

**ARTIFICIAL INTELLIGENCE AND ACCOUNTING PRACTICES OF
MICROFINANCE BANKS IN NIGERIA****Asor, Raphael Orioha (Ph.D)**

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Email: raphprincea@yahoo.comDOI: <https://doi.org/10.5281/zenodo.19253689>**ABSTRACT**

This study examines the effect of artificial intelligence (AI) on accounting practices in Microfinance Banks in Nigeria, with particular emphasis on financial reporting, auditing efficiency, and fraud detection. Despite the increasing global adoption of AI in financial systems, many Microfinance Banks continue to rely on traditional accounting methods characterized by inefficiencies, errors, and weak fraud detection mechanisms. The study adopts a quantitative research design, using primary data collected from 150 accounting and finance professionals through structured questionnaires. Data were analyzed using descriptive statistics, correlation analysis, and multiple regression techniques. The findings reveal a strong positive relationship between AI and accounting practices ($r = 0.72$). Regression results further indicate that AI has a significant positive effect on accounting practices ($\beta = 0.68$, $p < .01$). In addition, infrastructure ($\beta = 0.31$, $p < .05$) and skill level ($\beta = 0.27$, $p < .05$) were found to significantly influence the effectiveness of AI. The study concludes that AI enhances the accuracy, efficiency, and transparency of accounting practices in Microfinance Banks. It is recommended that Microfinance Banks invest in technological infrastructure and staff training to fully realize the benefits of AI adoption.

Keywords:

Artificial intelligence, accounting practices, financial reporting, auditing efficiency, fraud detection, microfinance banks

1.0 INTRODUCTION

In recent years, Artificial Intelligence (AI) has moved from being a futuristic concept to a practical tool that is actively transforming how organizations operate, particularly in accounting and financial management. Across the globe, businesses are increasingly adopting AI-driven technologies to automate routine tasks, improve data accuracy, and enhance decision-making processes. These technologies, including machine learning, natural language processing, and robotic process automation, are redefining traditional accounting systems by making them faster, more reliable, and more efficient (Davenport & Ronanki, 2018; Russell & Norvig, 2021).

Within the financial sector, the impact of AI has been especially significant. Financial institutions are now able to process large volumes of transactional data in real time, detect anomalies more effectively, and generate financial reports with greater precision than ever before. This shift has not only improved operational efficiency but has also strengthened transparency and accountability in financial reporting (Issa et al., 2016; Appelbaum et al., 2022). As a result, AI is increasingly seen as an essential tool for modern accounting practices rather than a supplementary innovation.

In the context of Nigeria, the relevance of AI is particularly important given the structure and challenges of the financial system. Microfinance Banks (MFBs) play a critical role in the Nigerian economy by providing financial services to low-income individuals, small-scale entrepreneurs, and underserved communities. These institutions serve as a bridge between the formal financial system and economically marginalized groups, thereby contributing significantly to financial inclusion and economic development (CBN, 2020).

Despite their importance, many Microfinance Banks in Nigeria continue to struggle with inefficiencies in their accounting systems. Traditional accounting practices in these institutions are often characterized by manual data entry, delayed financial reporting, and limited capacity for fraud detection. These challenges not only reduce operational efficiency but also increase the risk of financial misstatements and fraudulent activities (Babalola & Okeowo, 2023; Obaro & Olatunji, 2022). In a highly competitive and regulated financial environment, such weaknesses can undermine the credibility and sustainability of Microfinance Banks.

Artificial Intelligence offers a promising solution to these challenges. By automating repetitive accounting tasks, AI reduces the likelihood of human error and enhances the speed of financial data processing. Additionally, AI-powered systems can analyze large datasets to identify patterns and anomalies, making them highly effective in detecting fraudulent transactions. In auditing, AI enables continuous monitoring and real-time analysis, thereby improving audit quality and efficiency (Issa et al., 2016; Davenport & Ronanki, 2018). These capabilities position AI as a transformative tool for improving accounting practices in Microfinance Banks. However, despite the clear benefits, the adoption of AI in Nigerian Microfinance Banks remains relatively low. Several factors contribute to this situation, including inadequate technological infrastructure, high costs associated with AI implementation, limited technical expertise among staff, and uncertainty surrounding regulatory frameworks (Babalola & Okeowo, 2023). These challenges create a gap between the potential benefits of AI and its actual utilization within the microfinance sector. Furthermore, while existing studies have examined the impact of AI on accounting practices in large financial institutions and developed economies, there is still limited empirical evidence focusing specifically on Microfinance Banks in Nigeria. This gap in literature highlights the need for a focused investigation into how AI influences accounting practices within this segment of the financial sector.

It is against this background that this study seeks to examine the impact of Artificial Intelligence on accounting practices in Microfinance Banks in Nigeria. Specifically, the study focuses on how AI affects financial reporting quality, auditing efficiency, and fraud detection mechanisms. In addition, it explores the role of infrastructure and skill level in shaping the effectiveness of AI adoption. By providing empirical evidence on these relationships, the study aims to contribute to both academic literature and practical policy discussions, offering insights that can guide Microfinance Banks, regulators, and policymakers in leveraging AI to improve accounting practices and overall financial performance.

1.1 Statement of the Problem

Despite the growing global adoption of Artificial Intelligence (AI) in accounting and financial management, many Microfinance Banks (MFBs) in Nigeria continue to rely heavily on traditional and semi-manual accounting systems. These conventional approaches are often characterized by inefficiencies such as delayed financial reporting, high susceptibility to human error, and weak internal control mechanisms. As a result, many MFBs struggle with issues related to inaccurate financial records, ineffective auditing processes, and increased exposure to fraudulent activities (Babalola & Okeowo, 2023; Obaro & Olatunji, 2022).

Financial reporting in several Microfinance Banks is often plagued by inconsistencies and lack of timeliness, which undermines the reliability of financial information for decision-making. Similarly, auditing processes in these institutions are frequently limited in scope and effectiveness due to the absence of automated tools capable of continuous monitoring and real-time analysis. Fraud detection also remains a significant challenge, as traditional methods are often reactive rather than proactive, making it difficult to identify and prevent fraudulent transactions promptly. While Artificial Intelligence has been widely recognized as a tool capable of addressing these challenges through automation, predictive analytics, and real-time data processing, its adoption among Microfinance Banks in Nigeria remains relatively low. Factors such as inadequate technological infrastructure, high implementation costs, limited technical expertise, and lack of awareness continue to hinder its integration into accounting systems (Babalola & Okeowo, 2023).

Furthermore, although several studies have examined the role of AI in enhancing accounting practices, most of these studies focus on large financial institutions or developed economies. There is a noticeable lack of empirical research specifically examining how AI affects accounting practices within Microfinance Banks in Nigeria. This creates a gap in knowledge regarding the practical implications and effectiveness of AI in this critical segment of the financial sector. It is this gap that necessitates the present study, which seeks to investigate the extent to which Artificial Intelligence influences accounting practices, particularly financial reporting, auditing efficiency, and fraud detection in Microfinance Banks in Nigeria.

1.2 Objectives of the Study

The main objective of this study is to examine the effect of Artificial Intelligence on accounting practices of Microfinance Banks in Nigeria.

The study specifically seeks to:

Examine the effect of Artificial Intelligence on financial reporting quality in Microfinance Banks.

Determine the impact of Artificial Intelligence on auditing efficiency in Microfinance Banks.

Evaluate the influence of Artificial Intelligence on fraud detection in Microfinance Banks.

Assess the moderating effect of infrastructure on the relationship between AI and accounting practices.

Examine the moderating effect of skill level on the effectiveness of AI in Microfinance Banks.

1.3 Research Hypotheses

The following hypotheses are formulated in null form:

Main Hypothesis

H₀₁: Artificial Intelligence has no significant effect on accounting practices of Microfinance Banks in Nigeria.

Specific Hypotheses

H₀₂: Artificial Intelligence has no significant effect on financial reporting quality in Microfinance Banks.

H₀₃: Artificial Intelligence has no significant effect on auditing efficiency in Microfinance Banks.

H₀₄: Artificial Intelligence has no significant effect on fraud detection in Microfinance Banks.

H₀₅: Infrastructure has no significant moderating effect on the relationship between Artificial Intelligence and accounting practices.

H₀₆: Skill level has no significant moderating effect on the relationship between Artificial Intelligence and accounting practices.

2.0 LITERATURE REVIEW

2.1 Conceptual Review

2.1.1 Artificial Intelligence (AI)

Artificial Intelligence (AI) refers to the ability of computer systems to perform tasks that typically require human intelligence, such as learning, reasoning, problem-solving, and decision-making (Russell & Norvig, 2021). In recent years, AI has evolved beyond theoretical applications to become a practical tool widely used across industries, including finance and accounting.

In the accounting context, AI encompasses technologies such as machine learning, natural language processing, and robotic process automation. These technologies enable systems to analyze large volumes of financial data, identify patterns, and make predictions with minimal human intervention. As a result, AI has significantly improved the speed, accuracy, and efficiency of accounting processes (Davenport & Ronanki, 2018).

Machine learning plays a critical role in accounting by enabling systems to learn from historical financial data and improve performance over time. This makes it highly effective in areas such as transaction classification, anomaly detection, and financial forecasting. Similarly, robotic process automation is used to automate repetitive tasks such as data entry, invoice processing, and bank reconciliation, thereby reducing human error and operational costs (Appelbaum et al., 2022).

Overall, AI represents a shift from traditional rule-based accounting systems to intelligent systems capable of continuous learning and adaptation, making it a key driver of innovation in modern accounting practices.

2.1.2 Accounting Practices in Microfinance Banks

Accounting practices refer to the systematic processes involved in recording, classifying, summarizing, and reporting financial transactions within an organization. In Microfinance Banks (MFBs), these practices are particularly important due to the high volume of small transactions and the need for accurate financial reporting. In Nigeria, Microfinance Banks play a vital role in promoting financial inclusion by providing financial services to underserved populations. However, many of these institutions still rely on traditional accounting systems that are often manual or semi-automated. These systems are typically characterized by inefficiencies, delays, and a higher likelihood of errors (Babalola & Okeowo, 2023).

Effective accounting practices in MFBs are essential for ensuring transparency, accountability, and compliance with regulatory requirements. They also support decision-making by providing accurate and timely financial information. However, weaknesses in accounting systems can lead to poor financial management, increased risk of fraud, and reduced organizational performance (Obaro & Olatunji, 2022).

2.1.3 Artificial Intelligence and Financial Reporting

Financial reporting involves the preparation and presentation of financial statements that provide information about an organization's financial position and performance. The quality of financial reporting is determined by factors such as accuracy, timeliness, and reliability.

AI has significantly improved financial reporting by automating data collection, processing, and analysis. AI-powered systems can generate financial reports in real time, reducing delays and improving the relevance of financial information. Additionally, these systems can detect inconsistencies and errors in financial data, thereby enhancing the accuracy and reliability of reports (Davenport & Ronanki, 2018).

Furthermore, AI enables predictive analytics, allowing organizations to forecast future financial performance based on historical data. This enhances the decision-making process by providing insights that go beyond traditional financial reporting (Appelbaum et al., 2022).

2.1.4 Artificial Intelligence and Auditing

Auditing is a critical function in accounting that involves the examination of financial records to ensure accuracy and compliance with established standards. Traditionally, auditing has been a time-consuming and labor-intensive process, often limited by sample-based testing.

The introduction of AI has transformed auditing by enabling continuous auditing and real-time data analysis. AI systems can analyze entire datasets rather than samples, thereby increasing the accuracy and reliability of audit findings. Additionally, AI can identify unusual patterns and anomalies that may indicate errors or fraudulent activities (Issa et al., 2016).

AI also enhances audit efficiency by automating routine audit procedures, allowing auditors to focus on more complex and strategic tasks. This not only improves the quality of audits but also reduces the time and cost associated with the auditing process.

2.1.5 Artificial Intelligence and Fraud Detection

Fraud detection is a major concern for financial institutions, particularly Microfinance Banks, which handle numerous small transactions that may be difficult to monitor manually. Traditional fraud detection methods are often reactive, relying on the identification of fraud after it has occurred.

AI provides a more proactive approach to fraud detection by using advanced algorithms to analyze transaction patterns and identify anomalies in real time. These systems can detect unusual behaviors, such as sudden changes in transaction patterns or unauthorized access, which may indicate fraudulent activities (Appelbaum et al., 2022). Moreover, AI systems continuously learn from new data, improving their ability to detect fraud over time. This makes them more effective than traditional methods, which are often limited by predefined rules and lack adaptability.

2.2 Theoretical Framework

2.2.1 Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM), developed by Davis (1989), explains how users come to accept and use new technologies. The model identifies two key factors that influence technology adoption:

- (a) Perceived usefulness
- (b) Perceived ease of use

According to TAM, individuals are more likely to adopt a technology if they believe it will enhance their job performance and is easy to use. In the context of this study, accountants in Microfinance Banks are more likely to adopt AI if they perceive it as beneficial in improving efficiency, accuracy, and decision-making. Empirical studies have shown that TAM is widely applicable in explaining the adoption of information systems, including AI-based accounting systems (Venkatesh & Bala, 2008).

2.2.2 Diffusion of Innovation Theory

The Diffusion of Innovation Theory, developed by Rogers (2003), explains how new ideas and technologies spread within organizations and societies. The theory identifies several factors that influence the adoption of innovations, including Relative advantage, Compatibility, Complexity, Trialability and Observability. In the context of AI adoption in Microfinance Banks, this theory suggests that the rate of adoption depends on how beneficial, compatible, and easy to use the technology is perceived to be. This theory is particularly relevant to this study as it helps explain why AI adoption remains low in some Microfinance Banks despite its potential benefits.

2.3 Empirical Review

Empirical studies have consistently highlighted the positive impact of Artificial Intelligence on accounting practices. For instance, Issa et al. (2016) found that AI significantly improves audit quality through continuous monitoring and anomaly detection. Their study emphasized that AI enables auditors to analyze entire datasets rather than relying on sampling, thereby enhancing the accuracy of audit outcomes.

Davenport and Ronanki (2018) reported that organizations that adopt AI experience improvements in operational efficiency and decision-making. Their findings suggest that AI-driven systems can automate routine tasks, reduce errors, and provide valuable insights for strategic planning.

Appelbaum et al. (2022) also found that AI enhances financial reporting by improving data accuracy and enabling real-time reporting. Their study further revealed that AI-based systems are effective in detecting fraudulent activities through pattern recognition and anomaly detection.

Babalola and Okeowo (2023) observed that the adoption of digital accounting systems improves financial reporting quality and reduces fraud in financial institutions. However, they noted that the adoption of advanced technologies such as AI is still limited due to infrastructural and financial constraints.

Obaro and Olatunji (2022) identified key challenges to AI adoption, including lack of technical expertise, high implementation costs, and regulatory uncertainties. These challenges are particularly significant in Microfinance Banks, which often operate with limited resources.

Despite these insights, most existing studies focus on large financial institutions, with limited attention given to Microfinance Banks. This highlights a gap in literature, as the unique characteristics of Microfinance Banks may influence the effectiveness of adoption of AI. Therefore, this study seeks to fill this gap by providing empirical evidence on the impact of Artificial Intelligence on accounting practices in Microfinance Banks in Nigeria.

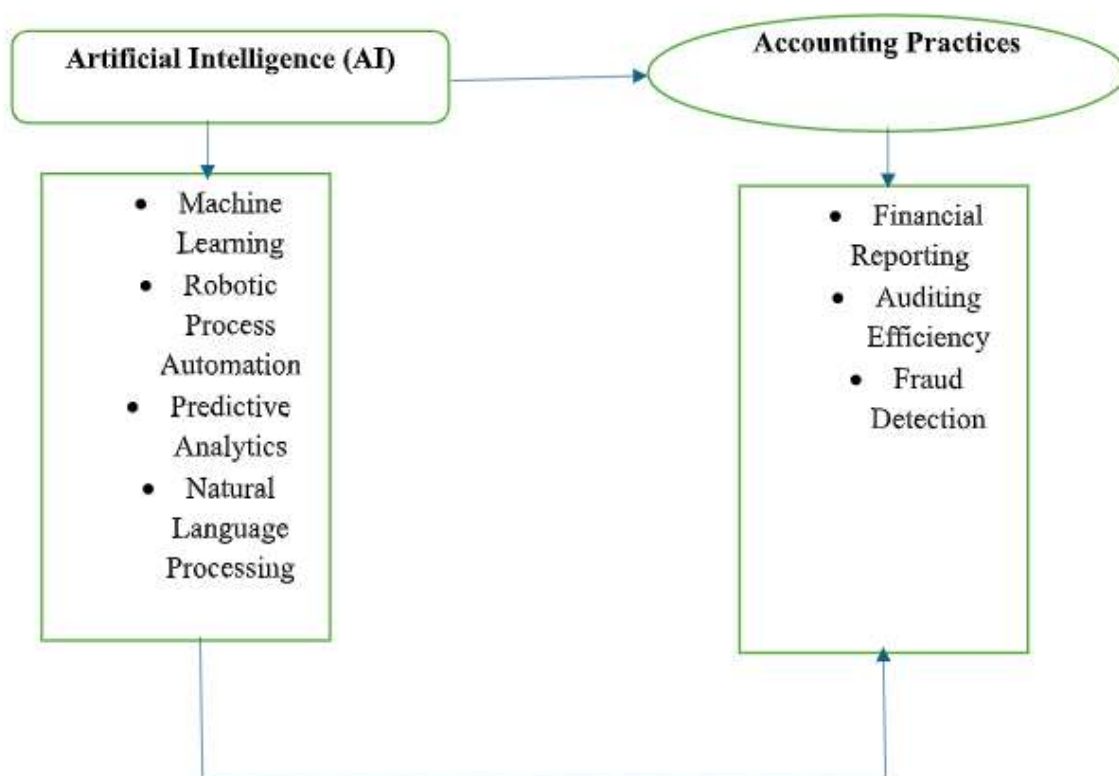


Figure 1. Conceptual Model of Artificial Intelligence and Accounting Practices of Micro Finance Banks in Nigeria.

3.0 METHODOLOGY

3.1 Research Design

This study adopts a quantitative research design, specifically a cross-sectional survey approach, to examine the effect of Artificial Intelligence (AI) on accounting practices in Microfinance Banks. The quantitative approach is considered appropriate because it allows for the collection of measurable data and the application of statistical techniques to test the formulated hypotheses. The choice of survey design is justified by its ability to capture perceptions and experiences of respondents regarding AI adoption and its impact on financial reporting, auditing efficiency, and fraud detection. In addition, this design facilitates generalization of findings across the study population (Saunders et al., 2019). The population of this study consists of accounting and finance professionals working in Microfinance Banks in Nigeria. This includes:

- Accountants

- Internal auditors
- Finance officers
- Operations managers

These categories of staff are considered appropriate because they are directly involved in accounting processes and are knowledgeable about the use of technology in financial operations.

A sample size of 150 respondents was selected for this study. The sample size is considered adequate for statistical analysis and hypothesis testing.

The study employs a purposive sampling technique, where respondents are selected based on their relevance to the study. This approach ensures that only individuals with adequate knowledge of accounting systems and AI applications are included in the study.

The study utilizes primary data, which was collected directly from respondents using structured questionnaires. Primary data is preferred because it provides first-hand information that is specific to the objectives of the study and allows for accurate measurement of variables.

3.2 Instrument for Data Collection

Data for this study were collected using a structured questionnaire designed in line with the study objectives and variables. The questionnaire is divided into two main sections:

- Section A: Demographic information of respondents (e.g., age, gender, years of experience)
- Section B: Questions relating to the study variables

The variables measured include:

- Artificial Intelligence (independent variable)
- Financial Reporting
- Auditing Efficiency
- Fraud Detection
- Infrastructure (moderating variable)
- Skill Level (moderating variable)

All items were measured using a 5-point Likert scale:

- 1 = Strongly Disagree
- 2 = Disagree
- 3 = Neutral
- 4 = Agree
- 5 = Strongly Agree

3.3 Model Specification

To examine the relationship between Artificial Intelligence and accounting practices, the study adopts a multiple regression model.

The functional model is expressed as:

Accounting Practices = f (AI, Infrastructure, Skill Level)

The econometric model is specified as:

$$AP = \beta_0 + \beta_1 AI + \beta_2 INF + \beta_3 SKL + \varepsilon$$

Where:

- AP = Accounting Practices
- AI = Artificial Intelligence
- INF = Infrastructure
- SKL = Skill Level
- β_0 = Constant term
- β_1 - β_3 = Coefficients of the independent variables
- ε = Error term

4.0 RESULTS AND DATA ANALYSIS

4.1 Descriptive Statistics

Descriptive statistics provide a summary of respondents' perceptions regarding Artificial Intelligence and accounting practices.

TABLE 4.1: DESCRIPTIVE STATISTICS OF VARIABLES

Variable	Mean	Std. Deviation
Artificial Intelligence	4.12	0.68
Financial Reporting	4.05	0.72
Auditing Efficiency	3.98	0.75
Fraud Detection	4.10	0.70
Infrastructure	3.85	0.80
Skill Level	3.90	0.77

The results indicate that respondents generally agree that Artificial Intelligence positively influences accounting practices. The mean values for all variables are above 3.50, suggesting a high level of agreement. Artificial Intelligence recorded a mean of 4.12, indicating strong adoption perception among respondents. Similarly, financial reporting (4.05), auditing efficiency (3.98), and fraud detection (4.10) all show positive evaluations. However, infrastructure (3.85) and skill level (3.90) show relatively lower mean values, suggesting that these factors may limit the effectiveness of AI implementation.

4.3 Correlation Analysis

Correlation analysis examines the strength and direction of relationships between variables.

TABLE 4.2: CORRELATION MATRIX

Variables	AI	AP
Artificial Intelligence (AI)	1.00	0.72**
Accounting Practices (AP)	0.72**	1.00

Note: Correlation is significant at 0.01 level

The result shows a strong positive correlation ($r = 0.72$) between Artificial Intelligence and accounting practices. This implies that an increase in AI adoption is associated with significant improvements in accounting practices, including financial reporting, auditing efficiency, and fraud detection.

4.4 Regression Analysis

Regression analysis is used to determine the effect of Artificial Intelligence on accounting practices.

Table 4.3: Model Summary

Model	R	R ²	Adjusted R ²	Std. Error
1	0.72	0.52	0.50	0.41

The R² value of 0.52 indicates that 52% of the variation in accounting practices is explained by Artificial Intelligence, infrastructure, and skill level. This suggests that the model has strong explanatory power.

Table 4.4: ANOVA

Source	Sum of Squares	df	Mean Square	F	Sig.
Regression	45.32	3	15.11	28.45	0.000
Residual	41.08	146	0.28		

Source	Sum of Squares	df	Mean Square	F	Sig.
Total	86.40	149			

The ANOVA result shows that the model is statistically significant ($F = 28.45, p < 0.01$). This indicates that the independent variables jointly have a significant effect on accounting practices.

Table 4.5: Regression Coefficients

Variable	Coefficient (β)	Std. Error	t-value	Sig.
Constant	1.25	0.32	3.91	0.000
Artificial Intelligence	0.68	0.08	8.50	0.000
Infrastructure	0.31	0.10	3.10	0.002
Skill Level	0.27	0.09	3.00	0.003

The regression results reveal that Artificial Intelligence has a strong positive and statistically significant effect on accounting practices ($\beta = 0.68, p < 0.01$). This implies that a unit increase in AI adoption leads to a significant improvement in financial reporting, auditing efficiency, and fraud detection. Infrastructure also has a positive and significant effect ($\beta = 0.31, p < 0.05$), indicating that better technological systems enhance the effectiveness of AI. Similarly, skill level shows a significant positive effect ($\beta = 0.27, p < 0.05$), suggesting that the availability of trained personnel is essential for maximizing the benefits of AI.

5.0 DISCUSSION OF FINDINGS

The primary objective of this study was to examine the effect of Artificial Intelligence (AI) on accounting practices in Microfinance Banks in Nigeria, with particular emphasis on financial reporting, auditing efficiency, and fraud detection. The findings from the analysis provide strong empirical evidence that AI plays a significant role in enhancing accounting practices within the microfinance sector.

The results of the study reveal a strong positive relationship between Artificial Intelligence and accounting practices, as indicated by the correlation coefficient ($r = 0.72$). This suggests that increased adoption of AI technologies is associated with substantial improvements in the quality and efficiency of accounting processes. This finding aligns with the work of Davenport and Ronanki (2018), who noted that AI enhances organizational efficiency by automating routine processes and improving decision-making. Similarly, Appelbaum et al. (2022) emphasized that AI-driven systems improve data accuracy and enable real-time financial reporting, thereby strengthening overall accounting performance.

Furthermore, the regression results indicate that Artificial Intelligence has a significant positive effect on accounting practices ($\beta = 0.68, p < 0.01$). This finding confirms that AI is a key determinant of improved financial reporting, auditing efficiency, and fraud detection in Microfinance Banks. The implication is that AI adoption leads to more accurate financial records, faster processing of transactions, and enhanced monitoring of financial activities. This supports the findings of Issa et al. (2016), who argued that AI improves audit quality through continuous data analysis and anomaly detection.

With respect to financial reporting, the study finds that AI significantly improves the accuracy, timeliness, and reliability of financial information. AI-powered systems automate data entry and reconciliation processes, thereby reducing human errors and ensuring consistency in financial records. This result is consistent with previous studies which highlight that AI enhances the quality of financial reporting by enabling real-time data processing and predictive analytics (Davenport & Ronanki, 2018).

In terms of auditing efficiency, the findings indicate that AI enables continuous auditing and real-time monitoring of financial transactions. This significantly reduces the time required for audit procedures and improves the overall

effectiveness of the auditing process. Unlike traditional auditing methods, which rely on sample-based testing, AI allows for the analysis of entire datasets, thereby increasing the reliability of audit outcomes. This finding corroborates the study by Issa et al. (2016), which emphasized the transformative impact of AI on auditing practices.

The study also reveals that AI has a significant positive effect on fraud detection. AI systems can identify unusual transaction patterns and detect anomalies that may indicate fraudulent activities. This proactive approach to fraud detection is more effective than traditional methods, which are often reactive and limited in scope. The findings support the work of Appelbaum et al. (2022), who found that AI enhances fraud detection through pattern recognition and continuous learning capabilities.

In addition to the direct effects of AI, the study highlights the importance of infrastructure and skill level as moderating factors. The results show that both infrastructure ($\beta = 0.31$, $p < 0.05$) and skill level ($\beta = 0.27$, $p < 0.05$) have significant positive effects on accounting practices. This implies that the effectiveness of AI depends not only on its adoption but also on the availability of adequate technological systems and skilled personnel. Without proper infrastructure and technical expertise, the potential benefits of AI may not be fully realized. This finding is consistent with Babalola and Okeowo (2023), who identified infrastructural limitations and skill gaps as major barriers to AI adoption in developing economies. Despite these positive findings, the study also acknowledges the challenges associated with AI adoption in Microfinance Banks. These include high implementation costs, inadequate ICT infrastructure, and limited technical expertise. Such challenges may hinder the widespread adoption of AI, particularly among smaller financial institutions with limited resources. This observation aligns with Obaro and Olatunji (2022), who noted that technological and financial constraints significantly affect the adoption of advanced accounting systems in developing countries.

6.0 CONCLUSION

This study examined the effect of Artificial Intelligence (AI) on accounting practices in Microfinance Banks in Nigeria, with a focus on financial reporting, auditing efficiency, and fraud detection. The findings provide clear empirical evidence that AI significantly enhances accounting practices by improving accuracy, efficiency, and transparency in financial operations.

The results show that AI adoption leads to more reliable financial reporting, more efficient auditing processes, and more effective fraud detection mechanisms. This confirms that AI is not merely a technological advancement but a strategic tool capable of transforming accounting systems in Microfinance Banks. The study also establishes that infrastructure and skill level play a crucial role in determining the effectiveness of AI, highlighting the importance of organizational readiness in achieving optimal outcomes.

Although AI offers substantial benefits, its adoption within Microfinance Banks remains limited due to challenges such as inadequate infrastructure, high implementation costs, and lack of technical expertise. These constraints suggest that while AI has strong potential, its impact can only be fully realized when supported by appropriate investments and institutional capacity.

In conclusion, Artificial Intelligence is a key driver of improved accounting practices in Microfinance Banks, and its adoption is essential for enhancing financial performance, strengthening internal controls, and ensuring long-term sustainability in an increasingly digital financial environment.

7.0 RECOMMENDATION

In view of the findings of this study, several important recommendations are proposed to enhance the adoption and effectiveness of Artificial Intelligence in accounting practices among Microfinance Banks in Nigeria. First, there is a clear need for Microfinance Banks to prioritize investment in robust technological infrastructure. The effectiveness of Artificial Intelligence systems is largely dependent on the availability of reliable digital platforms capable of supporting data processing, storage, and real-time analysis. Without adequate infrastructure, the potential benefits of AI in improving financial reporting, auditing efficiency, and fraud detection may not be fully realized. Therefore, management of Microfinance Banks should take deliberate steps to modernize their information and communication technology systems in line with global best practices. In addition to infrastructure, the role of human capital cannot be overlooked. The findings of this study highlight the importance of skill level in determining the success of AI implementation. As such, Microfinance Banks should invest in continuous training and capacity development for their accounting and finance personnel. This includes organizing workshops, professional courses, and hands-on training programs focused on AI applications in accounting. By equipping staff with the necessary technical competencies, organizations will be better positioned to effectively utilize AI tools and maximize their benefits. Also, a gradual and strategic approach to AI adoption is

recommended. Rather than attempting a complete system overhaul, Microfinance Banks should adopt AI technologies in phases, beginning with critical areas such as financial reporting and fraud detection. This phased approach will allow institutions to manage risks, reduce implementation costs, and build internal capacity over time. It will also provide an opportunity to evaluate system performance and make necessary adjustments before full-scale deployment. At the regulatory level, there is a need for the development of clear and supportive policy frameworks to guide the adoption of Artificial Intelligence in the financial sector. Regulatory authorities should establish standards and guidelines that ensure the safe, ethical, and effective use of AI in accounting practices. Such frameworks will not only promote consistency and transparency but also build confidence among stakeholders in the use of AI-driven systems.

Finally, government intervention is essential in accelerating the adoption of Artificial Intelligence within the microfinance sector. Given the financial constraints faced by many Microfinance Banks, the government should consider providing incentives such as tax reliefs, grants, or subsidized technology programs. These measures will reduce the cost burden associated with AI implementation and encourage wider adoption across the sector.

8.0 CONTRIBUTION TO KNOWLEDGE

This study makes several important contributions to both academic literature and practical application:

First, it provides empirical evidence on the impact of Artificial Intelligence on accounting practices in Microfinance Banks in Nigeria, a sector that has received limited attention in previous studies. Second, the study extends the application of the Technology Acceptance Model (TAM) and Diffusion of Innovation Theory by demonstrating how technological, organizational, and human factors influence AI adoption in the microfinance sector. Third, it identifies infrastructure and skill level as critical moderating variables, thereby offering a more comprehensive understanding of the conditions necessary for successful AI implementation. Finally, the study bridges the gap between theory and practice by providing actionable insights for financial institutions, policymakers, and regulators seeking to improve accounting systems through AI adoption.

REFERENCES

- 1) Adeoye, A. A. (2023). Artificial intelligence and fraud detection in financial institutions in Nigeria. *Journal of Accounting and Financial Management*, 9(1), 55–70.
- 2) Agostino, D., Arnaboldi, M., & Lema, M. D. (2021). New development: COVID-19 as an accelerator of digital transformation in public service delivery. *Public Money & Management*, 41(1), 69–72.
- 3) Al-Htaybat, K., von Alberti-Alhtaybat, L., & Alhatabat, Z. (2018). Educating digital natives for the future: Accounting educators' evaluation of the accounting curriculum. *Accounting Education*, 27(4), 333–357.
- 4) Appelbaum, D., Kogan, A., Vasarhelyi, M., & Yan, Z. (2022). Impact of business analytics and enterprise systems on managerial accounting. *International Journal of Accounting Information Systems*, 25, 29–44.
- 5) Babalola, S. S., & Okeowo, T. A. (2023). Digital transformation and accounting practices in Nigerian financial institutions. *Nigerian Journal of Accounting Research*, 15(2), 45–62.
- 6) Brynjolfsson, E., & McAfee, A. (2017). *Machine, platform, crowd: Harnessing our digital future*. W. W. Norton & Company.
- 7) Bughin, J., Seong, J., Manyika, J., Chui, M., & Joshi, R. (2018). Notes from the AI frontier: Modeling the impact of AI on the world economy. *McKinsey Global Institute*.
- 8) Central Bank of Nigeria (CBN). (2020). *Microfinance policy, regulatory and supervisory framework for Nigeria*. Central Bank of Nigeria.
- 9) Cockcroft, S., & Russell, M. (2018). Big data opportunities for accounting and finance practice and research. *Australian Accounting Review*, 28(3), 323–333.
- 10) Davenport, T. H., & Kirby, J. (2016). *Only humans need apply: Winners and losers in the age of smart machines*. Harper Business.
- 11) Davenport, T. H., & Ronanki, R. (2018). Artificial intelligence for the real world. *Harvard Business Review*, 96(1), 108–116.
- 12) Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, 13(3), 319–340.
- 13) Dwivedi, Y. K., Hughes, D. L., Ismagilova, E., et al. (2021). Artificial intelligence (AI): Multidisciplinary perspectives on emerging challenges, opportunities, and agenda for research. *International Journal of Information Management*, 57, 101994.

- 14) Elbashir, M. Z., Collier, P. A., & Sutton, S. G. (2011). The role of organizational absorptive capacity in strategic use of business intelligence. *Journal of Management Information Systems*, 28(2), 155–196.
- 15) Ernst & Young. (2020). *How artificial intelligence will transform the finance function*. EY Global Report.
- 16) Frey, C. B., & Osborne, M. A. (2017). The future of employment: How susceptible are jobs to computerization? *Technological Forecasting and Social Change*, 114, 254–280.
- 17) Issa, H., Sun, T., & Vasarhelyi, M. A. (2016). Research ideas for artificial intelligence in auditing. *Journal of Emerging Technologies in Accounting*, 13(2), 1–20.
- 18) Kokina, J., & Davenport, T. H. (2017). The emergence of artificial intelligence: How automation is changing auditing. *Journal of Emerging Technologies in Accounting*, 14(1), 115–122.
- 19) KPMG. (2021). *AI in financial reporting and audit: Transforming the profession*. KPMG Report.
- 20) Lacity, M., & Willcocks, L. (2018). *Robotic process automation and risk mitigation: The definitive guide*. SB Publishing.
- 21) Moffitt, K. C., Rozario, A. M., & Vasarhelyi, M. A. (2018). Robotic process automation for auditing. *Journal of Emerging Technologies in Accounting*, 15(1), 1–10.
- 22) Nunnally, J. C. (1978). *Psychometric theory* (2nd ed.). McGraw-Hill.
- 23) Obaro, O. E., & Olatunji, T. E. (2022). Challenges of technology adoption in accounting systems in developing economies. *African Journal of Accounting and Financial Research*, 10(1), 88–105.
- 24) Ogunleye, O. O., & Adeyemo, K. A. (2022). Information technology adoption and financial reporting quality in Nigeria. *International Journal of Accounting Studies*, 14(2), 101–118.
- 25) Onogholo, E., Adebayo, T., & Musa, S. (2025). Artificial intelligence and financial reporting quality in Nigerian banks. *Journal of Financial Innovation*, 12(1), 1–18.
- 26) PwC. (2020). *AI and the future of accounting and auditing*. PricewaterhouseCoopers Report.
- 27) Quattrone, P. (2016). Management accounting goes digital: Will the move make it wiser? *Management Accounting Research*, 31, 118–122.
- 28) Rogers, E. M. (2003). *Diffusion of innovations* (5th ed.). Free Press.
- 29) Russell, S., & Norvig, P. (2021). *Artificial intelligence: A modern approach* (4th ed.). Pearson.
- 30) Sutton, S. G., Holt, M., & Arnold, V. (2016). “The reports of my death are greatly exaggerated”—Artificial intelligence research in accounting. *International Journal of Accounting Information Systems*, 22, 60–73.
- 31) Tambe, P., Cappelli, P., & Yakubovich, V. (2019). Artificial intelligence in human resources management. *California Management Review*, 61(4), 15–42.
- 32) Vasarhelyi, M. A., Kogan, A., & Tuttle, B. (2015). Big data in accounting. *Accounting Horizons*, 29(2), 381–396.
- 33) Venkatesh, V., & Bala, H. (2008). Technology acceptance model 3. *Decision Sciences*, 39(2), 273–315.
- 34) Warren, J. D., Moffitt, K. C., & Byrnes, P. (2015). How big data will change accounting. *Accounting Horizons*, 29(2), 397–407.
- 35) World Bank. (2021). *Digital financial services in Africa: Opportunities and risks*. World Bank Publications.
- 36) Zhang, C., & Huang, J. (2020). The impact of artificial intelligence on accounting. *Journal of Finance and Data Science*, 6(2), 123–134.