

# Internal Audit Activities and Their Role in Employing Techniques to Support Digital Transformation in the Modern Business Environment

Dr. Eitedal M.S Al Helou<sup>1</sup> Dr. Iskandar M. H Nashwan<sup>2</sup> Dr. Issam M.A Al Taweel<sup>2</sup> Dr. Yarob J. Kullab<sup>1</sup>

<sup>1</sup>Assistant Professor, Department of Accounting, Faculty of Management and Finance, Al-Aqsa University Gaza

<sup>2</sup>Associate Professor, Department of Accounting, Faculty of Management and Finance, Al-Aqsa University Gaza

\*E-mail of the corresponding author: [e\\_alhelo@yahoo.com](mailto:e_alhelo@yahoo.com)

## Abstract

This study dealt with the knowledge of the role of internal audit activities in their most important dimensions (technical activities, information security and confidentiality activities, internal control activities and risk assessment, governance activities, and human resource activities) in employing techniques to support digital transformation in the modern business environment. Preparing a questionnaire designed specifically for this purpose, and the study was applied to a sample of internal auditors, managers and board members of companies listed on the Palestine Stock Exchange. There is a great agreement between the opinions of the respondents on the subject of the study, and in light of the results of the study; It recommended the need to pay attention to strengthening all aspects and dimensions of internal audit activities, because of their significant positive role in promoting the application of digital transformation techniques, which would result in the advancement and upgrading of the holistic performance of companies.

**Keywords:** internal audit activities: techniques to support digital transformation: the modern business environment

**DOI:** 10.7176/RJFA/13-22-04

**Publication date:** November 30<sup>th</sup> 2022

## 1. Introduction

Starting from the fourth industrial revolution; the world began to live in a remarkable and rapid digital transformation that imposed itself on all economic, life and professional fields, including: "Accounting and Auditing", as a result of the great development in emerging technologies, as these technologies worked to transform from the traditional system in the work environment to the digitized system, where speed Superiority and extreme accuracy in achievement, shortening time, effort and cost, ensuring upgrading service and achieving quality, meeting the requirements of the emerging generations, and in conjunction with the continuous human increase. It is linked to assisting management in achieving the desired goals, and accordingly, the digital transformation has contributed to changing the procedures, tasks, responsibilities and activities related to internal audit to keep pace with this transformation, and for this reason, auditors need to ensure their understanding of digitization and its impact on potential current and future risks, and they must develop their skills to enhance their abilities to assess risks Digitization and its understanding, because the orientation will be for internal audit teams that realize the possibilities of digitization, and seek to know the impact of changes technology in the business environment and how to benefit from it, and here a distinction must be made between business process automation and digitization, where automation reduces costs but by replacing paper statements with (e-mail), while digitization is based on technology to radically improve performance, generate efficiencies and create new opportunities business and revenue generation (Ram Balakrishnan, Protiviti, 2020).

The analysis of big data in the work environment electronically reduces the effort and cost of the internal audit process, identifies the most frequently evaluated processes and enables the development of the necessary indicators for evaluation and measurement, and emerging technologies may help to prepare remote auditing, whether internal or external, through meetings virtualization and based on the organization's databases available at any time through cloud computing, which increases the effectiveness of internal audit and enhances the activation of modern audit methodologies, and internal audit is referred to as an independent activity, objective assurance and consultancy aimed at adding value and improving the operations of the facility, as it helps to organize the achievement of its objectives by taking a systematic and disciplined approach to assessing and improving the effectiveness of risk management, control and management processes (Institute of Internal Auditors, 2016).

The emerging technologies also have clear repercussions for bringing about a social transformation, through the daily transactions of the individual, to reach a society that deals digitally in all aspects of life, to improve the life of the individual and society. The digital transformation strategy is based on providing a digital work environment that reduces budget expenditures, achieves quality in digital services, and ensures increased satisfaction of beneficiaries and the participation of everyone in the digital system. According to UNCTAD (2019), digitization has great benefits in improving production and management, and achieving abundant gains for companies that move from traditional sectors to digital sectors which made competition strong between companies in light of the rapid progress in emerging technologies, and since the internal audit system is the main center for providing accurate information to the company's departments, especially in the administrative, planning, directive and executive fields, it is the safety valve for companies for their focus on the control environment, risk assessment, technical activities, information and communications. Furthermore, follow-up (Friday, 2017), and the concept of internal audit has evolved to reach the stage of production efficiency, as it included methods for improving production efficiency, and this was interpreted by Standard No. 1 "AU320" issued by AICPA, which considered internal audit as the organizational plan and procedures that work to protect. The company's assets, and checks and audits the accuracy of accounting data, and works to achieve productive efficiency and adherence to administrative policies (Amshahr, 2017). To add value to the facility to improve its operations and help it achieve its goals, and (Ataf and Bensabo, 2021) believe that the Internal audit is a neutral and independent activity that helps management with all professionalism and objectivity to achieve the aims of the facility through a group of modern activities related to control, performance evaluation, governance and providing consultancy, which leads to adding value to the facility.

## 2. Study Problem:

Those in charge of the internal audit work according to a plan approved by the Audit Committee and the company's board of directors related to reviewing the main activities and operations, risk management, adherence to policies, follow-up and cooperation with administrators and executive bodies, strengthening governance and providing consultations. Harnessing electronic technologies has become a decisive matter to conduct internal audit efficiently and effectively. In order to ensure the expansion of coverage of the audit process, the Internal Audit Department submits its written reports to the Board, including its findings and recommendations regarding financial and administrative affairs, investments, performance evaluation, and others. Ensuring the success of internal audit in achieving the desired goals depends on keeping pace with the digital transformation and the modern and rapid developments of business all over the world, which requires greater attention from internal audit in technical aspects and focus on analyzing big data and activating modern audit methodologies (Al-Fifi, 2020).

Since the main purpose of internal audit gradually evolved, as it began with an evaluation of the internal control system and risk management, then it was included to help management adhere to the principles of governance, and then moved to the social audit until it reached the provision of assurance and advisory services to the facility, i.e. providing assurances and advisory services with the aim of adding value to the institution. and improving its work, which prompted us to pay attention to studying internal audit activities that are in harmony with the fourth Industrial Revolution and which left emerging technologies, to employ them in keeping pace with global technological progress for the purpose of optimal utilization of resources at the highest quality and lowest cost, and to maintain survival in light of digital transformation. In clarifying the role of internal audit activities in employing emerging technologies as supportive mechanisms for digital transformation in Palestinian establishments, the main study question can be formulated as follows:

What is the role of internal audit activities in employing techniques to support digital transformation in the modern business environment? The following sub-questions emerge from it:

- What is the role of technical and technological internal audit activities in employing techniques to support digital transformation?
- What is the role of internal audit activities related to information security and confidentiality in employing techniques to support digital transformation?
- What is the role of internal audit activities for internal control and risk management in employing techniques to support digital transformation?
- What is the role of internal audit activities related to governance in employing techniques to support digital transformation?
- What is the role of human resources internal audit activities in employing technologies to support digital transformation?

## 3. Study hypotheses:

**The main premise: There is a role for internal audit activities in employing techniques to support digital transformation in the modern business environment. The following hypotheses are derived from it:**

**The first sub-hypothesis:** There is a role for technical and technological activities in employing technologies to support digital transformation.

**The second sub-hypothesis:** There is a role for information security and confidentiality activities in employing techniques to support digital transformation.

**The third sub-hypothesis:** There is a role for internal control assessment and risk management activities in employing digital transformation support techniques.

**The fourth sub-hypothesis:** There is a role for governance activities in employing technologies to support digital transformation.

**The fifth sub-hypothesis:** There is a role for human resources activities in employing technologies to support digital transformation.

#### 4. Objectives of the study:

- Identifying the role of the technical activities of those in charge of internal auditing in employing techniques to support digital transformation.
- Uncovering the role of advisory activities for those in charge of internal auditing in employing techniques to support digital transformation.
- Explaining the role of the supervisory and procedural activities of those in charge of internal auditing in employing techniques to support digital transformation.
- Shedding light on the role of governance activities for those in charge of internal auditing in employing techniques to support digital transformation.
- Identifying the role of human resources activities for those in charge of internal auditing in employing techniques to support digital transformation.

#### 5. Importance of the study:

The importance of the study lies in the novelty and value of its subject, which deals with the role of internal audit activities in employing techniques to support digital transformation, and its compatibility with the era of the Fourth Industrial Revolution and digitization for current and future generations, and with the global trend towards digital transformation as a prominent strategic goal for the aspects of economic, social and educational life, and its importance stems from among its findings and recommendations about technical, advisory, supervisory, governance and human resources activities in employing the Internet of Things and artificial intelligence, and big data analysis as emerging technologies that strongly support the digital transformation strategy in the Palestinian business environment, which contributes to the development of companies and maximizing their value.

Spatial and temporal limits of the study:

**Objective limits:** The study was limited to determining the role of internal audit activities in employing techniques to support digital transformation.

**Time limits:** The study was implemented in the year 2022

**Spatial Boundaries:** The Palestinian Business Environment

**Human limits:** internal auditors, financial managers and board members in joint stock companies listed on the Palestine Exchange.

#### 6. Previous studies:

##### **A study (Mohammed et al., 2021) entitled “Modern Internal Audit Activities and their Role in Financial Performance”**

The study aimed to identify the role of modern activities of internal auditing in the financial performance of the institutions and was applied to the Sudanese Sugar Company. The problem of the study is the low efficiency of the financial performance of the institutions. The descriptive analytical approach was used to analyze the data of the field study. The study concluded that the internal audit contributes to determining Reducing and developing ways to treat the problem of the study, which helps to raise the efficiency of financial performance, and the internal auditor also contributes to activating governance in the efficiency of financial performance in those institutions.

##### **A study ((Betti, Sarens, 2021) entitled “Understanding the internal audit function in a digitalized business environment**

The study aimed to gain an in-depth understanding of how the internal audit function is evolving in an increasingly digital business environment, so an interview was conducted with 29 members of management committees and internal auditors in Belgium, and the study concluded that: “The digital business environment affects the internal audit function from three Aspects” and this is as follows, first: that it affects its scope, and it is expected that the speed of internal audit planning and the required digital knowledge will increase, and information technology risks acquire special importance, cybersecurity threats, second: the demand for advisory

activities carried out by internal auditors is higher, and third: the adjustment of Digitizing the work practices of internal auditors in their daily tasks. New technologies such as data analysis tools are gradually being implemented in internal audit departments, and the study recommended that the internal audit function should develop consulting activities to help organizations deal with the digitization of the business environment.

**A study (Betti, Sarens, and Poncin, 2021.) entitled ""Effects of digitalization of organizations on internal audit activities and practices",**

The study aimed to investigate how the internal audit function modified its activities and practices with regard to the digitization of the facility, and specifically dealt with the use of data analytics and the performance of advisory activities on the part of internal auditors, and the study was based on a survey conducted with 82 chief audit executives in the United States of America and members of the Institute of Auditors The results showed that: "Dogmatization increases the use of data analytics on the part of internal auditors and the performance of consulting activities. Thus, the results highlight the importance of these two aspects for IAF to continue providing value to organizations, and the study recommends conducting more data analyzes and implementing more activities advisory.

**A study (Almaleeh, 2021), entitled "The Impact of Digital Transformation on Audit Quality: Exploratory Findings from a Delphi Study."**

The study aimed to explore the impact of digital transformation on audit quality, and to achieve this, twenty predictions of the impact of digital transformation on audit quality determinants were developed, including (inputs of the audit process, procedures of the audit process, outputs of the audit process, interaction between stakeholders in the audit process, the environment of the audit process). These predictions were evaluated by a group of Egyptian auditors, and the results of the study revealed that the Egyptian auditors expect some important changes in the determinants of audit quality as a result of the spread of digital transformation, especially with regard to audit qualifications, some audit procedures and the timing of issuing the audit report, and they agreed that the digital transformation affects Significantly on the determinants of audit quality related to the loss of the audit process to the confidence of users, the widening of the expectations gap, or the widening of the organizational gap between auditing standards and the practical reality of the profession. The shadow of digital transformation.

**A study (Lekhadrosalmi, 2021) entitled "Modern trends of internal auditing in economic institutions"**

The study aimed to determine the role of internal audit in adding value to Algerian economic institutions, and to achieve this, a survey was conducted for a sample of 74 individuals (academics, certified accountants, internal auditors, accountants experts), and the questionnaire tool and the statistical packages program V22 SPSS were used for data processing and analysis. Interpretation of the results The study concluded: "The role of internal audit must be activated in a manner that is commensurate with meeting the needs of stakeholders who expect further development and growth from the internal audit department and contribute to increasing benefits and reducing costs, which leads to the progress and prosperity of their institutions, and help them succeed and continue, achieve their goals and add value. It has, through the assurance and advisory services of the internal control system, risk management, and governance provided by the Internal Audit Department, in addition to its evaluation and review of the functions of the institution.

**A study (Shehata, 2020), entitled "Measuring the impact of activating internal audit activities for digital transformation mechanisms on enhancing accountability and transparency and improving government performance."**

The study aimed to study and analyze the nature and importance of internal audit activities for digital transformation mechanisms as one of the applications of information technology, and to reveal the most important areas of examination that the internal audit department and audit committees should focus on to verify the efficiency and effectiveness of the digital transformation strategy, and to extract the most important elements of its activation in light of professional standards and publications. To achieve the goal, a field survey was conducted for senior management officials, internal audit management, information technology management, and academics in the accounting and auditing departments of public companies and Egyptian government units, and the study concluded that: Comprehensive risk-based internal audit procedures and policies for examining the digital transformation strategy, verifying the rate of technological development and digital technologies used within the organization and its various applications, and adopting a variety of ideas and experiences to assess the risks approaching the implementation of these technologies through digital platforms and websites.

**A study (Al-Mohammed, 2020) entitled "The Role of Digitalization in Developing Internal Audit Practices in an IT Environment**

The study aimed to clarify the role of digitization through many strategies and methods in the development of internal audit practices in the information technology environment. Through a questionnaire designed for this purpose, the study concluded that digitization contributes to the development of internal audit practices in the information technology environment, while the acquisition of knowledge and skills compatible with the use of modern digital technologies contributes to the digitization of the audit profession. The study recommended the

development of digital platforms and programs with the aim of developing internal audit practices. In the local business environment, noting that activating digitization mechanisms in the information technology environment requires attention to strategic risks.

**A Study (Youssef and Al-Mohammadi, 2019) entitled "Modern Internal Audit Activities and Their Role in Oversight of the Public Sector"**

The general objective of the study is to study the role of modern internal audit activities in strengthening and controlling oversight in the public sector, by studying and analyzing recent developments in the practice of the internal audit profession, and determining the role of internal audit in activating internal control in the public sector, and the study concluded that: Modern internal audit contributes to activating and controlling oversight in the public sector, and there is a strong direct correlation between modern activities of internal audit and financial control in the study community, and the regression coefficients indicate that the removal of modern activities of internal audit has a positive relationship with oversight over the public sector. The study recommends the necessity of keeping pace with the continuous changes in the contemporary business environment, activating the application of modern internal audit activities in the public sector, and ensuring the complete independence of the internal audit department, and its subordination to the Board of Directors or the audit committee in the institution.

**A study (Al Mahjoub and Abu Shaala, 2017) entitled "Internal audit activities and their role in achieving sustainable development."**

The study aimed to highlight the role of the internal audit function and how it contributes as a control mechanism to achieving sustainable development in light of the efforts aimed at developing and improving the environmental performance of Libyan institutions. The second is concerned with studying the reality of the practical practice of the internal audit to assess social and environmental performance within the framework of sustainable development in Libya, and prepared for this a list of questionnaires distributed to the research sample. The responses were collected and analyzed, and the following conclusions were drawn: Achieving sustainable development in the company, which affects their ability to participate in the application of the requirements of sustainable development and its economic, social and environmental dimensions in the company.

**Commenting on previous studies and the research gap:**

Through what has been presented from previous literature; The researchers noted that it was concluded that the activities of internal auditing and internal auditors have an important role to play in the field of examining the internal control environment, assessing risks of all kinds, accounting information systems, security and confidentiality of information, preparing periodic reports, providing advice, recommendations and assurances, and working alongside governance and with audit committees to add value to the company. To enhance competition and sustainability, and to activate this role, the concerned and official authorities must develop the methods of work and activities of the internal audit, and activate its role to protect stakeholders and assist the administration through their affirmative and advisory recommendations, and to issue standards and systems for internal audit commensurate with the techniques of digital transformation in the modern business environment.

**The most important thing that enriches the current study is that it was harmonious and complementary to the previous Arab and foreign studies, but it was unique in the Palestinian environment, which is very special from other environments, and aims to know the role of internal audit activities in employing digital transformation techniques for companies listed on the Palestine Stock Exchange.**

**7. Theoretical framework of the study:**

**Internal audit activities and their role in employing digital transformation techniques**

**• The concept of internal audit activities**

Internal audit activities have become one of the most prominent means that is relied upon to keep pace with modern technical developments and openness to the world of digital transformation, because they are activities based on evaluating the financial, administrative, operational and oversight work, and serve the institution through recommendations, advice, evaluations, analyzes and periodic reports that it submits to the management and the concerned parties and accordingly; The concept of internal audit is summarized as an independent and impartial confirming activity that helps management achieve the objectives of the organization with objectivity and integrity through commitment to a set of activities, its statutes are strategic review, risk management review, board of directors review, review of responsibilities and governance (Bin Ataf and Bensabou, 2021). According to (Lakhdar and Salmi, 2021), internal audit is a precise, purposeful and continuous process that helps the organization and makes it developed and able to achieve effectiveness in controlling and improving its operations. **Therefore, the concept of internal audit activities must be clarified as follows:**

Ghahtani (2021) believes that internal audit activities are a comprehensive framework for internal control systems, as they check the reliability of financial, operational and administrative information, and ensure compliance with policies, procedures, authority manual, plans, systems and regulations established, and audit

means of maintaining assets while verifying their existence. Evaluating the efficiency of using the organization's available resources, and checking programs and operations to ensure that the results are in line with the objectives set, and that they are implemented as planned, in addition to providing consultations, and proposing solutions to the various departments, in a way that improves the efficiency and effectiveness of operational and financial operations.

**Here, the researchers emphasize the importance of the role of internal audit in many of the activities of the institution, especially: technical and technological activities, information security and confidentiality activities, internal control assessment and risk management activities, governance mechanisms activities, and human resources activities.**

**• The impact of digitization on internal audit patterns**

The traditional internal audit strategy is no longer valid for the modern business environment, and has not kept pace with the course of the industrial revolution based on digital transformation techniques. The impact of digital challenges on internal audit skills and methodology was discussed in a report of the Institute of Internal Auditors (IIA, 2019). The success of the internal audit process depends on keeping pace with the digital transformation and modern developments in business, and this requires focusing on the technical aspects. The Master K study (2019) emphasized the essential role of internal audit activities in employing digital transformation techniques by offering solutions that address the negative repercussions related to digital transformation. Orienting the compass towards predictive risks rather than existing risks, without losing the audit function's independence.

Mousa (2020) indicated that internal audit activities are affected by digital transformation strategies in terms of data volume and quality, which imposes on internal audit an integrated examination of data, security and reliability, and change the methodology and method of examination, and assessment of the risks of digital technologies in the modern environment.

Although there are many advantages that internal audit pursues to examine the elements of digital transformation, there is, for the moment, no specific procedural practical approach relied upon in the examination process.

There is no doubt that the digital transformation has contributed to the development of the tasks and responsibilities related to the internal audit process, the most important of which are: (Magdy, 2020).

- **Data analysis:** As a result of the increasing data on a daily basis, its collection and storage within huge databases to be used in making decisions and preparing future and strategic plans, and here comes the role of internal audit to use, analyze and categorize it and provide management with the indicators necessary for decision-making, as this information needs a digital environment to be dealt with it easily and conveniently save effort, time and cost.

- **Continuous audit:** The internal audit uses a certain technique to verify errors in the financial statements in a timely manner, according to pre-defined indicators, with the aim of providing management with assurances about the validity of the analyzed processes, the controls over them, and identifying the indicators necessary to measure their efficiency and ensuring the existence of appropriate technology for them.

- **Remote auditing:** The digital transformation has contributed to the use of remote auditing technology to conduct business, and this was evident during the Corona pandemic, as many facilities activated the role of internal and external audit remotely through virtual meetings and analysis of computerized data and documents through technical survey, and within the company's databases. This has contributed to enabling companies to carry out their tasks easily, especially companies that have several branches.

**• The pillars and determinants of internal auditing in the digital transformation environment**

The role of internal audit has clearly improved in the era of digitization through consultations and advice provided to management by those with skills and competencies, providing guarantees related to risks and responding to them as quickly as possible (PWC, 2019), and the Institute of Internal Auditors (IIA, 2019) has confirmed that the current stage It requires the internal audit function to update its activities to keep pace with technical developments and digital transformation strategies. al., 2018), and the internal audit environment is supposed to be conducive to implementing digital transformation in terms of the following:

- Providing human cadres of internal auditors with a high degree of experience in using modern technologies and electronic data to complete the audit process accurately.
- Providing the infrastructure of modern technologies and applied technology of programs and systems related to digital transformation, which are the basis for digital transformation, such as the Internet of things, cloud computing, artificial intelligence, big data analysis and robotics.
- Ensuring the presence of the administration and its professional councils that devote their attention to keeping pace with the digital transformation and the audit committees affiliated to the governance mechanisms, which are communicated with and provided with completed work reports, consultations and

recommendations on a timely basis.

- Provide programs and activities related to security and confidentiality of information, risk management and governance that ensure safe progress.
- Providing financial resources and economic support to keep pace with modern technologies.

(Mosa, 2020) believes that the internal audit function in public institutions depends on a plan for the elements of digital transformation, standards and professional publications, the field of auditing and the competence of auditors, then the requirements for examination of digital transformation mechanisms. As for the pillars and determinants of internal auditing in the digital transformation environment, he identified them as follows:

- The justifications for digital transformation, which are to keep pace with technical developments globally and open the way for communication around the world, and the desire of the administration to keep pace with global industrial developments and networking with local institutions and to meet the desires and needs of the public, and to enhance the local social and economic role.
- The components of digital transformation, which are represented in the transformation of operations to digitization, achieving quality in products and services of precision, preserving the environment from pollution, achieving sustainable development, reducing costs and optimizing the use of time and resources.
- Digital transformation operations are based on the digitization of operational processes, the documentary cycle, services and products, the adoption of modern technologies, and the qualification of human cadres.
- The results of digital transformation, which include opening the way for new products and services, professions and specializations that keep pace with the digital field and open up new horizons, business and stability.

The researchers believe that the digital transformation in the internal audit environment improves and facilitates the internal audit process, reduces the workload of the internal auditor and gets rid of paper files, and completes the audit process with high efficiency and quality, with less time, effort and cost from anywhere with a guarantee. To keep pace with modern and advanced systems that enhance the facilitation of the audit process and improve the professional performance of the auditor, and digital transformation has a tremendous ability to detect intentional and unintended errors by finding indicators of manipulation and fraud within the analysis of big data for the organization and others. This leads us to clarify the concept of digital transformation.

#### **The concept of digital transformation:**

It was defined (Noureddine, 2022) as creating smart and digital models and solutions that meet the needs of individuals, institutions and governments in a modern environment characterized by competition in light of the industrial renaissance. A new work (Slaymy and Bush, 2019), and accordingly, it is possible to mention the requirements for the success of internal auditing.

#### **• Requirements for the success of the internal audit**

The success of the Internal Audit Department and its support to achieve its required goals depends on the activation of modern technologies and the transition to technical work in the field of auditing. Data within the cloud (Al-Fifi, 2020).

#### **• The role of internal audit activities in employing digital transformation techniques**

The digitization of the facility increases the use of big data analytics by internal auditors and thus enables them to perform and develop more advisory, assurance and technology activities to continue to provide value to the organization (Betti, Sarens, poncin, 2021). This is according to what was stated by the Institute of Internal Auditors, and the Institute emphasized that value is added to the institution through achieving the objectives entrusted to it, adhering to policies, reducing risks, supporting evaluation, building and upgrading while ensuring independence and objectivity, and one of the most important roles and activities that enhance digital transformation techniques and add value to the institution following (for Khedrosalmi, 2021):

#### **• Technical internal audit activities**

Technical internal audit activities seek to use modern technologies and follow-up digital technology to provide innovative solutions and provide opportunities for corporate management to respond to the rapid changes in the modern business environment, keep pace with the digital age and employ modern digital technologies, open the way for new business, harness the digital transformation for creativity, innovation, knowledge creation, and income diversification. The multiplicity of services, increasing productivity and efficiency, and supporting decision-making (Shehadeh, 2021).

The basic stage of technical internal audit relied on examining and evaluating the risks of accounting information systems, verifying security and safety controls with regard to the institution's resources, allocating its duties, managing and confronting any crises, then followed by the advanced stage, which included governance in the field of information technology, planning, risk assessment, application security, software management, data analysis and preparation Smart reports have reached the stage of cloud computing, which includes verifying the integrity and security of storing and analyzing big data, assessing IT risk management and

protection systems, and assessing Internet risks and digital systems and platforms (Mosa, 2020). For example, Blockchain technology is a type of ledger that has the ability to change the organization's management of its business and thus how it is audited (Schmitz & leoni, 2019), where a decentralized digital ledger records transactions between two parties on two peer networks, and through it all Participants have access to shared records, it has a global bookkeeping feature that facilitates the audit process, and artificial intelligence is used in auditing and detection of favoritism, data collection and validation and also in ratio analysis and classification of journal entries (Zhaokai & Moffitt, 2019).

• **Internal audit activities related to security and confidentiality of information, assessment and improvement of risk management**

Within the tasks of the basic internal audit activities, the development of the necessary policies and procedures to know the risks surrounding its activities and to assess their financial effects and reduce them to a minimum. Accounting information systems, operational and technological processes, and ensuring the security and confidentiality of information through cybersecurity (Betti, Sarens, 2021), and (Sanad et al., 2021) stressed the importance of having an independent risk management in public institutions to carry out tasks and activities that ensure risk prediction and prevention, and that Through systematic scientific and professional methods that anticipate and predict future risks based on past, present and future hypotheses, data and events that are relied on by those in charge of internal auditing, based on the analysis of big data and digital technologies, where risks are reduced to a minimum. Therefore, internal audit activities support digital value leadership through Security and confidentiality of information, proactively identifying facility risks, and providing strategic advice (Nair, 2022) believes that one of the most important internal audit functions that aim and help in its transformation into a digital internal audit system are digital risk assessment activities, which require replacing traditional risk assessment methods with a more collaborative and participatory approach that is fully digitized.

The internal audit function should aim to achieve several objectives as part of its transition to the first digital internal audit function:

Digital risk assessment: where traditional risk assessment methods must be replaced by a more collaborative and participatory approach that is fully digitized

• **Internal audit activities that control and strengthen the internal control system**

One of the most important responsibilities that fall on the shoulders of senior management in institutions and companies is to prepare a strong and effective system of internal control that guarantees assurances about working within a strategy and a practical plan, the accuracy and validity of financial statements, efficiency in operational procedures, and adherence to policies, legislation, controls and risk management, and then comes The responsibility of the internal audit is to ensure the efficiency, effectiveness and controls of the internal control system in the institution, which is represented in the administrative, information, financial, accounting, strategic and planning systems to ensure improvement and intonation (Al-Mahjoub and Abu Shaala, 2017). Strengths to be strengthened and weaknesses to address, and to emphasize the contribution of accounting information systems, smart programs and applications, cloud computing and electronic management in achieving the objectives of the institution to ensure continuity in the monitoring and evaluation process, and to provide recommendations and periodic preparation of reports; Which supports the confidence of stakeholders and helps management in follow-up and continuous improvement.

• **Internal audit activities in the application of governance**

The internal audit activities ensure compliance with the procedures, activities and duties of the stakeholders, the board of directors and the executive authorities by ensuring the follow-up of performance and achieving the objectives of the institution and decentralization to benefit from the opinions of all and the preference for working within a team. Khalil (2003) believes that internal audit activities contribute to the implementation of corporate governance through two directions:

- Assisting the Board of Directors, audit committees, and executive management, which are the most important parties responsible for implementing governance and its rules, in performing their duties through providing advisory services to the operation process.

Monitoring, analyzing and evaluating the risks associated with the financial, accounting, administrative, operational and control systems appropriate to confront them and submitting the necessary reports in particular.

(Sanad et al., 2021) believes that activating technological governance in joint stock companies enhances the role of internal audit and enables those in charge of it to obtain information in a timely manner, and increases interaction between audit committees and auditors, enabling them to make recommendations regarding the application of governance principles and mechanisms and controlling their aspects. Hamni (2020) stressed the importance and role of information technology governance in the success of digital transformation.

• **HR activities**

Digital skills are an important asset for the organization and have a fundamental and important role in modifying the work practices of internal auditors in their daily tasks, because the internal audit profession needs to integrate data analysis skills with information technology so that the internal auditor can develop consulting activities and



provide consultations in line with the digitization of business, And help the organization employ digital technologies (Betti,Sarens,2021), and for the internal audit function to succeed it must undergo a comprehensive digital transformation process, and this not only requires internal auditors to use technological tools to carry out internal audit tasks, but it also requires a change of mindset and an adaptation of the group Skills (Nair, 2022).

**Through the above, the researchers confirm that the internal audit activities have a fundamental and prominent role in each stage of the application of digital transformation systems, through the internal auditors performing the activities and tasks assigned to them to ensure the employment of digital transformation techniques in line with the modern business environment.**

### 8. The practical framework of the study

#### • Study Approach:

The researchers used the descriptive analytical approach to achieve the objectives of the study and answer its questions, as this approach relies on studying the phenomenon as it actually exists in reality, as it is concerned with describing it accurately and expressing it qualitatively or quantitatively.

#### • Study Population: The study population consists of employees in the Financial and Internal Audit Department of companies listed on the Palestine Stock Exchange.

Study sample, the researchers selected the study sample by job title and sector as follows.

**Table (1) Distribution of the sample members according to the study variables**

variable	Statement	Number	Percentage
Job title	Chief Financial Officer	10	32.3
	Head of the internal audit department	6	19.4
	Director of the internal audit department	7	22.6
	Director of financial and Administrative Control	8	25.8
	the total	31	100%
Sector	banking sector	9	29.0
	investment sector	3	9.7
	industry sector	3	9.7
	Services sector	13	41.9
	insurance sector	3	9.7
	the total	31	100%

#### The validity of the questionnaire:

The validity of the questionnaire means that the questions of the questionnaire measure what they were designed to measure. The researchers made sure of the validity of the questionnaire in two ways:

#### 1. The veracity of the arbitrators:

The researchers presented the study scale to a group of arbitrators, to verify the apparent sincerity, and accordingly, the arbitrators modified the study scale by deleting paragraphs, modifying some paragraphs, and adding some paragraphs.

#### 2- Validity Test:

The researchers calculated the correlation of the degree of each paragraph of the scale, and the total degree of the domain to which it belongs, on a sample of (30).

**Table (2) the correlation coefficients between the paragraphs of each domain and the total score for the domain.**

s	Correlation coefficients	s	Correlation coefficients	s	Correlation coefficients	s	Correlation coefficients	s	Correlation coefficients
Technical and technological activities		Information security and confidentiality activities		Internal control assessment and risk management activities		Governance Mechanism Activities		HR activities	
1	** 0.74	6	** 0.78	12	** 0.58	18	** 0.64	23	** 0.57
2	** 0.65	7	** 0.62	13	** 0.84	19	** 0.78	24	** 0.69
3	** 0.74	8	** 0.77	14	** 0.62	20	** 0.81	25	** 0.78
4	** 0.82	9	** 0.58	15	** 0.57	21	** 0.69	26	** 0.62
5	** 0.69	10	** 0.83	16	** 0.69	22	** 0.52	27	** 0.74
		11	** 0.76	17	** 0.78			28	** 0.59

\*\* Statistically significant at 0.01 level

Limits of the statistical significance of the value (t) at the 0.01 level of significance for the degree of freedom (30-2) = 0.354

It is clear from the previous table that: All paragraphs of the domain are statistically significant at the 0.01 level; this indicates that the paragraphs of the field are distinguished by internal consistency with the total degree of the field.

**Calculate the correlation coefficients between the score of each domain and the total score of the scale**

**Table (3)**

**The correlation coefficient between each degree of each field of the resolution and the total degree of the resolution**

The field	Technical and technological activities	Information security and confidentiality activities	Internal control assessment and risk management activities	Governance Mechanism Activities	HR activities	All paragraphs
Technical and technological activities	-					
Information security and confidentiality activities	**0.62	-				
Internal control assessment and risk management activities	**0.52	**0.64	-			
Governance Mechanism Activities	**0.62	**0.56	**0.67	-		
HR activities	**0.62	**0.62	**0.76	**0.85	-	
All paragraphs	**0.74	**0.74	**0.69	**0.67	**0.72	-

(\*\*) tabular value of rat 0.01 significance level and (30-2) degree of freedom equal to 0.496

(\*) The tabular value of rat the significance level of 0.05 and the degree of freedom (30-2) equals 0.388

It is clear from Table (3) that there is a statistically significant relationship at the 0.01 level of significance between the domains and the total score.

Resolution stability

The total stability of the resolution and its different domains was calculated by calculating Cronbach Alpha by using the SPSS computer program as shown in Table (4).

**Table (4)**

**Cronbach's alpha stability coefficient for each area of the scale**

The field	Cronbach's alpha coefficient
Technical and technological activities	0.85
Information security and confidentiality activities	0.74
Internal control assessment and risk management activities	0.85
Governance Mechanism Activities	0.86
HR activities	0.82
All fields of resolution	0.86

It is clear from Table (4) for the scale as a whole (0.86), which is a high stability coefficient of 0.05

**Scale correction:**

The reference arithmetic average was calculated and then the trend was determined according to the weighted average values as in Table(5)

**Table (5) weighted average**

Average	The level
1.79 – 1	very low
2.59 – 1.80	low
3.39 - 2.60	Average
4.19 – 3.40	high
5 - 4.20	very high

It is noted that the length of the period used here is (4/5), which is about (0.80), and the length of the period was calculated on the basis that the five numbers 1,2,3,4,5 were enclosed in between 4 spaces.

**Statistical methods used:**

The following statistical methods were used: Internal Consistency, Cronbach's Alfa, Split Half Method, arithmetic mean, standard deviation and relative weight, T-test to find differences between two independent samples, one-way analysis of variance test for the difference between three independent samples and more.

**Study results: In order to answer the study questions and prove its hypotheses, percentages and ranks were used, and this is evident in the following tables:**

**Answering the main premise:** There is a role for internal audit activities in employing techniques to support digital transformation in the modern business environment.

**Table (6)**

**It shows the percentages of the dimensions of the role of internal audit activities in employing techniques to support digital transformation in the modern business environment**

S.N.	The dimension	Arithmetic mean	Standard deviation	Percentage	Rank
1	Technical and technological activities	3.94	0.75	78.8	4
2	Information security and confidentiality activities	4.04	0.74	80.9	1
3	Internal control assessment and risk management activities	4.01	0.84	80.2	3
4	Governance Mechanism Activities	4.04	0.82	80.8	2
5	HR activities	3.94	0.82	78.7	5
	Overall Dimension	3.99	0.72	79.9	

The results of the study indicated that there is a high role for internal audit activities (technology, information security and confidentiality, internal control assessment, risk management, governance activities, and human resource activities) in employing techniques to support digital transformation in the modern business environment, and the average ratio among all activities was (79.9%) as shown in Table (6) above.

**The first sub-hypothesis: There is a role for technical and technological activities in employing technologies to support digital transformation in the modern business environment.**

**Table (7)**

**Shows the mean, deviation, percentage, and ranks for the field of technical and technological activities**

S.N.	Paragraph	Arithmetic mean	Standard deviation	Percentage	Rank
1	Providing services to assist management in employing emerging technologies and supporting the digital transformation strategy.	3.9	1.11	78.1	4
2	Providing the necessary knowledge and recommendations to decision makers regarding the most important recent and pioneering developments in the application of digital transformation at the level of the establishment's activity internationally and locally.	3.9	0.98	78.1	5
3	Assist decision makers in directing investments towards technologies and processes appropriate to the conditions and capabilities of the facility, which contributes to supporting digital transformation.	4.03	0.75	80.6	1
4	Assessing the possibility of working with electronic technologies and assessing their ability to reduce costs to support the digital transformation strategy.	3.94	0.81	78.7	2
5	Evaluating the infrastructure of electronic technologies in the facility, and benefiting the facility management in its importance to improve the product or improve the service, which supports the digital transformation strategy.	3.94	0.85	78.7	3
	Overall Degree	3.94	0.75	78.8	

Looking at Table (7), it becomes clear that the highest paragraphs are Paragraph No. (3), which stipulates "helping decision makers in directing investments towards technologies and processes appropriate to the

conditions and capabilities of the facility, which contributes to supporting digital transformation,” which is (80.6%), This means that digital technologies provide an opportunity for those in charge of internal auditing to direct the company’s management to invest in technical projects, and it becomes clear that paragraph No. (2), which stipulates “providing the necessary knowledge and recommendations to decision makers regarding the most important recent and pioneering developments in the application of digital transformation at the level of activity Established internationally and locally” ranked the lowest with a percentage of (78.1%).

Through it, it is clear that technical activities have a role in employing techniques to support digital transformation in the modern business environment at a rate of (78.8%), which is a “high” level. The researchers believe that this is due to the importance of these activities in improving the internal audit work environment in the company, and providing the opportunity to generate Creative ideas in analyzing data and drawing audit policies, and helping to facilitate and track the audit trail. This result is consistent with the study of (Betti, Sorens, Poncin, 2021), the study of (Shehadeh, 2020), and the study of (Al-Mohammed, 2020).

**Second sub-hypothesis: There is a role for information security and confidentiality in employing technologies to support digital transformation in the modern business environment.**

**Table (8)**

**It shows the mean, deviation, percentage, and ranks for the field of information security and confidentiality activities**

S.N.	The dimension	Arithmetic mean	Standard deviation	Percentage	Rank
1	Assessing the efficiency of integrated control measures on the security and confidentiality of information, preventing intrusion or theft, and reviewing the design of network infrastructure.	4.1	0.79	81.9	2
2	Assessing the efficiency of procedures related to ensuring the continuity of electronic business and facing any risks that prevent it from continuing its work.	3.96	0.99	79.3	6
3	Evaluate the efficiency of security measures related to backups via cloud computing or other electronic methods.	4.19	0.95	83.9	1
4	Assessing the efficiency of the validity of the data, and not subjecting it to modification during processing or exchange with other parties benefiting from it.	3.97	0.95	79.4	5
5	Evaluate the performance of the service provider, whether it meets the requirements of data security, and whether the facility has the right to audit it to ensure credibility, and whether it is able to meet the requirements of expanding the facility.	3.97	0.91	79.4	4
6	Assessing the extent of the senior management's commitment to supporting the application of information systems security procedures, and spreading the culture of maintaining confidentiality of data among employees of the facility.	4.06	0.85	81.3	3
Overall Degree		4.04	0.74	80.9	

From Table (8) above, it is clear that the highest paragraphs are Paragraph No. (3), which stipulates “Assessment of the efficiency of protection measures related to backups through cloud computing or other electronic methods,” which rate is (83.9%), and it is clear that Paragraph No. (2), which stipulated “assessing the efficiency of data validity, and not subjecting it to modification during processing or exchange with other parties benefiting from it,” ranked the lowest with a percentage of (79.3%). Therefore, the hypothesis result shows that the role of information security and confidentiality activities is “high” in employing techniques to support digital transformation in the modern business environment, at a rate of (80.9%), and the researchers confirm that this result came in light of reliance on cloud computing, which exposes companies to risks threatening cybersecurity. And here comes the role of those in charge of internal auditing with support towards smart management, and finding systematic digital solutions that protect information that has become an important asset for companies, and this result fits with the study (Youssef, 2019), the study (Lakhdar and Salmi, 2021) and the study (Almaleeh, 2021).

**The third sub-hypothesis: There is a role for internal control assessment and risk management activities in employing techniques to support digital transformation in the modern business environment.**

**Table (9)**

**Shows the mean, deviation, percentage, and ranks for the range of internal control assessment and risk management activities**

S.N.	Paragraph	Arithmetic mean	Standard deviation	Percentage	Rank
1	Evaluate the internal control work environment and evaluate the changes that occurred to it as a result of using emerging technologies as mechanisms for digital transformation.	4.03	0.95	80.6	2
2	Evaluate the efficiency of designing internal control procedures in the environment of emerging technologies and the effectiveness of their application.	4.13	0.99	82.6	1
3	Expanding the scope of the internal audit work to include the risks of emerging technologies related to smart and digital devices that carry confidential information about the company and intellectual rights.	4	0.97	80	4
4	Assess the facility's ability to manage the risks of emerging technologies and help it overcome these risks, and ensure the protection of digital assets by strengthening examination and testing procedures.	4	0.93	80	3
5	Assessment of risks associated with the work system that necessitated modification or development of new activities, as well as fraud risks, especially activities associated with emerging technologies.	3.94	1.03	78.7	6
6	Assessment of risks related to suppliers and third parties in the event of digital transformation.	3.97	1.02	79.4	5
Overall Degree		4.01	0.84	80.2	

Looking at Table No. (9), it becomes clear that the highest paragraphs are Paragraph No. (2), which states "Evaluation of the design efficiency of internal control procedures in the environment of emerging technologies and the effectiveness of their application," which rate is (82.6%), and it becomes clear that Paragraph No. (5), which stipulated "assessing the risks associated with the work system that necessitated the modification or creation of new activities, as well as the risks of fraud, especially the activities associated with emerging technologies" ranked the lowest with a percentage of (78.7%). The results of the study showed that the activities of evaluating internal control and risk management have a role in employing techniques to support digital transformation in the modern business environment, at a rate of (80.2%), which is a "high" level. The researchers attribute this to the importance of these activities in enabling internal auditors to predict risks and neutralize them to the lowest level. And this study agrees with the results of the study (Mohammed et al., 2021), the study (Betti, Sorens, 2021), the study (Shehadeh, 2020), the study (Al-Mohammed, 2020), and the study (Youssef and Al-Muhammadi, 2019).

**Fourth sub-hypothesis: There is a role for the activities of governance mechanisms in employing techniques to support digital transformation in the modern business environment.**

**Table (10)**

**It shows the mean, deviation, percentage, and ranks for the field of governance mechanisms activities**

S.N.	Paragraph	Arithmetic mean	Standard deviation	Percentage	Rank
1	Assessing the rate of technological development and digital technologies used within the facility, preparing periodic reports and discussing them with the Board of Directors and audit committees, and making recommendations in this regard.	4.06	0.93	81.3	3

S.N.	Paragraph	Arithmetic mean	Standard deviation	Percentage	Rank
2	Cooperation between the internal audit and the bodies responsible for corporate governance to assess the impact of the use of emerging technologies on the performance of the enterprise and its financial reports on an ongoing basis.	4.16	0.93	83.2	1
3	Assessing the readiness of the current administration to use emerging technologies; Meaning, has the traditional management turned into an electronic (digital) management that fits the digital transformation environment?	4	1	80	4
4	Supporting the implementation of digital governance mechanisms and directing them towards projects that are related to the use of emerging technologies.	3.84	1.1	76.8	5
5	Submitting proposals to review committees regarding ways to provide adequate protection for information using several means, including: data encryption, and verifying the identity of users.	4.13	0.88	82.6	2
Overall Degree		4.04	0.82	80.8	

Looking at Table (10), it becomes clear that the highest paragraphs are Paragraph (2), which stipulates “the cooperation between the internal audit and the bodies responsible for governance in the facility to assess the impact of the use of emerging technologies on the performance of the facility and its financial reports on an ongoing basis,” which accounted for (83.2%). And it is clear that Paragraph (4), which stipulates “supporting the implementation of digital governance mechanisms and directing them towards projects that are related to the use of emerging technologies” ranked the lowest with a percentage of (76.8%). The results of the study indicated that the activities of governance mechanisms have a “high” role in employing techniques to support digital transformation in the modern business environment, at a rate of (80.8%), and the researchers believe that these activities help support internal auditors to embody digital transformation by directing the company’s management to invest in working projects. In the environment of modern information technology and energy, which increases competitiveness, and this result is consistent with the study of (Almaleeh, 2021), and the study of (Lekhudrosalmi, 2021), (Shehata, 2020).

**The fifth sub-hypothesis: There is a role for human resources activities in employing techniques to support digital transformation in the modern business environment.**

Table (11)

Shows the mean, deviation, percentage, and ranks for the field of human resource activities

S.N.	Paragraph	Arithmetic mean	Standard deviation	Percentage	Rank
1	Classification of the workforce of professionals, qualified, distinguished, suitable for the emerging technologies environment, and those who are not.	3.9	1.08	78.1	4
2	Assessing the readiness and adequacy of the appropriate work team to implement the mechanisms of emerging technologies in the facility.	3.77	0.99	75.5	6
3	Assessing the ability of employees to deal with technological techniques to apply the mechanisms of emerging technologies.	3.9	1.11	78.1	5
4	Assessing the company's ability to provide financial support for training and qualifying employees to apply emerging technologies.	3.97	1.08	79.4	3
5	Providing support to the management through the multiple experiences that the internal audit team possesses in various fields that contribute to the success of the digital transformation implementation.	4.1	0.83	81.9	1

S.N.	Paragraph	Arithmetic mean	Standard deviation	Percentage	Rank
6	Assessing the extent to which emerging technologies are employed in developing the company's human resource system.	3.97	0.87	79.4	2
Overall Degree		3.94	0.82	78.7	

Looking at Table (11), it becomes clear that the highest paragraphs are Paragraph No. (5), which stipulates “providing support to management through the multiple experiences that the internal audit team possesses in various fields that contribute to the success of the application of digital transformation,” which is (81.9%). And it is clear that Paragraph (2), which stipulates “assessing the ability of employees to deal with technological techniques to implement mechanisms of emerging technologies” ranked the lowest with a percentage of (75.5%). The results of the study showed that the percentage of human resources activities in employing technologies to support digital transformation reached (78.7%), which is a "high" level. The researchers believe that digital human resources activities in the field of internal audit work very quickly by completing tasks via e-mail, communication sites, cloud computing and others One of the emerging technologies that respond to work as quickly as possible in the performance of tasks, which leads to improving the overall performance of facilities, and this percentage corresponds to the study (Almaleeh, 2021), the study of (Khadrossalmi, 2021), the study (Shehata, 2020), the study of (Al-Mohammed, 2020).

**Are there statistically significant differences at the level of significance ( $0.05 \geq \alpha$ ) in the role of internal audit activities in employing techniques to support digital transformation in the modern business environment attributed to demographic and personal variables (job title - sector)**

**The following hypotheses emerge from the fourth question:**

- There are no statistically significant differences between the averages of the role of internal audit activities in employing techniques to support digital transformation in the modern business environment due to the job title variable

One Way ANOVA was used to find out the differences in the job title variable.

**Table (12)**  
**Results of one-way ANOVA according to the job title variable**

Fields	Source of variance	Sum of squares	Degrees of freedom	Mean of squares	F value	Significance level
Technical and technological activities	between groups	0.15	3	0.05	0.084	0.968
	within groups	16.5	27	0.61		
	the total	16.7	30			
Information security and confidentiality activities	between groups	0.4	3	0.13	0.226	0.877
	within groups	15.9	27	0.59		
	the total	16.3	30			
Internal control assessment and risk management activities	between groups	0.88	3	0.29	0.389	0.762
	within groups	20.4	27	0.76		
	the total	21.3	30			
Governance Mechanism Activities	between groups	0.47	3	0.16	0.216	0.884
	within groups	19.6	27	0.73		
	the total	20.1	30			
HR activities	between groups	0.52	3	0.17	0.236	0.871
	within groups	19.7	27	0.73		
	the total	20.2	30			
internal audit activities	between groups	0.27	3	0.09	0.154	0.926
	within groups	15.5	27	0.57		
	the total	15.8	30			

**It is evident from Table (12):**

That the value of the significance level  $\text{sig} = 0.926$  which is greater than  $\alpha = 0.05$  and that the calculated “q” value is less than the tabular “t” value, and therefore we will accept the null hypothesis, as it is clear that there are no statistically significant differences between the averages of the role of internal audit activities in

employing techniques Supporting digital transformation in the modern business environment due to the variable job title for all dimensions. The researchers believe that the different job titles of specialists in the fields of accounting and finance, and their closeness in practical and technical experiences in the modern business environment, do not conflict with their professional opinions and ideas.

**- There are no statistically significant differences between the averages of the role of internal audit activities in employing techniques to support digital transformation in the modern business environment due to the sector variable**

One way an ova test was used to identify the differences in the sector variable.

**Table (13)**  
**Results of one-way ANOVA according to the sector variable**

Fields	Source of variance	Sum of squares	Degrees of freedom	Mean of squares	F value	Significance level
Technical and technological activities	between groups	1.16	4	0.29	0.486	0.746
	within groups	15.5	26	0.6		
	the total	16.7	30			
Information security and confidentiality activities	between groups	1.9	4	0.47	0.858	0.502
	within groups	14.4	26	0.55		
	the total	16.3	30			
Internal control assessment and risk management activities	between groups	2.7	4	0.67	0.944	0.455
	within groups	18.6	26	0.72		
	the total	21.3	30			
Governance Mechanism Activities	between groups	2.68	4	0.67	1	0.426
	within groups	17.4	26	0.67		
	the total	20.1	30			
HR activities	between groups	2.8	4	0.7	1.045	0.403
	within groups	17.4	26	0.67		
	the total	20.2	30			
internal audit activities	between groups	1.93	4	0.48	0.907	0.474
	within groups	13.8	26	0.53		
	the total	15.8	30			

It is evident from Table (13):

That the value of the significance level sig = 0.474, which is greater than  $\alpha = 0.05$ , and that the calculated “q” value is less than the tabular “t” value, and therefore we will accept the null hypothesis, as it becomes clear that there are no statistically significant differences between the averages of the role of internal audit activities in employing techniques Supporting digital transformation in the modern business environment due to the sector’s variable in all dimensions. This indicates that digital transformation included all sectors without exception and became a sign of competition among all companies.

### 9. Findings and Recommendations:

Based on the results of the field survey analysis of the study questions and testing its hypotheses, the researchers can draw the following conclusions and recommendations:

#### First: the results

##### Theoretical results

- 1- Internal audit activities support digital transformation techniques by assisting the management of public companies in knowing what is new about the impact of modern technical changes and digital programs and systems before implementing them, giving an idea and visualizing them after evaluating the aspects of the risks surrounding them, assisting the board of directors and governance committees and directing them towards emerging projects and businesses in the digital environment.
- 2- There is a prominent role for internal audit activities in activating digital transformation techniques so that those in charge of internal audit can devote themselves to analyzing data and providing advice and suggestions, to maintain the company's development and continuity in light of the modern electronic environment.





- w-tathra-balthwl-alsqmy
- Jamila Salaimi, Youssef Bouchi. (2019). "Digital transformation between necessity and risk" *Journal of Legal and Political Sciences* 2 (10).
- Jumaa, Jawad. (2017). *The Impact of Applying the COSO Model on the Performance of the Food Aid Program at UNRWA*, Unpublished Master's Thesis, Islamic University, Gaza.
- Lakhdar Salehi, Salmi Al-Dinori. (2021). "Modern trends of internal auditing in economic institutions" A survey of a sample of "academics, certified accountants, internal auditors, accountants experts", *Journal of Financial and Accounting Studies*, Volume 12, No. 01, Shahid Hama University Lahasir, Algeria.
- Magdy, Ahmed (2020). *The nature of internal audit work and its impact on digital transformation*.
- Mahjoub Hamida and Abu Shaala Hanan. (2017). "Internal audit activities and their role in achieving sustainable development in the Libyan Iron and Steel Company" case study, *Journal of Economics and Business Studies*, Volume 5, Special Issue, March 2017.
- Master Kalpesh & Bansal Saurabh. (2019). *Impact of Digital on the future of internal audit*. Ex-service Holdings, Inc. All Rights Reserved. For more information, see [www.exlservice.com/legaldisclaimer](http://www.exlservice.com/legaldisclaimer). 17. Matt, C., Hess, T., & Benlian, A.
- Muhammad Yasser Taj Al-Sir Ahmad Abd al-Rahim Mahjoub al-Bashir al-Jaili Ahmad Muhammad. (2021). "Modern activities of internal auditing and its role in financial performance by applying to the Sudanese Sugar Company Limited", *Journal of Studies in Economics and Business Administration*, Volume 4, Issue 2, December 2021.
- Nair Biju, CISA, CRISC, CFE, CIA, CISSP, CRMA. (2022). "The Evolution of Internal Audit in a Digital-First Environment" Date Published: 13 July 2022, <https://www.isaca.org/resources/news-and-trends/industry-news/2022/the-evolution-of-internal-audit-in-a-digital-first-environment>
- Noureddine, Qarini. (2022). "The Role of Technology Startups in Achieving the Desired Digital Transformation in Algeria, *Al-Ibdaa Magazine*, Vol. 12, No. 1, Algeria.
- Schmitz, J., & Leoni, G. (2019). *Accounting and auditing at the time of blockchain technology: a research agenda*. *Australian Accounting Review*, 29(2), 331-342.
- Shehadeh, Maha Khalil. (2021). "Digital Transformation and Financial Technology in Islamic Banks - A Study of Benefits and Corruptions, *Bait Al-Mashura Journal*, Issue 17 - State of Qatar.
- Shehata Muhammad Musa Ali. (2020). "Measuring the impact of activating internal audit activities for digital transformation mechanisms on enhancing accountability and transparency and improving government performance with a field guide in the Egyptian environment", Department of Accounting and Auditing, Faculty of Commerce, Sadat City University, Egypt.
- The Institute of Internal Auditors, (2016) *International Professional Practice Framework, Practice Guide: Internal Audit and the Second Line of Defense*, The Institute of Internal Auditors, Alta Monte Springs, FL [https://chapters.theiia.org/montreal/ChapterDocuments/Guide%20pratique%20\\_%20Audit Directory %, 0interne%20et%20%C3%A8me%20ligne%20de%20ma%C3%A9trise.pdf](https://chapters.theiia.org/montreal/ChapterDocuments/Guide%20pratique%20_%20Audit%20Directory%20interne%20et%20%C3%A8me%20ligne%20de%20ma%C3%A9trise.pdf) EFSA
- Youssef Kamal Ahmed and Al-Mohammadi Younis Ahmed Hossam. (2019). "Modern Internal Audit Activities and Their Role in Oversight of the Public Sector", College of Graduate Studies, Al-Neelain University, Sudan.
- Zhaokai, Y., & Moffitt, K. C. (2019). *Contract analytics in auditing*. *Accounting Horizons*, 33(3), 111-126.