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Research Article

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Role of Artificial Intelligence Technologies in Enhancing Management Accounting Functions: An Applied Study at the University of Tikrit

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Abstract: This study aims to examine the role of artificial intelligence technologies (cloud computing, big data, blockchain) in enhancing management accounting functions. The study was conducted at the University of Tikrit using a random sample of (82) employees in the finance departments of various colleges. The researchers employed a range of statistical methods to test the causal relationships and correlations among the study variables. They adopted a descriptive-analytical approach in their study. The study reached a set of findings, the most important of which is that there is a statistically significant correlation between the study variables-that is, the more artificial intelligence (AI) technologies are employed, the more effective management accounting functions become and that the AI technology with the greatest impact on management accounting functions is cloud computing. The study recommended organizing training courses on the use of artificial intelligence technologies in performing business operations and tasks to ensure quality and effectiveness, as well as the need to provide the necessary infrastructure for these technologies. It also presented a set of recommendations to the university under study that should be adopted in its accounting and administrative practices.

Keywords: Artificial intelligence technologies, management accounting functions, University of Tikrit.

INTRODUCTION

In this context, management accounting functions like other administrative and operational functions may require modern technologies that support and enhance their effectiveness and improve their accuracy. Since management accounting involves core functions including data analysis and interpretation, providing the financial information necessary for decision-making, controlling costs, and financial planning all of these require purely scientific techniques based on artificial intelligence to ensure the effectiveness and efficiency of these functions and to optimize the performance outcomes both in day-to-day, routine operations and in long-term strategic financial performance.

To ensure the effectiveness of their management accounting functions, organizations must adopt digital technologies capable of providing accuracy and quality in financial and accounting tasks, as well as in the reports and information they

generate, which help the organization maintain its financial and administrative standing. Perhaps the most prominent of these technologies is artificial intelligence, which provides highly accurate, high-quality, and rapid support sufficient to enhance management accounting functions. In light of the above, this study aims to provide a scientific framework for the role of artificial intelligence technologies in enhancing management accounting functions through findings derived from statistical analyses and theoretical conclusions, and their application to daily operations at the managerial and operational levels.

Research Problem:

Management accounting and its functions are considered one of the tools that assist management in the decision-making process. Management accounting is also a tool for collecting and analyzing data according to specific methods and techniques in order to obtain information that benefits management. Furthermore, management accounting can be viewed as an integrated system that seeks to support various management functions, It also helps management optimize the use of its capabilities and resources (Zahir and Hussein: 2024: 18–19), On the other hand, management accounting is a system based on the collection and classification of data and its presentation to management in the form of ready-to-use information for all of management's needs (Dalil and Isa: 2020: 8). Artificial intelligence can have a significant impact on how modern societies respond to the difficult challenges they face; if utilized optimally, artificial intelligence can contribute to building a more just, healthy, and inclusive society, Today, AI has become a mature technology and an increasingly important part of the fabric of contemporary life. It is already being used in a variety of practical applications, such as recommendation systems, spam filters, image recognition, speech recognition, virtual assistants, and others (Delipetrev et al., 2020: 7).

On the other hand, AI technologies can significantly assist management accounting functions by providing accurate and detailed information that helps management make administrative decisions, AI also includes technologies that can enhance the effectiveness of management accounting, such as analyzing unstructured financial data and converting it into valuable information (Amirham, 2022: 701), AI and its technologies are also considered a branch of computer science, as they enable the design of various programs across different fields that mimic human intelligence. They can also perform certain roles and tasks on behalf of humans tasks that require human planning, thinking, and communication which is what AI technologies encapsulate (Hariri, 2024: 4). On the other hand, artificial intelligence and its technologies refer to a set of systems and devices that mimic human intelligence and behavior in performing roles and tasks based on high-value information (Al-Najjar, 2020: 36).

In accordance with the above overview, the present study seeks to formulate a set of questions that articulate the research problem regarding the role of artificial intelligence technologies in enhancing management accounting functions. A key question that can be posed is (To what extent do artificial intelligence technologies contribute to enhancing management accounting functions?) Three sub-questions stem from this main question, as outlined below:

1) To what extent do artificial intelligence technologies contribute to enhancing management accounting functions?
2) What is the nature of the relationship between artificial intelligence technologies and management accounting functions?
3) What are the most prominent technologies that contribute to enhancing management accounting functions?

4) To what extent are artificial intelligence technologies available in the organization under study, according to the opinions of the sample participants?

Research Objectives:

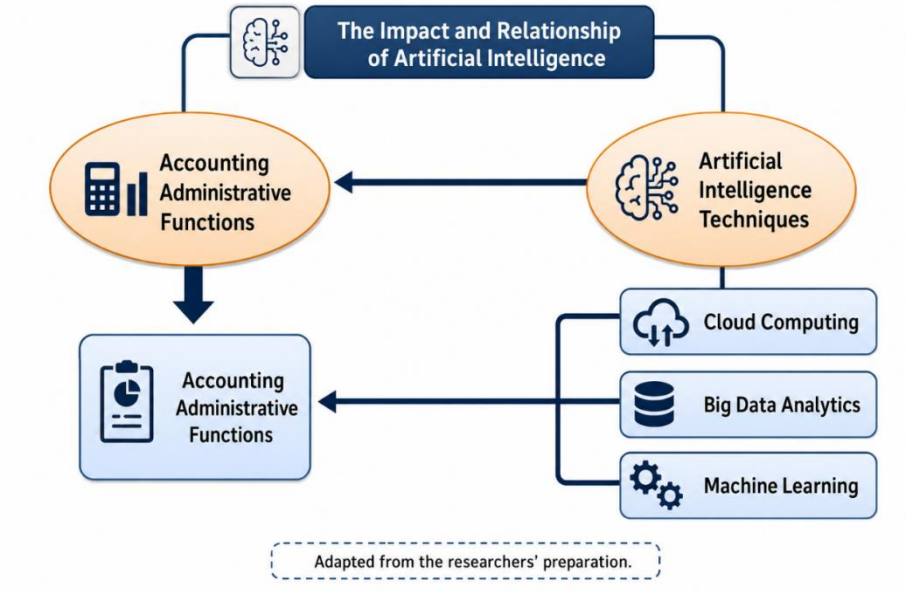
1) To determine the extent to which artificial intelligence (AI) technologies contribute to enhancing management accounting functions.
2) To identify the relationship between AI technologies and management accounting functions.
3) To identify the most prominent technologies that contribute to enhancing management accounting functions.
4) To determine the extent to which artificial intelligence technologies are available in the organization under study, based on the opinions of the sample.
5) To present recommendations to the organization under study that will contribute to enhancing management accounting functions through artificial intelligence technologies.

Significance of the Research:

The significance of this scientific research lies in the contemporary variables addressed by the study, namely artificial intelligence technologies and their role in enhancing management accounting functions. The study also reviewed previous scholarly contributions addressing the same context to identify the research gap that needs to be addressed, and to enrich university libraries and academic treatises so that they serve as a scientific foundation from which future researchers can launch scientific studies that build upon the findings of the current study, given the importance of the variables addressed in both this study and previous ones.

On the other hand, the practical and applied significance of this research lies in its examination of variables that are of paramount importance to the functioning of contemporary organizations; The research addressed the importance of artificial intelligence and its role in enhancing management accounting functions so that organizations can maintain the accuracy and quality of their information. This study seeks to present a set of recommendations that organizations can utilize to improve and enhance performance through effective management accounting functions.

Research Model:



Research Hypotheses:

In accordance with the research problem, its sub-questions, and the nature of the objectives the study seeks to achieve namely, to examine the relationships between the study variables and their sub-dimensions the researcher posits a main hypothesis stating that (artificial intelligence technologies have a significant impact on management accounting functions), Three sub-hypotheses stem from this main hypothesis, as follows:

1) Cloud computing has a significant impact on management accounting functions.
2) Big data has a significant impact on management accounting functions.
3) Blockchains have a significant impact on management accounting functions.

METHODOLOGY

1. Research Data Sources:

- **Secondary data**: Data obtained from the literature of previous scholarly contributions relevant to the variables of the current study.
- **Primary data**: Data obtained through face-to-face interviews with sample participants to identify their views on the research variables.

2. Research Scope:

- Scientific scope of the research: The scientific scope of the research was limited to understanding the role of artificial intelligence techniques in enhancing management accounting functions.
- Field Scope of the Study: The field scope of the study was limited to the University of Tikrit.
- Human Scope of the Study: The human scope of the study included staff members in the Finance Departments of the colleges at the University of Tikrit

3. Research Population and Sample:

The study population was confined to the university and included a random sample of (82) eighty-two accountants working in the finance departments of the colleges at the University of Tikrit.

Artificial Intelligence Technologies

1. What Is Artificial Intelligence?

Artificial intelligence has garnered significant attention in recent years, particularly in 2023, but it is not a new concept; its history dates back to the development of computers after World War II, specifically to the 1956 Dartmouth Conference, which brought together researchers from various fields to explore "thinking machines." This conference is widely considered the beginning of artificial intelligence as an independent field of study, as the term "artificial intelligence" was first used by the pioneers of this field at that conference (McDonald, et al., 2024: 4).

The term "artificial intelligence" also began to appear prominently in the world of business and management when the American Association for Artificial Intelligence clarified in 1980 the scope of this technology and the services it could provide to societym(Buchanan, B. G., 2005: 56). Terminologically, artificial intelligence is defined as software systems and technologies that can be implemented as algorithms to simulate the human mind in learning processes, data processing, problem-solving, and decision-making in an intelligent manner, with the aim of enhancing productivity; It is also defined as the methods and techniques that help computer systems make more rational decisions and respond more flexibly to unexpected environmental conditions (Al-Ajlan and Al-Otaibi, 2026: 165), Consequently, artificial intelligence is not merely an

isolated technical term but is closely and conceptually linked to the human mind, which has been engaged in shaping civilizations for thousands of years (MacLennan, B. 2009, 5)

Artificial intelligence can also be defined as the ability of machines to simulate the human mind through specialized computing technologies and software in this field; it can also be viewed as a tool through which human intelligence and its nature can be understood via computer-designed programs intended to replicate intelligent actions and processes, It can also be regarded as a tool for organizing and structuring scientific content or can be defined as the collective efforts aimed at developing accounting information systems in a way that enables them to think similarly to humans. These systems are characterized by natural languages, integrated coordination, task completion, as well as the intelligent storage and utilization of experience and knowledge in decision-making (Hadi, 2023: 1–6). Artificial intelligence technologies also employ various techniques that enable machines to sense, understand, plan, act, and learn at levels of intelligence comparable to human intelligence. Essentially, AI systems perceive their surroundings, recognize objects, contribute to decision-making, solve complex problems, learn from past experiences, and identify patterns. These capabilities are integrated to perform tasks such as driving a car or recognizing faces to unlock device screens (Konar, A. 2018: 1).

On the other hand, artificial intelligence is considered a branch of computer science through which intelligent programs that mimic human intelligence can be designed and created; these programs are capable of performing certain tasks and roles that require humans to think, speak, and perceive in an organized, scientific, and logical manner (Al-Najjar, 2020: 3), Artificial intelligence is also defined as a method for making a computer—or a computer-controlled robot, or a program that thinks intelligently—think in the same way that intelligent humans do, and it has a long history. Artificial intelligence is the search for something; it is a method of classification; and it is also a set of mathematical and statistical techniques (Ahmed & Ali, Jun, 2016: 1).

In another context, (Amirham, 2022: 256) noted that artificial intelligence is a branch of computer science that works on designing intelligent information systems similar in nature to those powered by human intelligence; it also works on describing the nature of objects and processes and explaining their characteristics and their logical, statistical, and computational relationships in a logical and intelligent manner, It is also capable of designing programs that replace human labor in the performance of tasks.

The researcher views artificial intelligence as a set of advanced technologies and software that support management science and accounting by designing intelligent systems that mimic human intelligence in providing management and accounting information, supporting decision-making, and carrying out job tasks and duties.

2. Characteristics of Artificial Intelligence Technologies:

The adoption of artificial intelligence technologies in the business world yields a range of benefits for organizations that employ these technologies, stemming from the characteristics that define them, as explained below (Abdullah and Abu Farwa, 2024: 114):-

a) Their use of methods that closely resemble those employed by the human mind in processing complex problems and issues.
b) The ability of AI technologies to process data that is symbolic rather than numerical in nature.
c) A high capacity for creativity, an understanding of the surrounding context, and

rapid comprehension.

d) The ability to simulate human thought processes and behaviors and to generate innovative and advanced ideas.
e) The ability to support human expertise and provide multiple alternatives, thereby contributing to sound decision-making.
f) Investing time and effort in performing routine tasks and duties, and avoiding implementation errors.

3. Artificial Intelligence Technologies:

In his study, the researcher relied on three artificial intelligence technologies that can enhance and support management accounting functions, according to (Al-Kafi and Al-Majri, 2026: 114–116), as explained below:

1. ***Cloud computing:*** This is a technology that enables data to be processed, stored, and managed over the Internet via simple servers. Cloud computing also allows organizations and individuals to access software flexibly without needing to store it on a computer, thereby helping to reduce infrastructure costs. Its characteristics include self-service and on-demand access, extensive internet connectivity, speed, flexibility, ease of monitoring and measurement, and the ability to optimize resource utilization.
2. ***Big Data***: is defined as a diverse and multifaceted collection of data, whether structured or unstructured, which can be obtained from various sources both inside and outside the network and cannot be analyzed using traditional methods. Characteristics of big data include: diversity encompassing emails, PDF files, images, audio recordings, and larger volume, such as data from social media platforms, commercial transactions, human interactions, and more; speed in acquiring, processing, storing, and retrieving data when needed; accuracy, as the data is highly reliable and sometimes 100% accurate; and value, as this data is valuable and useful for its intended purposes.
3. ***Blockchain***: This is a networked information system comprising a group of devices, each of which functions as a database. All transactions within these chains are subject to review and verification. This technology also enables the development and enhancement of accounting information systems, ensuring consistency and transparency in record-keeping, it also reduces the likelihood of errors and manipulation in the financial reporting process and helps accountants invest their time and effort in performing their duties. Among the most important features of this technology are: the privacy of network users; security, as records recorded in these chains cannot be modified or deleted; cost reduction through process automation and the minimization of routine tasks, as well as the execution of these processes with high accuracy and speed, while reducing the need for users to physically visit locations to complete their tasks while decreasing the number of people required to perform these tasks using traditional methods; and finally, it speeds up transaction processing and reduces the effort and time required for these operations.

Management Accounting and Its Functions

1. What Is Management Accounting?

Management accounting is considered one of the key tools for analysis, control, and planning within business organizations; it also contributes to the effective analysis, estimation, and control of costs, It also helps provide information on financial performance, resources, and operations. Among its most important tools are budgets, cost analysis, reports on financial performance and investments, and the provision of

financial and non-financial information to assist management in decision-making (Zahir and Hussein: 2024: 17).

Management accounting aims to provide managers with useful information for planning and monitoring activities, as well as for justifying decisions. Management accounting also plays a fundamental role in the strategic direction of the organization, as it combines financial and non-financial information to provide a comprehensive view of operations, with the goal of making optimal decisions under favorable conditions. In Anglo-Saxon literature, management accounting is defined through the processes of processing, analyzing, interpreting, and internally communicating information to the entity's management, which aids in budgeting, evaluating, and monitoring operations, as well as determining the necessary resources (Student Didea, et al., 2024: 3), On the other hand, management accounting can be defined as a system based on collecting, classifying, and analyzing data and presenting it as useful information to management regarding all aspects of operations, with the aim of using it in monitoring, planning, and performance evaluation processes to contribute to decision-making that helps achieve the organization's objectives (Dalil and Issa: 2020: 7).

Management accounting can also be defined as the process of measuring, identifying, analyzing, compiling, preparing, interpreting, and communicating the accounting and financial information that management needs and uses in planning, evaluation, and control processes, as well as providing information to shareholders and creditors and everything else the organization needs regarding its activities (Abdul-Ati, 2021: 87), and management accounting is also defined as an accounting method that generates data, reports, and documents to help management make better decisions regarding the performance of its operations (Mrs. Agbo, et al., 2025: 520).

On the other hand, management accounting can be defined as one of the branches of accounting that is based on providing useful information to organizational managers. It involves several stages, beginning with the identification, collection, preparation, verification, and communication of information that contributes to achieving the organization's objectives (Bashikh and Obaid, 2022: 475), Management accounting is a system for collecting and processing data and converting it into information that assists management in organizing its planning and control activities and making managerial decisions (Al-Bashir, 2020: 138).

Based on the views presented by a group of researchers regarding the definition of management accounting, the researcher defines management accounting as a term that combines management and accounting by identifying, compiling, and analyzing data in a scientific and organized manner in order to transform it into information that assists an organization's management in the decision-making process and in determining its strategic and routine.

2. Objectives and Benefits of Management Accounting:

There are a number of objectives and benefits that management accounting seeks to achieve through its functions, as explained below (Abdulrahman et al., 2017: 35).

a) Providing the information needed by management for planning and decision-making.
b) Assisting in guiding the organization's supervisory and operational activities.
c) Motivating employees and managers to achieve organizational goals.
d) Measuring the performance and outcomes of the organization's activities at the departmental and employee levels.
e) Assessing the organization's competitive position to maintain its competitive edge.
f) Assisting relevant parties with accounting and administrative roles.

3. Methods of Management Accounting:

There is a set of methods upon which management accounting is based, which are divided into two categories: traditional and modern, as explained below (Al-Daleel and Isa: 2020: 11): -

1) Traditional Management Accounting Methods:

- Break-even point (the relationship between volume, cost, and profit).
- Planning budgets.
- Responsibility accounting.

2) Modern methods of management accounting:

- Activity-Based Costing (ABC).
- Balanced Scorecard (BSC).

THE FIELD ASPECT OF THE RESEARCH

1. Validity and Reliability Testing (Cronbach's Alpha):

According to Cronbach's alpha, the validity and reliability of the research variables (artificial intelligence as the independent variable and management accounting as the dependent variable) are measured, as shown in Table (1):

Table 1. Measuring the Validity and Reliability of Measurement Items

Truth Coefficient	Stability Coefficient (α)	Number of Items	Variables
0.84	**0.76**	**12**	Artificial Intelligence Techniques
0.82	**0.79**	**12**	Management Accounting Functions

According to Table (1) and based on Cronbach's alpha test for reliability and validity, the reliability coefficient for the measurement items related to artificial intelligence techniques was 0.76, while the validity coefficient for those items was 0.84; These values indicate a high level of internal consistency for the AI techniques measurement items, which is considered acceptable and high. On the other hand, according to Table (1), the reliability coefficient for the measurement items of management accounting functions as a dependent variable was 0.79, while the validity coefficient for these items was 0.82. These values indicate a high level of internal consistency for the measurement items of management accounting functions, which is considered acceptable and of a high standard.

2. Descriptive Tests of the Research Variables:

a. ***Descriptive Tests of Artificial Intelligence Technologies***:

These tests involve statistically describing the sample participants' opinions regarding the study variables using statistical methods (mean, standard deviation, and coefficient of variation).

Table 2. Statistical description of the sample participants opinions regarding artificial intelligence technologies

No.	Measures of Variability in Artificial Intelligence Techniques	Arithmetic Mean	Standard Deviation	Coefficient of Variation
	Cloud Computing:			
1	Cloud computing helps access accounting data at any time	3.4	0.89	0.172
2	Cloud computing helps reduce the cost of storing and processing financial data	4.5	0.83	0.175

3	Cloud computing helps increase the speed of data processing	3.3	0.79	0.173
4	Cloud computing helps enhance information security and confidentiality	4.3	0.81	0.181
	Total scores:	3.8	0.83	0.175
	Big Data			
1	Big data helps enhance the accuracy of accounting information	4.4	0.86	0.176
2	Big data helps management detect cases of financial fraud	3.5	0.73	0.172
3	Big data contributes to the development of accountants' decision-making abilities	4.4	0.79	0.181
4	Big data helps increase and integrate information sources	4.4	0.80	0.175
	Total Values	4.1	0.79	0.176
	Blockchains:			
1	Blockchains help management obtain information quickly	3.4	0.74	0.182
2	Blockchains provide diverse sources of information	4.4	0.75	0.176
3	Value chains contribute to improving the accuracy of information	3.4	0.71	0.171
4	Value chains help provide information at the right time	4.2	0.84	0.172
	Total Scores	3.8	0.76	0.175

Source: Prepared by the researcher based on the results of statistical analysis.

According to Table (2), the following results are shown:

- The arithmetic means for all artificial intelligence techniques are statistically significant. The arithmetic mean for cloud computing technology was (3.8), with a standard deviation of (0.83) and a coefficient of variation of (0.175), As for big data technology, the arithmetic mean was (4.1), with a standard deviation of (0.79) and a coefficient of variation of (0.176), As for blockchain technology, the arithmetic mean was (3.8), with a standard deviation of (0.76) and a coefficient of variation of (0.175).
- Since the values in Table (2) are statistically significant, this indicates that the research sample has a high level of awareness regarding artificial intelligence technologies (cloud computing, big data, blockchain) and their availability in their work environment.

Descriptive Tests for Management Accounting Functions: These tests involve statistically describing the opinions of the sample population regarding the study variables using statistical methods (mean, standard deviation, and coefficient of variation).

Table 3. Statistical Description of the Sample Participants' Opinions on Management Accounting Functions

No.	Measures of Variability in Management Accounting	Arithmetic Mean	Standard Deviation	Coefficient of Variation

1	Management accounting functions contribute to providing highly accurate information	4.3	0.83	0.178
2	Management accounting helps analyze data quickly	4.2	0.72	0.183
3	Management accounting processes are becoming more digital	3.3	0.79	0.172
4	Management accounting functions clearly interpret ambiguous data	4.3	0.84	0.176
5	The effectiveness of management accounting increases when AI technologies are used	4.5	0.71	0.174
6	Management accounting functions contribute to more effective planning	4.3	0.86	0.175
7	Management accounting functions help management make effective decisions	3.2	0.83	0.189
8	Management accounting functions help increase the effectiveness of control activities	4.4	0.77	0.176
9	Management accounting functions contribute to improving the efficiency of financial performance evaluation	4.5	0.72	0.179
10	Management accounting functions increase the level of transparency in accounting information	3.2	0.75	0.176
11	AI techniques reduce the rate of accounting errors	3.5	0.83	0.173
12	Management accounting reports prepared using AI techniques are of higher quality	4.5	0.74	0.177
	Total scores	**4.01**	**0.78**	**0.177**

Source: Prepared by the researcher based on the results of statistical analysis.

Table 3. shows that the statements measuring management accounting functions received moderate to high ratings, with an arithmetic mean of (4.01), a standard deviation of (0.78), and a coefficient of variation of (0.177), These figures are statistically significant and indicate a high level of awareness among the sample participants regarding the functions of management accounting and their availability in their work environment.

3. Testing Correlation and Influence Relationships:

1. Testing Correlation Relationships:

According to Table (4), the correlation between artificial intelligence technologies (cloud computing, big data, and blockchain) and management accounting functions as the dependent variable is tested, as shown below

Table 4. Correlation Coefficient (Rank-Pearson) for the Relationship Between Artificial Intelligence Technologies and Management Accounting Functions

	Artificial Intelligence Techniques	R-value	Significance Level
Management Accounting Functions	Cloud Computing	0.562**	Positive and Statistically Significant
	Big Data	0.541**	Positive and Statistically Significant
	Blockchains	0.522**	Positive and Statistically Significant
	Overall Average	0.531**	Positive and Statistically Significant

**Statistically significant at the 0.01 significance level *Statistically significant at the 0.05 significance level

According to the statistical analysis in Table (4), the following conclusions emerge:

1) The correlation coefficient for cloud computing technology was (0.553**), which is a positive value statistically significant at the (0.01) level. This value indicates the existence of a correlation between cloud computing technology as one of the artificial intelligence technologies and the independent variable and management accounting functions as the dependent variable.

2) The correlation coefficient for big data technology was (0.541**), which is a positive value that is statistically significant at the (0.01) level; this value indicates the existence of a correlation between big data technology as one of the artificial intelligence technologies and an independent variable and management accounting functions as the dependent variable.

3) The correlation coefficient for blockchain technology was (0.522**), which is a positive value that is statistically significant at the (0.01) level; this value indicates the existence of a correlation between blockchain technology as one of the artificial intelligence technologies and the independent variable and management accounting functions as the dependent variable.

4) The total correlation coefficient between artificial intelligence technologies as the independent variable and management accounting functions as the dependent variable was (0.531**), a positive value that is statistically significant at the (0.01) level, indicating the existence of a correlation between the research variables.

5) On the other hand, it appears that the AI technology most closely associated with and having the greatest impact on management accounting functions is cloud computing.

2. Testing the Research Hypotheses:

The hypotheses formulated to achieve the study's objectives will be tested. A main hypothesis has been formulated, which states: (Artificial intelligence technologies have a significant impact on management accounting functions). Three sub-hypotheses stem from this main hypothesis, as follows:

A. Cloud computing has a significant effect on management accounting functions.

B. Big data has a significant effect on management accounting functions.

C. Blockchains have a significant effect on management accounting functions.

- **Testing the First Sub-Hypothesis**: Cloud computing has a significant effect on management accounting functions, as measured using a t-test and a regression model to assess the relationship between cloud computing and management accounting functions, as shown in the table below:

Table 5. Regression model to measure the relationship between cloud computing as an artificial intelligence technology as the independent variable and management accounting functions as the dependent variable

Independent Variables		Coefficient of Regression (β_i)	t-Test	Level Significance	Significance
	Constant	4.44	3.4	**.005	Significant
X_1	Cloud Computing	0.86	4.2	**.000	Significant

Source: Prepared by the researcher: Statistically significant at the level 0.01 **.

According to Table (5) and based on the statistical analysis: Cloud computing has a significant effect on enhancing management accounting functions, which supports the first sub-hypothesis stating that (cloud computing has a significant effect on management accounting functions).

- ***Testing the second sub-hypothesis***: Big data has a significant effect on management accounting functions, as determined by the t-test and a regression model used to measure the relationship between big data and management accounting functions, as shown in the table below:

Table 6. Regression model to measure the relationship between big data as a form of artificial intelligence as the independent variable and management accounting functions as the dependent variable

Independent Variables		Coefficient of Regression (β_i)	t-Test	Level Significance	Significance
	Constant	4.20	4.4	**.005	Significant
X_1	Big data	0.80	3.2	**.000	Significant

Source: Prepared by the researcher: Statistically significant at the level 0.01 **.

According to Table (6) and based on the statistical analysis: Big data has a significant impact on enhancing management accounting functions, which supports the second sub-hypothesis stating that (Big data has a significant impact on management accounting functions).

- ***Testing the third sub-hypothesis***: Cluster series have a significant effect on management accounting functions, as determined by the t-test and regression analysis to measure the relationship between cluster series and management accounting functions, as shown in the table below:

Table 7. Regression model for measuring the relationship between blockchains as an artificial intelligence technique as the independent variable and management accounting functions as the dependent variable

Independent Variables		Coefficient of Regression (β_i)	t-Test	Level Significance	Significance
	Constant	3.32	3.2	**.005	Significant
X_1	Blockchains	0.79	4.5	**.000	Significant

Source: Prepared by the researcher: Statistically significant at the level 0.01 **.

According to Table (7) and based on the statistical analysis: Block chains have a statistically significant effect on enhancing management accounting functions, which supports the first sub-hypothesis stating that (blockchains have a statistically significant effect on management accounting functions).

CONCLUSIONS AND RECOMMENDATIONS

1) Conclusions:

1. The results of the descriptive tests showed that the research sample members have a high level of understanding of artificial intelligence technologies (cloud computing, big data, blockchain) and that these technologies play a significant role in performing certain administrative and accounting tasks.
2. The results demonstrated a positive correlation among the research variables: the more artificial intelligence technologies are employed, the more administrative accounting functions are enhanced, leading to higher levels of accuracy and quality.
3. The results of the hypothesis testing showed that AI technologies (cloud computing, big data, and blockchain) have a significant effect on enhancing management accounting functions, thereby validating these hypotheses.
4. The results of the statistical analysis confirmed that the most influential AI technology in enhancing management accounting functions is cloud computing.

2) Recommendations and Proposals:

1. Organize training courses for employees in the divisions and units of the Financial Affairs Departments to raise awareness and understanding among accounting staff regarding the use of artificial intelligence technologies in performing financial and accounting tasks and roles in the workplace.
2. Provide the necessary infrastructure and operational resources that facilitate the use of various artificial intelligence technologies to enhance and improve management accounting practices.
3. Work to provide digital platforms and smart technologies specific to cloud computing and make them available to users and specialists including accountants and finance professionals as these are the most influential in enhancing management accounting functions.
4. Encourage researchers, academics, and students at both the undergraduate and graduate levels at the university under study and other universities to examine these important variables in order to keep pace with the changes and developments brought about by the digital revolution and information technology, and to utilize the results of these studies and apply them in both academic and practical work environments.
5. The researcher recommends that the university under study take the findings of the current study into consideration and disseminate them to the university's colleges and all government institutions with the aim of utilizing them to enhance practical applications related to the study's variables (artificial intelligence technologies and management accounting functions).

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