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REVIEW

Artificial intelligence and accounting practice in Nigerian banking industry

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This study critically examined the impact of artificial intelligence on accounting practice in the Nigerian banking industry. To attain the objectives of the study, a regression and correction model comprising independent variables (automation process, expert system, and intelligent agent) and dependent variables (accounting practice) was specified for the study. The data for this study were obtained from a primary source where a survey was carried out on banking industries in Nigeria; 133 respondents were chosen as the sample size, of which 128 were returned. The data were analyzed using regression method of inferential statistics to test the significance of hypotheses using the t-statistics of co-efficient with the generated *p*-values. The findings revealed that all three variables (automation process, expect system, and intelligent agent) have a significant effect on accounting practice in deposit money banks (DMBs) industries in Nigeria. Therefore, the conclusion is that artificial intelligence enhances accounting practice in selected DMBs industries in Nigeria. It was recommended that banking industries and accountants, by improving their knowledge of artificial intelligence and enhancing their performance, will be able to eliminate some unwanted accounting costs.

Keywords: artificial intelligence, expert system, intelligent agent, banks, Nigeria

1. Introduction

Accounting automation encompasses the full accounting lifecycle, not just the financial management department of a corporation. This means that software controls the whole accounting process, including transactional data capture, modification, and interpretation, with little dependence on human transactional entries. Currently, a system named Robotic Process Automation (RPA) manages present-day accounting, used by AIM (2018), and is a word that describes software solutions that, in partial or totality automate, repetitive, manual, and rule-based human processes (1). The technological innovation aimed at artificial intelligence Artificial Intelligence (AI) has attracted a lot of attention for its capacity to assist decision-makers in making reliable decisions. AI can be used for many human activities, such as communication.

Numerous fields of endeavor are already familiar with some of the profits of adopting AI solutions, such that more results are achieved accurately with less time and effort when large amounts of data are involved. AI solutions are neither a novel problem for researchers nor a routine procedure for advanced technology companies, but they are an interesting subject for case studies, especially their effects on accounting (2).

The study of AI aims to create an intelligent system that is capable of carrying out a variety of tasks using its intelligence. The study of AI focuses on ways to improve computer performance over that of humans. Systems that think and behave like humans have emerged. The system's ability to process jobs that are typically handled by the human brain is another definition of AI. The creation of a machine capable of acting in human-like ways is the aim of AI. Additionally, it requires the ability to decide, see connections, and think creatively. The way financial institutions operate is rapidly changing as a result of AI, which improves operational efficiency while needing less labor. Accounting applications of AI have a long history

dating back more than 25 years, particularly in the domains of financial reporting and auditing. This suggests that AI will improve accounting services by decreasing the industry's severe, tedious, and detailed character (1).

In order to deliver more effective, suitable, and straightforward accounting procedures and information processing through automated services via the internet, AI is the way to go in the accounting profession. All parties involved in accounting business and processes would then be AI-compliant and engage in trade and information exchange. This strategy is applicable to both businesses and accounting education. Based on the advent of artificial technological innovations and applications for obtaining management and integrated accounting information systems, technology is now widely used in accounting (3).

This evolutionary change affects many different aspects of accounting, ranging from auditing and reporting to forensic science and more. The importance of accounting technology in the educational sector has increased due to its wide educational application for good practice and knowledge needed in most accounting data and applications (4). In order to improve performance and save time, accountants have already started incorporating technology into their regular tasks. They will be accustomed to constructing AI systems in this scenario. But doing so has a number of advantages, including the chance to achieve objectives through data-driven decision making, gain knowledge about the operation of the organization through data analytics, and duration of the process (5).

Accounting software robots and better expert systems have been developed as a consequence of recent breakthroughs in AI. Many changes in the corporate environment, as well as changes in the way firms function, have happened as a result of this new technological phenomenon. Studies have shown that technological innovations, if care is not taken, can mess up even expert accountants' work, and accountants' skill sets are being challenged these days (ACCA, 2013).

Pew Research Center (6) anticipated that growing automation and technological innovation would substitute people for employment by 2025. According to Johnathan, just as banks' ATMs are increasingly replacing human cashiers with artificially intelligent cashiers, accountants are in danger of being supplanted by sophisticated smart software and expert systems. As a result, the emphasis of this study will be on the impact of AI and improved accounting procedures in the Nigerian banking industry.

Various accounting groups have recently acknowledged the growing demand for AI in the accounting profession. According to the American Accounting Association [AAA] (2019), accounting service providers must build incentives, partnerships, and methods that detect and incorporate current and new accounting software quickly throughout their academic curricula in today's digital world. Worthy of note is the progress of AI technology, which, as a result, has a great impact on all societal elements accounted for through the substitution of human labor and daily reliance.

The accounting industry has completely changed its accounting processes as a result of the development of accounting software and the more recent integration of AI. A number of new advancements have emerged as a result of recent innovative technologies in accounting processes, which have largely replaced the traditional accounting system. The dynamic nature of technology innovation and AI is believed to be essential for today's accountant to stay relevant in light of these elements. In light of the benefits of professional accountants who are AI-compliant and the need for accounting practices in the Nigerian banking industry to invest in AI in order to keep up with the dynamics of the digital world in the 21st century, this research will respond to both of these issues.

The aim of the study was to examine the impact of AI on accounting practice in the Nigerian banking system. The specific objectives are to:

(i) Evaluate the effect of accounting system computerization in the Nigerian banking system;
(ii) Ascertain the effect of expert system on accounting practice in the Nigerian banking system; and
(iii) Examine the impact of intelligent agent on accounting practice in the Nigerian banking system.

2. Research elaborations

2.1. Concept of artificial intelligence

Artificial intelligence is a term used to describe computer programs that are designed to function and think like humans. It is accomplished using computer science's experimental component, which entails creating an intelligent machine that can use its intelligence to do a range of tasks (7). Zhang et al. (8) defined AI as the consequence of successful applications of big data and machine learning (ML) technology to understand the past and estimate the future utilizing huge amounts of data. Research shows that AI focuses on the technical know-how required to create intelligent software and computers, as well as the study of how to program computers to carry out activities more effectively and precisely than humans (9). Additionally, according to Brown and O'Leary (10), AI has the capacity of programmable technology to carry out operations that a human brain would carry out.

2.2. Merit and demerit of artificial intelligence

According to Kumar et al. (11), the advantages of AI are as follows: the application of RPA and intelligent automation

(IA) can help reduce time and enhance accuracy in corporate. Daily reporting is possible through AI's automated processes by utilizing natural language processing procedures; invoice processing, accounts payable and receivable, and other internal accounting processes will all be improved by AI faster than ever before; and it may frequently provide real-time financial status information.

Furthermore, corporate firms and organizations hire auditors to audit their books of accounts and assure the accuracy and legality of their financial records; using AI, the auditor may simply access these documents with very low chances of error; in an accounting firm, AI can readily handle accounting functions such as data handling, data processing, payroll preparation, and bookkeeping. With a more advanced ML model of regular behaviors and improved prediction of fraudulent activity, AI is enhancing fraud detection (11).

Artificial intelligence has the following disadvantages: aside from the high expenditures, there is no originality because AI cannot take a creative approach and can only learn over time using pre-fed material and prior experiences. Additionally, it raises unemployment because the elimination of numerous work options has made fewer human interventions necessary.

Artificial intelligence makes people lazy since it automates the majority of laborious and repetitive tasks. Since our brains are now relaxed from processing complex tasks due to the available computerized processes, we will become useless without computers in the future due to addiction. Additionally, it lacks morality and ethics, two essential human traits that AI may find challenging to include. The sudden emergence and rapid growth of AI technology pose a threat to human existence as it can grow out of control and perhaps annihilate mankind. The AI singularity occurs during this time period (11).

2.3 Artificial intelligence in accounting

According to Jackson et al. (2021), AI applications can benefit accountants in accomplishing their regular responsibilities at a faster pace in the following areas:

Machines that imitate the human brain: Accounting firms are making these technologies a critical part of their business by heavily investing in them. As a result, AI may take on the time-consuming labor of diverse data entry and reconciliation as well as eliminate errors, lowering liability. Accounting professionals will be able to focus on more recommended jobs once the routine chores have been completed. Combating misrepresentation: AI aids in the efficient processing of large amounts of data from various sources, the identification of difficult transactions and dealings, and the reporting of those transactions and dealings in a visual tool that allows the compliance team to more effectively handle such cases. Machines with AI Make Accounting Tasks Easier: AI computers automate a wide range of accounting tasks. It ensures operational effectiveness while lowering costs. As automation infiltrates every nook and cranny of a business, accounting firms embrace the digital change that will result from technological advancements.

2.4. The impact of artificial intelligence on accounting information systems

According to Solaimani et al. (12), accounting information systems are information bases for putting away, handling, and deciphering results. Past investigations showed that utilization of computer-based intelligence decreases the issues of bookkeeping data sets (13), further develops accounting information system frameworks, and provides independent direction (14). Coordinating savvy frameworks with bookkeeping data sets can assist in the assessment of huge volumes of information, regardless of the immediate support of the chief. The wise frameworks can determine information and help clients grasp exchanges, store, and recuperate information in normal language. For example, the simulated intelligence report exploring activity, created by Deloitte, computerizes the most common way of assessing and removing important data from different records (12, 15).

Li and Zheng (16) observed efficiency improvements in work processes through AI, for example, the enlistment of bookkeeping books and the arrangement of proclamations that have required numerous assets. He contends that AI permits bookkeeping staff to zero in on information passage, and the PC will wrap up the gig.

2.5. 21st century accountant and adaptation to artificial intelligence

Accounting will not be completely replaced by AI, but accountants need to be mindful of its consequences. In order to keep up with current trends in AI, accountants should arm themselves with the following competencies (17).

Professional skills: As an accountant, you will be redundant if your current skills and output are outdated and obsolete methodologically. You will be considered a professional misfit. Therefore, accountants need to keep learning and developing their skills. Managing effectively: While studying Accounting systems may not be affected right away by management abilities, accountants will gain from these abilities when they take on jobs as financial managers or other positions that require them to supervise and control a team of individuals.

Computer Skills: Computerization best describes the big data era we are currently living in. The value of computers has been acknowledged in paperless accounting methods from the past, present, and future, as well as

in computerized accounting. Therefore, to enhance their current data processing Skills, accountants should learn some computer programming techniques in addition to basic computer operations. Analytical skills: Accounting professionals use accounting statements to analyze a large amount of financial data. Because of this, it is highly important to weigh the risks involved reasonably and accurately in a timely manner. The capacity to assess a project's quality and the tools required to complete it quickly falls under the category of skills. The ability of a company's financial personnel to accurately assess the economic environment in which they operate, identify the level of competition, and provide a reference is crucial to both short- and long-term project decisions.

2.6. Classical theory of artificial intelligence (CTAI)

Akinadewo (18) claimed that the concept focuses around the query of whether AI is even conceivable. It prompts inquiries such as do machines think? Or can a machine achieve that? (19). Some people think AI would not be able to fully replace human intelligence. However, Super Artificial Intelligence robots, which are creative AI robots, are in fierce competition with human inventors, claimed Zohuri and Rahmani (20). Although this theory is predicated on the premise that humans will continue to provide the fundamental transactions necessary for AI to function, it is still questionable whether or not any human tasks have been entirely supplanted by AI in the new world. Despite advances in AI, this concept remains important in terms of the constraints on what robots can do, stating that AI is essentially restricted or swapped with alternative approaches (19).

The foundation of this research is the Classical Theory of Artificial Intelligence (CTAI). While this hypothesis is based on the assumption that humans would continue to offer the essential transactions for AI to operate, CTAI contends that numerous human operations have not been completely replaced by AI in recent years. Surprisingly, AI still needs the human aspect to function because AI is not designed to input data into the Expert System on its own in order to generate the required reports as considered appropriate by the organization.

2.7. Empirical review

Giles (21) examined how ML and AI will impact financial auditing in the future. Additionally, the survey showed that the field of accounting has changed, with accountants now learning to analyze data rather than just arrange and handle it. Despite these studies, there is still a substantial knowledge vacuum on how AI might impact accounting procedures, especially in a commercial and economic hub like Lagos, Nigeria.

The effect of AI on jobs and future work was investigated by Bruun and Duka (22). According to the findings, AI has already replaced human jobs in sectors that were formerly deemed impossible to automate. Chukwudi et al. (23) studied the level of change AI has had on accounting practices. The study used survey research methodology and was specifically focused on accounting firms in the southeast. A descriptive study of 185 accountants was conducted using a standardized questionnaire. The outcome revealed that AI would significantly affect how accounting operations are carried out in South-East Nigerian enterprises.

Greenman (24) investigated the effect of AI on the accounting discipline. According to the findings, there is software that automates tax processes, bookkeeping, accounting, and auditing activities. The necessity for AI as an auditing and accounting system supplement was conceptualized by Issa et al. (25). This study posed a series of research questions in the hopes of uncovering AI's role in the modern audit environment. AI might potentially replace auditors in a variety of automated jobs, according to the report. An outline of AI and its capabilities was offered by Singh et al. (26). The study revealed that extensive continuing research suggests that humans and machines will mix in the near future to form cybernetic entities highly capable and dominant with sophisticated technologies, a concept known as transhumanism.

Kumari et al. (27), arguing for a true comprehension of native language and the use of cloud computing, looked into cloud computing and intelligent computing and found out that incorporating AI into cloud-based code will boost efficiency while also introducing intelligent computing language into the software, allowing machines to make judgments independently and in real time.

3. Research method, population size, sample, and sampling technique

There are different exploration plans, yet the one embraced for the purpose of this study is the survey method. In the survey method, data are collected from a predefined group of respondents to gain information. The survey research design used in the study involved a self-designed questionnaire for collecting data from the respondent. The researchers relied on the responses derived from the structured questionnaire that had been prepared to help answer the research questions. The study's population referred to the whole personnel of a few chosen Nigerian banks as a case study. The total number of 200 customers, managers, and employees of Wema Bank,

Polaris Bank, Union Bank, and Access Bank make up the study's population.

In total, 133 employees, customers, and management were selected for sampling due to the size of the population. All participants in the study population have an equal chance of being selected because the study uses a random sample technique. The sample size above was arrived at using Taro Yamane's formula as stated below:

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

$$= \frac{200}{1 + 200(0.05)2}$$

$$= \frac{200}{1 + 200(0.0025)}$$

$$= \frac{200}{1 + 0.5}$$

$$n = 133$$

Unfortunately, however, only 128 copies of the questionnaire distributed were properly filled out and recovered; this number then formed the sample for this study.

3.1. Method of data analysis and model specification

Ordinary least squares and analysis of variance (ANOVA) analyses were employed to evaluate the hypotheses, while descriptive statistics were utilized to test the data. Tables and figures were used to present the data collected. In order to analyze the data, the Statistical Package for Social Sciences was used.

In this study, a correlation and multiple regression equation is constructed to evaluate the hypothesized associations between the dependent variable and the three independent variables. The equation's econometric version is stated as follows:

$$Y = a + bx$$

$$Y = \alpha + \beta 1 \times 1 + \beta 2 \times 2 + \beta 3 \times 3 + \mu$$

$$ACP = \alpha + \beta 1\, AP + \beta 2\, ES + \beta 3\, IA + \mu$$

where

ACP = Accounting Practice
AP = Automation Process
ES = Expert System
IA = Intelligent Agent
$\beta_1, \beta_2, \beta_3$ = Co-efficient
μ = Error term
α = Constant term

4. Results

From the questionnaire distributed, 53.91% representing 69 respondents were male while the remaining 46.09% representing 59 respondents were female; 53.13% representing 68 respondents were single while the remaining 46.88% representing 60 respondents were married; 39.06% representing 50 respondents were less than 40 years of age, 45.31% representing 58 respondents were 41–50 years while the remaining 15.63% representing 20 respondents were more than 51 years; 66.41% representing 85 respondents had less than 10 years of experience, 17.97% representing 23 respondents had 10–20 years while the remaining 15.63% representing 20 respondents had more than 20 years of experience; 36.72% representing 47 respondents had B.Sc. qualification, 41.41% representing 53 respondents had M.Sc. while the remaining 21.88% representing 28 respondents had Ph.D. qualification; majority of the respondents at 57.81% representing 74 respondents were cashiers, 13.28% representing 17 respondents were supervisors, 21.09% representing 27 respondents were managers while the remaining 7.81% representing 10 respondents were Directors.

4.1. Respondents' input

Table 1 presents the responses of the respondents on the impact of the automation process of the accounting system on accounting practice. Notably, 39.84% of the respondents strongly agreed that the high cost of automation affects the application of AI. Most of the respondents (51.56%) strongly agreed that the fear of data loss is the major reason for the non-automation of the traditional accounting software to AI in my firm; 29.69% of the respondents strongly agreed and disagreed that data validation is going to be a major challenge in the implementation of AI in accounting.

However, majority of the respondents (31.25%) disagreed that the support of top management affects the automation and implementation of AI usage and installation. Lastly, 43.75% of the respondents strongly agreed that the structure and overall digitalization of the firm affect the implementation and automation of AI in accounting.

4.2. Respondents' input

Table 2 presents the responses of the respondents to the expert system on accounting practice. Notably, 67.19% of the respondents strongly agreed that accounting information through the expert system is flexible in data processing. Most of the respondents (64.84%) strongly agreed that using an expert system for accounting processes will make recording much easier and faster. A total of 29.69% of the

TABLE 1 | Respondents' responses on automation process of the accounting system on accounting practice.

S. No.	Evaluate the effect of automated accounting practice in Nigerian banking industry	*SA*	*A*	*SD*	*D*
1	High cost of automation affects the implementation of AI.	51 (39.84%)	26 (20.31%)	30 (23.44%)	21 (16.41%)
2	The fear of loss of data is the major reason for non-automation of the traditional accounting software to AI in my firm.	66 (51.56%)	14 (10.94%)	28 (21.88%)	38 (29.69%)
3	Data validation is going to be a major challenge in the implementation of AI in accounting.	38 (29.69%)	25 (19.53%)	27 (21.09%)	38 (29.69%)
4	Supports of top management affect the automation and implementation of AI usage and installation.	27 (21.09%)	35 (27.34%)	26 (20.31%)	40 (31.25%)
5	The structure and overall digitalization of the firm affects the implementation and automation of AI in accounting.	56 (43.75%)	16 (12.50%)	21 (16.41%)	35 (27.34%)

SA, strongly agreed; A, agreed; SD, strongly disagreed; D, disagreed.

TABLE 2 | Responses of the respondents' expert system on accounting practice.

S. No.	Ascertain the effect of expert system on accounting practice in Nigerian banking industry	*SA*	*A*	*SD*	*D*
1	Accounting information through the expert system is flexible in data processing.	86 (67.19%)	10 (7.81%)	29 (22.66%)	3 (2.34%)
2	Using an expert system for accounting processes, recording will be much easier and faster.	83 (64.84%)	10 (7.81%)	25 (19.53%)	10 (7.81%)
3	Accounting software operates in a defined environment without failure.	37 (28.91%0	34 (26.56%)	19 (14.84%)	38 (29.69%)
4	Expert system automated the bank accounting information is inclusive for all the financial aspects that users need in the decision making.	50 (39.06%)	20 (15.63%)	29 (22.66%)	29 (22.66%)
5	Expert system through the innovation of AI has improved the general accounting bodies in preparation of reliable reports and accounts.	50 (39.06%)	20 (15.63%)	22 (17.19%)	36 (28.13%)

SA, strongly agreed; A, agreed; SD, strongly disagreed; D, disagreed.

respondents disagreed with the statement that accounting software operates in a defined environment without failure.

However, the majority of the respondents (39.06%) strongly agreed that the expert system that automated the bank accounting information is inclusive of all the financial aspects that users need in their decision-making. Lastly, 39.06% of the respondents strongly agreed that expert systems, through the innovation of AI, have improved the general accounting bodies in preparation of reliable reports and accounts.

4.3. Responses of the respondents

Table 3 presents the responses of the respondents on intelligent agents in accounting practice. Notably, 44.53% of the respondents strongly agreed that the core intelligent agents look for information in real time to help them make decisions on a regular basis. Most of the respondents (46.88%) strongly disagreed that the banks used intelligent agents that follow an AI strategy with a distinct enterprise-level use case road map that benefits the bank. A total of 65.63% of the respondents strongly agreed that a standard set of AI toolkits utilized by intelligent agents for business data and analytics has been implemented by the bank.

However, the majority of the respondents (35.94%) strongly agreed that the bank meticulously monitors a wide range of well-specified key performance indicators for AI. Lastly, 28.91% of the respondents strongly agreed as well as disagreed that, for the financial sector, intelligent agents provide a greater threat than an opportunity.

4.4. Correlation analysis

4.4.1. Correlation between automation process and accounting practice

	ACP	AP
ACP	1.0000	
AP	0.7381	1.0000

The correlation analysis explained the nature of association among our respective AI variables. The correlation analysis explained that the automation process was positively inclined at 0.7381 to accounting practice and was insignificant at the 5% significant level.

TABLE 3 | Responses of the respondents' intelligent agent on accounting practice in Nigerian banking industry.

S. No.	Examine the impact of intelligent agent on accounting practice in Nigerian banking industry	*SA*	*A*	*SD*	*D*
1	The core intelligent agents look for information in real time to help them make decisions on a regular basis.	57 (44.53%)	12 (9.38%)	44 (34.38%)	15 (11.72%)
2	The banks used intelligent agents that follow an AI strategy with a distinct enterprise-level use case road map that benefits the bank.	60 (46.88%)	13 (10.16%)	38 (29.69%)	16 (12.50%)
3	A standard set of AI toolkits utilized by intelligent agents for business data and analytics has been implemented by the bank.	84 (65.63%)	8 (6.25%)	28 (21.88%)	8 (6.25%)
4	The bank meticulously monitors a wide range of well specified key performance indicators for AI.	46 (35.94%)	29 (22.66%)	26 (20.31%)	27 (21.09%)
5	For the financial sector, intelligent agents provide a greater threat than an opportunity.	37 (28.91%)	28 (21.88%)	37 (28.91%)	26 (20.31%)

SA, strongly agreed; A, agreed; SD, strongly disagreed; D, disagreed.

4.4.2. Correlation between expert system and accounting practice

	ACP	ES
ACP	1.0000	
ES	0.7706	1.0000

From the model above, the correlation analysis explained that the expert system had positive correlation at 0.7706 with accounting practice. Thus, it was insignificant at the 5% significant level.

4.4.3. Correlation between intelligent agents and accounting practice

	ACP	IA
ACP	1.0000	
IA	0.7901	1.0000

From the model above, the correlation analysis explained that intelligent agents had a positive correlation at 0.7901 with accounting practice and were insignificant at the 5% significant level.

4.5. Interpretation of results

4.5.1. Hypotheses testing

Three hypotheses were formulated to form the research objectives of this study, and the hypotheses are thereby discussed as follows according to the result of the analysis done:

Hypotheses I: There is no significant relationship between automation process of the accounting system and accounting practice in Nigerian banking industry.

For hypothesis one, the t-statistics gave a result of 3.17 and a probability value of 0.002. At a significant level of 0.05, it can be agreed that automation process does have a significant effect on accounting system and accounting practice of the Nigerian banking system (**Table 4**).

Hypotheses II: There is no significant relationship between expert system and accounting practice in Nigerian banking system

The t-statistics and probability value of hypotheses II are given as 3.57 and 0.001, respectively, which means that there also exist a significant relationship between expert system and accounting practice in the Nigerian banking industry (**Table 5**).

Hypotheses III: There is no significant relationship between intelligent agents and accounting practice in Nigerian banking industry.

Table 6 shows that there is a significant relationship between intelligent agents and accounting practice in the Nigerian banking industry as it gives a t-statistics of 4.97 and a probability value of 0.000.

5. Discussion of Results

In all three models examined on the effect of AI on accounting practices in Nigerian banking institutions, AI was measured as an automation process, an expert system, or an intelligent agent. The linear regression estimates of the results of automation process and accounting practices showed that automation process was statistically significant to accounting practices with a *p*-value of 0.002, which was less than the 5% significance level.

TABLE 4 | Hypothesis one.

Model	Unstandardized coefficients		t	Sig.
	B	Std. error		
1 (Constant)	0.3464	0.1233	0.28	0.779
AP	0.2125	0.0669	3.17	0.002

TABLE 5 | Hypothesis two.

Model	Unstandardized coefficients		t	Sig.
	B	Std. error		
1 (Constant)	0.3464	0.1233	0.28	0.779
ES	0.3153	0.8843	3.57	0.001

TABLE 6 | Hypothesis three.

Model	Unstandardized coefficients		t	Sig.
	B	Std. error		
1 (Constant)	0.3464	0.1233	0.28	0.779
IA	0.4283	0.0860	4.97	0.000

The linear regression result on expert systems on accounting practice showed that there was a relationship between expert systems on accounting practice with a regression significance value of 3.57 and a *p*-value of 0.001, which was less than the 5% significance level. Hence, the study concluded that there was a relationship between expert systems and accounting practice.

Finally, the relationship between intelligent agent and accounting practice revealed intelligent agent has a *p*-value of 0.000, which is less than the 5% significance level. Hence, we concluded that intelligent agent has a significant effect on accounting practice in banking institutions in Nigeria.

6. Conclusion

It is difficult to find solutions to the issues affecting AI. The researchers came to the following conclusions in light of the study's findings regarding the influence of AI on Nigerian accounting practice:

Following the analysis of variance result, the association between automation process and accounting practice was statistically significant with a *p*-value of 0.002, which is less than the 5% significance level. It was decided that the automated process has a substantial impact on accounting procedures in the Nigerian banking sector.

The results of the expert system and accounting practice also showed a relationship between the two, with a *p*-value of 0.001 (less than the 5% significance level) indicating that it was significant. As a result, we came to the conclusion that the expert system has a major impact on accounting practices in the Nigerian banking sector.

Finally, it is demonstrated that there is a relationship between intelligent agents and accounting practices with a *p*-value of 0.000, which is less than the 5% level of significance. As a result, we came to the conclusion that intelligent agents have a big impact on how Nigerian banks handle accounting.

7. Recommendations

The following recommendations were made in light of the findings:

All accounting organizations and professionals should endeavor to be abreast of the technological innovations in AI to enable them to utilize its resources in performing various accounting activities more effectively, avoiding certain unnecessary accounting costs.

Many components of AL should be looked into. Areas such as genetic programming, hybrid systems, and other automated processes are key to the future.

Lastly, issues concerning safety and security should be properly maintained and protected by bolstering cyber defense.

Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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