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# The Impact of Digital Transformation on the Application of Risk-Based Auditing in Jordanian Public Shareholding Industrial Companies

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***Abstract***

*This study aimed to explore the impact of digital transformation on the application of risk-based auditing in Jordanian public shareholding industrial companies. To achieve the study's objectives, a descriptive-analytical approach was adopted. The study population consisted of all Jordanian public shareholding industrial companies that are still operating, totaling 46 companies distributed across nine different industrial sectors, according to the Companies Guide bulletin published on the Amman Stock Exchange website for the year 2024. The study sample included the main management departments of these companies. A comprehensive survey method was used to select the sample, resulting in the inclusion of all 46 Jordanian public shareholding industrial companies. The study's sampling unit targeted employees from the following departments within these companies: Finance, Internal Audit, and Information Technology. The targeted positions included Department Manager, Section Head, Accountant, Internal Auditor, and IT employee. To analyze the study data and test the hypotheses, the Statistical Package for Social Sciences (SPSS V.20) was used. After conducting the statistical analysis, the study revealed several key findings, the most notable of which was that digital transformation positively impacts the application of risk-based auditing in Jordanian industrial companies. This is due to the advanced tools and modern technologies provided by digital transformation, which enhance the efficiency and accuracy of risk-based auditing procedures. The study also presented several recommendations, the most important of which is the need for Jordanian industrial companies to establish an integrated system that combines digital technology, digital innovation, and digital governance processes to comprehensively implement risk-based auditing procedures.*

***Keywords:*** *Digital Transformation, Risk-Based Auditing, Jordanian Public Shareholding Industrial Companies.*

## Introduction

The use of advanced technology, represented by digital transformation, is no longer an option or a luxury; rather, it has become a necessity and an integral part of the strategic operations of industrial companies striving for manufacturing excellence. Any industrial company must accelerate its digital transformation and adjust its strategies accordingly, otherwise, it risks being eliminated from the competitive market. Digital transformation is not merely about implementing technology and automation within companies; rather, it is a comprehensive strategic program that impacts both internal and external aspects of the company. Internally, it influences operational processes and workflow, while externally, it enhances how products and services are delivered to the target audience, increases market share, and ultimately helps achieve the company's strategic goals more efficiently, quickly, and at a lower cost (Mar'i, 2022).

The auditing profession is becoming increasingly complex as businesses continue their transition toward digitalization. Financial transactions are now conducted electronically, making them less

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visible in traditional formats. Consequently, electronic auditing systems have evolved, significantly impacting the application of risk-based auditing in companies that adopt digital transformation policies and strategies. Therefore, this study examines the impact of digital transformation on the application of risk-based auditing in Jordanian public shareholding industrial companies.

## Study Objective

This study aims to explore the impact of digital transformation on the application of risk-based auditing in Jordanian public shareholding industrial companies by:

1. Identifying the relative importance of digital transformation in Jordanian public shareholding industrial companies.

2. Assessing the significance of applying risk-based auditing in Jordanian public shareholding industrial companies.

3. Examining the impact of digital transformation dimensions (digital technology, digital innovation, and digital governance) on the dimensions of risk-based auditing (risk assessment, risk response, and reporting) in Jordanian public shareholding industrial companies.

### Research Problem

Digital transformation provides modern tools and technologies that enhance the efficiency and accuracy of risk-based auditing procedures. Advanced analytical techniques enable companies that adopt digital transformation to detect suspicious trends and identify potential risks more quickly and accurately. However, digital transformation also presents several challenges, including high implementation costs, a shortage of auditors in industrial companies with the necessary technical expertise, and resistance to digitalization by company auditors.

Thus, the research problem is formulated through the following key questions:

**Main Research Question:**
Does digital transformation, with its dimensions (digital technology, digital innovation, and digital governance), impact the application of risk-based auditing (risk assessment, risk response, and reporting) in Jordanian industrial companies?

From this main question, the following sub-questions emerge:

1. Does digital technology impact the application of risk-based auditing in Jordanian industrial companies?

2. Does digital innovation impact the application of risk-based auditing in Jordanian industrial companies?

3. Does digital governance impact the application of risk-based auditing in Jordanian industrial companies?

### Research Hypotheses:

Based on the research problem questions, the study's hypotheses are formulated as follows:

**Main Hypothesis ($H_0$):**
There is no statistically significant impact at the significance level ($\alpha \leq 0.05$) of digital transformation, with its dimensions (digital technology, digital innovation, and digital

governance), on the application of risk-based auditing (risk assessment, risk response, and reporting) in Jordanian industrial companies.

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

- **$H_{01}$:** There is no statistically significant impact at the significance level ($\alpha \leq 0.05$) of digital technology on the application of risk-based auditing in Jordanian industrial companies.
- **$H_{02}$:** There is no statistically significant impact at the significance level ($\alpha \leq 0.05$) of digital innovation on the application of risk-based auditing in Jordanian industrial companies.
- **$H_{03}$:** There is no statistically significant impact at the significance level ($\alpha \leq 0.05$) of digital governance on the application of risk-based auditing in Jordanian industrial companies.

## Theoretical Framework of the Study

### The Conceptual Understanding of Digital Transformation

Liere et al. (2018) defined digital transformation as the use of modern digital technologies, such as social media, mobile devices, analytics, and embedded systems, to enhance business operations in companies. It also contributes to improving customer service, streamlining processes, and creating innovative business models tailored to the company's needs.

On the other hand, Muehlburger et al. (2019) described digital transformation as a fundamental change process within the value creation chain or internal structure of companies. This transformation either serves as a driver or a prerequisite for adopting innovative entrepreneurial technologies within the organization.

Similarly, Vial (2019) defined digital transformation as the pursuit of an entrepreneurial strategy aimed at developing innovative and flexible business and operational models. This is achieved through investments in technology, talent development, process reorganization, and change management to create new value and experiences for customers, employees, and relevant stakeholders.

### Entrepreneurial Goals of Digital Transformation

Digital transformation aims to achieve multiple objectives, including (Abdel Ghani, 2022):

1. Enhancing the development of innovative and collaborative financial and technological systems in companies while modifying the education system to equip individuals with new skills and guide them toward an advanced digital future.
2. Focusing on building and maintaining digital communication infrastructure, ensuring its accessibility, and balancing service quality with cost efficiency.
3. Strengthening digital data protection, transparency, and trust while improving access to services. This includes establishing regulations and mechanisms for digital service quality, implementing innovative business models, and enhancing the regulatory framework and technical standards for companies adopting digital transformation.

### Concept of Risk-Based Auditing and Its Implementation Mechanisms

Vahit, Duygu (2014) and Zakiya (2017) defined risk-based auditing as an audit approach that identifies the nature of business risks, with the auditing process structured according to these risks. Audit resources are allocated based on the identified risks to enhance audit effectiveness

in companies that adopt this approach.

The Institute of Chartered Accountants of Australia and New Zealand defined risk-based auditing as a methodology used in internal auditing to focus on and determine the timing and nature of audit procedures in areas where the likelihood of material misstatements is higher, ensuring efficiency and effectiveness (Abdullah, 2014, p. 97).

Meanwhile, the Institute of Internal Auditors described it as "a methodology that links internal auditing with risk management processes within an economic entity, providing assurance to the board of directors that risk management processes are effectively managed and that the entity's risks are under control" (Dahou, 2018, p. 128).

Accordingly, Nour Al-Din (2018) suggested that risk-based auditing is achieved through:

- Focusing on business risks rather than solely on financial data risks.
- Shifting the nature of audit testing from large-scale substantive tests to supervisory or control-level testing, supported by highly accurate analytics.

**Benefits of Risk-Based Auditing**

According to Benli (2014, p. 6), risk-based auditing provides several benefits, including:

1. Facilitating adaptability to changing conditions by developing a consistent and comprehensive risk management approach, leading to a better understanding and management of risks.
2. Increasing opportunities by reducing negative risks, optimizing resource utilization, and eliminating unnecessary costs.
3. Enhancing the ability to respond effectively to unexpected challenges and deviations from business objectives while improving the understanding of potential risks and their actual impacts.

**The Role of Digital Transformation in Enhancing Risk-Based Auditing**

The researcher believes that digital transformation plays a crucial role in seamlessly connecting industrial companies, enabling transparent execution of shared services through advanced investments in modern information technology tools. This has increased the focus on improving service delivery methods, accelerating transaction completion, and leveraging entrepreneurial digital innovations through various digital channels, websites, and mobile applications to reach all relevant stakeholders.

Moreover, digital transformation provides modern tools and technologies that enhance the efficiency and accuracy of risk-based auditing procedures. Advanced analytical techniques enable companies to detect suspicious trends and identify potential risks more quickly and accurately. Digital technology supports the automation of proactive planning, crisis management, and execution, leading to faster response times and reduced risk impact.

Additionally, digital governance facilitates data unification and exchange across electronic systems, improving communication speed and transparency with stakeholders involved in industrial companies' operations.

**Practical Aspect of the Study**

## Research Methodology

The purpose of this study is to examine the impact of digital transformation adoption by Jordanian industrial companies on the implementation of risk-based auditing. To achieve this, the study follows a descriptive-analytical approach, aiming to track the relationship between study variables, understand their trends, and analyze their influence on the research problem. This approach helps identify the best solutions that explain the relationship between digital transformation and risk-based auditing.

### Study Population and Sample

The study population consists of all publicly listed Jordanian industrial companies that are still in operation, totaling 46 companies across 9 different industrial sectors, as per the 2024 Company Directory published on the Amman Stock Exchange website (https://www.ase.com.jo).

The study sample includes the main administrative departments of these companies. A comprehensive survey sampling method was used, ensuring that all 46 publicly listed Jordanian industrial companies were included in the study.

### Sampling Unit

The study targeted employees from the following departments in Jordanian industrial companies:

- Finance
- Internal Audit
- Information Technology

The study specifically included employees holding the following positions:

- Department Manager
- Section Head
- Accountant
- Internal Auditor
- IT employee

To ensure a wide representation of employees in these departments, 276 questionnaires were distributed, averaging 6 questionnaires per company. The survey was conducted electronically, and responses were collected through the same method. A total of 235 completed questionnaires were successfully retrieved.

### Testing the Reliability of the Study Tool

The validity of the study tool is evaluated in terms of its objectivity, coherence, and the degree of correlation between its items. Its ability to provide relatively consistent answers is tested using reliability testing, which is considered one of the most important tests in this area. The result of this test is assessed using Cronbach's Alpha Coefficient, which measures internal consistency. A Cronbach's Alpha value of 0.70 or higher indicates good reliability of the study tool (Sekaran

& Bougie, 2016).

Below is the table illustrating the reliability test results of the study tool.

| Number | Variable | Alpha |
|---|---|---|
| **1** | Digital Technology | 0.885 |
| **2** | Digital Innovation | 0.842 |
| **3** | Digital Governance | 0.840 |
| **4** | Digital Transformation | 0.926 |
| **5** | Risk Assessment | 0.917 |
| **6** | Risk Response | 0.897 |
| **7** | Reporting | 0.898 |
| **8** | Risk-Based Auditing | 0.960 |

Table (1): Results of the Study Tool Reliability Test

It is evident from Table (1) that the study tool demonstrates a high degree of reliability, with Cronbach's Alpha values ranging between (0.840-0.960), which are greater than the value of (0.70).

**Multicollinearity Test**

One of the essential conditions for the proper use of the General Linear Model (GLM) is the independence of the independent variables. Correlation values between these variables are used to assess their independence. Correlation values greater than (0.80) indicate the presence of multicollinearity, which can lead to illogical interpretations of the relationship between the independent and dependent variables (Guajarati, 2004).

To detect this issue, the Variance Inflation Factor (VIF) and Tolerance tests are used. The presence of multicollinearity is indicated by VIF values of 10 or higher and Tolerance values of 1 or higher (Guajarati, 2004). The results appear as follows:

| Variable | VIF | Tolerance |
|---|---|---|
| **Digital Technology** | 1.719 | 0.582 |
| **Digital Innovation** | 3.713 | 0.269 |
| **Digital Governance** | 3.146 | 0.318 |

Table (2): Results of the Multicollinearity Test for Independent Variables

It is evident from Table (2) that there is no multicollinearity issue among the independent variables, ensuring their independence. The Variance Inflation Factor (VIF) values range between (1.719-3.713), which is less than (10), while the Tolerance values range between (0.269-0.582), which is less than (1).

**Statistical Techniques Used**

The following statistical methods were applied using the Statistical Package for the Social Sciences (SPSS V.20) to process, describe, analyze data, and test hypotheses:

**First: Descriptive Statistical Methods**

These methods included frequency and percentage to describe demographic data, as well as

mean and standard deviation to describe the study variables.

**Second: Inferential (Analytical) Statistical Methods**

These methods were used to verify the reliability of the study tool, the independence of the independent variables, and to test the hypotheses. The statistical techniques used included:

- **Internal consistency test (Cronbach's Alpha)** to assess the reliability of the study tool.
- **Variance Inflation Factor (VIF) and Tolerance test** to check for multicollinearity among independent variables.
- **Multiple and simple linear regression analysis** to test the study hypotheses.
- **Path analysis using Amos software**, supported by SPSS.

**Presentation and Discussion of Results**

**Description of Demographic Data**

The purpose of describing the responses of the sample members to the questions related to their personal (demographic) information is to build a general understanding of the nature of employees working in the targeted departments of Jordanian industrial companies. Descriptive statistical methods, including frequencies and percentages, were used to analyze these responses. The results are as follows:

| Variable | Category | Repeats | Percentage |
|---|---|---|---|
| **Years of Experience** | Less than 5 years | 28 | 11.9 |
| | From 5 years to less than 10 years | 75 | 31.9 |
| | From 10 years to less than 15 years | 83 | 35.3 |
| | 15 years or more | 49 | 20.9 |
| **Educational Qualification** | Bachelor's | 164 | 69.8 |
| | Master's | 50 | 21.3 |
| | PhD | 21 | 8.9 |
| **Field of Specialization** | Accounting | 109 | 46.4 |
| | Business Administration | 33 | 14.0 |
| | Information Technology | 65 | 27.7 |
| | Other | 28 | 11.9 |
| **Job Position** | Department Manager | 2 | 0.9 |
| | Section Head | 5 | 2.1 |
| | Employee | 228 | 97.0 |
| | Total | **235** | **100%** |

Table (3): Description of the Demographic Data of the Study Sample.

It is evident from Table (3) that the majority of employees in the targeted departments of Jordanian industrial companies have extensive experience exceeding five years, accounting for 88.1%. Additionally, most employees hold a bachelor's degree (69.8%), indicating that they possess the necessary academic and practical qualifications for their assigned tasks.

The table also shows a high percentage of employees specializing in accounting (46.4%) and information technology (27.7%), which aligns with the nature of the targeted departments,

namely finance, internal auditing, and IT. Moreover, employees represent the largest proportion compared to other job positions, making up 97.0%, which is consistent with the general distribution of human resources within organizational structures.

**2- Description of Study Variables**

The study consists of two main variables:

1. **Digital transformation** (independent variable), measured by digital technology, digital innovation, and digital governance.

2. **Risk-based auditing** (dependent variable), measured by risk assessment, risk response, and reporting.

The descriptive analysis of the participants' opinions on these variables was conducted using means and standard deviations, and the overall results are presented as follows:

| Number | Variable | Mean | S. D | Rank | Relative importance |
|---|---|---|---|---|---|
| **1** | Digital Technology | 4.464 | 0.612 | 1 | High |
| **2** | Digital Innovation | 4.044 | 0.701 | 2 | High |
| **3** | Digital Governance | 4.029 | 0.674 | 3 | High |
| **4** | Digital Transformation | **4.179** | **0.588** | **-** | High |
| **5** | Risk Assessment | 3.899 | 0.753 | 2 | High |
| **6** | Risk Response | 3.831 | 0.751 | 3 | High |
| **7** | Reporting | 4.178 | 0.635 | 1 | High |
| **8** | Risk-Based Auditing | **3.969** | **0.665** | **-** | High |

Table (4): Description of Study Variables.

It is evident from Table (4) that the respondents' opinions on the study variables all indicate a high relative level of importance. The overall mean for the independent variable (digital transformation) was 4.179 with a standard deviation of 0.588. The respondents agreed on the high relative importance of its dimensions, ranked as follows:

- **Digital technology**: Mean **(4.464)**, Standard Deviation **(0.612)**
- **Digital innovation**: Mean **(4.044)**, Standard Deviation **(0.701)**
- **Digital governance**: Mean **(4.029)**, Standard Deviation **(0.674)**

Similarly, the overall mean for the dependent variable (risk-based auditing) was 3.696 with a standard deviation of 0.665. The respondents also agreed on the high relative importance of its dimensions, ranked as follows:

- **Reporting**: Mean **(4.178)**, Standard Deviation **(0.635)**
- **Risk assessment**: Mean **(3.899)**, Standard Deviation **(0.753)**
- **Risk response**: Mean **(3.831)**, Standard Deviation **(0.751)**

**3- Hypothesis Testing**

The main objective of this study was to examine the impact of digital transformation on the

application of risk-based auditing in Jordanian industrial companies. To achieve this, a primary hypothesis was formulated to explore the relationship and effect between these two variables. This hypothesis was further divided into three sub-hypotheses, each analyzing the relationship and effect between the dimensions of digital transformation and the application of risk-based auditing.

To test these hypotheses, inferential (analytical) statistical methods were applied:

- **Multiple linear regression analysis** was used to test the main hypothesis.
- **Simple linear regression analysis** was used to test the sub-hypotheses.

The results were as follows:

**First: Results of Testing the Main Hypothesis**

The **main hypothesis** stated:
"There is no statistically significant impact at a significance level of ($\alpha \leq 0.05$) of digital transformation, with its dimensions (digital technology, digital innovation, and digital governance), on the application of risk-based auditing (risk assessment, risk response, and reporting) in Jordanian industrial companies."

The results of the multiple linear regression analysis appeared as follows:

| Digital Transformation | B coefficient | S.E | Beta | Calculated T | Sig T* |
|---|---|---|---|---|---|
| **Coefficients Table** | | | | | |
| **Digital Technology** | 0.158 | 0.040 | 0.146 | 3.951 | 0.000 |
| **Digital Innovation** | 0.389 | 0.051 | 0.411 | 7.566 | 0.000 |
| **Digital Governance** | 0.426 | 0.049 | 0.432 | 8.650 | 0.000 |
| **Model Summary and Variance Analysis** | | | | | |
| **R** | | **0.904** | **$R^2$** | | **0.817** |
| **Calculated F** | | **343.374** | **SigF** | | **0.000** |

Table (5): Results of Testing the Main Hypothesis

*Statistical Significance at ($\alpha \leq 0.05$) – Dependent Variable: Risk-Based Auditing Application

Table (5) demonstrates a strong positive correlation between digital transformation and the application of risk-based auditing, with a correlation coefficient (R) of 0.904 and a coefficient of determination ($R^2$) of 0.817. This indicates that digital transformation accounts for 81.7% of the variations in risk-based auditing application.

Additionally, the results confirm a significant impact of digital transformation on risk-based auditing, as the computed F-value is 343.374, with a significance level (Sig. F) of 0.000, which is less than 0.05.

**Impact of Digital Transformation Dimensions**

Examining the dimensions of digital transformation, the findings show a positive and

statistically significant impact of these variables on the application of risk-based auditing:

- **Digital Technology: (B = 0.158, T = 3.951, Sig. T = 0.000)** *(p < 0.05)*
- **Digital Innovation: (B = 0.389, T = 7.566, Sig. T = 0.000)** *(p < 0.05)*
- **Digital Governance: (B = 0.426, T = 8.650, Sig. T = 0.000)** *(p < 0.05)*

## Conclusion

Based on these results, the null hypothesis is rejected, and the alternative hypothesis is accepted, which states:

"There is a statistically significant impact at (α≤0.05) of digital transformation, with its dimensions (digital technology, digital innovation, and digital governance), on the application of risk-based auditing (risk assessment, risk response, and reporting) in Jordanian industrial companies."

**Results of Testing the Sub-Hypotheses**

The sub-hypotheses stated:

1. "There is no statistically significant impact at (α≤0.05) of digital technology on the application of risk-based auditing in Jordanian industrial companies."

2. "There is no statistically significant impact at (α≤0.05) of digital innovation on the application of risk-based auditing in Jordanian industrial companies."

3. "There is no statistically significant impact at (α≤0.05) of digital governance on the application of risk-based auditing in Jordanian industrial companies."

The results of the simple linear regression analysis are presented in Table (6).

| Variable | Digital Technology | Digital Innovation | Digital Governance |
|---|---|---|---|
| **Model Summary and Variance Analysis** | | | |
| **R** | 0.652 | 0.861 | 0.852 |
| **$R^2$** | 0.425 | 0.742 | 0.726 |
| **Calculated F** | 171.984 | 668.960 | 618.287 |
| **Sig.F** | 0.000 | 0.000 | 0.000 |
| **Coefficients Table** | | | |
| **B coefficient** | 0.708 | 0.816 | 0.840 |
| **Standard Error** | 0.054 | 0.032 | 0.034 |
| **Beta** | 0.652 | 0.861 | 0.852 |
| **Calculated T** | 13.114 | 25.864 | 24.865 |
| **Sig T*** | 0.000 | 0.000 | 0.000 |

Table (6): Results of Testing the Sub-Hypotheses

*Statistical Significance at (α≤0.05) – Dependent Variable: Risk-Based Auditing Application

It is clear from Table (6) that digital technology is strongly positively correlated with the application of risk-based auditing, with a correlation coefficient (R=0.652) and a coefficient of determination ($R^2$=0.425), indicating that digital technology explains (42.5%) of the variations

in the application of risk-based auditing. The table also shows a statistically significant impact of digital technology on the application of risk-based auditing, with a calculated F value of (171.984) and a significance level (SigF=0.000), which is less than 0.05. The coefficient table confirms a positive relationship and significant impact of this variable on the application of risk-based auditing, with a coefficient (B=0.708), and a calculated T value of (13.114) with a significance level (Sig T=0.000), which is less than 0.05. Based on these results, the first sub-hypothesis is rejected, and the alternative hypothesis is accepted, which states that: "There is a statistically significant impact at the significance level ($\alpha \leq 0.05$) of digital technology on the application of risk-based auditing (risk assessment, risk response, and reporting) in Jordanian industrial companies."

It is also clear from Table (6) that digital innovation is strongly positively correlated with the application of risk-based auditing, with a correlation coefficient (R=0.861) and a coefficient of determination ($R^2$=0.742), indicating that digital innovation explains (74.2%) of the variations in the application of risk-based auditing. The table further shows a statistically significant impact of digital innovation on the application of risk-based auditing, with a calculated F value of (668.960) and a significance level (SigF=0.000), which is less than 0.05. The coefficient table confirms a positive relationship and significant impact of this variable on the application of risk-based auditing, with a coefficient (B=0.816), and a calculated T value of (25.864) with a significance level (Sig T=0.000), which is less than 0.05. Based on these results, the second sub-hypothesis is rejected, and the alternative hypothesis is accepted, which states that: "There is a statistically significant impact at the significance level ($\alpha \leq 0.05$) of digital innovation on the application of risk-based auditing (risk assessment, risk response, and reporting) in Jordanian industrial companies."

It also shows from Table (6) that digital governance is strongly positively correlated with the application of risk-based auditing, with a correlation coefficient (R=0.852) and a coefficient of determination ($R^2$=0.726), indicating that digital governance explains (72.6%) of the variations in the application of risk-based auditing. The table also shows a statistically significant impact of digital governance on the application of risk-based auditing, with a calculated F value of (618.287) and a significance level (SigF=0.000), which is less than 0.05. The coefficient table confirms a positive relationship and significant impact of this variable on the application of risk-based auditing, with a coefficient (B=0.840), and a calculated T value of (24.865) with a significance level (Sig T=0.000), which is less than 0.05. Based on these results, the third sub-hypothesis is rejected, and the alternative hypothesis is accepted, which states that: "There is a statistically significant impact at the significance level ($\alpha \leq 0.05$) of digital governance on the application of risk-based auditing (risk assessment, risk response, and reporting) in Jordanian industrial companies."

## Results and Recommendations

### Results

The results indicated the following:

1. There is a high interest among Jordanian industrial companies in digital transformation and its dimensions (digital technology, digital innovation, and digital governance). This suggests that the management of these companies recognizes the importance of digital technology as one of the key elements that enhance their competitive ability, focusing on increasing operational efficiency, reducing costs, and acquiring the capability to adapt to rapid changes in the work environment. Through digital applications, digital technology helps company management

improve resource management and automate operations. Digital innovation contributes to enhancing their ability to create new services and products suitable for changing market conditions, while digital governance aids in improving oversight, transparency, and achieving efficiency in the decision-making process, thereby increasing credibility and trust.

2. There is a high interest among Jordanian industrial companies in risk-based auditing and its dimensions (risk assessment, risk response, and reporting). This indicates that the management of these companies recognizes the importance of preserving their resources and ensuring sustainability in an operating environment that faces many challenges. This is achieved by identifying and analyzing potential threats and risks that could affect the company's financial, operational, and strategic objectives, developing plans to address them, and reporting to the relevant authorities along with the necessary procedures to manage these risks.

3. Digital transformation positively affects the application of risk-based auditing in Jordanian industrial companies.This is achieved through the tools and modern technologies provided by digital transformation that improve the efficiency and accuracy of risk-based auditing procedures. Advanced analytical techniques enable the detection of suspicious trends and the identification of potential risks more quickly and accurately. Moreover, digital technology helps automate proactive planning, crisis management, and execution, leading to a faster response and reducing the impact of risks. Digital governance further aids by unifying data and facilitating its exchange across electronic systems, thereby enhancing communication speed and transparency with relevant stakeholders.

4. Digital technology positively affects the application of risk-based auditing in Jordanian industrial companies.This impact is realized by offering advanced solutions that enhance operations and ensure the precision and effectiveness of risk management. Digital technology provides instant communication channels and comprehensive reports that meet the needs of all parties. It assists in identifying and classifying potential risks through the collection and analysis of vast amounts of data, and offers digital tools that simplify the electronic implementation of preventive plans, thereby increasing transparency and expediting decision-making.

5. Digital innovation positively impacts the implementation of risk-based auditing in Jordanian industrial companies by introducing creative and innovative methods in the risk assessment and management process. Advanced analytical tools help in predicting and identifying potential risks quickly based on previous data and expected trends, developing innovative risk modeling techniques, and creating automated systems to handle them automatically. Additionally, the development of digital platforms helps in providing real-time reports in advanced formats, offering a clear and comprehensive view for decision-makers within the company.

6. Digital governance positively affects the implementation of risk-based auditing in Jordanian industrial companies by providing a clear framework for controlling and managing processes and making decisions based on digital data. Digital governance enables the use of unified systems that collect and analyze data from all departments accurately, helping identify potential risks and how to manage them. It also assists in preparing policies and procedures based on interconnected digital systems, enabling quick responses to risks and reducing their impact on operations. Furthermore, it provides secure digital communication channels for the transparent exchange of important information and ensures compliance with local and international regulations and laws.

- **Recommendations**

**Based on the results obtained, the study offers the following recommendations:**

1. Jordanian industrial companies should adopt artificial intelligence and big data analytics tools for effective and quick risk assessment, and work on updating and enhancing their technological systems to ensure their integration with auditing and risk management procedures.

2. Jordanian industrial companies should provide specialized training programs to develop employees' skills in using digital technologies, enabling them to create virtual scenarios that assist in strategic planning for risk management and audit execution.

3. Jordanian industrial companies should allocate adequate budgets to develop innovative solutions that enhance their ability to predict and manage risks.

4. Encourage a culture of innovation within Jordanian industrial companies by providing digital tools that foster collaboration and creative thinking.

5. Jordanian industrial companies should adopt clear digital frameworks that align with local and international auditing and risk management requirements, and utilize electronic governance tools that ensure secure and easy data exchange between departments.

6. Jordanian industrial companies should implement dynamic reporting systems that provide decision-makers with updated, real-time data analyses.

7. Jordanian industrial companies should build an integrated system that combines digital technology, digital innovation, and digital governance processes to carry out risk-based auditing procedures comprehensively.

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