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DIGITAL TRANSFORMATION AND ITS IMPACT ON IMPROVING STRATEGIC AUDITING AT THE JORDANIAN BANKS

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Abstract

The study aimed to identify the impact of digital transformation in its dimensions (digital operations, impact on individuals, digital customer activities) on improving strategic auditing in its dimensions (commitment to governance principles, auditor independence, and strategic planning) in Jordanian Islamic and commercial banks. To achieve this goal, the descriptive analytical approach was followed. The study population consisted of Jordanian Islamic and commercial banks, numbering (15) Jordanian banks (12 commercial banks, 3 Islamic banks). The study applied the comprehensive survey strategy to determine the size of the study sample, as the study sample included all Jordanian banks representing the study population. The study used an electronic questionnaire that was designed and distributed to all individuals concerned with digital transformation and strategic auditing in Jordanian Islamic and commercial banks, represented by heads of finance, internal audit, and information technology departments, and employees working in these departments, including accountants, internal auditors, and programmers. The data were analyzed using descriptive statistical methods and inferential (analytical) statistical methods. The study concluded that there is a statistically significant impact of digital transformation in its dimensions (digital operations, impact on individuals, digital customer activities) on improving strategic auditing in its dimensions (commitment to governance principles, auditor independence, strategic planning) in Jordanian Islamic and commercial banks. The study recommended that Islamic and commercial banks prioritize investment in advanced digital tools and technologies, given their ability to streamline operations, improve data security, and enhance customer experiences. This supports both digital transformation and strategic audit objectives. It also recommended that banks encourage a culture of continuous improvement and innovation by regularly reviewing and updating their digital transformation and audit strategies.

Keywords: Digital Transformation, Digital Operations, Impact on Individuals, Digital Customer Activities, Strategic Auditing, Compliance with Governance Principles, Auditor Independence, Strategic Planning.

1. INTRODUCTION

The global economy has undergone a major transformation as a result of rapid developments in modern information technology, including information systems, digital transformations and other means of communication. These developments have led to the transformation of the economy and money into a digital economy and digital financial transformations. That, increased the pressure on institutions to keep pace with and apply modern digital technologies and adapt their work to these developments to ensure survival, continuity and competitiveness in the field of money and business. Therefore, digital transformation has become easy, speeds up and improves work and delivers financial and non-financial information accurately and with the least effort and cost in the desired time. It has become clear that government sectors are interested in digital transformation to control work and benefit from digital transformation and keep pace with technological development. Therefore, digital transformation is important to improve the work of the organization, which necessitated the development of clear plans and

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strategies to keep pace with development and benefit from its positive impact and the implementation of digital development to achieve the objectives of transformation, using: technology, communication and economy. (AL-Aqaileh, 2023)

1.1 Study Problem and Questions

Strategic auditing is a vital process aimed at evaluating and analyzing the goals and strategies adopted in an institution or organization by understanding the extent to which the institution achieves its vision and future goals, identifying the strengths and weaknesses of the strategic process, identifying the opportunities and challenges that it may face. Strategic auditing has not received sufficient attention by the departments of international and local institutions of auditors and accountants. Despite the importance of strategic auditing, the departments of the majority of Jordanian banks still rely on traditional tools to audit and evaluate the financial, administrative and accounting risks in the institution, especially as we witness an acceleration towards the digital transformation of the accounting, financial, tax and audit work. They neglect modern tools for strategic auditing, such as adherence to the principles of governance, strategic planning, operations and technology departments, the independence of the auditor and linking them to digital transformation in order to achieve the strategic objectives of the institution. Strategic auditing is the basis for the audit process of the institution, as it helps in evaluating and correcting the strategic objectives of the institution and ensuring the efficiency and effectiveness of operational processes. The desired benefit of strategic auditing is to develop and improve the performance of institutions. The link between strategic auditing and digital transformation has not received sufficient attention by many Jordanian banks. Therefore, it is likely that there will be positive results when studying the impact of digital transformation on improving and strengthening the strategic audit of Jordanian Islamic and commercial banks, thus providing scientific recommendations based on the problem of the study towards improving the overall performance of Jordanian banks.

Therefore, this study has come to answer the following main question: Is there an impact of the digital transformation on improving the strategic auditing of Islamic and commercial Jordanian banks?

The following **sub-questions** emerge:

First: What is the level of application of the dimensions of digital transformation (digital operations, impact on individuals, digital customer activities) at Islamic and commercial banks in Jordan?

Second: What is the level of application of the dimensions of strategic audit improvement (commitment to the principles of governance, auditor independence, strategic planning) at Islamic and commercial banks in Jordan?

1.2 Objectives of the Study

The study aims to identify the impact of digital transformation in its dimensions (digital operations, impact on individuals, digital customer activities) on improving strategic

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auditing in its dimensions (commitment to the principles of governance, auditor independence, and strategic planning) at Islamic and commercial banks in Jordan.

From this main objective, the following sub-objectives are subdivided:

1) Identifying the impact of digital transformation in its dimensions (digital operations, impact on individuals, and digital customer activities) on improving the strategic audit in its dimension (commitment to the principles of governance) at Islamic and commercial banks in Jordan.
2) Identifying the impact of digital transformation in its dimensions (digital operations, impact on individuals, and digital customer activities) on improving the strategic audit in its dimension (the independence of the auditor) at Islamic and commercial banks in Jordan.
3) Identifying the impact of digital transformation in its dimensions (digital operations, impact on individuals, and digital customer activities) on improving the strategic audit in its dimension (strategic planning) at Islamic and commercial banks in Jordan.

1.3 Significance of the Study

The importance of the study stems from the field, objective and scientific importance as follows:

1) **Field importance:** The results of this study contribute to the Jordanian Islamic and commercial banks in identifying the impact of digital transformation in improving strategic auditing, as attention to digital transformation may lead to strengthening and improving strategic auditing.
2) **Objective importance:** The variables of the researched study are represented in the impact of digital transformation on improving strategic auditing if these topics are addressed in detail or linked with other topics by either academics or professionals, and the possibility of linking them. This linking represents a scientific addition to the current study.
3) **Practical importance:** The study shows the importance of applying digital transformation in the system of Islamic and commercial banks in Jordan and highlighting the benefits and potential results. The results of this study can contribute to attracting the attention of commercial and Islamic banks in Jordan towards the importance of digital transformation and its role in improving strategic auditing.

1.4 Hypotheses of the Study

To answer the questions of the study and achieve its objectives, the following hypotheses were formulated and developed:

The first main hypothesis: There is no statistically significant effect at the level of significance ($\alpha \leq 0.05$) of digital transformation in its dimensions (digital operations, impact on individuals, digital customer activities) on improving the strategic audit in its dimensions (commitment to the principles of governance,

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independence of the auditor, strategic planning) at the Islamic and commercial banks in Jordan.

From this hypothesis, the following sub-hypotheses are derived:

The **first sub-hypothesis**: There is no statistically significant effect at the level of significance ($\alpha \leq 0.05$) of digital transformation in its dimensions (digital operations, impact on individuals, digital customer activities) on the dimension of adherence to the principles of governance as one of the dimensions of improving the strategic audit of Islamic and commercial banks in Jordan.

The **second sub-hypothesis**: There is no statistically significant effect at the level of significance ($\alpha \leq 0.05$) of the digital transformation in its dimensions (digital operations, impact on individuals, digital customer activities) on the dimension of the independence of the auditor as one of the dimensions of improving the strategic audit of Islamic and commercial banks in Jordan.

The third sub-hypothesis: There is no statistically significant effect at the level of significance ($\alpha \leq 0.05$) of digital transformation in its dimensions (digital operations, impact on individuals, digital customer activities) on the dimension of strategic planning as one of the dimensions of improving the strategic audit of Islamic and commercial banks in Jordan.

2. SECOND: THEORETICAL FRAMEWORK OF THE STUDY

2.1 Digital Transformation

Digital transformation is essential for all organizations, whether governmental or private sector organizations, especially as it aims at developing and improving the services provided, and facilitates the access of the beneficiaries to the it (digital transformation). Digital transformation greatly saves effort, time and cost, improves operating efficiency, and organizes work in a way that achieves the desired goal. The great and accelerated interest in technical and institutional innovation is an essential part of this transformation. This interest has helped to enhance and support social and environmental performance at all educational, commercial and economic levels. Employees have interacted positively with digital technology, which has led to increased operational efficiency in various fields. The rapid and wide application of digital technologies and the radical changes that will follow them in business models are referred to as digital transformation (Oke & Fernandes, 2020).

AL-Aqaileh (2023) believes that digital transformation is an integrated management process that frames investment in technological thinking among organizations in the public and private sectors alike and is based on the optimal use of technological capabilities to move from traditional work to accelerated electronic work that provides efficiency and effectiveness of performance.

Matarazzo et al. (2021) found that digital transformation in which a company uses a range of digital technologies to develop a new digital business model, helps create greater value

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for a company and provides new channels of revenue that increase the value of its products.

Muehlburger et al. (2019) indicated that digital transformation is a process of fundamental changes within the value creation chain of the organization or the internal structure of the organization, which is either a cause or a precondition for the use of technology.

The researcher believes that the digital transformation is the complete transition of Jordanian banks to a business model based on modern technologies in the field of innovation for the services provided to customers. This change is linked to the application of digital technology in all aspects of economic and social aspects. Digital transformation includes a comprehensive change in culture, methodologies, processes and systems so that banks and individuals can take advantage of the benefits and positives of modern technology to achieve their required goals efficiently and effectively. This also includes the transition from paper processes and paper documents to electronic processes and digital documents and the use of software, computer applications and integrated systems to carry out tasks and manage data and information, which contributes to reducing the cost of administrative procedures, improving them and accommodating a larger number of customers efficiently and effectively.

2.2 Dimensions of the Independent Variable (Digital Transformation):

- **The measurement of the independent variable (digital transformation) consists of the following dimensions:**

1) **Digital Operations:** This dimension includes the transformation of traditional processes into digital processes, through the use of digital technology and electronic systems to improve and accelerate the efficiency of operations, including mobile applications, software, cloud applications and smart technology to improve productivity, reduce errors and improve the quality of services (Khatib & Alshawabkeh, 2022).

2) **Impact on Individuals:** Digital transformation leads to a significant impact on individuals and the way they work. This requires the development of new skills and technical capabilities to deal with digital technology. This can require training and continuous education to adapt to technological changes and take full advantage of the benefits of digital transformation (Khatib & Alshawabkeh, 2022).

3) **Digital Customer Activities:** This dimension includes transforming customer interaction with government institutions, banks and companies into digital activities, and enables customers to interact with the Internet and mobile applications, including online shopping, electronic payment, online customer service, and providing feedback and evaluations through social networks and other digital activities related to customers (Hoyer et al., 2020).

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2.3 Importance of Digital Transformation:

Digital transformation helps in the efficiency of transactions and services by improving transaction processes and providing services more efficiently and quickly. The digital system allows dealing with documents and transactions electronically, which reduces paper burdens and bureaucratic procedures and saves time and effort for individuals and institutions. Digital transformation improves decision-making through quick and easy access to reliable and updated information. It offers strong analytical capabilities to examine data and draw forth significant concepts and patterns. This helps institutions and leaders to make informed and effective decisions, improve their performance and achieve better results. Digital transformation contributes to eliminating manipulation by reducing the need of institutions, governments and banks for paper processes and manual handling, where the digital system is more transparent and reliable and allows better tracking and control of processes at a lower cost. Digital transformation helps facilitate access to information quickly, less effort and easily, as it can store and organize large data effectively, provide search and filtering tools and find the required information quickly. This enhances education, continuous improvement, development and innovation. Digital transformation contributes to finding innovative and creative opportunities through the use of advanced digital technologies such as artificial intelligence, cloud computing and virtual and temporal reality to develop new and innovative solutions in various fields such as education, industry, commerce and health (Shehadeh, 2024), (Ebert & Duarte, 2018).

The researcher believes that the importance of digital transformation helps to accommodate a larger number of customers. Through digital transformation, services can be provided to a larger number of customers at the same time, which improves the customer experience, saves time and leads to gaining their satisfaction. Digital transformation contributes to the transition to the electronic archiving system by replacing traditional paper archiving with the electronic archiving system, which is characterized by flexibility to deal with documents and makes them easy to share between different parties quickly and easily. Digital transformation helps in simplifying and improving administrative processes, which reduces administrative costs and increases efficiency. The digital system allows the management of transactions and documents electronically, which saves time and effort and improves the workflow with flexibility and ease.

2.4 Strategic Auditing:

Strategic auditing is the starting point for various audits such as financial auditing, administrative auditing, legal and social auditing, and electronic digital transformation auditing to contribute to the achievement of the institution's multiple strategic objectives. In light of the rapid environmental, economic and technological changes faced by these companies and banks, there is a need for an approach that allows auditing and reviewing the strategies of companies to identify and correct deviations and ensure the right direction that will help achieve their required objectives (Shible et al., 2020).

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In this context, many researchers expressed different views of the concept of strategic audit. The following are the most important concepts over various periods of time, from the latest to the oldest:

At the outset, Auld (2023) defines strategic auditing as a systematic approach that is applied to strategic management processes and the company's strategy to analyze strengths and weaknesses and identify the reasons for the company's failure to achieve its target objectives, as well as search for new opportunities that can contribute to adding value to the company and maximizing its profits.

Strategic audit is defined as an audit that aims to ensure that the institution under audit continues its work and achieves all its objectives and how to manage the risks it faces in growth and development in the near future. This type of audit is concerned with topics and matters of a strategic nature, as it requires the provision of special qualifications (Al-Sarayreh et al., 2022).

Karim and Al-Shatnawi (2020) believe that strategic auditing is a supervisory approach that aims to examine and evaluate all aspects of companies, banks and their surrounding environment, with the aim of identifying the factors affecting the company's performance and achieving its strategic objectives. The strategic audit also aims at verifying the degree of conformity between what is achieved compared to what is planned and communicating these results to the end user.

The researcher believes that strategic auditing is an oversight process aimed at measuring strategic performance, which is a broader and more modern method than other methods. It aims to ensure the ability of banks and companies to continue their work and achieve their required objectives in light of the challenges and risks they face. Strategic auditing focuses on the strategic aspects of banks and companies and requires the presence of special skills of the auditor. Strategic auditing is an addition to traditional financial auditing, which focuses mainly on accounting and financial auditing of companies and banks. Strategic auditing aims to detect and enhance resources and competencies. The strategic audit process is carried out by the senior management of banks, companies and audit committees. Strategic auditing includes an ongoing evaluation of internal functions and systems.

2.5 Dimensions of the Dependent Variable (Strategic Planning):

The measurement of the dependent variable (strategic planning) consists of the following dimensions:

1) **Compliance with Governance Principles:** It is the management's achievement of the vision and objectives of the institution through its commitment to the rules of governance and their application. Governance: is the internal control system to achieve the objectives of the institution and monitor its financial performance in order to increase its performance and efficiency through the establishment of controls on the relationship between managers, boards of directors and shareholders to avoid the occurrence of corruption and financial embezzlement. Corporate governance is

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represented in a set of mechanisms, procedures, laws, systems and decisions that ensure both discipline, transparency and justice. Hence, governance aims to achieve quality and excellence in performance by activating the actions of the company's management regarding the exploitation of the economic resources available to it in a way that achieves the best possible benefits for all stakeholders and society (Abed et al., 2020).

2) **Auditor Independence:** Independence is the most important feature that the external auditor should have. It is the basis on which the auditing profession is based and the main reason for its existence. Independence requires the external auditor to carry out his work without being subjected to any pressure. Without independence, the audit process becomes useless, unjustified, and loses its social role, this way its harm is greater than its benefit. Independence ensures that the auditor performs his work at all stages of the auditing honestly, uprightly, objectively, transparently, without bias towards any particular party, and without being subject to any influences that may conflict with objectivity and integrity. (Nwaeze, 2025).

3) **Strategic Planning:** The process that precedes the implementation of the objectives of the organization and represents the starting point when setting their objectives. It is one of the processes or administrative functions carried out by the manager in cooperation with the employees of any organization, in which the objectives to be achieved and the amount of time needed to achieve those objectives are determined, plans and programs are developed to achieve these objectives, and the efficiency and quality of the company are improved depending on its mechanisms that are used to achieve high successes towards reaching the desired objectives (Nashwan, 2024), (Al-Jalamdeh, 2023).

2.6 Importance of Strategic Audit:

Strategic auditing helps improve the strategic performance of the institution by analyzing and evaluating the current strategy and identifying areas that can be improved and developed. Strategic auditing also allows institutions to benefit from new opportunities and challenges and achieve competitive excellence.

Strategic auditing contributes to providing comprehensive and reliable information that helps leaders and decision-makers make the right strategic decisions at the right time. Strategic auditing also provides the analytics and recommendations necessary to achieve future objectives and implement effective strategies.

Strategic auditing helps to enhance and improve harmony and integration between the various departments and elements of the institution. By evaluating operations and analyzing internal relations, coordination and cooperation between different departments can be improved and enhance organizational effectiveness. Institutions can improve their adaptability and take appropriate strategic actions.

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Strategic auditing helps achieve accountability and improve institutional performance within the institution. It also contributes to identifying key performance indicators and evaluating the implementation of the strategy (Kabanov et al., 2023).

The researcher believes that the importance of strategic auditing is about analyzing and evaluating the strategy of companies and banks and their current performance, by identifying unnecessary practices, converting unused resources and optional activities into a strategy to enhance performance, achieve competitive advantage, evaluate their strategic position compared to their competitors in the market, and determine the extent of development and progress they have achieved.

This enables them to identify their competitive strengths and take the necessary steps to strengthen their position in the market. Strategic auditing helps build a knowledge-based corporate management capable of dealing with strategic challenges and achieving the necessary changes.

By analyzing the strategic situation of a company and identifying weaknesses and deficiencies, it enables companies and banks to take actions and remedies to improve their performance and adapt their strategy to changes in the internal and external environment.

Strategic auditing also contributes to the application of modern management methods such as total quality management and governance principles, which enhance and improve the efficiency and effectiveness of strategic performance.

3. THIRD: METHOD AND PROCEDURES

3.1 Methodology

This study focuses on researching the impact of digital transformation in improving the strategic audit of Jordanian Islamic and commercial banks. To achieve this objective, the descriptive analytical approach was followed, which is one of the most important and appropriate scientific approaches that are commensurate with the nature and type of the current study.

3.2 Study Population and Sample

The study population consists of Jordanian Islamic and commercial banks, and according to the disclosures of the Central Bank of Jordan, there are (15) Jordanian banks (12 commercial banks, 3 Islamic banks).

The study applied the comprehensive survey strategy in determining the size of the study sample, as the study sample included all Jordanian banks representing the study population.

3.3 Sampling Unit

The analysis unit included all individuals concerned with digital transformation and strategic auditing in Jordanian Islamic and commercial banks, represented by the heads

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of the finance, internal audit and information technology departments, and the employees working in these departments, including accountants, internal auditors and programmers.

In the absence of disclosures regarding the number of these employees in Jordanian banks, and to ensure the inclusion of the largest number of them, (15) questionnaires were distributed in each bank and electronically, bringing the number of questionnaires distributed to (225) questionnaires. The researcher was able to collect (214) valid electronic responses for analysis, at a rate of (95.1%) of the total number of questionnaires distributed.

3.4 Data Sources

The researcher used two types of sources to obtain the necessary data and information to prepare the study and achieve its objectives.

These sources were represented in **secondary sources,** which focused on the various scientific and research literature that dealt with the topics of the study, as they were used in preparing and processing the theoretical aspect of the study, reviewing previous studies, and preparing the study tool. These sources were also represented in the **primary sources,** which focused on the questionnaire that was prepared to implement the practical aspect of the current study, after referring to the secondary sources that dealt with the variables of the study model.

The questionnaire was distributed to the members of the analysis unit to obtain preliminary data, which represents their views and impressions of the study variables in the environment of Jordanian banks, which helps in understanding and clarifying the nature of the assumed relationship between the variables, within the framework of the problem and the objectives of the study.

The questionnaire consisted of two parts, in which the first part expressed the demographic information of the respondents: (years of experience, educational qualification, scientific specialization, and job position), while the second part expressed the paragraphs devoted to measuring the variables of the study, which were divided into two axes:

The **first axis: The independent variable,** which is represented in the digital transformation. This variable was measured through (21) paragraphs distributed over (3) sub-dimensions, namely: digital processes (8 paragraphs), impact on individuals (5 paragraphs), and digital customer activities (8 paragraphs).

The **second axis: The dependent variable,** which is represented in the strategic audit. This variable was measured through (28) paragraphs distributed over (3) sub-dimensions, namely: commitment to the principles of governance (9 paragraphs), independence of the auditor (10 paragraphs), and strategic planning (9 paragraphs).

To measure the attitudes of the study sample on the study variables, the questionnaire used the cognitive measurement method based on the 5 Likert scale, where 5 degrees of approval were determined and expressed numerically, as follows: (strongly agree =5, agree=4, neutral=3, disagree=2, and strongly disagree =1) (Al-Najjar et al., 2013):

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It also identified (3) levels of relative importance to clarify the extent to which Jordanian banks are interested in the dimensions and variables of the study, based on the following formula:

Period Length:	**Upper limit of the alternative - lower limit of the alternative**	**=**	**1 - 5**	**1.33**
	Number of Levels		**3**	

Thus, the levels of relative importance are as follows:

- Low level of importance: if the mean value within the period is (1-less than 2.33)
- The level of importance is medium: if the mean value within the period is (2.33-less than 3.66).
- The level of importance is high: if the mean value within the period is (3.66-5.0).

3.5 Testing the reliability of the study tool

The reliability test of the study tool indicates the reliability of the study tool in terms of its accuracy and objectivity, the correlation between its paragraphs, and obtaining stable answers. One common statistical measure of the reliability of a study instrument is the Cronbach alpha coefficient, where a Cronbach's alpha value ($\alpha \leq 0.70$) indicates a high level of reliability of the instrument (Sekaran & Bougie, 2016). The following table presents the results of the reliability test of the study instrument.

Table 1: Cronbach's alpha values for the paragraphs of the study tool

S. N	Variable	Cronbach's alpha values
1	Digital Process	0.924
2	Impact on individuals	0.884
3	Digital Customer Activities	0.916
4	Digital Transformation	0.957
5	Commitment to the principles of governance	0.864
6	Auditor independence,	0.910
7	Strategic Planning	0.897
8	Strategic Audit	0.956

Cronbach's alpha values in Table (1) indicate a high level of reliability in the study tool and thus its stability, as all values appeared to be greater than the estimated value of (0.70).

3.6 Multi Collinearity Test

One of the fundamental prerequisites for guaranteeing the validity of the general linear model's (GLM) use is the independence of the explanatory (independent) variables. The independence of these variables is determined by finding the values of the correlation between them, as the correlation values are high indicating the existence of the problem of linear multiplicity (duality), which is a statistical problem that leads to inaccurate and illogical interpretations of the relationship between independent variables and the dependent variable. In other words, having strong correlations between independent

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variables weakens the model's ability to provide reliable results and undermines confidence in interpreting regression coefficients (Guajarati, 2004).

Therefore, revealing linear multiplicity is an important step in statistical analysis, especially when linear models are used. A common statistical tool used to detect this problem is the variance inflation coefficient (VIF) and the permissible tolerance coefficient (Tolerance). The variance inflation coefficient (VIF) measures the degree of correlation between independent variables. Values greater than (10) indicate the existence of the problem of linear multiplicity. The permissible coefficient of variation measures the extent to which independent variables are able to bear the existence of correlation between them, and values less than (0.1) indicate the existence of the problem of linear multiplicity, and thus the lack of independence of independent variables, which necessitates corrective measures to ensure the validity of the statistical model (Guajarati, 2004).

The results were as follows:

Table 2: Correlation coefficient values between independent variables using the variance inflation coefficient and the permissible variance coefficient

variable	coefficient of variation inflation	Tolerance coefficient
Digital Process	3.498	0.286
Impact on individuals	1.852	0.540
Digital Customer Activities	3.998	0.250

The values of the variation inflation coefficient (VIF) and the values of the permissible variation coefficient in Table (2) indicate that there is no problem of linear multiplicity (duality) between the independent variables, as the values of the variation inflation coefficient (VIF) appeared between (1.852-3.998), which is less than (10), and the values of the permissible variation (Tolerance) appeared between (0.250-0.540), which is greater than (0.1), and this indicates the independence of the (independent) explanatory variables in the study.

3.7 Statistical Processors Used

To analyze the study data and test its hypotheses, several statistical methods were used, which are available on the Statistical Package for Social Sciences- SPSS v. 20, which are as follows:

First: Descriptive statistical methods, as these methods aim to describe the demographic information of the respondents, and describe the dimensions and variables of the study. These methods were frequency, percentage, mean, and standard deviation.

Second: Inferential (analytical) statistical methods, as these methods aim to verify the validity of the study data and test its hypotheses. The methods of verifying the validity of the data were the Cronbach Alpha test, the variance inflation coefficient test and the permissible variance coefficient test, while the hypotheses testing methods were the multiple linear regression analysis.

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4. FOURTH: PRESENTATION AND DISCUSSION OF THE RESULTS

4.1 Description of Demographic Information

The study targeted the heads of the finance, internal audit and information technology departments, and the employees working in these departments, including accountants, internal auditors and programmers, to collect their views on the variables of the study through the questionnaire that was distributed to them.

The following table provides a description of these individuals in terms of their years of experience, qualifications, scientific specializations, and job status. The results were as follows:

Table 3: Description of the demographic information of the respondents

Variable	Category	Frequency	Percentage
Years of Experience	Less than 5 years	31	14.5
	5 years to less than 10 years	68	31.8
	From ten years to less than fifteen years	70	32.7
	15 years and above	45	21.0
Degree:	B.Sc.	125	58.4
	M.Sc.	77	36.0
	PhD	12	5.6
Specialization	Accounting (n.)	149	69.6
	Business Administration	10	4.7
	Economy	25	11.7
	Programming	30	14.0
Job Title	Section Head	25	11.7
	Internal Auditor	75	35.0
	ACCOUNTANT	102	47.7
	Programmer	12	5.6
	Total	**214**	**100.0**

It is clear from Table (3) that the largest percentage of employees have years of experience exceeding (5 years), which amounted to (85.5%), and that the largest percentage of them hold a bachelor's degree, which amounted to (58.4%).

This indicates that the employees of the Jordanian Islamic and Commercial Banks have practical and practical experiences that qualify them to perform their work and carry out their tasks efficiently and effectively.

It also indicates that the administrations of these banks are interested in attracting employees with scientific and practical experience and competencies to work for them and maintain them.

The table also shows an increase in the percentage of employees specialized in the field of (accounting) compared to the rest of the categories of scientific disciplines, which amounted to (69.6%), and this is commensurate with the nature of the work of banks.

As for the job position, the results indicated an increase in the percentage of employees holding an accountant position (47.7%) compared to the rest of the other job positions,

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and this corresponds to the general distribution of workers in the administrative hierarchy in organizations in general, as their number increases at the lower administrative levels and decreases at the higher administrative levels.

4.2 Description of Study Variables

The study included two main variables: digital transformation as an independent variable and was measured by digital processes, the impact on individuals and digital customer activities, and strategic auditing as a dependent variable and was measured by adherence to the principles of governance, and auditor independence and strategic planning.

The respondents' answers to the paragraphs devoted to measuring these variables were described to identify the degree of interest of Jordanian Islamic and commercial banks in these variables, and the results were as follows:

Table 4: Description of the study variables from the point of view of the respondents

No.	Variable	Arithmetical mean	Standard deviation	Rank	Materiality
1	Digital Process	3.999	0.740	3	High
2	Impact on individuals	4.468	0.612	1	High
3	Digital Customer Activities	4.036	0.646	2	High
4	**Digital Transformation**	**4.168**	**0.599**	**-**	**High**
5	Commitment to the principles of governance	4.096	0.625	2	High
6	Auditor independence,	3.824	0.747	3	High
7	Strategic Planning	4.185	0.623	1	High
8	**Strategic Audit**	**4.035**	**0.618**	**-**	**High**

Table (4) shows the interest of the Jordanian Islamic and commercial banks in digital transformation to a high degree, as the general mean was (4.168) and the standard deviation was (0.599).

It was also clear that the interest of these banks in the dimensions of digital transformation increased, as it came after (the impact on individuals) in the first place with an arithmetic mean (4.468) and a standard deviation (0.612), and in the second place came after (customer digital activities) with an arithmetic mean (4.036) and a standard deviation (0.646), and in the third place came after (digital operations) with an arithmetic mean (3.999) and a standard deviation (0.740).

The table shows the interest of Jordanian Islamic and commercial banks in strategic auditing to a high degree, as the overall mean was (4.035) and the standard deviation was (0.618).

It was also found that the interest of these banks in the dimensions of strategic auditing increased, as it came after (strategic planning) in the first place with an arithmetic mean of (4.185) and a standard deviation of (0.623), and in the second place came after (adherence to the principles of governance) with an arithmetic mean of (4.096) and a

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standard deviation of (0.625), and in the third place came after (independence of the auditor) with an arithmetic mean of (3.824) and a standard deviation of (0.747).

4.3 Testing the Hypotheses of the Study

The hypotheses of the study focused on researching the impact of digital transformation in its combined dimensions in improving the strategic audit in its combined and individual dimensions.

Therefore, a main hypothesis was formulated and divided into (3) sub-hypotheses. The results were as follows:

4.3.1 Key Hypothesis Test Results

The main hypothesis focused on researching the impact of digital transformation in its combined dimensions in improving strategic auditing in its combined dimensions. This hypothesis stipulated that:

"There is no statistically significant effect at the level of significance (α≤0.05) of digital transformation in its dimensions (digital operations, impact on individuals, digital customer activities) in improving strategic auditing in its dimensions (commitment to the principles of governance, auditor independence, strategic planning) at Islamic and commercial banks in Jordan." The results were as follows:

Table 5: The impact of digital transformation in improving the strategic audit of Jordanian Islamic and commercial banks

Digital Transformation	(B) coefficients	Standard error	Beta Value	Calculated T value	(Sig T*) significance level
Digital Process	0.303	0.041	0.363	7.441	0.000
Impact on individuals	0.201	0.036	0.199	5.601	0.000
Customer Numerical Activities	0.429	0.050	0.449	8.609	0.000
Correlation coefficient R		**0.926**	**Coefficient of determination value (R^2)**		**0.857**
Calculated F Value		**419.503**	**level indication**		**0.000**

* Statistically significant impact is at the significance level (α≤0.05) Dependent variable: Improved strategic audit

Table (5) shows that there is a strong correlation between digital transformation and improving strategic auditing, as the value of the correlation coefficient was (R=0.926), and the value of the coefficient of determination was (R^2=0.857), and this indicates that digital transformation explained (85.7%) of the change in improving strategic auditing, and that the rest is attributable to other factors.

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The table shows the moral impact of the digital transformation in improving the strategic audit, where the calculated value of F was (419.503) and at the level of significance (SigF =0.000), which is less than 0.05.

Regarding the dimensions of digital transformation, the results indicated the following:

- The value of B at the dimension of (digital operations) reached (0.303) , which indicates that the increase of digital operations by one unit contributes to increasing the improvement of strategic auditing by (30.3%), and the value of T calculated at this dimension reached (7.441) with a level of significance (SigT =0.000), which is less than 0.05 , and based on this, it becomes clear that there is a statistically significant effect of digital operations in improving the strategic auditing of Islamic and commercial banks in Jordan.
- The value of B at the dimension (impact on individuals) was (0.201) , which indicates that increasing the impact on individuals by one unit contributes to increasing the improvement of strategic auditing by (20.1%), and the value of T calculated at this dimension was (5.601) and at a significance level (SigT =0.000), which is less than 0.05 , and based on this, it becomes clear that there is a statistically significant impact to influence individuals in improving the strategic auditing of Islamic and commercial banks in Jordan.
- The value of B at the distance of (customers' digital activities) was (0.429) , which indicates that the increase in customers' digital activities by one unit contributes to increasing the improvement of strategic audit by (42.9%), and the value of T calculated at this dimension was (8.609) and at a significance level (SigT =0.000), which is less than 0.05 , and accordingly, it is found that there is a statistically significant effect of customers' digital activities in improving the strategic audit of Islamic and commercial banks in Jordan.

Based on the above, it is clear that:

"There is a statistically significant effect at the level of significance (α≤0.05) of digital transformation in its dimensions (digital operations, impact on individuals, digital customer activities) on improving strategic auditing in its dimensions (adherence to the principles of governance, auditor independence, strategic planning) at Islamic and commercial banks in Jordan."

4.3.2 Results of Testing Hypotheses Branching from the Main Hypothesis

The hypotheses branching from the main hypothesis focused on researching the impact of digital transformation in its combined dimensions in improving the strategic audit in its individual dimensions, and the results appeared as follows:

First: Results of Testing the First Sub-Hypothesis

The first sub-hypothesis focused on researching the impact of digital transformation in its combined dimensions in the dimension of adherence to the principles of governance, as this hypothesis stipulated that:

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"There is no statistically significant effect at the level of significance (α≤0.05) of digital transformation in its dimensions (digital operations, impact on individuals, digital customer activities) in the **dimension** of **adherence to the principles of governance as one of the dimensions of strategic audit** at **Islamic and commercial banks in Jordan**." The results were as follows:

Table 6: The impact of digital transformation on the dimension of adherence to the principles of governance of Islamic and commercial banks in Jordan

Digital Transformation	(B) coefficients	Standard error	Beta Value	Calculated T value	(*Sig T) significance level
Digital Process	0.234	0.059	0.277	3.970	0.000
Impact on individuals	0.177	0.052	0.173	3.416	0.001
Customer Numerical Activities	0.451	0.072	0.466	6.256	0.000
Correlation coefficient r		**0.842**	**Coefficient of determination value (R^2)**		**0.709**
Calculated F Value		**170.151**	**SigF level indication**		**0.000**

* Statistically significant impact at the significance level (α≤0.05) Dependent variable: adherence to the principles of governance

Table (6) shows that there is a strong correlation between digital transformation and adherence to governance principles, as the value of the correlation coefficient was (R=0.842), and the value of the coefficient of determination was (R^2=0.709), and this indicates that digital transformation explained (70.9%) of the change in adherence to governance principles, and that the rest is attributable to other factors. The table shows the moral impact of the digital transformation in adherence to the principles of governance, where the value of F calculated (170.151) and the level of significance (SigF =0.000), which is less than 0.05.

Regarding the dimensions of digital transformation, the results indicated the following:

- The value of B at the dimension of (digital operations) was (0.234) , which indicates that the increase in digital operations by one unit contributes to increasing compliance with the principles of governance by (23.4%), and the value of T calculated at this dimension was (3.970) and at a level of significance (SigT =0.000), which is less than 0.05 , and accordingly, it becomes clear that there is a statistically significant effect of digital operations in adhering to the principles of governance as one of the dimensions of strategic auditing at Islamic and commercial banks in Jordan.
- The value of B at the dimension (impact on individuals) was (0.177) , which indicates that increasing the impact on individuals by one unit contributes to increasing compliance with the principles of governance by (17.7%), and the value of T calculated at this dimension was (3.416) and at a level of significance (SigT=0.001), which is less than 0.05 , and accordingly, it turns out that there is a statistically

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significant impact to influence individuals in adhering to the principles of governance as one of the dimensions of strategic auditing in Islamic and commercial banks in Jordan .

- The value of B at the distance of (customers' digital activities) was (0.451), which indicates that the increase in customers' digital activities by one unit contributes to increasing compliance with the principles of governance by (45.1%), and the value of T calculated at this dimension was (6.256) and at a level of significance (SigT =0.000), which is less than 0.05. Accordingly, it is clear that there is a statistically significant effect of customers' digital activities in adhering to the principles of governance as one of the dimensions of strategic audit at Islamic and commercial banks in Jordan.

Based on the above, it is clear that: **"There is a statistically significant effect at the level of significance (α≤0.05) of digital transformation in its dimensions (digital operations, impact on individuals, digital customer activities) in** the **dimension** of **adherence to the principles of governance as one of the dimensions of strategic auditing** in **Islamic and commercial banks in Jordan."**

Second: Results of Testing the Second Sub-Hypothesis

According to the hypothesis, the first sub-hypothesis examined the effects of digital transformation in all of its dimensions on the dimension of adherence to governance principles.: **"There is no statistically significant effect at the level of significance (α≤0.05)** of **digital transformation in its dimensions (digital operations, impact on individuals, digital customer activities) in** the dimension of adherence to the principles of governance **as one of the dimensions of strategic** audit at **Islamic and commercial banks in Jordan**." The results were as follows:

Table 7: The impact of digital transformation on the independence of the auditor at the Jordanian Islamic and Commercial Banks

Digital Transformation	(B) coefficients	Standard error	Beta Value	Calculated T value	(*Sig T) significance level
Digital Process	0.530	0,063	0.526	8.428	0.000
Impact on individuals	0.072	0.055	0.059	1.308	0.192
Customer Numerical Activities	0.395	0.077	0.342	5.131	0.000
Correlation coefficient R		**0.875**	**Coefficient of determination value ($^{R2)}$**		**0.766**
Calculated F Value		**229.457**	**SigF level indication**		**0.000**

* Statistically significant impact at the significance level (α≤0.05) Dependent variable: Independence of the auditor

Table (7) shows that there is a strong correlation between digital transformation and the independence of the auditor, as the value of the correlation coefficient was (R=0.875), and the value of the coefficient of determination was (^{R2}=0.766), and this indicates that

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the digital transformation explained (76.6%) of the change in the independence of the auditor, and that the rest is attributed to other factors. The table shows the moral impact of the digital transformation on the independence of the auditor, as the calculated value of F was (229.457) and at the level of significance (SigF =0.000), which is less than 0.05.

Regarding the dimensions of digital transformation, the results indicated the following:

- The value of B at the dimension of (digital operations) was (0.530) , which indicates that the increase of digital operations by one unit contributes to increasing the independence of the auditor by (53.0%), and the value of T calculated at this dimension was (8.428) with a level of significance (SigT=0.000), which is less than 0.05 , and based on this, it becomes clear that there is a statistically significant effect of digital operations on the independence of the auditor as one of the dimensions of the strategic audit of Islamic and commercial banks in Jordan.
- The value of B at the dimension of (impact on individuals) was (0.072) , which indicates that increasing the impact on individuals by one unit contributes to increasing the independence of the auditor by (7.2%), and the value of T calculated at this dimension was (1.308) with a significance level of (SigT =0.192), which is greater than 0.05 , and accordingly, it turns out that there is no statistically significant effect to affect individuals on the independence of the auditor as one of the dimensions of the strategic audit of Islamic and commercial banks in Jordan.
- The value of B at the distance of (customers' digital activities) was (0.451), which indicates that the increase in customers' digital activities by one unit contributes to increasing compliance with the principles of governance by (45.1%), and the value of T calculated at this dimension was (6.256) and at a level of significance (SigT =0.000), which is less than 0.05. Accordingly, it is clear that there is a statistically significant effect of customers' digital activities in adhering to the principles of governance as one of the dimensions of strategic audit at Islamic and commercial banks in Jordan.

Based on the above, it is clear that: **"There is a statistically significant effect at the level of significance (α≤0.05) of digital transformation in its dimensions (digital operations, impact on individuals, digital customer activities) in** the dimension of adherence to the principles of governance **as one of the dimensions of strategic** auditing in **Islamic and commercial banks in Jordan**."

Third: Results of Testing the Third Sub-Hypothesis

The first sub-hypothesis focused on researching the impact of digital transformation in its combined dimensions in the dimension of adherence to the principles of governance, as this hypothesis stipulated that: **"There is no statistically significant effect at the level of significance (α≤0.05) of digital transformation in its dimensions (digital operations, impact on individuals, digital customer activities) in** the dimension of adherence to the principles of governance **as one of the dimensions of strategic** audit at **Islamic and commercial banks in Jordan**." The results were as follows:

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Table 8: The impact of digital transformation on the strategic planning dimension of Jordanian Islamic and commercial banks

Digital Transformation	(B) coefficient	Standard error	Beta Value	Calculated T value	(*Sig T) significance level
Digital Process	0.145	0.051	0.172	2.852	0.005
Impact on individuals	0.353	0.045	0.347	7.883	0.000
Customer Numerical Activities	0.442	0.062	0.458	7.090	0.000
Correlation coefficient R		**0.883**	**Coefficient of determination value ($^{R2)}$**		**0.781**
Calculated F Value		**248.972**	**SigF level indication**		**0.000**

* Impact is statistically significant at the significance level (α≤0.05) Dependent variable: Improved strategic audit

Table (8) shows that there is a strong correlation between digital transformation and strategic planning, as the value of the correlation coefficient was (R=0.883), and the value of the coefficient of determination was (^{R2}=0.781), and this indicates that digital transformation explained (78.1%) of the change in strategic planning, and that the rest is attributed to other factors. The table shows the moral impact of digital transformation in strategic planning, where the calculated value of F was (248.972) and the level of significance (SigF=0.000), which is less than 0.05.

Regarding the dimensions of digital transformation, the results indicated the following:

- The value of B at the dimension of (digital operations) was (0.530), which indicates that the increase of digital operations by one unit contributes to increasing the independence of the auditor by (53.0%), and the value of T calculated at this dimension was (8.428) with a level of significance (SigT= 0.000), which is less than 0.05, and based on this, it becomes clear that there is a statistically significant effect of digital operations on the independence of the auditor as one of the dimensions of the strategic audit of Islamic and commercial banks in Jordan.
- The value of B at the dimension of (impact on individuals) was (0.353) , which indicates that increasing the impact on individuals by one unit contributes to increasing strategic planning by (35.3%), and the value of T calculated at this dimension was (7.883) and at a level of significance (SigT =0.000), which is less than 0.05 , and based on this, it turns out that there is a statistically significant impact to influence individuals in strategic planning as one of the dimensions of strategic audit at Islamic and commercial banks in Jordan .
- The value of B at the distance of (customers' digital activities) was (0.451), which indicates that the increase in customers' digital activities by one unit contributes to increasing compliance with the principles of governance by (**45**.1%), and the value of T calculated at this dimension was (6.256) and at a level of significance (SigT =0.000),

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which is less than 0.05. Accordingly, it is clear that there is a statistically significant effect of customers' digital activities in adhering to the principles of governance as one of the dimensions of strategic audit at Islamic and commercial banks in Jordan.

Based on the above, it is clear that: **"There is a statistically significant effect at the level of significance (α≤0.05) of digital transformation in its dimensions (digital operations, impact on individuals, digital customer activities) in** the dimension of adherence to the principles of governance **as one of the dimensions of strategic** auditing in **Islamic and commercial banks in Jordan**."

5. FIFTH: RESULTS AND RECOMMENDATIONS

5.1 Results

The results indicated the following:

1- The interest of Jordanian Islamic and commercial banks in digital transformation and its dimensions (impact on individuals, digital customer activities, and digital operations) respectively to a high degree. This reflects the commitment of banks to benefit from digital transformation to improve service delivery, achieve operational efficiency, and reach customer satisfaction, which ensures their competitiveness in light of a rapidly evolving financial environment. Digital tools contribute to enhancing employee productivity by automating repetitive tasks and promoting a culture of continuous learning through the development of skills. The provision of digital services such as mobile banking, electronic transactions, and artificial intelligence-based support contribute to meeting customer needs for specialized services. In addition, digital operations play an effective role in simplifying operations and reducing costs, which enhances the accuracy of the bank's operations.

2- The interest of the Islamic and commercial banks in strategic auditing and its dimensions (strategic planning, commitment to the principles of governance, and the independence of the auditor) respectively to a high degree, and this reflects the banks' commitment to transparency, accountability, and long-term sustainability, by strengthening their governance frameworks, enhancing the confidence of stakeholders, and achieving sustainable growth in a competitive market. Strategic planning ensures that banks' operations are aligned with long-term objectives, enabling them to allocate resources efficiently and manage risks effectively. Compliance with governance principles enhances ethical practices, adherence to regulations and stakeholder confidence, while the independence of the auditor ensures objective assessments of financial and operational operations.

3- There is a statistically significant impact of the digital transformation in its dimensions (digital operations, impact on individuals, digital customer activities) in improving the strategic audit in its dimensions (commitment to the principles of governance, independence of the auditor, strategic planning) at the Islamic and commercial banks in Jordan. This shows the importance of digital transformation as a key driver of effective strategic audit, enabling banks to achieve higher levels of governance,

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objectivity and strategic alignment. Digital tools contribute to enhancing transparency and accountability, which facilitates monitoring of governance compliance. Automation reduces human bias in audits, which enhances the independence of the auditor. In addition, data analytics and predictive modeling enable banks to make informed decisions, which improves strategic planning.

4- There is a statistically significant impact of the digital transformation in its dimensions (digital operations, impact on individuals, digital customer activities) in the dimension of adhering to the principles of governance as one of the dimensions of the strategic audit of Islamic and commercial banks in Jordan. This shows the importance of digital transformation in maintaining strong governance structures, contributing to strengthening trust with stakeholders and ensuring regulatory compliance. Digital tools promote transparency and accountability, ensuring accurate recordkeeping and prompt monitoring of compliance-related activities, and staff trained in digital tools and governance standards are better equipped to adhere to regulatory requirements, fostering a culture of compliance. Moreover, digital platforms enable banks to track customer transactions more effectively, ensuring adherence to anti-money laundering and other regulatory frameworks.

5- There is a statistically significant impact of the digital transformation in its dimensions (digital operations, impact on individuals, digital customer activities) in the dimension of the independence of the auditor as one of the dimensions of the strategic audit of Islamic and commercial banks in Jordan. This highlights the role of technology and digital transformation in enhancing transparency and objectivity in audits, contributing to building stakeholder confidence and ensuring the integrity of financial systems. By automating audits, digital tools reduce human intervention, reducing biases, and ensuring objective evaluations, and auditors trained in digital technologies are better equipped to conduct independent and unbiased evaluations, taking advantage of the immediate access to data provided by digital platforms. This independence is critical to maintaining the credibility and reliability of financial reporting.

6- There is a statistically significant impact of the digital transformation in its dimensions (digital operations, impact on individuals, digital customer activities) in the dimension of the independence of the auditor as one of the dimensions of the strategic audit of Islamic and commercial banks in Jordan. This shows the importance of digital transformation in enabling banks to adapt to changing market conditions, achieve long-term goals, and maintain a competitive advantage in the financial sector. Through digital processes, banks can generate real-time data and insights, enabling informed decision-making and efficient resource allocation. Employees equipped with digital skills contribute more effectively to strategic planning processes, leveraging data analytics and predictive modeling to identify market trends and customer needs. In addition, digital platforms provide banks with valuable insights into customer behavior, helping them align their strategies with market dynamics.

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5.2 Recommendations

In light of the results, the study suggests the following recommendations:

1- Giving Islamic and commercial banks priority to invest in advanced digital tools and technologies, because of their ability to simplify processes, improve data security, and improve customer experiences, which supports both digital transformation and strategic audit objectives.

2- Islamic and Commercial Banks hold comprehensive training programs to hone their employees' skills in digital tools, governance principles and auditing practices, ensuring that employees are qualified to deal with new technologies and contribute effectively to strategic audits.

3- Islamic and commercial banks should take advantage of digital tools to improve compliance with governance principles, and this would contribute to enhancing transparency and accountability, and building stakeholder confidence.

4- Adoption of automated auditing tools by JICBs that reduce human intervention and bias, thus contributing to the provision of objective and accurate assessments, thus ensuring the credibility and reliability of financial reports.

5- Islamic and Jordanian banks use data analytics and predictive modeling to improve strategic planning, as the use of these tools would support the bank's ability to make informed decisions, align its strategies with market dynamics, and achieve long-term goals more effectively.

6- Increasing the focus of Jordanian Islamic and commercial banks on developing digital platforms that are easy to use and meet the needs of customers, which contributes to enhancing their satisfaction and loyalty.

7- Encouraging the Jordanian Islamic and Commercial Banks a culture of continuous improvement and innovation by reviewing and updating their strategies for digital transformation and auditing regularly, including keeping abreast of the latest technologies, regulatory changes and best practices of the sector to maintain competitiveness and compliance.

CONCLUSIONS

The impact of digital transformation in its dimensions (digital operations, impact on individuals, customers' digital activities) on improving strategic auditing in its dimensions (commitment to the principles of governance, auditor independence, and strategic planning) was studied at Jordanian Islamic and commercial banks, and the study population consisted of Jordanian Islamic and commercial banks, the number of which was (15) Jordanian banks (12 commercial banks and 3 Islamic banks). The study applied the comprehensive survey strategy in determining the size of the study sample, as the study sample included all Jordanian banks representing the study population. It was found that there is an impact of digital transformation in its dimensions (digital operations, impact on individuals, digital customer activities) on improving strategic auditing in its dimensions

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(adherence to the principles of governance, auditor independence, strategic planning) at Islamic and commercial banks in Jordan. These results contribute to enriching the growing literature on digital transformation and strategic auditing, and provide practical insights for decision and policy makers in Jordanian banks. Future studies should be conducted on the impact of digital transformation on improving the quality of internal auditing and internal oversight in Jordanian banks and industrial companies.

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