The Impact of Using Artificial Intelligence Technology (Expert Systems) on Audit Quality

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***Abstract*— Today, the world is experiencing a digital revolution, characterized by the widespread use of artificial intelligence (AI) technologies across various fields. This rapid technological advancement has significantly influenced all aspects of economic and social life. One of the key areas that have received substantial attention is accounting and auditing, particularly the impact of AI technologies on these domains. The term Artificial Intelligence (AI) refers to the ability of computers and machines to simulate human cognitive functions, such as learning from examples and experiences, recognizing objects, understanding and responding to language, making decisions, and overcoming challenges. The integration of AI technologies in auditing offers several advantages. For instance, the use of intelligent systems enhances accuracy and efficiency in accounting and auditing processes, leading to cost reduction and decreased workload, which ultimately improves audit quality. The foundation of this research is based on the hypothesis that the use of expert systems has a positive impact on audit quality. To validate this hypothesis, the study was divided into three main sections, leading to several key findings. The most significant conclusion is that the adoption of AI technologies plays a crucial role in achieving high-quality auditing. Additionally, the study presents several recommendations, the most notable of which emphasizes that the implementation of AI-based expert systems in auditing requires collaboration between accountants and programmers to develop and enhance reliable auditing software that can be effectively utilized in audit procedures.**

Keywords*— *Artificial Intelligence, Auditing, Expert Systems, Digital Technologies

I. INTRODUCTION

The world today is witnessing a digital revolution, marked by significant advancements in technology and artificial intelligence (AI). This rapid progress has profoundly impacted various aspects of economic and social life, with particular emphasis on auditing and the implications of using expert systems in the auditing process. Computer-assisted auditing techniques have been widely used in the field of auditing for an extended period. However, the introduction of advanced technologies, such as artificial intelligence and machine learning, alongside the increasing volume of data, has drawn auditors' attention to the potential benefits of AI-driven auditing systems. This shift represents a transformative trend in the evolving landscape of modern auditing.

II. RESEARCH METHODOLOGY AND LITERATURE REVIEW

A. Research Problem

The research problem focuses on examining the impact of artificial intelligence techniques (expert systems) on audit quality and the implications of their implementation on the auditing profession, as well as the challenges associated with their adoption.

B. Research Objectives

- To highlight the importance of using expert systems in auditing.
- To analyze the impact of expert systems on audit quality.
- To identify the key challenges facing the adoption of expert systems in the auditing profession.

C. Research Significance

The significance of this study lies in its examination of AI-based expert systems and their impact on audit quality. It further discusses the challenges associated with their adoption and evaluates the extent to which the auditing profession can benefit from these advanced technologies.

D. Research Hypotheses

- There is a positive impact of expert systems on audit quality.
- There is no significant impact of expert systems on audit quality.
- The use of expert systems in auditing is associated with various risks and challenges.

E. Research Sample

The study was conducted in Diyala Province in 2025, where a survey questionnaire was distributed to 80 financial accountants across different faculties of Diyala University to gather insights on the impact of expert systems in auditing.

F. Research Methodology

The study adopts an inductive research approach for the theoretical framework, relying on a comprehensive review of existing literature, research studies, and relevant sources related to the subject.

III. Artificial Intelligence and Auditing

A. Artificial Intelligence

The term Artificial Intelligence (AI) refers to the ability of computers or machines to simulate human cognitive abilities, such as learning from examples and experiences, recognizing objects, understanding and responding to language, making decisions, and overcoming challenges (1). Over time, AI technologies have become a critical factor considered by auditing firms when planning their business operations, aiming to leverage the increasing volume of big data available to them. However, it is important to note that the use of AI and machine learning in auditing is still in its early stages, although it has recently witnessed significant and continuous advancements. Auditing firms are already exploring and testing the potential of machine learning in auditing processes. For example, Deloitte & Touché has implemented "Argus," a machine learning-based software capable of reading documents such as leases, derivatives, and sales contracts. "Argus" is programmed with algorithms that identify key contract terms and detect statistical outliers, which significantly reduces the time required for auditors to perform these tasks [1].

B. Artificial Intelligence in Accounting and Finance

According to [2]: "AI aims to replicate human cognition in machines that are designed to think and learn like humans. The term can also be applied to any machine exhibiting characteristics typically associated with human intelligence, such as learning and reasoning. An ideal AI system possesses the ability to make decisions based on probabilistic reasoning to achieve a specific objective. Machine learning enables AI to learn from vast amounts of unstructured data, including text, images, and video, without human intervention. AI plays a significant role in automating bookkeeping and financial processes. AI-powered systems take over repetitive and labor-intensive tasks, reducing human involvement in bookkeeping and allowing financial professionals to complete their responsibilities more efficiently."

In general, financial experts develop methodologies to allocate business resources, while accountants are responsible for recording and reporting financial transactions and ensuring accuracy in bookkeeping. Today, financial transactions, audit complexity, and errors in revenue recognition present major challenges for accounting professionals. Machine learning (ML) and deep learning have revolutionized bookkeeping and financial management, enabling more efficient task execution. AI does not replace human accountants but rather supports them by automating routine processes. As a result, the digital transformation of bookkeeping and finance through AI is inevitable. AI-powered accounting software introduces significant improvements in accuracy and efficiency, potentially fully digitizing financial and accounting tasks in the near future [3].

C. Audit Quality: Definitions and Perspectives

Audit quality has been defined as the ability of the audit process to detect errors and weaknesses in the internal control system, address them effectively, and minimize their impact. Additionally, from an academic perspective, audit quality reflects the degree of compliance with auditing standards and professional codes of conduct during the audit process. According to International Standard on Auditing (ISA) 1300, audit managers are responsible for developing and maintaining quality assurance and improvement programs that cover all aspects of auditing activities. These programs should include both internal and external quality assessments, enabling the enhancement of audit performance and overall organizational processes [4].

Hosseinniakani in [5], emphasized that audit quality is achieved through strict adherence to auditing standards, requiring auditors to conduct audits with accuracy, efficiency, integrity, and objectivity. This involves identifying and addressing deficiencies that may exist in financial statements and accounting records across companies and institutions. Furthermore, in [6], Albawwat defined audit quality as the effective and efficient execution of the auditing profession, whereby material misstatements and financial discrepancies are identified and disclosed to meet the expectations of stakeholders.

According to [7], audit quality is a systematic examination of the auditing framework, conducted at both internal and external levels. The auditing process is designed to ensure that quality control systems are implemented in compliance with operational procedures and regulatory requirements, ensuring optimal efficiency.

In [8], Luo defined audit quality as a benchmark for reducing fraud and financial misrepresentation, thereby enhancing the accuracy and reliability of financial information. High-quality audits increase investor confidence by facilitating more precise financial evaluations of companies. Additionally, Salem in [9], described audit quality as the auditor’s independence in disclosing and reporting financial irregularities, including fraud and errors, while ensuring full compliance with professional standards and ethical guidelines. They argue that audit quality is directly linked to the reliability and accuracy of financial statements, making it a fundamental component of financial transparency and corporate governance.

IV. The Importance of Audit Quality

Audit quality is one of the most critical factors that organizations must ensure, as it plays a key role in assisting chief audit executives and auditors in embedding quality principles across all aspects of the audit process. This includes strategic and operational planning, as well as day-to-day audit tasks. Additionally, it provides a framework for developing quality assurance and improvement programs, simplifying the evaluation process, and enhancing it by educating employees on how to design audit procedures that effectively meet institutional needs [4].

The significance of audit quality is also reflected in its role in helping management fulfill its responsibilities efficiently and effectively by providing accurate, objective reports along with recommendations and observations related to the organization's activities. Furthermore, auditing strengthens corporate governance and accountability by ensuring that employees and management are held accountable for their actions. This, in turn, enhances overall organizational performance, mitigates fraud risks, and ensures that business operations align with strategic plans. Additionally, auditing helps identify deviations and provides corrective recommendations, thereby improving organizational management and achieving institutional goals with greater efficiency and effectiveness [10].

Audit quality also plays a crucial role in producing reliable information for management, ensuring the

effectiveness of the information system and internal controls. This ensures the flow of accurate and trustworthy data that supports informed decision-making. The detection of fraud, errors, and financial misstatements often indicates weaknesses in audit quality, which necessitates greater managerial attention to audit processes to reinforce accountability and transparency.

For auditors, maintaining high audit quality enhances management's trust in their reports, strengthens the audit department's position within the organization, and aligns with the professional and ethical standards governing the auditing profession. Therefore, audit quality is a key factor in ensuring business continuity and achieving operational excellence across all organizations [10].

Factors Affecting Audit Quality

Professional and academic organizations in the fields of accounting and auditing have identified key factors influencing audit quality to elevate the auditing profession to the highest possible standards. These factors can be categorized as follows:

- Organizational Factors: These include audit procedures, audit planning, workload determination, and time allocation required to complete the audit process. Additionally, the auditor's ability to define the audit scope and timeframe plays a crucial role. Audit quality is assessed based on the accuracy and adequacy of audit programs, the scope of the audit, and adherence to professional care standards [11].
- Behavioral Factors: These refer to the auditor's commitment to integrity, independence, and teamwork, which are essential for maintaining high-quality audit performance. Auditors must uphold ethical principles related to impartiality and objectivity
- Personal Factors: These include the auditor's expertise, educational background, professional training, and continuous development programs, which significantly impact the quality of the audit process
- Professional and Scientific Factors: These require adherence to generally accepted auditing principles, particularly the application of the principle of objectivity and compliance with professional auditing standards. Ensuring accurate and transparent reporting on the optimal use of available resources in professional activities enhances trust and transparency in the auditing process and strengthens the credibility of financial reports. Therefore, senior management must actively support the auditing process, as they are responsible for selecting and empowering qualified auditing personnel, ensuring that they perform their duties efficiently and effectively [12].

Factors Influencing the Adoption of Artificial Intelligence in the Auditing Profession

Auditors are impacted by artificial intelligence (AI) from two different perspectives. On one hand, they are influenced by changes in their clients' business environments. As clients increasingly adopt innovative technologies, this transformation affects all stages of the audit process, from audit planning to fieldwork and ultimately the final audit report. On the other hand, auditors face direct pressure to adopt AI technologies to align with client expectations, keep pace with technological advancements, and enhance the quality and accuracy of their audit services.

Audit clients now have growing expectations from auditors, seeking greater support in managing expanding business operations and emerging risks. However, the need to meet client demands is not the only driving factor behind AI adoption in auditing. The profession itself must evolve to adapt to the surrounding technological transformations, particularly those related to digital advancements [2].

For instance, several critical questions arise:

- How can auditors analyze the vast and increasing volumes of data available to clients without leveraging modern technologies?
- Can auditors effectively plan an audit engagement without considering the emerging risks associated with changes in business models?
- What if clients begin providing audit evidence in AI-generated formats? How can auditors fulfill their responsibilities if they do not keep up with these technological changes?

These challenges highlight the necessity of AI adoption in auditing and emphasize the need to explore the opportunities and solutions that AI technologies offer to auditors.

The Role of Artificial Intelligence in Enhancing Audit Quality

As discussed earlier, auditors face increasing expectations from clients and stakeholders, creating an urgent need for technological transformation in the auditing profession. Among the most significant advancements enabling this transformation is artificial intelligence (AI), which has the potential to redefine and enhance audit processes. But what exactly can AI contribute to the auditing profession?

The integration of AI technologies can help mitigate audit risks, particularly those related to inaccurate audit opinions, failure to detect material misstatements in internal controls, or financial data errors due to the limitations of traditional sampling techniques. One of the most critical advantages of AI-powered auditing is its ability to analyze entire datasets, regardless of their size, enabling auditors to identify unusual or suspicious transactions that might go unnoticed in traditional sample-based auditing [13].

Additionally, efficiency improvement is among the key benefits of AI adoption in auditing. AI enables auditors to achieve higher levels of assurance while reducing time and effort spent on manual tasks. For instance, instead of spending extensive hours reviewing contracts, AI-driven tools can automate the document analysis process, completing tasks in a fraction of the time. This allows auditors to allocate more time to aspects that require human judgment, such as client communication, building strong relationships, and gaining a deeper understanding of business operations – aspects that machines cannot replace.

V. Expert Systems in Auditing

In the context of auditing, expert systems play a pivotal role in enhancing the efficiency and accuracy of decision-making processes. They facilitate the analysis of large

datasets, detecting errors or fraudulent activities, and providing precise recommendations based on past patterns in financial operations. Expert systems operate similarly to human experts in making decisions, as they process and analyze data based on a predefined set of rules, which helps in expediting the process and improving its accuracy.

The key benefits of expert systems in auditing include:

- Error Detection: Expert systems can identify financial errors or deviations from established standards based on data analysis.
- Predictive Analysis: They can be used to predict future financial trends based on historical data.
- Assisting Auditors: They assist auditors by automatically analyzing data and providing the necessary explanations based on accumulated knowledge.

By relying on historical data and its interpretation, expert systems significantly improve both the speed and quality of decision-making, making them an invaluable tool in the auditing profession.

- Expert Systems

The term "expert systems" consists of two main parts. The first part refers to systems, which is the plural of the word "system," representing a set of interrelated components that work together to collect, process, store, and distribute information to assist in the control and decision-making process within an organization. The second part, "expert," indicates that these systems possess expertise, meaning deep, accumulated knowledge gained over time and experience, covering both facts and rules/procedures in a specific operational domain [14].

Expert systems are, in essence, information systems that receive inputs, process them, and generate outputs to aid in decision-making. However, instead of applying mathematical equations or algorithms to arrive at solutions, they leverage previous experiences and knowledge in processing data. Based on the previous definitions of expert systems, it is evident that they share a common trait: they acquire their ability to make decisions and solve problems from the knowledge of human experts. Consequently, they behave—so to speak—as the expert would when faced with a situation requiring a specific decision [13].

What distinguishes expert systems from traditional systems is that the user does not necessarily need to be proficient in computer use. The process begins by the system asking the user a question, followed by the system posing further queries, creating a dialogue that continues until a suitable solution is reached. The system then provides justifications and explanations for the chosen solution, based on the underlying database and associated inference engine.

Auditing with Expert Systems

When an external auditor performs an audit for any client, they are entrusted with numerous duties and responsibilities that require the exercise of sufficient professional care to ensure the accuracy of the results they reach and to report them appropriately.

The auditing process is defined as the organized process of gathering and evaluating evidence about significant economic events to determine their compliance with predefined standards and report the findings to stakeholders with vested interests.

Therefore, the process of collecting and evaluating evidence requires the auditor to engage in several activities, such as risk assessment, evaluating the client's internal control systems, and planning the audit process. The auditor then executes audit procedures, ultimately leading to the preparation of a report in which they provide their unbiased professional opinion on the fairness of the client's financial statements and how accurately they represent the client's financial position and the results of their operations [15].

- Applications of Expert Systems in Accounting and Auditing

Expert systems emerged as computer systems with commercial designs and applications developed and marketed in the 1980s. In 1983, the first attempt to explore the use of artificial intelligence and expert systems in accounting fields took place when the Internal Revenue Service (IRS) studied the potential applications of expert systems in tax work. The IRS initiated two training programs: one for training managers to evaluate the performance of external expert systems developers they had contracted with, and another for training their engineers and computer programmers to build their own expert system.

In 1987, the American Institute of Certified Public Accountants (AICPA) published a report titled "Introduction to Artificial Intelligence and Expert Systems," aimed at providing Certified Public Accountants (CPAs) and those interested in accounting sciences with information about expert systems, including their main components, potential applications in accounting, and future prospects. This report reflected the significant achievements that had been made using expert systems in other scientific and professional fields, with the AICPA recognizing a substantial potential for the development of expert systems to address complex accounting processes such as leasing, foreign exchange trading, acquisitions, pension benefits, income taxes, and auditing [14]. By 1990, the IRS had created and implemented 13 expert systems, one of the most important being used by tax employees in auditing the accounts of taxpayers [16].

The technical nature of various accounting applications made them highly suited for the use of expert systems, as accounting processes primarily depend on specific principles and policies. This aligns with the nature of the problems expert systems are designed to solve, as they are fundamentally rule-based.

The knowledge and expertise needed can be obtained from experienced CPAs and auditors, expressed in simplified technical language that knowledge engineers can convert into inferential rules within the expert system. Thus, expert systems have been used to monitor, analyze, and correct potential deviations from established accounting principles and policies, and their use has become prominent in the following accounting areas [16]:

- Providing accounting consultations to managers
- Controlling and supervising various auditing activities
- Tax analysis and planning
- Account analysis

- Preparation of annual reports
- Diagnosing the financial position of the organization and evaluating its continuity

In line with the principle that successful organizations learn how to utilize modern technology and incorporate it into their core activities, expert systems have become valuable resources widely adopted within public accounting and auditing firms. They offer increased efficiency and effectiveness in the work of auditors, thereby enhancing audit quality and providing a competitive advantage. Auditors benefit from the decisions made by expert systems, which are characterized by speed, accuracy, and consistency, knowing that these decisions are based on expert knowledge and problem-solving methods [15].

Furthermore, the nature of the auditing profession itself provides a strong incentive for using artificial intelligence applications and expert systems, as auditing involves structured or unstructured decisions made under incomplete and uncertain information. The problems faced by auditors often present a large number of potential solutions, which can be challenging to sort through to identify the best one. This type of problem is often solved through expert judgment in selecting a good solution, though not necessarily the best or optimal one. Here, the role of expert auditors becomes critical in choosing the best alternative using their experience and expertise in evaluating different alternatives. Since these expert experiences can be embedded in computer systems capable of simulating and replicating effective problem-solving methods. The reasons behind the widespread use of expert systems in auditing activities, including the following [17]:

- The increasing complexity of the auditing environment, particularly with the proliferation of computerized accounting systems and electronic data processing, requires more sophisticated control systems and more effective audit mechanisms.
- Heightened competition among auditing firms led to significant reductions in audit fees, prompting firms to seek new technologies and tools to perform audit tasks more efficiently, thus reducing audit costs. Competition also forced firms to shorten the time required to perform audits and improve the accuracy of results to retain clients.
- Auditors' desire to enhance the decision-making abilities of their staff without requiring them to consult more experienced auditors.

Hosseinniakani in [5], noted that the more complex (unstructured) the decision, the higher the level of expertise required to handle it, and this makes decision support and expert systems crucial. He highlighted three factors that make expert systems desirable in auditing:

- Their ability to improve decision-making efficiency in auditing.
- Their ability to disseminate accumulated knowledge and expertise both within and outside the audit firm to all audit team members, ensuring that each individual has access to the best available expertise in the required field.
- Competitive pressures that demand better quality audit decisions while keeping costs low to maintain a competitive edge.
- In addition to these factors, expert systems are now commonly used as training tools for novice auditors and as educational tools in university and institute auditing courses. Given the advantages of expert systems in improving efficiency, competence, and the ability to handle complex tasks that typically require expert involvement, their use in various auditing activities has become both common and necessary for assisting auditors with limited experience.

Practical Aspect

1-Field Framework of the Research

Sample and Data Collection Method:

The researchers employed a simple random sampling method for distributing the questionnaire among a sample of accountants working at the colleges of the University of Diyala, assuming a homogeneous population. A suitable sample was then drawn, with 80 questionnaires distributed to employees in the colleges. A total of 75 questionnaires were returned, which were valid for analysis, yielding a response rate of 90%.

Statistical Indicators:

The researchers used statistical analysis based on the data and information obtained from the research using the five-point Likert scale. The following key statistical indicators were employed with the ready-made software package (SPSS V26), suitable for the research hypotheses and questions:

- Frequencies and Percentages: Used to determine the number and percentage of respondents within the sample.
- Weighted Mean: Used to assess the degree of agreement of the sample with the questions.
- Standard Deviation: Used to understand the extent of dispersion in the respondents' answers relative to the degree of agreement.
- Pearson Correlation Coefficient: Used to measure the degree of correlation between the research variables and to determine the type of relationship (whether it is positive or negative).
- F-Test: Used to determine the presence of an effect of the independent variables on the dependent variable.
- Regression Analysis: Used to determine the extent to which the independent variable affects the dependent variable.

2-Description of the Research Sample:

The research sample included a group of individuals from the College of Administration and Economics, University of Diyala. Table 1 presents the characteristics of the individuals in terms of gender, age, academic qualifications, and years of service in the college.

TABLE I. FREQUENCIES AND PERCENTAGES OF DEMOGRAPHIC VARIABLES FOR THE RESEARCH

Variable	Category	Frequency	Percentage (%
Gender	Male	55	73.0
	female	20	27.0
Total		75	100.0
Marital Status	Married	0.0	0.0
	Divorced	19	25.0
	Single	39	52.0
	Widowed	17	23.0
Total		75	100.0
Academic Qualification	Below High School	22	29.0
	Bachelor's Degree	9	12.0
	Master's Degree	26	35.0
	PhD	18	24.0
Total		75	100.0
Years of Service	Less than 5 years	7	9.0
	6-10 years	11	15.0
	11-15 years	27	36.0
	More than 15 years	30	40.0
Total		75	100.0
Job Title	Assistant Accountant	9	12.0
	Accountant	4	5.0
	Senior Accountant	16	21.0
	Account Manager	8	11.0
	Assistant Auditor	9	12.0
	Auditor	17	23.0
	Senior Auditor	2	3.0
	Audit Manager	10	13.0
Total		75	100.0

Source: Prepared by the researcher based on the computed results.

From Table (1), the results are as follows:

- Gender Variable: It was found that the number of males was 55, representing 73%, which is higher than the percentage of females.
- Marital Status Variable: It was found that the category "Single" accounted for 39 individuals, representing 52%, which is the highest percentage among the other categories.
- Academic Qualification Variable: It was found that individuals holding a Master's degree accounted for 26 individuals, representing 35%, which is the highest among the other academic qualifications.
- Years of Service Variable: It was found that the category of employees with more than 16 years of service accounted for 30 individuals, representing 40%, which is the highest percentage among the other service years.
- Job Title Variable: It was found that auditors accounted for 17 individuals, representing 23%, which is the highest percentage among the other job titles.

3-Description and Diagnosis of Research Variables:

This section includes the description and diagnosis of the main research variables, specifically Artificial Intelligence as the independent variable and Audit Quality as the dependent variable. To achieve this, appropriate statistical analyses were used to determine the means and standard deviations of the responses from the sample regarding Artificial Intelligence and Sustainable Audit Quality. Table (2) presents the description and diagnosis of the Artificial Intelligence variable.

TABLE II. THE RESEARCH VARIABLES RELATED TO ARTIFICIAL INTELLIGENCE

Standard Deviation	**Mean**	**Strongly Disagree**		**Disagree**		**Neutral**		**agree**		**Strongly agree**		**variables**
		%	NO.	%	NO.	%	NO.	NO.	NO.	%	No.	
0.98242	3.9800	0	0	11	8	36	27	40	30	20	15	X1
0.95384	3.5400	0	0	18	14	24	18	35	26	9	7	X2
0.75928	3.5900	0	0	28	21	30	15	27	20	11	8	X3
1.11098	3.3800	8	4	12	6	16	8	37	28	4	3	X4
0.97646	3.7800	0	0	12	6	20	10	32	24	23	17	X5
0.80026	3.8200	0	0	8	4	18	9	33	25	25	19	X6
0.92660	3.8800	Overall Average										

[a]Source: Prepared by the researcher based on the computed results

The results of Table (2) indicate that artificial intelligence has achieved an overall mean of (3.88) with a standard deviation of (0.92660). This suggests that the responses of the sample are consistent around the mean value. Regarding the individual items, item number (1) in this section, which is (X1), shows the highest level of consistency, with a mean of (3.98) and a standard deviation of (0.98242). The direction of this item is (Agree), and the overall direction for artificial intelligence is (Agree).

As for the means and standard deviations of the sample responses related to employee performance, Table (3) is presented to illustrate this.

TABLE III. DESCRIPTION OF AUDIT QUALITY

Standard Deviation	**Mean**	**Strongly Disagree**		**Disagree**		**Neutral**		**agree**		**Strongly agree**		**variables**
		%	NO.	%	NO.	%	NO.	NO.	NO.	%	No.	
0.60238	4.4500	0	0	6	5	30	23	50	25	36	27	X1
0.86402	3.7800	0	0	30	21	14	7	58	29	1	1	X2
0.73983	4.4900	0	0	2	1	18	9	52	26	3	2	X3
0.75551	4.7800	0	0	4	2	28	4	54	27	27	20	X4

Standard Deviation	Mean	Strongly Disagree		Disagree		Neutral		agree		Strongly agree		variables
		%	NO.	%	NO.	%	NO.	NO.	NO.	%	No.	
0.82833	3.7400	2	1	6	3	20	10	60	30	40	30	X5
0.78272	3.8600	0	0	4	3	26	13	50	25	15	11	X6
0.89125	3.8256	Overall Average										

b. Source: Prepared by the researcher based on the computed results.

The results of Table 3 indicate that the overall mean for audit quality is 3.8256 with a standard deviation of 0.89215, which reflects the consistency of the sample responses around the mean value. At the item level, the highest level of consistency was observed in item X4 of this variable, which scored a mean of 4.7800 and a standard deviation of 0.75551, indicating agreement. Therefore, the overall trend for audit quality is one of agreement.

VI. Hypothesis Testing

1. Analysis of the Correlation Between Artificial Intelligence and Audit Quality in the College of Administration and Economics under Study:

This relationship represents the testing of the first main hypothesis, which states that there is a statistically significant correlation between artificial intelligence and audit quality. As shown in Table (4), there is a statistically significant relationship between artificial intelligence and audit quality, with a correlation coefficient value of 0.680. The significance value sig. equals 0.001, which is less than 0.01 at a 99% confidence level. This result indicates the statistical significance and strength of the correlation between the two variables, leading to the rejection of the null hypothesis and acceptance of the alternative hypothesis.

TABLE IV. The correlation relationship between artificial intelligence and audit quality

F		R^2	Audit Quality		Independent Variable Dependent Variable
table	Calculated		B_1	B_o	
4.412	37.755	0.453	0.760 (5.624)	0.660	Artificial Intelligence

c. The source: Prepared by the researcher based on the results from the SPSS software, N = sample size.

2. Analysis of the Impact Relationship Between Artificial Intelligence and Audit Quality in the College of Administration and Economics Under Study:

This analysis represents the test of the second main hypothesis of the research, which posits that there is a significant impact between artificial intelligence and audit quality in the College of Administration and Economics under study. As shown in

Table (5), there is a significant impact between artificial intelligence and audit quality in the College of Administration and Economics under study. The calculated value of (F) is 37.755, which is higher than its tabulated value of 4.412 at degrees of freedom (1, 48) at a significance level of 0.05. The P-value is 0.000, which is less than 0.05. Additionally, the value of R^2 is 0.453, meaning that artificial intelligence explains 43.7% of the changes in audit quality. The value of the coefficient of determination (R^2) is 0.760, indicating that a one-standard deviation increase in audit quality will lead to a 76% increase in artificial intelligence by one standard deviation unit. This result leads to the rejection of the null hypothesis and the acceptance of the alternative hypothesis. This means there is a significant impact between artificial intelligence and audit quality, implying that the audit quality in the studied college depends on artificial intelligence.

TABLE V. Impact Between Artificial Intelligence and Audit Quality

Correlations		
		Audit Quality
Artificial Intelligence	Pearson Correlation	**0.680
	Sig. (2-tailed)	0.000
	N	75
**. Correlation is significant at the 0.01 level (2-tailed).		

d. Source: Prepared by the researcher based on the results of the statistical software (SPSS).

e. Indicates the computed t-values with df (1,48), N = 50, and P < 0.05.

VII. Conclusion

1) The use of artificial intelligence (AI) technologies is a critical factor in achieving audit quality.

2) The implementation of expert systems enhances audit productivity and efficiency by improving auditing processes and reducing time and effort.

3) The utilization of expert systems in auditing also contributes to developing a new generation of auditors and accountants with extensive expertise, leading to an improved business environment, investment stimulation, and job creation.

4) There are challenges and concerns related to the use of AI technologies in general, particularly in terms of digital security and privacy. The increasing reliance on digital techn4-ologies raises the risk of cyber threats and data breaches.

VIII. Recommendations

1) The adoption of AI-based expert systems in auditing requires collaboration between accountants and programmers to develop reliable auditing software.

2) The application of expert systems in auditing should be comprehensive, extending its benefits to accounting in general and auditing in particular.

3) All accountants and auditors should be actively involved in the transition plan for integrating AI technologies into accounting and auditing. This should be part of a broader strategy to enhance digital transformation, ensure sustainability, and strengthen coordination efforts.

4) The necessary infrastructure for AI technologies, including computers, software, and training programs, should be made available.

5) All concerns related to data security and privacy in AI applications should be addressed by strengthening cybersecurity measures in accounting and auditing software.

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