importance of addressing these issues to maximize the advantages of AI in governance.

Aldemir et al. (2025) investigated the transformative potential of AI in enhancing financial accountability and governance in the public sector. The study focused on Estonia, Singapore, and Finland, countries known for their innovative use of AI in public administration. Using a qualitative case study approach, the research examined literature, government reports, case studies, and public feedback to explore how AI solutions like predictive analytics, fraud detection, and automated reporting improve operational efficiency, transparency, and decision-making. The study also acknowledged challenges, including algorithmic bias, data privacy, and the need for ethical guidelines, highlighting the importance of aligning technological advancement with ethical and democratic standards.

Changkui et al. (2025) explored the use of AI in government decision-making, focusing on its applications, challenges, and policy recommendations. The study discussed AI's role in improving policy analysis, administrative efficiency, financial management, and public engagement. Challenges such as algorithmic bias, data privacy, explainability, and regulatory gaps were identified. The study recommended the creation of AI ethics councils, explainability standards, public AI literacy programs, and transparency laws. It also emphasized future research on hybrid human-machine governance to ensure that AI adoption aligns with accountability and democratic principles.

Abdallah et al. (2025) examined factors influencing AI implementation in the accounting industry, comparing the public and private sectors. Using the technology–organization–

environment model, innovation diffusion theory, and the technology acceptance model as the framework, the study collected 561 surveys from accounting, auditing, and finance professionals in Kuwait. Analysis with partial least squares structural equation modeling showed that most individual and organizational factors significantly affect AI implementation, although competitive pressure was not statistically significant. Differences between private and public sectors were found regarding organizational culture, regulatory support, and perceived ease of use of AI.

Nsoke et al. (2024) studied how AI enhances government financial management in Nigeria, focusing on operational efficiency and the complexities of integration. Using qualitative methods and efficiency theory as the framework, the study found that AI improves accuracy, budget forecasting, decision-making, and overall efficiency, despite challenges such as limited skilled personnel, cost, integration issues, and legal alignment. These challenges, however, were not significant enough to prevent AI adoption.

Ogunbangbe et al. (2024) examined the impact of AI on accounting staff and fraud prevention. The study concluded that AI enhances the quality of accounting information without causing widespread unemployment. It emphasized the need for accountants to develop technical expertise and suggested expanding the use of machine learning and image recognition, as well as providing continuous training in data mining to improve audit practices.

Agba et al. (2023) analyzed the intersection of AI and public governance in both developed and developing countries. The study found that AI can improve policymaking, public service delivery, financial management, and data processing. However, challenges include the high cost of implementation and the need for skilled personnel. The study concluded that AI has significant potential to improve governance but requires strong political support and investment.

Mbonigaba (2023) investigated AI's role in enhancing financial reporting accuracy in Rwandan enterprises. Using surveys and interviews, the study found an 80% reduction in financial errors and a 17-percentage-point increase in reporting accuracy after AI implementation. Despite challenges like high costs and limited expertise, AI training investments increased, highlighting the importance of fostering adoption to improve transparency and efficiency.

Maione et al. (2021) examined the factors enabling and limiting AI adoption in public sector accounting in Italy. Using qualitative interviews with 45 municipal accounting managers, the study applied the Innovation Diffusion Theory attributes of relative advantage, compatibility, complexity, trialability, and observability. Findings indicated that public sector accounting in Italy is transitioning, with AI technologies still in early adoption phases, reflecting both interest and immaturity in their application.

### **Gap in Literature**

Despite the growing body of research on artificial intelligence in accounting and public administration, several gaps remain in understanding its impact on government accounting in Nigeria. Studies such as Igbokwe et al. (2025) focused on AI adoption and administrative transparency in selected public organizations in Enugu State, while Shaban et al. (2025) examined AI-driven financial transparency in corporate governance in Jordan. Similarly, Aldemir et al. (2025) and Changkui et al. (2025) explored AI's role in operational efficiency, financial accountability, and policy decision-making in public sectors outside Africa, but did not specifically investigate the Nigerian context. Abdallah et al. (2025) compared AI implementation between public and private accounting sectors in Kuwait, highlighting organizational and regulatory differences, while Nsoke et al. (2024) investigated AI integration in Nigerian public financial management without focusing on transparency or operational efficiency systematically. Ogunbangbe et al. (2024) examined AI's effects on

accounting staff and fraud prevention, and Agba et al. (2023) explored AI in public governance broadly, yet neither directly addressed the combined impact on transparency and efficiency in Nigerian government accounting. Mbonigaba (2023) and Maione et al. (2021) provided evidence on financial reporting accuracy and adoption challenges in Rwanda and Italy, respectively, but their findings cannot be generalized to Nigeria due to contextual differences. Collectively, these studies highlight AI's potential benefits and challenges, yet there is limited empirical evidence on the extent to which AI expert systems improve transparency and efficiency in Nigerian government accounting and how implementation challenges influence operational outcomes. Therefore, this study addresses this gap by providing a focused investigation within the Nigerian federal public sector context, combining transparency, efficiency, and implementation barriers as central variables for empirical analysis.

### METHODOLOGY

This study adopted a survey research design. The survey approach was considered appropriate as it allowed for the collection of primary data from employees across various public sector institutions in Nigeria. This design was suitable for examining the relationship between the adoption of AI expert systems and their impact on transparency and efficiency in government accounting. The survey method facilitated the efficient collection of information from a large number of respondents and enabled generalization of the findings to the wider population of accounting and finance personnel in public institutions (Cyril-Nwuche, 2025).

The target population comprised employees involved in accounting, finance, auditing, and administrative functions across federal public sector institutions in Nigeria, estimated at 720,000 personnel (The Punch, 2023). These employees were directly responsible for financial reporting, budgeting, and monitoring, making them relevant for assessing the effects of AI expert systems on transparency and efficiency. Due to the large and dispersed nature of the population and the absence of a comprehensive sampling frame, the study employed a snowball sampling technique. This approach involved identifying initial respondents who were knowledgeable about government accounting practices and AI implementation, who then referred other relevant personnel. Snowball sampling was particularly useful in reaching professionals with expertise in financial management and AI systems across different government agencies.

The sample size was determined using Taro Yamane's (1973) formula with a 5% margin of error:

$$N = \frac{N}{1 + N(e^2)}$$

Where:

n = sample size

N = population size (720,000)

e = margin of error (0.05)

$$n = \frac{720000}{1 + 720000(.05)}$$

n ≈ 400

Primary data were collected through a structured questionnaire, consisting of close-ended questions designed on a 5-point Likert scale ranging from Very High Extent (5) to Very Low Extent (1). The questionnaire measured respondents' perceptions of the extent to which AI expert systems enhance transparency, improve efficiency, and the effect of implementation challenges on accounting operations. Face and construct validity were ensured by consulting experts in public finance, accounting, and research methodology, who assessed the instrument for clarity, relevance, and alignment with the study objectives. Reliability of the questionnaire was assessed using Cronbach's Alpha through a pilot study involving 20 public sector employees outside the main study area. All variables produced coefficients above 0.70, indicating acceptable internal consistency.

Data analysis was conducted using the Statistical Package for the Social Sciences (SPSS) version 26. Descriptive statistics, including frequencies and means, were used to summarize carry out preliminary analysis of the responses. Simple linear regression analysis was employed to test the research hypotheses and examine the effects of AI expert systems on transparency, efficiency, and the influence of implementation challenges. The significance of regression coefficients was assessed at a 5% level ( $p < 0.05$ ). Hypothesis testing followed this criterion: if  $p\text{-value} < 0.05$ , the null hypothesis was rejected, indicating a statistically significant effect; if  $p\text{-value} \geq 0.05$ , the null hypothesis was not rejected, implying no significant effect.

**DATA ANALYSIS**

**Descriptive Analysis**

Table 1

*Descriptive Statistics*

S/N	AI Expert Systems	VLE	LE	N	HE	VHE	Mean
1	Our organization uses AI expert systems to support accounting processes.	4	60	80	171	85	3.68
2	AI expert systems help in automating financial reporting and record-keeping.	4	49	75	186	86	3.75
3	AI expert systems are integrated into the organization’s accounting workflows.	4	88	103	141	64	3.43
4	The use of AI expert systems improves accuracy and reliability in accounting operations.	68	–	108	179	45	3.50
<b>S/N Transparency in Government Accounting Processes</b>		<b>VLE</b>	<b>LE</b>	<b>N</b>	<b>HE</b>	<b>VHE</b>	<b>Mean</b>
5	AI expert systems make financial records more accessible and understandable.	14	76	117	145	48	3.34
6	The use of AI expert systems enhances clarity in reporting financial information.	8	71	102	153	66	3.49
7	Financial activities in our organization can be easily verified due to AI expert systems.	13	51	97	174	65	3.57
8	AI expert systems reduce errors and inconsistencies in financial reporting, promoting transparency.	4	54	94	175	73	3.65
<b>S/N Efficiency of Government Accounting Processes</b>		<b>VLE</b>	<b>LE</b>	<b>N</b>	<b>HE</b>	<b>VHE</b>	<b>Mean</b>
9	AI expert systems help speed up accounting processes and reduce delays.	4	54	86	202	54	3.62
10	Accounting tasks are completed with greater accuracy and less manual effort due to AI.	8	115	77	165	35	3.26
11	AI expert systems enable timely preparation of financial reports and statements.	12	84	111	160	33	3.29
12	The use of AI expert systems improves the overall efficiency of accounting operations.	4	46	64	214	72	3.76
<b>S/N Challenges of Implementation of AI Expert Systems</b>		<b>VLE</b>	<b>LE</b>	<b>N</b>	<b>HE</b>	<b>VHE</b>	<b>Mean</b>
13	Limited technical skills among staff affect the implementation of AI expert systems.	43	–	62	213	82	3.84
14	High cost of AI systems hinders their full adoption in accounting operations.	43	–	81	210	66	3.75
15	Integrating AI expert systems with existing financial processes is challenging.	51	101	69	102	77	3.13
16	Policy constraints limit the effectiveness of AI expert systems in accounting.	7	58	82	171	82	3.66

**Source:** *Field Survey (2025)*

Table 1 presents the descriptive statistics for responses on the use of AI expert systems, transparency, efficiency, and challenges in government accounting. Regarding AI expert systems, the first item shows that 171 respondents indicated a high extent of adoption, while 85 reported a very high extent, 80 were neutral, 60 indicated low extent, and only 4 reported very low extent. This distribution, with a mean of 3.68, suggests that most employees perceive that AI expert systems are being utilized to support accounting processes. The second item, concerning automation of financial reporting and record-keeping, similarly reflects strong

agreement, with 186 indicating high extent and 86 very high, a mean of 3.75, and fewer responses in the lower categories, confirming that AI is recognized for its role in automating reporting. Item three, on integration of AI into accounting workflows, has a wider spread, with 141 reporting high extent, 64 very high, 103 neutral, 88 low, and 4 very low, yielding a mean of 3.43, suggesting moderate integration but some variability among respondents. The fourth item, which addresses accuracy and reliability, shows 179 high and 45 very high responses, 108 neutral, and 68 low, giving a mean of 3.50, indicating that respondents generally agree that AI improves accuracy, though some still perceive gaps.

For transparency in government accounting, item five shows 145 respondents reporting high extent and 48 very high, with 117 neutral, 76 low, and 14 very low, resulting in a mean of 3.34. This indicates a moderate perception that AI makes financial records more accessible. Item six, on clarity in reporting, has 153 high and 66 very high responses, 102 neutral, 71 low, and 8 very low, yielding a mean of 3.49, which reflects a slightly stronger agreement. Item seven, about verification of financial activities, has 174 high and 65 very high, with 97 neutral, 51 low, and 13 very low, resulting in a mean of 3.57, showing that respondents largely believe AI enhances verifiability. Item eight, addressing error reduction, shows 175 high and 73 very high, 94 neutral, 54 low, and 4 very low, with a mean of 3.65, indicating strong agreement that AI promotes transparency by reducing errors.

Regarding efficiency, item nine, on speeding up accounting processes, has 202 high and 54 very high responses, 86 neutral, 54 low, and 4 very low, with a mean of 3.62, indicating strong agreement that AI improves speed. Item ten, concerning accuracy and reduced manual effort, shows 165 high and 35 very high, 77 neutral, 115 low, and 8 very low, giving a mean of 3.26, suggesting moderate perception. Item eleven, on timely report preparation, has 160 high and 33 very high, 111 neutral, 84 low, and 12 very low, mean 3.29, reflecting a similar moderate agreement. Item twelve, overall efficiency improvement, shows 214 high and 72 very high responses, 64 neutral, 46 low, and 4 very low, mean 3.76, indicating that respondents generally perceive AI as significantly enhancing overall accounting efficiency.

For challenges, item thirteen on limited technical skills has 213 high and 82 very high responses, 62 neutral, and 43 low, with a mean of 3.84, suggesting that respondents strongly acknowledge skill limitations as a challenge. Item fourteen, on high cost, shows 210 high and 66 very high, 81 neutral, and 43 low, mean 3.75, indicating agreement that cost is a significant barrier. Item fifteen, integration with existing processes, shows a more even distribution with 102 high, 77 very high, 69 neutral, 101 low, and 51 very low, mean 3.13, reflecting moderate recognition of integration difficulties. Finally, item sixteen, concerning policy constraints, has 171 high and 82 very high, 82 neutral, 58 low, and 7 very low, mean 3.66, suggesting that respondents perceive policy limitations as a notable challenge to AI implementation.

## **Test of Hypotheses**

### ***Test of Hypothesis I***

$H_{01}$ : AI expert systems have no significant effect on transparency in government accounting processes in Nigeria.

Table 2 shows the result of the hypotheses tested in this study. Starting with the model validity, the ANOVA results in the tables indicate that the regression model is statistically significant at the 5% level. For Hypothesis I, the model predicting transparency in government accounting has an R Square of 0.693 and an ANOVA p-value of 0.000, suggesting that AI expert systems explain approximately 69.3% of the variation in transparency. The constant in the model is also significant at 5%, suggesting that even in the absence of the predictor variable is not zero but have a baseline value.

Table 2  
*Test of Hypothesis I*

Model Summary						
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate		
1	.832 <sup>a</sup>	.693	.692	1.795		
a. Predictors: (Constant), AI Expert Systems						
ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2889.815	1	2889.815	897.092	.000 <sup>b</sup>
	Residual	1282.083	398	3.221		
	Total	4171.897	399			
a. Dependent Variable: Transparency in Government Accounting Processes						
b. Predictors: (Constant), AI Expert Systems						
Coefficients <sup>a</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients		Sig.
		B	Std. Error	Beta	t	
1	(Constant)	2.309	.402		5.742	.000
	AI Expert Systems	.817	.027	.832	29.951	.000
a. Dependent Variable: Transparency in Government Accounting Processes						

Source: SPSS V. 26 (2025)

Hypothesis I tested whether AI expert systems significantly affect transparency in government accounting processes. Table 4.2 shows a coefficient of 0.817 for AI expert systems with a p-value of 0.000. This coefficient indicates that for every one-unit increase in the adoption or use of AI expert systems, transparency in government accounting processes increases by 0.817 units on the measurement scale, holding other factors constant. Since the p-value is less than 0.05, this effect is statistically significant at the 5% level. Therefore, the null hypothesis that AI expert systems have no significant effect on transparency is rejected. The relatively large beta coefficient suggests a strong positive marginal effect, meaning that increased utilization of AI expert systems substantially enhances the accessibility, clarity, and verifiability of financial records in federal government institutions. In practical terms, this implies that the more organizations deploy AI expert systems in accounting operations, the greater the transparency observed in financial reporting and oversight processes.

**Test of Hypothesis II**

H<sub>02</sub>: AI expert systems have no significant effect on the efficiency of government accounting operations in Nigeria.

Table 3  
*Test of Hypothesis II*

Model Summary						
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate		
1	.557 <sup>a</sup>	.310	.309	2.742		
a. Predictors: (Constant), AI Expert Systems						
ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1347.369	1	1347.369	179.173	.000 <sup>b</sup>
	Residual	2992.941	398	7.520		
	Total	4340.310	399			
a. Dependent Variable: Efficiency of Government Accounting Processes						
b. Predictors: (Constant), AI Expert Systems						
Coefficients <sup>a</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients		Sig.
		B	Std. Error	Beta	t	
1	(Constant)	5.916	.615		9.628	.000
	AI Expert Systems	.558	.042	.557	13.386	.000
a. Dependent Variable: Efficiency of Government Accounting Processes						

Source: SPSS V. 26 (2025)

For Hypothesis II, the model explaining efficiency in government accounting has an R Square of 0.310 and a p-value of 0.000, meaning that 31% of the variation in efficiency is explained by AI expert systems. The constant in the model is also significant at 5%, suggesting that even in the absence of the predictor variable is not zero but have a baseline value. Hypothesis II examined the effect of AI expert systems on the efficiency of government accounting operations. Table 4.3 shows a coefficient of 0.558 with a p-value of 0.000, indicating that for every one-unit increase in AI expert system adoption, accounting efficiency increases by 0.558 units. This marginal effect is positive and statistically significant at 5%, confirming that AI expert systems contribute meaningfully to streamlining accounting tasks, reducing delays, and improving the accuracy of reporting. Although the effect size is smaller than that observed for transparency (0.558 versus 0.817), it still represents a moderate and practical impact. Thus, the null hypothesis stating that AI expert systems have no significant effect on efficiency is rejected. The results suggest that organizations leveraging AI for accounting operations experience measurable improvements in operational speed, accuracy, and resource optimization.

**Test of Hypothesis III**

H<sub>03</sub>: The effect of challenges of implementation of AI expert systems do not significantly affect the efficiency of government accounting operations in Nigeria.

Table 4

**Test of Hypothesis III**

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.638 <sup>a</sup>	.407	.406	2.542

a. Predictors: (Constant), Challenges of Implementation of AI Expert Systems

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1768.434	1	1768.434	273.667	.000 <sup>b</sup>
	Residual	2571.876	398	6.462		
	Total	4340.310	399			

a. Dependent Variable: Efficiency of Government Accounting Processes

b. Predictors: (Constant), Challenges of Implementation of AI Expert Systems

Coefficients <sup>a</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	2.166	.723		2.998	.003
	Challenges of Implementation of AI Expert Systems	-.819	.049	-.638	-16.543	.000

a. Dependent Variable: Efficiency of Government Accounting Processes

Source: SPSS V. 26 (2025)

For Hypothesis III, the model examining the effect of challenges of implementation has an R Square of 0.407 with a p-value of 0.000, indicating that challenges account for 40.7% of variation in accounting efficiency. The constant in the model is also significant at 5%, suggesting that even in the absence of the predictor variable is not zero but have a baseline value. Hypothesis III assessed whether challenges of implementation of AI expert systems affect the efficiency of government accounting operations. Table 4.4 shows a negative coefficient of -0.819 with a p-value of 0.000. This indicates that for every one-unit increase in implementation challenges—such as lack of technical skills, high cost, integration difficulties, and policy constraints—the efficiency of accounting operations decreases by 0.819 units. The negative sign confirms an inverse relationship, and the p-value shows the effect is statistically significant at 5%. Therefore, the null hypothesis that challenges of AI implementation do not

significantly affect efficiency is rejected. The sizable magnitude of the beta coefficient suggests that implementation barriers have a strong adverse effect on operational performance, implying that even with AI systems in place, unresolved challenges can substantially reduce the expected efficiency gains.

### **Discussion of Findings**

The finding that AI expert systems have a positive and significant effect on transparency in government accounting processes in Nigeria can be explained by the capacity of these systems to make financial information more accessible, verifiable, and consistent. By automating record-keeping, reducing human errors, and enabling easier monitoring of transactions, AI systems help public institutions provide clearer and more accurate financial reports. This result aligns with the study by Igbokwe et al. (2025), which showed that AI significantly enhanced administrative transparency and reduced corrupt practices in selected public organizations in Enugu State. Similarly, Shaban et al. (2025) demonstrated that AI-driven financial transparency improves corporate governance effectiveness and regulatory compliance in Jordan, indicating that enhanced visibility of financial processes reduces information asymmetry and promotes accountability. Aldemir et al. (2025) also noted that AI solutions such as automated reporting and predictive analytics strengthen transparency and decision-making in public sector organizations, while Changkui et al. (2025) emphasized that AI facilitates verifiable reporting and public engagement in governance processes. Collectively, these studies support the notion that AI adoption fundamentally increases the clarity and reliability of financial records, explaining the strong positive effect observed in the Nigerian context.

The positive and significant effect of AI expert systems on the efficiency of government accounting operations can be attributed to the automation of repetitive tasks, faster data processing, and the ability to generate timely reports. AI systems reduce manual effort, minimize errors, and streamline financial workflows, which leads to quicker and more accurate completion of accounting tasks. Nsoke et al. (2024) found that AI enhances operational efficiency in Nigerian public sector financial management by improving accuracy, budget forecasting, and decision-making. Ogunbangbe et al. (2024) also observed that AI improves the quality of accounting information and supports better audit practices without displacing staff, suggesting that efficiency gains come from complementing human efforts with technology. Abdallah et al. (2025) indicated that individual and organizational factors significantly influence AI implementation, which can amplify operational effectiveness in both public and private accounting sectors. Agba et al. (2023) further highlighted that AI enhances financial management and service delivery across public institutions, demonstrating that the efficiency gains observed in this study are consistent with broader evidence of AI's role in streamlining public financial operations.

The finding that challenges in implementing AI expert systems negatively and significantly affect the efficiency of government accounting operations reflects the critical importance of organizational readiness, technical expertise, and resource availability for effective AI deployment. When staff lack the necessary skills, costs are high, or integration with existing systems is difficult, AI adoption can slow processes instead of improving them. This aligns with the observations of Maione et al. (2021), who noted that early adoption of AI in public sector accounting often faces limitations due to technological immaturity and capacity gaps. Similarly, Abdallah et al. (2025) reported that regulatory constraints, organizational culture, and perceived difficulty of use influence AI implementation, potentially hindering efficiency. Agba et al. (2023) emphasized that successful integration requires skilled personnel and political support, while Aldemir et al. (2025) highlighted that algorithmic biases and implementation barriers can compromise operational gains. These studies collectively explain why implementation challenges in the Nigerian context exert a strong negative effect on

accounting efficiency, demonstrating that technology alone is insufficient without proper support systems, capacity building, and resource allocation.

## **CONCLUSION AND RECOMMENDATION**

### **Conclusion**

The results of this study suggest that the integration of AI expert systems into government accounting fundamentally reshapes how financial information is managed, accessed, and utilized in public institutions. The significant positive effects on transparency and efficiency indicate that AI systems enable more reliable, timely, and verifiable reporting, which can foster greater trust between government agencies and stakeholders, including citizens, auditors, and oversight bodies. With AI handling routine accounting tasks and automating complex financial processes, public institutions can streamline workflows, reduce errors, and allocate human resources to more strategic functions, enhancing overall institutional performance. At the same time, the evidence that implementation challenges have a strong negative impact on operational efficiency highlights that technological adoption alone is not sufficient; organizational readiness, technical competence, and supportive policies are essential to realize the full benefits of AI systems. These dynamics suggest that the deployment of AI in government accounting creates both opportunities and pressures for institutions to adapt structurally and operationally, reshaping processes, decision-making practices, and accountability mechanisms. Moreover, the results indicate that AI has the potential to transform the culture of public financial management, as decision-making becomes more data-driven, errors are minimized, and procedural consistency is reinforced across departments. The study highlights the need for a careful alignment of technology with human capacity and institutional frameworks, demonstrating that the performance of AI systems is intertwined with the capabilities and responsiveness of the organizations implementing them. In all, the findings reveal that AI expert systems can serve as a powerful tool for modernizing public accounting, enhancing transparency, and promoting efficiency, but their effectiveness is contingent upon the ability of institutions to manage and mitigate the challenges associated with technology integration.

### **Recommendations**

First, since AI expert systems have a positive and significant effect on transparency in government accounting processes, it is recommended that the Office of the Accountant General of the Federation actively expand the adoption of AI expert systems across all federal public institutions. This will ensure that financial records are more accessible and verifiable, reducing opportunities for misreporting and improving accountability in government operations.

Second, given that AI expert systems positively and significantly enhance the efficiency of government accounting operations, management teams in federal ministries and agencies should invest in continuous training programs for accounting and finance staff. Equipping employees with the necessary skills to effectively operate AI systems will maximize the speed, accuracy, and overall efficiency of financial reporting and resource management.

Third, because challenges in implementing AI expert systems negatively and significantly affect efficiency, it is recommended that policymakers and IT departments in federal public institutions establish dedicated support units to address technical, financial, and policy-related barriers. These units can provide guidance on system integration, troubleshoot technical issues, and ensure that AI systems are effectively aligned with existing accounting processes to maintain operational efficiency.

### **Contribution to Knowledge**

This study makes a significant contribution to the existing literature by providing empirical evidence on the impact of AI expert systems on transparency and efficiency in Nigerian government accounting, areas that have received limited attention in previous research. While

earlier studies, such as Igbokwe et al. (2025) and Nsoke et al. (2024), examined AI adoption and integration in specific organizations or general financial management, they did not simultaneously explore transparency, efficiency, and implementation challenges within the Nigerian federal public sector. Research conducted by Shaban et al. (2025), Aldemir et al. (2025), and Changkui et al. (2025) focused on AI applications in corporate or non-African public contexts, limiting the applicability of their findings to Nigeria. Similarly, studies by Abdallah et al. (2025), Ogungbangbe et al. (2024), Agba et al. (2023), Mbonigaba (2023), and Maione et al. (2021) addressed AI adoption, financial reporting accuracy, or governance broadly, but none directly examined how implementation challenges affect the efficiency of government accounting operations in Nigeria. By investigating the extent to which AI expert systems enhance transparency, improve efficiency, and the influence of implementation barriers, this study fills an important gap in the literature, providing a comprehensive understanding of AI's role in strengthening financial management and accountability in the Nigerian public sector.

### **Limitations of the Study and Suggestion for Further Studies**

A major limitation of this study was that it focused only on federal public institutions in Nigeria, which may not fully represent all levels of government or local government accounting practices. The use of a questionnaire also relied on the honesty and understanding of respondents, which could affect the accuracy of the responses. Additionally, the snowball sampling method, while practical for reaching knowledgeable employees, may have introduced some bias because participants referred colleagues who might share similar views. These factors limit the generalizability of the findings to other contexts or sectors.

Future research could expand to include state and local government institutions to provide a more comprehensive picture of AI adoption in government accounting across Nigeria. Studies could also use a combination of interviews, observations, and document analysis to gain more perspectives on how AI expert systems are applied in practice. Researchers might explore the long-term effects of AI on decision-making, accountability, and corruption prevention. Comparing AI implementation in different countries or sectors could also help identify best practices and challenges that could guide policymakers and administrators in improving government financial management.

### **References**

- Abdallah, W., Harraf, A., & Al Wael, H. (2025). Factors influencing artificial intelligence implementation in the accounting industry: A comparative study among private and public sectors. *Journal of Financial Reporting and Accounting*, 23(4), 1509–1530. <https://doi.org/10.1108/JFRA-04-2024-0230>
- Agba, M. S., Agba, G. E. M., & Obeten, A. W. (2023). Artificial intelligence and public management and governance in developed and developing market economies. *Journal of Public Administration, Policy and Governance Research*, 1(2), 1–14.
- Aldemir, C., & Uçma, T. (2025). Artificial intelligence for financial accountability and governance in the public sector: Strategic opportunities and challenges. *Administrative Sciences*, 15(2), 58.
- Amalia, M. M. (2023). Enhancing accountability and transparency in the public sector: A comprehensive review of public sector accounting practices. *The ES Accounting and Finance*, 1(3), 160–168.
- Bello, O. A., & Olufemi, K. (2024). Artificial intelligence in fraud prevention: Exploring techniques and applications, challenges, and opportunities. *Computer Science & IT Research Journal*, 5(6), 1505–1520.
- Berdiyeva, O., Islam, M. U., & Saedi, M. (2021). Artificial intelligence in accounting and finance: Meta-analysis. *International Business Review*, 3(1), 56–79.

- Bhawna, & Gupta, P. (2025). Empowering financial efficiency in India: Harnessing artificial intelligence (AI) for streamlining accounting and finance. In *Generative Artificial Intelligence in Finance: Large Language Models, Interfaces, and Industry Use Cases to Transform Accounting and Finance Processes* 407–428.
- Changkui, L. (2025). AI-driven governance: Enhancing transparency and accountability in public administration. *Digital Society & Virtual Governance*, 1(1), 1–16.
- Cifuentes-Faura, J. (2024). Debate: Will AI affect the transparency and accountability of public sector accounting? *Public Money & Management*, 44(2), 154–155.
- Cyril-Nwuche, O. F. (2025). Entrepreneurial leadership and performance of small-scale enterprises in Nigeria. *International Journal of Economics and Financial Management*, 10(9), 14–32.
- Davis, F. D. (1989). Technology acceptance model: TAM. In M. N. Al-Suqri & A. S. Al-Aufi (Eds.), *Information seeking behavior and technology adoption* 205–219.
- Emetaram, E., & Uchime, H. N. (2021). Impact of artificial intelligence (AI) on the accountancy profession. *Journal of Accounting and Financial Management*, 7(2), 15–25.
- Gaba, D. M. (2022). Artificial intelligence and expert systems. In *Control and automation in anaesthesia* 22–36. Springer Berlin Heidelberg.
- Igbokwe, C. I., Anikeze, N. H., & Ugwunwangwu, M. G. C. (2025). The role of artificial intelligence (AI) in enhancing administrative accountability and financial reporting in selected public organizations in Enugu State, Nigeria. *Newport International Journal of Current Research in Humanities and Social Sciences*, 5(2), 54–65.
- Ikwuo, A. K., Nworie, G. O., & Moedu, V. O. (2024). Implementation of AI-driven automation: A game-changer in accounting research. *International Journal of Financial, Accounting, and Management*, 6(3), 385–398. <https://doi.org/10.35912/ijfam.v6i3.2522>
- Kuswara, Z., Pasaribu, M., Fitriana, F., & Santoso, R. A. (2024). Artificial intelligence in financial reports: How it affects the process's effectiveness and efficiency. *Jurnal Ilmu Keuangan dan Perbankan (JIKA)*, 13(2), 257–272.
- Lyezia, M. S., & Katamba, A. (2024). The influence of financial reporting quality and efficiency in resources utilization on public sector financial performance: Evidence from Tanzania. *Asian Journal of Economics, Business and Accounting*, 24(7), 135–146.
- Maione, G., & Leoni, G. (2021). Artificial intelligence and the public sector: The case of accounting. In *Artificial intelligence and its contexts: Security, business and governance* 131–143. Springer International Publishing.
- Martin, T. (2022). A literature review on the technology acceptance model. *International Journal of Academic Research in Business and Social Sciences*, 12(11), 2859–2884.
- Mbonigaba, C. (2023). AI-driven financial reporting: Enhancing accuracy and reducing human errors in Rwanda. *Indo American Journal of Multidisciplinary Research and Review (IAJMRR)*, 7(11), 108–117.
- Mmadubuobi, L. C., Nworie, G. O., & Aziekwe, O. P. (2024). Industry 4.0 and corporate technological responsibility of manufacturing firms in Nigeria. *Central Asian Journal of Innovations on Tourism Management and Finance*, 5(4), 67–80. <https://cajitmf.centralasianstudies.org/index.php/CAJITMF/article/view/711>
- Nsoke, U. P. (2024). Artificial intelligence enhancement in government financial management: The Nigeria experience. *African Banking and Finance Review Journal*, 15(15), 66–75.
- Nworie, G. O., & Okafor, T. G. (2023). A literature review on the challenges of the use of point of sale (POS) terminals in the Nigerian banking system. *International Journal of*

- Academic Information Systems Research*, 7(2), 1–14. <http://ijeais.org/wp-content/uploads/2023/2/IJAISR230201.pdf>
- Nworie, G. O., Okafor, T. G., & John-Akamelu, C. R. (2022). Firm-level traits and the adoption of computerized accounting information system among listed manufacturing firms in Nigeria. *Journal of Global Accounting*, 8(3), 128–148. <https://journals.unizik.edu.ng/index.php/joga/article/view/1858>
- Ogunbangbe, B. M., & Kalu, A. O. (2024). Artificial intelligence and financial sector regulation: Implications for accountants in Nigeria's economy. *Arabian Journal of Business and Management Review (Nigerian Chapter)*, 9(1), 1–6.
- Okafor, T. G., & Nworie, G. O. (2025). Achieving environmental sustainability: The contribution of digital automation technologies of Industry 4.0 used by companies in Nigeria. *Quantitative Economics and Management Studies*, 6(5). <https://doi.org/10.35877/454RI.qems4039>
- Shaban, O. S., & Omoush, A. (2025). AI-driven financial transparency and corporate governance: Enhancing accounting practices with evidence from Jordan. *Sustainability*, 17(9), 3818.
- Siahay, A. Z. (2023). Building public trust through transparency and accountability: A systematic review of the role of public sector accounting. *Journal Economic Resource*, 6(2), 423–430.
- The Punch. (2023, October 26). N5.5 tn payroll: FG stops workers' salaries not on IPPIS. *The Punch*. <https://punchng.com/n5-5tn-payroll-fg-stops-workers-salaries-not-on-ippis/>