World Economics & Finance Bulletin (WEFB)
Available Online at: https://www.scholarexpress.net
Vol. 47, June, 2025
ISSN: 2749-3628,

ARTIFICIAL INTELLIGENCE TECHNOLOGY AND ITS ROLE IN IMPROVING THE QUALITY OF AUDITING AND ITS IMPACT ON THE PERFORMANCE OF ECONOMIC UNITS

Rahim Obaid Abbas[1]
Doaa Sarhan Ebadi Al-Hassani[2]
Accounting Techniques Department, Technical College of Management/ Kufa, Al-Furat Al-Awsat Technical University (ATU), 54003, Najaf, Iraq[1]
AL Sheikh Al Toosi University[2]
alkfhg150@gmail.com[1]
Raheem.Obaid@atu.edu.iq[2]

Article history:
Received: 14th May 2025
Accepted: 11th June 2025

Abstract:
This research aims to explain the role of artificial intelligence techniques and methods in achieving the quality of auditing in protecting information and financial data in economic units. The research sample was the descriptive method adopted for the theoretical side, while the practical side was built on the basis of conducting a questionnaire directed to the category of auditors working in the Office of Financial Supervision in Najaf, Babylon, and Karbala, The results were then analyzed, and the results were presented and analyzed to show that adopting artificial intelligence improves the quality of auditing through what it achieves by displaying information with credibility and transparency, and in a way that suits the needs of users of artificial intelligence, including its role in managing economic resources more effectively to obtain benefits that would have been lost in the event of any electronic attacks. . This study concluded Conclusions: Economic units are able to establish control procedures that support their system against electronic attacks and risks, thus creating a safer and more beneficial investment atmosphere.

Keywords: Artificial Intelligence, Audit Quality, Economic Unit.

INTRODUCTION

Artificial intelligence technology serves as an advanced modern technique to document information regarding internet activities and information technology. Artificial intelligence technology protects both data security and unauthorized access to economic unit-related systems. Economic units demonstrate clear proof that auditing quality creates substantial impacts while auditing quality requirements must implement information security measures to prevent all unlawful file erasures and modifications. The practical application of this technology becomes a motivation which economic units can provide to other institutions.

CHAPTER ONE: RESEARCH METHODOLOGY AND PREVIOUS STUDIES

1.1. Research Methodology

1.1.1. Research Problem

The research problem can be summarized in the following question: How can we avoid Attacks by hackers against economic units that submit their financial reports digitally?

1.1.2. Research Objectives

The research seeks to achieve several objectives, which can be stated as follows:

1. Demonstrate the role of artificial intelligence techniques and methods in achieving audit quality in economic units.
2. Demonstrate the impact of applying artificial intelligence systems and their ramifications on the financial reports of their users.

1.1.3. The Importance of the Research

The importance of the research can be summarized as follows:

Artificial intelligence is considered important for systems linked to networks and information technology, as it improves the efficiency of the audit process, reduces costs, reduces the audit workload, and delivers audit results in a timely manner. Expert systems can enhance auditor performance to ensure the protection of information from any risk or threat that may arise as a result of its presence on systems and information technology networks.

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1.1.4. Research Hypothesis

It is as follows:

Main Hypothesis: Artificial intelligence technology positively impacts the quality of auditing in economic units. Sub-hypotheses can be presented as follows:

a) Machine learning technology positively impacts the quality of auditing in economic units.

b) Continuous auditing technology positively impacts the quality of auditing in economic units.

1.1.5. Study Population and Sample

The study population is all auditors practicing the auditing profession in audit offices licensed to practice the profession based on bulletins issued by the Professional Council, in addition to specialists working in the Federal Board of Supreme Audit in economic units.

The study sample included a number of audit offices (individuals or companies) pursuant to the 2024 bulletin, and a number of employees of the Federal Board of Supreme Audit in Iraq, the third district, which included the governorates (Najaf, Karbala, and Babil).

1.1.6. Spatial and Temporal Limits of the Study

1. Spatial Limits: The study was limited to economic units using artificial intelligence technology to assess the quality of auditing in auditors' offices and the Federal Board of Supreme Audit in Iraq.
2. Temporal Limits: The study was conducted during the period from 2024 to 2025.

1.1.7. Study Methodology and Data Collection Tools

In order to achieve the study objectives and test its hypotheses, the researcher adopted the following methods and tools:

1. Theoretical Aspect: The researcher adopted a descriptive approach based on available local, Arab, and foreign sources relevant to the study topic, including books, research, periodicals, dissertations, and university theses. She also utilized articles and publications published on the Internet and official documents from professional organizations specializing in the field of accounting work organization.
2. Practical aspect: The questionnaire method was adopted, in relation to artificial intelligence technology, for audit quality, and the presentation of questionnaire results and data analysis using SPSS to obtain the study results. A number of personal interviews were also conducted with specialists in the field of accounting and auditing, as well as professionals, regarding the study to support and enhance the questionnaire information.

1.2. Previous Studies

Study referred to by (Alawi and Amari, 2022), in their master's thesis, which focused on the question of how information technology can contribute to achieving external audit quality. To achieve the objectives, the researcher used a questionnaire distributed to a sample of auditors, certified accountants, and professors specializing in accounting and auditing. The researchers concluded that information technology facilitates the work of external auditors in terms of accuracy, efficiency, and speed of performance.

Sayyed et al (2021), discussed the impact of artificial intelligence technologies on audit evidence from the perspective of certified auditors in information technology companies. The study used a descriptive analytical approach. Data was collected from a sample of auditors using a questionnaire developed for this purpose. The results of the study showed that expert systems had an impact on audit evidence, while neural network technology did not have a significant impact on audit evidence. The study recommended increasing attention to artificial intelligence technologies by audit firms operating in Jordan due to their Scientific importance in improving the process of collecting audit evidence.

Chapter Two: The Conceptual Framework of Artificial Intelligence Technology

2.1. Artificial Intelligence

2.1.1. Definition

Despite the many studies that have addressed artificial intelligence, the concepts of artificial intelligence have varied with the number of researchers in this field. Accountants have been unable to arrive at a precise and comprehensive concept, as each researcher has a different point of view. Several definitions of artificial intelligence will be addressed in **(Table 1.1)**

Table 1.1: Definitions of Artificial Intelligence

Year	Source	Definition
2020	**Razzaq**	It is a way of thinking (algorithms) about how to make the computer solve problems, so artificial intelligence programs and systems are programmed in any of the programming languages designed for writing artificial intelligence programs and systems because they contain facilities for the programmer.

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2018	**Shaw**	It is a technology programmed to mimic human judgment and cognitive skills and can be designed based on these signals. Artificial intelligence systems can assess risks to make decisions based on environmental cues. Based on these signals, AI systems can assess risks to make decisions, make predictions, or take action, unlike other programs.

The table was prepared by the researcher

2.1.2. Characteristics of Artificial Intelligence

There are several characteristics of artificial intelligence that protect computers against attacks, the most important of which are the following (Al-Anzi, 51-52, 2022).

1. The ability to handle complex and difficult situations, rely on previous experiences for understanding and learning, distinguish the role of presented situations, evaluate their importance, and solve problems in the absence of complete information.
2. Ease of application and knowledge acquisition, as well as dealing with ambiguous situations in the absence of information.
3. The ability to adapt to new situations and circumstances. It can discover multiple things through trial and error, and it also contributes to employing old experiences and utilizing them in new situations.

2.1.3. Advantages of Artificial Intelligence

Artificial intelligence has a set of advantages agreed upon by both (Aishawi and Bakri: 2021, 11-12), as follows:

1. Ability to represent knowledge: Unlike statistical programs, artificial intelligence programs have a method for representing information. They use a specific structure to describe knowledge. This structure includes facts, relationships between these facts, rules that link these relationships, etc.
2. Use of the optimistic heuristic method: An important characteristic of the field of artificial intelligence is that its programs are divided into problems that do not have a known general solution method. This means that the programs do not use sequential steps that lead to the correct solution, but rather choose a specific method for it to appear optimal while maintaining the possibility of changing the method if it turns out that the first option does not lead to a quick solution. This means focusing on appropriate solutions and not emphasizing optimal or accurate solutions, as is the case with current traditional programs.
3. Ability to handle incomplete information: Another advantage of AI programs is their ability to find solutions even if the information is not fully available at the time the solution is needed. The consequences of not incorporating information can lead to less realistic or less relevant conclusions, but on the other hand, the conclusions may still be correct.
4. Ability to learn: An important characteristic of intelligent behavior is the ability to learn from past experiences, as well as the ability to improve performance by taking into account errors, generalizing information, and inferring similar cases from previous experiences. These are related to selective reasoning, and ignoring some redundant information.
5. Ability to infer: The ability to devise possible solutions to a given problem based on known data and past experiences, especially for problems that cannot be solved using traditional methods. This ability is achieved by computers by storing all possible solutions and using inferential laws or strategies and the laws of logic.

2.1.4. Components of Artificial Intelligence

Artificial intelligence consists of three main components (Al-Masoudi, 2023:23):

1. Knowledge Base: The size and quality of the knowledge base contained within the system is a measure of its performance. The knowledge base includes methods for solving problems, providing advice, rules based on mathematical formulas, absolute facts that describe the logical relationship between concepts and elements, and a set of facts based on experience and the practice of experts within the system.
2. Inference System: These are the programmed procedures that lead to the desired solution by linking specific facts and rules to form a line of deduction and reasoning.
3. User Interface: These are the procedures that provide the user with the appropriate tools to interact with the system throughout the development and use phases.

2.1.5. Artificial Intelligence's Ability to Detect Fraud

According to general auditing standards, whether internal or external, detecting fraud does not fall directly under the auditor's responsibility, despite what many believe. Fraud detection and prevention are primarily the responsibility of management. However, internal auditors are responsible for identifying material weaknesses in the internal control system that could lead to fraud. External auditors, on the other hand, are responsible for identifying opportunities resulting from the detection of material misstatements in the financial statements, whether due to errors or fraud. In both cases, auditors are indirectly responsible for detecting and preventing fraud (CPA, 2019: 23).

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2.1.6. The Role of Artificial Intelligence in Accounting

To make efforts to improve accounting, accountants and stakeholders must apply their technical knowledge and have the highest quality information about financial and non-financial transactions. Artificial intelligence interprets the role of accountants as examining an organization's financial position and assisting in accurate decision-making. For example, providing a cost-effective database, developing new analytical techniques, and saving time so that the focus can be shifted from manual accounting tasks to decision-making, building relationships, and addressing problems (Greenman, 2017: 14).

2.2. Audit Quality

2.2.1. Definition

There are several definitions of audit quality, as shown in the following **(Table 2.1)**:

Table 2.1: Definitions of Audit Quality

Year	Source	Definition
2020	**Saliha & Flayyihb**	It is the performance of the audit process efficiently and effectively according to auditing standards, while revealing discovered errors and violations, and working to meet the desires and needs of users of the financial statements.
2020	**Al-awad**	It is a systematic process of obtaining evidence and objectively evaluating assertions about economic actions and events to determine the degree of relationship between these assertions and applicable criteria, and communicating the results to interested users.

The table was prepared by the researcher

2.2.2. The Importance of Audit Quality

The importance of auditing stems from its being a means, not an end, aimed at serving several groups, both inside and outside the company, who have a relationship with it. These groups rely on the final audit report to make decisions, formulate policies, and develop future plans. Among these groups are the following (Awadi, 2016: 22):

1. Investors: The quality of the audit process is important for enhancing confidence in audit reports, as these reports lend credibility to financial statements. This contributes to the important role played by investors, who rely on audited financial statements in making decisions that are used to direct their savings and investments to achieve the highest possible returns and predict the company's future (Chen et al., 2019: 191).
2. Audit firm (external auditor): The auditor is concerned with maintaining the audit firm's reputation by completing the audit process with the highest possible quality. This enhances the ability to detect errors and material misstatements in the financial statements, thus avoiding any penalties or lawsuits. This positively impacts the firm by retaining its existing clients and attracting new ones. This aspect has received significant attention from researchers and professional organizations (Al et Bergner, 2020:1)
3. Company Management (Client): The company's management is responsible for preparing the financial statements. Therefore, performing the audit process with the highest possible quality helps the company's management instill greater confidence and credibility in its financial statements and present them to all relevant parties. This helps the company increase its market share and develop future plans (Al-Akhdari, 21: 2021).
4. Government agencies and bodies: Some government agencies rely on data issued by projects for various purposes, including monitoring economic activity, formulating the country's economic policies, or imposing taxes. This relies on the fact that some countries set prices for certain products or provide financial subsidies to certain companies (Bin Ahmadi, 5: 2022).
5. Banks and Creditors: Banks, finance companies, and creditors rely heavily on the auditor's report on the company's financial statements, particularly when granting loans and banking facilities. This helps ensure the soundness of the company's financial position and its ability to meet its obligations as collateral for their loans, and assists them in making the necessary decisions. There is no doubt that the quality of the audit positively impacts the quality of its decisions (Awadi, 43: 2016).

2.2.3. Factors Affecting the Quality of External Auditing

Many researchers, professionals, and those interested in audit quality agree that there are many factors that can affect audit quality, including the following:

2.2.3.1. Factors Affecting Audit Quality Related to the Audit Firm:

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1. Audit Firm Reputation: The audit firm's reputation can be considered one of its intangible assets, reflecting its ability to provide high-quality services. It is worth noting that this reputation is acquired through practice and the ability to provide high-quality services, which are usually acquired by large audit firms. This confirms the existence of a direct relationship between a firm's reputation and audit quality (Talili and Suissi, 2019: 375).
2. Audit firm size: This refers to the financial capabilities and qualified technical staff to conduct the audit process more efficiently than their counterparts in other firms. Large audit firms have a greater ability to warn and address any errors or omissions before the report is written due to their strong reputation, which they work to protect or fear losing. They also have a wealth of experience sufficient to address the progress of audit services (Pham et al., 2017: 437).
3. Cases filed against audit firms: Some believe that audit failure leads to significant losses incurred by shareholders and other stakeholders, leading to lawsuits being filed against the audit firm. Accordingly, the absence of lawsuits against the audit firm was considered an expression of a high level of quality, meaning that the number of lawsuits can be used as an inverse measure. Furthermore, the judicial opinion governing the legal liability of the external auditor makes them more conservative in their professional performance (Saadawi and Tawhari, 2021: 35).
4. Technical Advancement in Professional Performance and Electronic Data Processing: Audit firms' reliance on technological means in the implementation of the audit process is considered one of the most important aspects of quality, as electronic processing and the use of technology in auditing represent a real investment that enhances the quality of the results the auditor will achieve at the end of the audit. Therefore, there is a relationship between the use of electronic data processing and the increased effectiveness of audit firms (Laqawi, 2019: 34).

2.2.4. Factors affecting audit quality and related to the audit process

1. External Auditor Rotation: Auditor rotation is the exchange of auditors to audit a company (client) or mandatory. Auditor rotation can be voluntary. Voluntary auditor rotation occurs when the company (client) voluntarily changes its auditor. Mandatory auditor rotation occurs when this is required by the rules (Ardhani et al., 2019). Mandatory auditor rotation is the change that requires, under relevant laws and regulations, audited companies (audited employees) to change their auditor after a certain period, after which they contract with another auditor. The second type is voluntary auditor rotation, which occurs at the client's request if the client has reasons to believe it is necessary to change the auditor (Mahmoud, 2017: 770).
2. The Audit Firm's Provision of Consulting Services: The auditor's provision of non-audit services, or so-called consulting services, to the entity under audit, increases the economic ties and financial interests between them, which raises doubts about the auditor's independence and his resistance to pressure from management to be objective and impartial when examining potential financial statements. It also poses a real threat to the client's ability to express an opinion on their fairness, which has prompted many countries to prohibit this practice, as is the case in the United States of America through the SOX Act (Talili, 2019: 367).
3. Planning the Audit Process: The auditor assigned to perform the audit of a specific project organizes the various necessary procedures preceding the audit process by designing a well-thought-out plan that reflects the nature, scope, timing, and objectives of the process. This ensures its implementation at a professional level that provides confidence to users of the financial statements (Marouf, 12:2022).
4. Examining the Internal Control System: This is defined as "the organizational plan, procedures, and methods used by an organization to preserve the organization's assets, ensure the accuracy of its data, increase production efficiency, and enhance the policies followed within the company" (Belkhiri, 41:2018). During this step, the auditor attempts to understand the system in place, and must ensure that he understands it by conducting comprehension and conformity tests. That is, he ensures that he understands all its components and summarizes them better after following up on the operations. The auditor determines the quality of the design of the internal control structure and the extent to which actual operations comply with what was planned (Al-Tayeb, Nasser Al-Din, 58:2016).
5. Sufficiency of Evidence: Evidence in the audit process is the auditor's acquisition of in addition to obtaining a neutral technical opinion on the financial statements that he is conducting, the evidence must be sufficient and appropriate in order to be effective (Abdul Hadi, Afer, 2015: 35). The auditor is responsible for obtaining evidence of material misstatements. Decisions regarding the quantity and types of evidence that must be collected for a specific set of circumstances also require professional judgment (Al et Arens, 2013: 37).

2.3. Artificial Intelligence Technology to Improve Audit Quality

2.3.1. Penalties Resulting from the Integration of AI Technologies into the Professional Work of External Auditors

Although the adoption of AI in economic units may increase corporate efficiency and inefficiency, caution is required in monitoring costs and required upgrades to intelligent systems to avoid any risks (Solaimani et al., 2020:171). Furthermore, auditors should not over-rely on AI tools, as these tools are not a substitute for the auditor's professional skepticism, wisdom, and knowledge based on codes. If the coding information lacks qualitative characteristics, the

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limitations of the neural network technology underlying deep learning AI can increase AI biases (Frijat & Albawwat, 2021:757). AI techniques, such as Neuro-Linguistic Programming (NLP), carry risks of failure due to the difficulties in analyzing unstructured human language, which can vary depending on the context. Furthermore, a lack of training and understanding of AI, failure to select the appropriate AI technology for a given task, and low data can contribute to this. Quality in Failures Involving the Use of Artificial Intelligence (Robertson & Cui, 2022: 22).

2.3.2. Enhancing AI's Impact on Audit Quality

Artificial intelligence is one of the most important modern technologies that will enable auditors to effect this change. AI can add to the auditing profession by reducing audit risks that revolve around expressing an incorrect opinion, or otherwise, failing to detect material errors in the internal control system or financial statements due to only examining a limited sample of the statistical population. Here, the importance of AI technologies emerges, given their high ability to examine the entire statistical population, regardless of its size. This enables auditors to identify unusual or suspicious transactions, which would be difficult to detect using a sample. Increased efficiency is one of the most important benefits of using AI in auditing, as it enables auditors to achieve higher levels of assurance with less time and effort (Arab Monetary Fund, 2021:9).

2.3.3. AI-Based Auditing

Performing audit functions through AI reduces the massive workload on both the client and the business unit. When reviewing ledger analysis, financial reports, or any manual effort that can be reduced by AI, auditors can provide better context than before. Auditors can collect useful data using machine learning to identify implications and merits related to accounting terms and risk resolution factors (Gusai, 2019: 67). Economic entities generate and collect large amounts of data on an ongoing basis, from points of sale to shipment tracking information, as well as real-time inventory counts. In addition, information derived from external sources, in the form of social media and news feeds, for example, is easily accessible and available for analysis. In fact, the application of artificial intelligence to this type of big data is expected to take the audit profession a step forward. With these large databases, traditional audit procedures become less effective and efficient, necessitating a rethinking of the way audits are conducted (Issa et al., 2016: 9).

Chapter Three: The Practical Aspect (Applied Study of Artificial Intelligence Technology on Audit Quality)

3.1. An Introductory Overview of the Federal Board of Supreme Audit

3.1.1. Establishment of the Federal Board of Supreme Audit

The Federal Board of Supreme Audit is an administratively and financially independent body with a legal personality. It is the highest oversight body affiliated with the Iraqi Council of Representatives, pursuant to Article (102) of the Constitution of the Republic of Iraq of 2005. The Board, or whoever it authorizes, is responsible for overseeing public funds wherever they are located, by overseeing the activities of entities subject to its oversight throughout Iraq pursuant to Law (31) of 2011 (as amended). It is considered one of the leading bodies in protecting public funds, detecting cases of fraud and manipulation, combating financial and administrative corruption, and actively contributing to supporting the national economy, thus contributing to building a new Iraq governed on solid and stable financial and economic foundations and scientific and legal rules. To date, it has gone through several stages closely linked to the development of political, economic, and legislative conditions in Iraq, represented by the following:

1. The first phase.(1967-1927)
2. The second phase, from 2011 to the present.

3.1.2. Objectives of the Federal Board of Supreme Audit

The Board seeks to achieve the following objectives:

1. Preserving public funds from waste or misappropriation and ensuring their efficient use.
2. Improving the performance efficiency of the entities whose activities the Board seeks to audit.
3. Contributing to the independence of the economy and supporting its growth and independence.

3.2. An Overview of the Council of the Auditing and Compliance Profession

Since its establishment, the Council of the Auditing and Compliance Profession has gone through three stages linked to the development of legislation in Iraq, as follows:

1 .The First Stage:(1957)

The issuance of the Auditing Profession Regulation No. (52) of 1957, which was amended by the Regulation for the Practice of the Auditing Profession of Companies and Industrial Projects No. (18) of 1958. The legal provisions contained therein helped regulate the investigation process, as the auditor must be licensed by the Ministry of Commerce and his name must be included in the register of auditors licensed by the Ministry.

2 .The Second Stage:(1984)

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The issuance of the Professional Practice Regulation No. (7) in 1984, which stipulated that auditors be licensed and the profession regulated by the Accountants and Auditors Syndicate instead of the Ministry of Commerce.

3 .The Third Stage:(1997)

It began with the issuance of Companies Law No. (21) of 1997, which regulates the practice of the auditing profession. The auditing task has been entrusted to the Council of the Professional Auditing and Controlling Profession, after the Syndicate of Accountants and Auditors had been in charge of this profession. The Financial Control Bureau shall be the competent sectoral body concerned with granting licenses to companies established under this system for the purposes of implementing Companies Law No. (21) of 1997.

3.3. Questionnaire Structure

1. To achieve the study's objective, the questionnaire was divided into two sections:

Section One:

Demographic Data: This section aimed to collect data on respondents who had practical experience in the economic units covered by the study (gender, academic qualifications, years of experience, specific specialization, and organizational position). The aim of this section was to determine the respondents' ability to answer the study's paragraphs.

Section Two:

Questionnaire Axes: This section aimed to collect primary data from respondents from the study sample, which aimed to use artificial intelligence technology to improve the quality of auditing in economic units. This was achieved through 36 paragraphs distributed across the dimensions of the independent and dependent variables. The questionnaire structure also included an open-ended question regarding any observations the respondent deemed necessary and not included in the questionnaire paragraphs, related to measuring the impact of audit quality in Iraqi economic units.

Each paragraph of the questionnaire contained a five-point Likert scale to determine the degree of respondents' agreement with each paragraph, and to facilitate the process of converting agreement degrees into quantitative data. It is easy to measure statistically and determine its level of importance. The answers were given relative weights as follows:

Totally agree, 5, Agree, 4, Neutral, 3, Disagree, 2, Totally disagree 1, as shown in the following **(Table 3.1)**

Table 3.1: Coding of the five-point Likert scale

Encoding or numerical value and degree	**5**	**4**	**3**	**2**	**1**
Alternatives	Totally agree	Agree	Neutral	Disagree	Totally disagree

Source: Prepared by the researcher

➢ First domain (independent variable): Objective: To obtain primary data on artificial intelligence technology in economic units in Iraq, as follows:

❖ First axis: To determine the impact of machine learning technology on audit quality in economic units and measure it with (4) paragraphs.

❖ Second axis: The impact of continuous audit technology on audit quality with (4) paragraphs.

➢ Second domain (dependent variable): Objective: To obtain primary data on audit quality in economic units in Iraq and measure it with (3) paragraphs.

3.4. Study population and sample

The study population consists of all auditors throughout Iraq (individuals and companies), issued bulletins, and the Federal Board of Supreme Audit, represented by the Third District/Hillah, which consists of three governorates (Najaf, Karbala, and Babylon).

The researcher stipulated that the study sample be exclusively auditors or those qualified to be auditors for the purpose of answering the questionnaire questions, in accordance with the study title and **(Table 3.2)** This is illustrated in

Table 3.2: Distribution, return, and analysis of questionnaire forms among the study population.

Distributed questionnaire forms		Questionnaires received and included in the analysis		Survey forms received but not included in the analysis	
Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
100%	100%	100%	93%	7	2.5%

Source: Prepared by the researcher

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ISSN: 2749-3628,

3.5. Descriptive statistical measures for the study variables

Respondents' responses to the questionnaire variables regarding the analytical procedures and their determinants and the three stages of the audit process (planning, implementation, report preparation, and opinion) were extracted based on the questionnaire's scale score and descriptive statistical measures (arithmetic mean, standard deviation, skewness, kurtosis) for each of the study variables, as follows:

3.5.1. Results of Artificial Intelligence Analysis

1. Determining the Machine Learning Technology

Table 3.3 Study sample response levels and descriptive statistics for the variable items (determining the machine learning technology) (N=93)

No.	Paragraphs	Totally disagree	Disagree	Neutral	Agree	Totally agree	A.m	S.d
1	Using technological devices to develop auditing processes	38	46	16	12	5	4.061	0.935
2	Training auditors to keep pace with technological developments	30	48	24	12	2	3.867	0.975
3	Using artificial intelligence in the audit quality process	46	51	17	2	0	4.092	0.770
4	Using advanced electronic information programs to develop auditing processes	22	57	26	9	1	4.102	0.814
Total							3.776	0.417

The table was prepared by the researcher based on the outputs of the SPSS program.

Table 3.3 (above) shows that the responses of the study sample respondents regarding paragraphs(1-4) were consistent with artificial intelligence, as follows:

1 .The study sample responses agree that the use of technological devices for development in auditing processes is essential. This was confirmed by the arithmetic mean, which reached (4.061), while the standard deviation was.(0.935)

2 .The study sample responses agree with the training of auditors to keep pace with technological development, as shown by the arithmetic mean, which reached (3.867), while the standard deviation was.(0.975)

3 .The study sample responses agree with the use of artificial intelligence in the audit quality process, as shown by the arithmetic mean, which reached (4.092), while the standard deviation was.(0.770)

4 .The study sample responses agree with the use of advanced electronic information programs to develop auditing processes, as shown by the arithmetic mean, which reached (0.770). (4.102), while the standard deviation was.(0.814)

Table 3.3 includes the results of the respondents' responses regarding the artificial intelligence variable, and considers the following electronic data in general:

1.The overall arithmetic mean was (3.776) with a standard deviation of (0.417). This overall arithmetic mean is higher than the hypothetical mean of the scale of (3), which is relied upon to examine the levels of the study sample's respondents' responses. Note that the arithmetic mean for the rating (completely disagree) was zero, which indicates the study sample's tendency toward agreement on all items of the variable.

2.The arithmetic means for the variable items were higher than the hypothetical mean, ranging from a maximum of (4.102) for the item "The economic unit monitors the auditors' commitment to artificial intelligence with the aim of

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addressing any gaps" to a minimum of (3.867) for the item "The economic unit determines the objectives, responsibilities, and work procedures related to artificial intelligence".
3. The highest responses to most items were within the "agree" rating, followed by "completely agree".
Hypothetical mean = (highest value of the scale + lowest value)/2= (1+5)/2+3

3.5.2. Continuous auditing technology on audit quality

Table 3.4 Study sample response levels and descriptive statistics for the items of the variable "Continuous auditing technology on audit quality" (N=93)

No.	Paragraphs	Totally disagree	Disagree	Neutral	Agree	Totally agree	A.m	S.d
1	The use of advanced software and communication networks in auditing contributes to achieving quality audit services.	44	48	16	4	3	3.776	0.974
2	Auditing helps achieve quality in the preservation of working papers.	34	56	16	4	4	4.102	0.931
3	Auditing contributes to providing transparent and objective audit services.	32	56	21	4	0	3.867	0.875
4	The use of auditing leads to efficiency and improves individuals' ability to select high-quality evidence.	27	58	20	7	1	4.061	0.818
Total							4.033	0.8595

Table: Prepared by the researcher based on the outputs of the SPSS program.

Table 3.4 shows that the responses of the study sample respondents regarding paragraphs 1-4 were consistent with the concept of "continuous auditing technology for audit quality," as follows:
1 .The responses of the study sample members fully agreed that the use of advanced software and communication networks in auditing contributes to achieving quality audit services, with an arithmetic mean of 3.776 and a standard deviation of 0.974.
2 .The responses of the study sample members fully agreed that auditing helps achieve quality in the preservation of working papers, with an arithmetic mean of 4.102 and a standard deviation of 0.931.
3 .The responses of the study sample members fully agreed that auditing contributes to providing transparent and objective audit services, with an arithmetic mean of 3.867 and a standard deviation of 0.875.
4 .The responses of the study sample members are completely consistent with the idea that the use of auditing leads to efficiency and improves individuals' ability to select high-quality evidence, with an arithmetic mean of (4.061) and a standard deviation of.(0.818)

World Economics & Finance Bulletin (WEFB)
Available Online at: https://www.scholarexpress.net
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Table 3.4 includes the results of the respondents' responses regarding the audit process variable in suitability management, and considers the following cybersecurity data in general:

1 .The overall arithmetic mean was (4.033) with a standard deviation of (0.8595). The overall arithmetic mean is higher than the hypothetical mean of the scale of (3), which is relied upon to examine the levels of response of the study sample respondents. Note that the arithmetic mean for the (completely disagree) rating was zero, indicating the study sample's tendency to agree on all items of the variable at this stage.

2. The arithmetic means for the variable's items were higher than the hypothetical mean, ranging from a maximum of (4.102) for the item "The economic unit tells customers not to share any information about them through unreliable programs," to a minimum of (3.776) for the item "Economic units maintain the confidentiality of customer information and are careful not to disclose it to any beneficiary".

3. The highest responses to most items were within the "fully agree" rating, followed by "agree."

3.5.3. Results of Audit Quality Analysis

Table 3.5: Level of study sample responses and descriptive statistics for the items of the (Audit Quality) variable (N=93)

No.	Paragraphs	Totally disagree	Disagree	Neutral	Agree	Totally agree	A.m	S.d
1	The auditor's academic qualifications and specific specializations help ensure quality audit services.	31	54	23	5	0	4.818	0.816
2	The use of specialized audit software contributes to quality audit services.	27	57	24	5	1	4.116	0.814
3	Auditing contributes to providing services that enjoy complete independence.	39	46	24	3	2	4.313	0.615
Total							4.415	0.629

Table: Prepared by the researcher based on the outputs of the SPSS program.

Table 3.5 shows that the responses of the study sample respondents regarding items were consistent with (audit quality), as follows:

1 .The responses of the study sample members completely agree that the academic qualifications and precise specialization of the auditor contribute to achieving quality audit services, with an arithmetic mean of (4.818) and a standard deviation of (0.816)

2 .The responses of the study sample members completely agree that the use of specialized auditing software contributes to achieving quality audit services, with an arithmetic mean of (4.116) and a standard deviation of (0.814)

3 .The responses of the study sample members completely agree that auditing contributes to providing services that enjoy complete independence, with an arithmetic mean of (4.313) and a standard deviation of (0.615)

Table 3.5 includes the results of respondents' responses regarding the audit process variable in compliance management, and considers the following electronic data in general:

1 .The overall arithmetic mean was (4.415), with a standard deviation of (0.629). This overall arithmetic mean is higher than the hypothetical mean for the scale of (3), which was used to examine the levels of response of the study sample. Note that the arithmetic mean for the (completely disagree) rating was zero, indicating the study sample's tendency to agree on all items of the variable at this stage.

World Economics & Finance Bulletin (WEFB)
Available Online at: https://www.scholarexpress.net
Vol. 47, June, 2025
ISSN: 2749-3628,

2 .The arithmetic means for the variable items were higher than the hypothetical mean, ranging from a high of (4.818) for the item (The use of specialized audit software contributes to achieving the quality of audit services) to a low of (4.116) for the item (Auditing contributes to providing services that enjoy complete independence).
3 .The highest responses to most items were (completely agree), followed by (agree).

3.6. Testing the Study Hypotheses

To test the study hypotheses, a simple linear regression analysis method was used. This method is used to test the relationship between two variables: one independent variable, artificial intelligence technology, and the other dependent variable, audit quality. The results were as follows:

3.6.1. Defining machine learning technology within the economic unit

➢ Null hypothesis (H0): There is no significant relationship between defining machine learning technology within the unit and audit quality in economic units.

The results of evaluating the structural model for the first sub-hypotheses showed that the path coefficients for the sub-hypotheses are, in part, significant and insignificant. These coefficients are significant when they exceed the value of (T) for the first hypothesis, where the calculated value (1) reached (1.034), which is greater than the standard value, a value that has no impact on audit quality. This indicates that there is no significant relationship between the selection of machine learning technology within the unit and audit quality in economic units. Therefore, the null hypothesis is accepted.

3.6.2. Continuous audit technology on audit quality

➢ Null hypothesis (H0): There is no significant relationship between continuous audit technology on audit quality and audit quality in economic units.

The results of evaluating the structural model for the second sub-hypotheses showed that the path coefficients for the sub-hypotheses are, in part, significant and insignificant. These coefficients are significant when they exceed the value of (T) for the third hypothesis, where the calculated value (1) reached (1.203), which is greater than the standard value, a value that has no impact on audit quality. This indicates that there is no significant relationship. There is a significant relationship between continuous audit technology and the quality of auditing in economic units. Therefore, the null hypothesis is accepted.

CHAPTER FOUR: CONCLUSIONS AND RECOMMENDATIONS

4.1. Conclusions

1. Artificial intelligence is one of the fundamental pillars that economic units should employ, given its important role in confronting threats to the unit, such as cyberattacks.
2. Economic units can establish control procedures that support their systems against cyberattacks and risks, thereby creating a safer and more beneficial investment climate.
3. There is no significant effect of defining the role of auditors within the economic unit on the quality of financial reports in economic units.

4.2. Recommendations

1. The importance of increasing attention to the issue of risk management through electronic programs, given its impact on audit quality, in order to increase the level of audit quality in economic units.
2. The economic unit should identify threats and vulnerabilities in the information technology environment and work to address them by adopting special measures to preserve information assets.

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