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# The impact of digital transformation on internal control procedures

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#### Abstract

The aim of the research was to identify the impact of digital transformation on improving internal control procedures. The field of research was the Iraqi banking sector, while the research community consisted of internal auditors working in Iraqi commercial banks. The research sample consisted of the total number of questionnaires distributed to the community. The results were obtained using arithmetic means and relative weights through the SPSS programmer. One of the most important findings of the researcher was that digital transformation improves auditing procedures by using electronic data to facilitate the completion and implementation of the auditing process efficiently and accurately. The researcher recommended that banks listed on the Iraq Stock Exchange should use digital transformation because of its importance in organizing and planning the auditing process.

Keyword: Digital transformation, internal auditing, Iraq Stock Exchange

#### Introduction

As a result of recent technological revolutions, there have been modern developments in the field of business, the most important of which is digital transformation. Countries around the world have recently increased their interest in digital transformation by directing all their capabilities and efforts towards its implementation. Governments have also begun to support the implementation of digital transformation technologies in their institutions and to rely on them when providing services to citizens, thereby enabling the success of the digital transformation process. Many agencies and organizations have begun to implement digital transformation as a result of government directives, with digital technology referring to tools and means such as artificial intelligence, big data, and block chains. The internal control system is also considered one of the pillars and foundations of an organization seeking to achieve continuity, given its important role in the success of organizations. With the technological developments that have taken place and the emergence of digital transformation, there has been a need to improve and develop the internal control system in order to perform efficiently and effectively and help management achieve its objectives and protect the institution's assets. This is because financial institutions in general, and banks in particular, have a special nature that requires accuracy and efficiency in the systems applied in them, and the internal control system in banks requires continuous development.

#### First requirement: Study methodology

Research problem: The changes brought about by the Fourth Industrial Revolution in the field of technology, including rapid digital transformations, have led institutions to complicate the mechanisms for achieving their goals. As a result, institutions have turned to expanding their operations and achieving their goals by using the technologies accompanying the Fourth Industrial Revolution with speed and accuracy. As a result of the difficulties that arose, such as high auditing costs, a shortage of human resources, and a lack of competencies, all of which negatively affect the quality of auditing, On the other hand, the use of modern technology in auditing can save a lot of time and effort in performing tasks. Therefore, the move towards digital transformation is considered a vital factor in facing the challenges that may arise as a result of performing tasks manually, especially in light of these developments. Based on the above, the research problem can be formulated with the following two questions:

Correspondence Author: Marwa Sabah Khalaf College of Islamic Sciences, Department of Islamic Finance and Banking, Iraq Does digital transformation have an impact on improving internal control procedures?

Does digital transformation play a role in improving the efficiency and professional care of internal auditors?

**Study objectives:** The importance of the research lies in the following points

- 1. Identifying the impact of digital transformation on improving internal control procedures.
- 2. Identifying the role of digital transformation in improving the efficiency and professional diligence of internal auditors.

#### Importance of the study

- 1. Theoretical importance: The theoretical aspect of this study covers the importance of digital transformation in that it adds new information for researchers and plays a significant role in improving the internal audit sector of institutions
- 2. Scientific importance: The scientific importance of this study comes from the results that will be reached, which can play a significant role in helping auditors overcome the challenges and difficulties they will face when using digital transformation in their work, in order to keep pace with contemporary electronic developments and ensure the continuity of the institution in performing its work.

#### **Study hypotheses**

Based on the main research question, the following main hypotheses can be formulated:

- First main hypothesis: There are statistically significant differences at a significance level (05≥α) between the use of digital transformation and the improvement of internal audit procedures in banks in the field of research.
- Second main hypothesis: There are statistically significant differences at a significance level (05≥α) between the use of digital transformation and the improvement of the efficiency and professional care of internal auditors in the banks in the field of research.

# 3. Study (Al-Qanbari, 2020) [12] entitled: The Impact of Modern Technologies of the Fourth Industrial Revolution on Accounting and Auditing (A Theoretical Review of Previous Studies)

The aim of the research was to highlight the modern technologies produced by the Fourth Industrial Revolution and their impact on accounting and auditing, relying on a descriptive documentary approach to review and analyse available documents from research, publications and publications, and to draw conclusions that answer the research questions. Among the most important of these conclusions is that the technologies of the Fourth Industrial Revolution are bringing about changes in the concepts and principles of accounting information system design, improving the quality of financial reports, reducing personal judgements and accounting estimates, bringing about fundamental changes in the organisation and planning of the review process, risk assessment and analytical review procedures, and the emergence of new areas such as exception review, automated review and financial analysis

of big data. Based on the results of the research, he recommended that accounting and auditing should adapt at the same pace as developments in the corporate business environment resulting from the increased adoption of Fourth Industrial Revolution technologies, and that company management should take cybersecurity issues into account in strategic planning.

#### Foreign studies

# 1. A study (Al-Meleih, 2021) entitled: 'The effects of digitalisation on auditors' tools and working methods'

The study aimed to explore the impact of digital transformation on audit quality, using the Delphi methodology to develop twenty predictions of the impact of digital transformation on audit quality determinants, namely audit process inputs and audit process procedures, and then evaluating these predictions through two rounds of a survey of with regard to auditor qualifications, some audit procedures applied, and the timing of the issuance of the audit report. These results imply that rapid technological developments, represented by digital transformation technologies such as big data and artificial intelligence, will play a major role in reducing human intervention in the auditing process. Therefore, it cannot be expected that the auditing process will remain as it is in light of the prevalence of digital transformation tools. a group of Egyptian auditors. The study found that Egyptian auditors expect some significant changes in audit quality determinants as a result of the spread of digital transformation, particularly

# 2. Study (Meuldijk, 2017) $^{[23]}$ entitled: 'Impact of digitisation on the audit profession.'

The study aimed to clarify the extent of rapid digital developments and that there is a high level of uncertainty about which technologies will truly succeed over the next thirteen years. The study concluded that it is clear that digitisation will have an impact on auditors, who will be forced to rethink their audit approaches and perhaps their profession as a whole. It recommended that it is essential for auditors to keep pace with digital change, understand its impact and have the competence to deal with it. Therefore, auditors should define a digital strategy and explore partnerships with others or even acquire start-ups.

# Second requirement: Theoretical framework First: Digital transformation

#### 1. The concept of digital transformation

Digital transformation is an important topic that has been increasingly discussed in recent times. International institutions have pointed to the need to apply it in their work, especially after the Fourth Industrial Revolution, which played a major role in integrating all technologies, including (artificial intelligence, cloud computing, cellular technologies, and 3D printing). This revolution has also contributed to, as well as transformations to connect the virtual world with the physical world, which will lead to increased processing power, enormous storage capacity, and unlimited access. These transformations will achieve the strategic goals of societies with minimal effort and cost in general, and the goals of institutions in particular. There are several concepts of digital transformation. Vial (2019)

believes that digital transformation is the framework that reshapes the ways in which individuals think, interact, coexist and communicate, relying on available technologies in accordance with planning and a constant quest to reformulate scientific experiences. Providing sustainable competitive advantages for organisations by radically changing the delivery of services to all parties, including customers, consumers and employees, while working to improve their productivity by following a series of processes consistent with the necessary procedures for activation and implementation. Garzoni et al. 2019) [27] defined digital transformation as a change in the work and style of institutions to ensure the achievement of desired goals in accordance with the strategies outlined, at the lowest cost, with the highest accuracy and quality, by harnessing digital technology in line with the work of institutions, and in a way that serves to reduce corruption in the transformation process. Digital transformation is also defined as social media, mobile devices, various applications, and embedded devices, which are used to improve business operations, such as enhancing the customer experience, simplifying processes, and creating new business models (Al-Balushi et al., 2020, 15) [2].

Based on the above concepts, the researcher suggests that digital transformation will improve internal control and reduce embezzlement and opportunistic behaviour by managers. Digital transformation will also allow for the development of internal control by improving the transparency of financial data and enabling the board of directors to make sound decisions, in addition to improving internal systems and processes in order to produce accounting information based on auditors' recommendations. Accordingly, digital transformation can be defined as

#### 2. Basic requirements for digital transformation

There are some key pillars and requirements that must be in place for organisations to transform from traditional business to digital transformation, as follows: (Al-Balushi, 2020: 5) [2].

#### **Human resources**

Human resources are considered the most important element and key component for implementing digital transformation in organisations. Therefore, this group must acquire the skills and knowledge to easily use technology, facilitate the transition to digital transformation, and achieve its objectives.

#### Security and legislation

Security and legislation play an important role in achieving and ensuring the success of digital transformation by regulating the relationship between the services received and provided by the target entities. The importance of laws and legislation related to digital transformation and electronic transactions in the digital environment stems from the difference between traditional and electronic services. (Dahleez and Walbad, 2017) [4]. Nader (2019) [28] explained that there are important things that should be available in establishments during digital transformation, such as updating laws and legislation in line with digital transformation in order to avoid problems that may occur to

individuals, such as electronic crimes, which may occur due to the incompatibility of the traditional system with the electronic system.

#### Infrastructure

The transition of institutions from traditional to digital work requires preparation and equipping for technology that will rely on technology and the internet to provide its services, with efficient specifications and human resources, in addition to policies that regulate practices and procedures.

#### Plans and strategies

A study (Al-Hasban and Al-Hayek, 2017) [3] showed that digital transformation depends primarily on the provision of a clear strategy developed by relevant and competent parties in the field of digital transformation, containing mechanisms and objectives to be achieved with follow-up by senior management to ensure that work proceeds in a high-quality and correct manner. IT and human resources elements should also be aligned with the strategies and provide flexibility due to the instability of technology in terms of development and growth.

#### 3. Digital transformation technologies

There are several technologies for digital transformation, as follows: (Rashwan, Abu Arab, 2022: 42) [5].

- Artificial intelligence: One of the features of computers, which, in addition to their ability to handle complex patterns and process vast amounts of data, allows them to reach conclusions.
- Blockchain technology: This is a secure and transparent technology for recording data, which is shared without the need for an intermediary. It is a decentralised technology, and one of the most wellknown applications of blockchain is digital currencies, such as Bitcoin.
- Virtual reality and augmented reality: Digital experiences are provided through the use of VR headsets that simulate real and augmented reality, combining digital and augmented reality.
- **Biotechnology:** used to develop new technologies and products through cellular and molecular processes.
- Three and four-dimensional printing: companies can use this to print their own parts with minimal tools and costs.

# 4. The role of digital transformation in institutional practices

(Al-Qanbari, 2020: 2016) [1] explained that digital transformation and the technologies that emerged as a result of the Fourth Industrial Revolution have contributed to the field of auditing through:

- Increasing the volume of data and the emergence of several scientific concepts and modern scientific practices, in addition to intelligent processing.
- The emergence of various technologies, including blockchain and the introduction of robots into business, which could have a significant impact on accounting and auditing.
- The traditional tasks of internal and external auditors have been significantly reduced and replaced by analytical and advisory tasks, in addition to the

- exchange of roles between humans and robots in most accounting processes.
- Technologies are being reduced through reliance on accuracy and trust.
- Increase the quality of financial reports by improving reliability and relevance, as well as the quality of information.

# Second: Internal Auditing 1. The Concept of Internal Auditing

There are a number of concepts of internal auditing that have been clarified by researchers and professional organisations. The definition issued by the American Institute of Auditors in 1947 is considered the first definition of internal auditing, which defined it as an independent activity to monitor the accounting and financial work of an organisation, in addition to providing preventive and remedial measures for management. This type of control aims to examine and evaluate the effectiveness of internal control measures (Youssef and Othman, 2017: 13) [17]. It was also defined by the Arab Institute, of Accountants as an independent activity through which management and accounting are monitored, in addition to working to improve the use of resources, which ensures the achievement of productive efficiency (Abu and Halas, 2016: 15). Enofe et al. (2013: 163) [1, 21] view internal control as part of a control system established by management to ensure compliance with established work procedures.

(Abdulrahman and Banaser, 2022: 62) <sup>[9]</sup> explain that internal auditing is an integrated auditing system that includes a set of control methods and procedures that establish rules designed by management and are implemented by all employees in order to obtain a reasonable level of confidence in addition to achieving the unit's objectives through the efficiency and effectiveness of its operations and the accuracy and integrity of its financial reports.

The researcher believes that, based on the above concepts, internal auditing is an independent and objective activity aimed at adding value to the organization and improving its operations, in addition to monitoring the activities carried out by the organization in order to help individuals perform their tasks effectively by submitting reports with recommendations and observations.

#### 2. Internal audit objectives

One of the objectives of internal auditing is to control accounting data, ensure the integrity of records, and protect the institution's assets from fraud and errors. The role of internal auditing is achieved by increasing the value of the institution and improving its operations through improved internal audit procedures. The objectives of internal auditing can be summarized in the following points: (Ali and Zidan, 2012: 99) (Suleiman and Hassan, 2015: 49) (Youssef and Othman, 2017: 16) [17, 8, 11].

- Ensuring that economic resources are used efficiently.
- Ensuring that accounting data and information are accurate and reliable.
- Protecting the organization's assets from fraud, error and embezzlement. This is achieved through the need for strict control over operations.
- · Conduct periodic reviews of activities and submit

- reports to senior management containing findings and recommendations.
- Monitor and evaluate the implementation of plans and policies by identifying weaknesses or deficiencies in procedures and systems for improvement and modification.

The researcher believes that internal auditing seeks to provide advisory and supervisory services that include administrative and financial activities, and that the objectives of internal auditing are not limited to auditing, but also include constructive goals to help management achieve its objectives, implement its plans and improve its policies.

# 3. Advantages of applying digital transformation to internal auditing

- 1. The use of data analysis in the internal audit process may change the role of internal auditors, as the use of digital transformation technologies leads to standardisation of practices and increased work efficiency, as well as the possibility of testing large amounts of data through the use of big data analysis, thereby increasing the importance of reports.
- 2. The possibility of achieving accuracy and productive value in the internal audit function through the use of digital transformation, as data analysis can support internal auditors in performing their assigned tasks and assessing risks and testing stages when processing large amounts of data, and this mechanism can facilitate predictive analytics and provide greater accuracy. (Islam and Stafford, 2021:201) [22].
- 3. The use of digital transformation technologies facilitates the use and analysis of electronic data, which can be leveraged to perform audit tasks with high accuracy. Many programmes contain the technological skills that internal auditors need to standardize procedures and thus facilitate their implementation. (Newman, *et al.*, 2021: 5) [24].
- 4. Digital transformation contributes to the development of the internal auditor's capabilities in technology and information, thereby enhancing the reliability of the reports issued by the internal auditor. (Christ, *et al.*, 2021: 253) [20].
- 5. Digital transformation helps in analysing data that is consistent with internal audit objectives according to a plan that is appropriate for the internal audit process and is determined in advance. This advance planning will lead to the standardisation and simplification of internal audit implementation procedures. (Zhikhoreva, *et al.*, 2021, p. 253) [25].

By reviewing the advantages of digital transformation, the researcher believes that the level of digital transformation in an organisation can affect internal auditing work, as technologies are integrated into daily work and the more an organisation uses digital transformation technologies, the more internal auditors use these technologies in their tasks.

# **4.** The role of digital transformation in the internal audit process

(Al-Washli, 2013) [16] believes that the efficiency of the

internal control system in institutions depends primarily on the professional competence of internal auditors, which should be improved by (Al-Washli, 2013) [16] that the efficiency of the internal control system in institutions depends mainly on the professional competence of internal auditors, which should be improved by associations and institutes, especially with the developments taking place in the business environment and the application of digital transformation technology tools in internal auditing as part of modern accounting information systems.

The internal control system in banks is one of the most important requirements of banking rules and regulations, as it ensures the efficiency and effectiveness of banking operations. Therefore, there should be an effective control system that responds to changes in the surrounding environment in order to reduce fraud and errors. An effective control system consists of five components, namely:

- Control.
- Risk assessment.
- Control activities and distribution of tasks.
- Information and communication.
- Control activities.

On the other hand, (Ali, 2022) [11] believes that the importance of auditing lies in its ability to improve the quality of financial reports, thereby increasing the confidence of relevant parties in those reports. Internal auditing also depends on the quality with which the tasks assigned to the internal auditor are performed, which in turn depends on the auditor's qualifications and professional capabilities to use modern technological tools, as well as their commitment to modern standards (Mahmoud, 2017) [14], as the reference standard requires (1210) requires that the internal auditor be familiar with modern technological • tools, how to use them, and their risks, so that they can • perform their work efficiently and effectively. They should also have the computer and modern technological skills required to plan and perform internal audit tasks.

(Attiya, 2021) explained that the internal audit department must be fully aware of all developments and changes in the services provided and transactions within the institution. This requires training and qualifying internal auditors to deal with modern technologies and face the challenges and obstacles that may arise as a result of the application of digital transformation in institutions, thereby facilitating the task of the internal auditor and improving their performance. In addition, internal audit procedures must be reviewed because digital transformation is accompanied by an expansion of internal audit activities to include new burdens and responsibilities, such as providing protection against cybercrime, as internal audit activities focus on evaluating and improving risk management, internal control and governance systems.

Based on the above, the researcher believes that internal auditors should keep pace with modern technological developments on an ongoing basis and align audit standards and policies. They must develop themselves and obtain the qualifications that enable them to deal with digital technology and be familiar with digital transformation

techniques in order to perform internal auditing activities effectively.

# The Third Requirement: The Practical Aspect First: Research Sample and Data Collection

The research field is represented by the Iraqi banking sector due to its importance in reflecting the study variables, while the research community is represented by internal auditors working in Iraqi commercial banks. The research sample consisted of the total questionnaires distributed to the community, with the number of distributed questionnaires being (100), and the number of retrieved and valid ones for analysis being (91), with a retrieval rate of approximately (91%). The distributed questionnaire to the research sample was the main tool for data collection, and Table (1) shows the number of retrieved questionnaires and the number of valid ones for analysis.

Table 1: Returned Ouestionnaire Forms

Category	Number
Distributed forms	100
Valid forms for analysis	91
Response rate	91%

**Source:** Table prepared by the researcher.

#### Secondly: Study Tool

In order to achieve the study's objective, the researcher prepared a questionnaire as a tool for collecting data related to the impact of digital transformation on improving internal audit procedures. It was designed thru the following steps:

- Reviewing and examining previous studies related to the subject of the study.
- Creating a preliminary questionnaire form consisting of personal data and the two main axes of the survey.
- In order to achieve the study's objective, the questionnaire consisted of 20 items distributed across two axes.
  - The first axis: There are statistically significant differences at a significance level of (05≥α) between the use of digital transformation and the improvement of internal audit procedures in the banks under study, consisting of (10) items.
  - Axis Two: There are statistically significant differences at a significance level of (05≥α) between the use of digital transformation and the improvement of the internal auditor's efficiency and professional care in the banks under study, consisting of (10) items. A five-point Likert scale was adopted to express the attitudes of the sample individuals in commercial banks, where their scores range from (5 = strongly agree to 1 = strongly disagree).

#### **Third: Results**

#### 1. Description of the research sample individuals

In order to shed more light on individuals' perceptions of the research variables, the researcher in this section provides a simple description of the sample members in general terms. Table (2) shows the distribution of individuals according to their demographic information.

Number Percentage % Category Gender Male 75.8 Female 22 24.2 **Academic Qualification** Diploma 4.4 4 Bachelor's Degree 5 5.5 Master's Degree 62 68.1 Doctorate 20 22.0 Years of Experience 5 years 20 22.0

40

31

Table 2: Distribution of individuals according to demographic information

**Source:** Table prepared by the researcher based on SPSS statistical program.

Table (2) shows the demographic information of the surveyed individuals. It is noted that the majority consists of males, with a total of 69 individuals out of the total sample of 91 individuals (n=91), accounting for 75.8%, which is the largest percentage. The percentage of females in the sample is 24.2%. Regarding educational qualifications, the master's degree category is the highest, with 68.1% and a total of 22 individuals, followed by the doctoral degree category with 20 individuals, accounting for 22%. The bachelor's degree category follows with 5.5% and a total of 5 individuals, and finally, the diploma category with 4.4% and a total of 4 individuals. As for years of experience, the 5-10 years category has the highest percentage at 44% with 40 individuals, followed by the 10 years or more category with 34.1% and 31 individuals. Finally, the 5 years category recorded the lowest percentage at 22% with 20 individuals.

5-10 years

10 years or more

#### 2. Validity of the questionnaire

It means that the questionnaire should be comprehensive of all the elements that should be included in the analysis and that its items should be understandable and clear. It should also be clear to the entities that will use it. The researcher verified the validity of the questionnaire thru the following: Face validity: The preliminary model of the questionnaire was presented to a number of esteemed referees specialized in the College of Administration and Economics at Takrin University, totaling six referees. Some phrases were refined, and others were deleted or replaced according to the given opinions and guidelines, resulting in the final and approved version of the questionnaire.

44.0

34.1

#### 3. Hypothesis Testing

Regarding the first main hypothesis of the research represented by (H1). There are statistically significant differences at the significance level  $(05 \ge \alpha)$  between the use of digital transformation and the improvement of internal audit procedures in the banks under study. The hypothesis was tested by calculating the arithmetic means and relative weights of the internal auditors' responses, as shown in Table (3).

 Table 3: Arithmetic Means of the Impact of Digital Transformation on Improving Internal Auditing

No.	Statements	Arithmetic Mean	Standard Deviation	Relative Importance %	T-test Value	Sig.	Rank
1	The use of digital transformation provides great capabilities in dealing with databases, analyzing them, and extracting results and reports quickly and accurately	3.93	89.0	%80	1.969	0.000	1
2	Digital transformation contributes to enhancing the internal audit process and raising the efficiency of auditors.	3.74	91.0	%77	1.774	0.000	5
3	The use of digital transformation contributes to improving the quality of internal audit work through the availability of programs that enhance the auditors' skills in using modern techniques	3.84	88.0	%78	1.923	0.000	3
4	The use of digital transformation provides the necessary technological skills for the internal auditor to deal effectively with the audit process	3.63	83.0	%73	1.799	0.000	9
5	The use of digital transformation in the internal audit process helps in dealing with a large volume of data in record time, with high accuracy and an advanced method	3.89	83.0	%79	2.096	0.000	2
6	The use of digital transformation enables the auditor to extract results and identify control weaknesses accurately within the internal audit process	3.73	99.0	%75	1.598	0.000	6
7	The use of digital transformation contributes to improving the quality of internal audit work by raising the level of control over the audit process.	3.73	89.0	%75	1.792	0.000	6
8	The use of digital transformation leads to improved internal audit quality and	3.71	73.0	%76	2.152	0.000	7

	enhances the strategic and operational efficiency of the auditing process.						
9	The use of digital transformation contributes to improving internal audit quality	3.69	85.0	%74	1.826	0.000	Q
	by reducing human intervention and minimizing errors						0
	The use of digital transformation contributes to speeding up data verification and						
10	processing, thereby improving the completion of audit work with the least effort	3.78	87.0	%77	1.873	0.000	4
	and time						
	Overall Mean	3.79	66.0	%77	2.509	0.000	

**Source:** Table prepared by the researcher based on statistical analysis.

#### It is noted from the following Table (3)

- The paragraph number (1) which includes "The use of digital transformation technology provides significant facilities in dealing with databases, analyzing them, and processing them with the required accuracy and speed" contained the highest arithmetic mean, which was (3.93) with a relative weight of (80%).
- The statement number (4) received the lowest arithmetic mean, which includes "the use of digital transformation provides the technological skills necessary for the internal auditor to conduct the audit process with high efficiency," with a relative weight of (73%).
- It was evident from Table (3) that the mean score for all the above items was (3.79) with a relative weight of (77%), which is a value greater than the neutral weight of (60%). This indicates that the response level to this axis has risen above the average score (3), suggesting that the sample members agree with the items in this axis. Consequently, the first hypothesis is accepted,

which states that "there are statistically significant differences at a significance level of  $(0.5 \ge \alpha)$  between the use of digital transformation and the improvement of internal auditing procedures in the banks under study."

The researcher attributes that digital transformation is for the purpose of data protection and practicing the auditing profession, and there should be necessary technological skills to improve the internal auditing procedures, which positively contributes to conducting the auditing process efficiently and effectively. Regarding the second main hypothesis of the research represented by (H2). There are statistically significant differences at the significance level  $(05 \ge \alpha)$  between the use of digital transformation and the improvement of efficiency and professional care of internal auditors in the banks under study. The hypothesis was tested by calculating the arithmetic means and relative weights of the internal auditors' responses, as shown in Table (4).

**Table 4:** Arithmetic Means of the Impact of Digital Transformation on Improving the Efficiency, Integrity, and Professionalism of the Internal Auditor

No.	Statements	Arithmetic Mean	Standard Deviation	Relative Importanc e %	T-test Value	Sig.	Rank
1	The use of digital transformation helps in developing the social relations of the internal auditor in the field of professional cooperation with relevant authorities and institutions concerned with the internal audit process	4.04	0.77	%81	2.373	0.000	2
2	The use of digital transformation contributes to speeding up the internal audit process and achieving high accuracy in auditing results.	3.93	0.93	%786	1.910	0.000	3
3	The use of digital transformation contributes to setting financial and planning budgets that help the internal auditor to complete audit work efficiently.	3.83	0.77	%766	2.161	0.000	5
4	The use of digital transformation contributes to preparing personality tests and personal interviews for internal auditors when applying for the job	3.79	0.82	%758	1.999	0.000	6
5	The use of digital transformation enhances the independence and objectivity of the internal auditor through the adoption of modern auditing programs.	3.60	0.94	%72	1.576	0.000	8
6	The use of digital transformation contributes to solving the difficulties facing the internal auditor in collecting audit data, thereby facilitating the auditing process.	3.70	0.90	%74	1.728	0.000	7
7	The use of digital transformation helps to strengthen the auditor's ability to analyze and interpret data accurately during the auditing process.	3.70	0.92	%74	1.702	0.000	7
8	The use of digital transformation contributes to enhancing the auditor's confidence and professionalism, thus improving the quality of audit results.	3.48	0.98	%70	1.391	0.000	9
9	The use of digital transformation helps in developing the ethical awareness of the internal auditor and increasing their commitment to professional ethics.	3.85	0.81	%77	2.090	0.000	4
10	The use of digital transformation contributes to enhancing the efficiency of the internal auditor and improving the quality of their performance by adopting modern techniques.	4.04	0.77	%81	2.373	0.000	2
11	The use of digital transformation contributes to activating the role of the internal	4.10	0.79	%82	2.436	0.000	1

auditor in performing their duties with high efficiency and great professional care						
during the auditing process.						
Overall Mean	3.85	0.63	%77	2.704	0.000	

#### It is noted from Table (4) the following

The paragraph (10) which states "The use of digital transformation contributes to activating the role of the internal auditor in performing their tasks with great efficiency and professional care during the auditing process" included the highest arithmetic mean, which was (4.10) with a relative weight of (82%). As for the paragraph that received the lowest arithmetic mean, it was "The internal auditor exerts the necessary professional care when using technology-based auditing and other data analysis techniques," where the arithmetic mean was (3.48) with a relative weight of (70%).

It was evident from Table (4) that the mean for all the above items was (3.85) with a relative weight of (77%), which is a value greater than the neutral weight of (60%). This indicates that the response level for this axis has risen above the average score (3), suggesting that there is agreement among the sample members on the items of this axis. Consequently, the second hypothesis is accepted, which states that "there are statistically significant differences at a significance level of  $(05 \ge \alpha)$  between the use of digital transformation and the improvement of the internal auditor's efficiency and professional care in the banks under study."

#### 4. Results and Recommendations

The researcher sought to test the impact of digital transformation on improving internal audit procedures, and reached a set of conclusions and recommendations as follows:

#### A- Results

- Digital transformation improves audit processes by using electronic data to facilitate the completion and execution of the audit process efficiently and accurately. Digital transformation improves the auditing process by using electronic data to facilitate the completion and execution of the audit efficiently and accurately.
- 2. The use of digital transformation in banks listed on the Iraq Stock Exchange enables the auditor to perform their tasks efficiently and with professional care during the auditing process. The use of digital transformation in banks listed on the Iraq Stock Exchange enables the auditor to perform their duties with efficiency and professional care during the auditing process.
- 3. Digital transformation provides the ability to audit large quantities of data simultaneously and in a dynamic manner, thereby improving the efficiency of audit operations by reducing the audit duration. Digital transformation provides the ability to audit large volumes of data simultaneously and in a dynamic manner, thereby improving the efficiency of audit operations by reducing the audit duration.

#### **B- Recommendations**

1. The necessity of using banks listed on the Iraq Stock Exchange for digital transformation due to its importance in organizing and planning the auditing

- process. The necessity of using banks listed on the Iraq Stock Exchange for digital transformation due to its importance in organizing and planning the auditing process.
- 2. The banks listed on the Iraq Stock Exchange should, when using digital transformation, enhance the efficiency and professional care of the internal auditor and build new skills for the internal auditor that align with the technology of the auditing process. Banks listed on the Iraq Stock Exchange should, when using digital transformation, enhance the efficiency and professional care of the internal auditor and build new skills for the internal auditor that align with the technology of the auditing process.

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