# The Impact of Information Technology Governance on the Cloud-Computed Enterprise Resource Planning System in Jordanian Commercial Banks

Saqer Al-Tahat<sup>1\*</sup>, Osama Abdel Moneim Ali<sup>2</sup>, Ghazi Qasaimeh<sup>3</sup>, Luma Basheer<sup>4</sup>, Mamoun M. A. Alqudah<sup>5</sup>

<sup>1</sup> Assoc. Prof., Accounting Department, School of Business, Al al-Bayt University, Al-Mafraq, Jordan. \* Corresponding author e-mail: <u>dr.altahat@aabu.edu.jo</u>, <u>saltahat@yahoo.com</u>

<sup>2</sup> Prof., School of Business, Jerash University, Jerash, Jordan.

<sup>3</sup> Assoc. Prof. Qadisiyah College, Al-Balqa Applied University, Amman, Jordan

<sup>4</sup> Presidency of the University of Tikrit, Tikrit University, Tikrit, Iraq

<sup>5</sup> Assoc. Prof., Mamoun M. A. Alqudah, Accounting Department, School of Business, Ajloun National University, Jordan.

# Abstract

The research intended to illustrate the influence of information technology governance (COBIT19) on the cloud-based enterprise resource planning system in commercial banks in Jordan. The study used an analytical descriptive methodology and utilized the Statistical Package for Social Sciences -SPSS application to address the research objectives and hypotheses. The research population consisted of the primary departments of the Jordanian commercial banks, totaling 12 institutions at the end of 2022. The study focused on individuals working in different administrative levels within the main departments of Jordanian commercial banks. The study yielded several findings, with the most significant being the identification of a statistically significant influence of information technology governance COBIT19 on the cloud-based enterprise resource planning system in banks. This influence was observed across various dimensions, including technological competence, collaboration with external experts, support from senior management to employees, institutional culture, system characteristics, and digital administrative communication. The primary recommendations emphasize the necessity for Jordanian commercial banks' management to embrace a well-defined approach in implementing the computerized enterprise resource planning system. This entails thorough preparation for system application and the development of comprehensive business plans encompassing all implementation stages. Furthermore, there is a need to embrace a broader range of principles including information technology governance, such as COBIT19, to provide a comprehensive framework for ensuring the safeguarding and integrity of information.

**Keywords:** information technology governance (COBIT19): cloud-computed enterprise resource planning system: Jordanian commercial banks.

# Introduction

The increasing reliance of banks on information and communication technology has impacted various economic and social aspects, including the diversification of services provided. This shift towards digital technologies has led to the emergence of financial technology, with banks rapidly adopting these technologies in their services. Modern technologies such as blockchain, artificial intelligence, and smart contracts have transformed banking products and services from traditional to digital (Habashneh, 2022).

In 2018, Information Systems Audit and Control Association ISACA announced an update called "COBIT 2019" to keep pace with updates and contribute to the development of governance strategies to be more flexible, appropriate to changing and modern technology, the latest version of COBIT, where its modernization the work of banks and leading companies.

COBIT 19 contains 37 regulatory objectives, with a high level of five dimensions, namely, "planning, ownership, organization, implementation, connectivity, follow-up and evaluation," and seven information standards, namely, privacy, inclusiveness, efficiency and effectiveness, responsiveness, availability, and reliability. The framework is based on the identification of information technology resources or sources of applications and software, human resources, facilities, technology, and database (Area, 2021). COBIT 19 focuses on helping companies and banks to reach their information technology management and governance objectives and contributes to value creation by maintaining a balance between improving risk levels and using resources and actual benefits (Al-Sajini et al., 2023).

COBIT2019 clarified a basic and essential concept in the field of information technology, and it emerged as a model that helps organizations direct their business in a rational and systematic manner to achieve corporate strategy, as some companies began to apply COBIT2019 with the aim of achieving integration between business and information technology (Al-Gasaymeh, 2023). The importance of COBIT2019 in economic units lies in its vital role in sustaining these units, achieving good organizational goals, enhancing competitive advantage and the ability to compete in the labor market, and thus good management of information technology becomes crucial to ensuring the effective use of technology and achieving the company's goals successfully (Sihotang, et al. 2020).

The information technology governance framework (COBIT 19) supports the work of companies and sophisticated banks leading in accounting and regulatory work. since business development and value-added provision are not limited only to traditional industry, but also to service providers, including software providers, who have been providing traditional programmers for the development of administrative services, such as enterprise resource planning systems in their traditional form,

which operate through large computers, which need massive infrastructure that can only be applied by large companies and banks. The cloud is now one of the requirements of the present era. Software and administrative applications providers have developed their services to move to the cloud, so that companies and banks in all their sizes and legal forms can benefit from the services of suppliers through cloud services provided by them (Kamal, 2019).

The research gap in the study primarily revolves around several key areas. There is a notable lack of studies specifically focusing on the Jordanian context, which leaves a significant gap in understanding how IT governance and cloud-based ERP systems are managed within Jordanian commercial banks. Additionally, there is insufficient exploration of the specific challenges and benefits associated with integrating IT governance frameworks with cloud-computed ERP systems in this context. Another gap exists in the direct measurement of the impact that IT governance practices have on the performance and efficiency of these systems. Furthermore, there is a need for research that identifies best practices and frameworks tailored to the unique environment of Jordanian commercial banks to ensure effective implementation and governance of cloud-based ERP systems. Addressing these gaps would provide valuable insights and practical guidelines for enhancing the effectiveness of IT governance in relation to cloud-computed ERP systems in Jordanian commercial banks. Therefore, this study worked to demonstrate the impact of information technology governance (COBIT19) on the cloud-computed enterprise resource planning system in Jordanian commercial banks.

### **Theoretical framework**

1. Cloud Computing

According to Alrabei (2021), cloud computing is a comprehensive architecture of various components and features that can efficiently gather, analyze, and distribute information. Since it makes it possible to provide information quickly and affordably, cloud computing is regarded as one of the most crucial technologies utilized by different commercial companies in their varied activities (Jahmani et al., 2023).

Also, Allal and Boubaaya (2020), Cloud computing "is a system capable of collecting, processing, classifying, and storing data and information required by decision-makers to perform all administrative functions, including planning, organizing, directing, and controlling, in all areas of work within an organization. Public and private institutions have witnessed a qualitative shift in information systems, which include the use of computers, databases, communication networks, and other technological means that contribute to the existence of an information system primarily based on computer usage".

The COBIT 19 framework works to create benefit for banks by using information technology in an effective and innovative manner and maximizing the benefit of investments supported by information technology. Which leads to achieving the strategic goals of banks, preserving high-quality data for management to use in decision-making. That is commensurate with the needs and desires of customers, as well as raising the level of the bank's performance and deepening the role of auditing over information technology and its outputs (Ilori, Nwosu, & Naiho, 2024).

In addition, the application of this framework serves the internal control system in the company by providing it with internationally accepted principles, and thus leads to the provision of analytical practices that in turn help to increase confidence in the value of information provided to internal and external parties. Which leads to the expansion of the bank's business and increasing its profitability (Lanter, 2018).

Meanwhile, the objective of applying the COBIT 19 framework is to achieve information technology governance in a manner commensurate with the strategic level of banks and companies. In addition to effectively handling information technology management operations (Hardy, 2016).

2. The Concept of a Cloud-Computed ERP System

It is a comprehensive information system designed to integrate the resources operations and information of all departments of the organization such as manufacturing, marketing, sales, inventory management, accounting, maintenance, customer relationship management, human resource management and electronic commerce. This achieved through a single interconnected system that includes a comprehensive database in a way that leads to raising the efficiency of the performance for companies and banks and contributes to controlling their resources and managing their operations. (Beheshti et al., 2014). Kroenke (2015) defines it as "a set of applications, a database, and a set of processes necessary to enhance and coordinate business processes in a single automated platform."

Therefore, the organization must have objective factors and conditions in place for the success of the cloud ERP application. Which are represent in the efficiency and skill of the main users to evaluate the efficiency of the system's operation, and to identify its problems and gaps and address them, which contributes to the success of implementing the system and achieving the desired goals of the company and the bank, thus, that one of the factors for the success of the application of the cloud ERP system is support of senior management, the organizational culture, as well as the support of the service providers of the system (Almahamid & Awsi, 2015).

Additionally, it refers to the total knowledge used by the members of the organization to give meanings and provide explanations for all the phenomena surrounding them inside and outside organization, which is reflect in management practices and its method in achieving goals and can be classifies into creative culture, family culture, market culture, and hierarchical culture (Kwamboka, 2015).

Moreover, the researchers believe there is a real integration between the governance of information technology COBIT 19 and the cloud ERP system. That highlights their role in administrative communication between employees in banks, which is the transfer of information between them, or receiving information from abroad, by a technical means that may be smart networks linked to satellites in addition to technologies currently used such as: (computer, e-mail, mobile phone, social media tools).

Hence, there must be an internal communication effectively strategy in the bank provides a guiding framework for the communication process and aims to support communication between employees and directorates with the aim of facilitating work, taking their suggestions, and gaining the necessary support from employees, as it achieves the vision and mission of the strategy plan. As a result, effective communication and information exchange between management and employees is necessary and a basic condition in the organizational strategy of banks.

#### 3. Enterprise Resource Planning

A computerized integrated system that supports all the business's operations and activities is called an enterprise resource planning system. Financial, accounting, inventory, marketing, maintenance, human resources, and project management tools are all included. For the business, it is also regarded as a decision support system. As a result, Tavana et al. (2020) characterize it as an enterprise resource planning system that uses databases, shared software platforms, and general organization techniques to combine planning and administration.

Enterprise Resource Planning systems are also described by Carlsson et al. (2022) as comprehensive information systems that are made to integrate the information, processes, and resources of all organizational departments, including e-commerce, marketing, sales, manufacturing, inventory management, accounting, maintenance, customer relationship management, and human resources management. This is accomplished by means of a single, networked system that includes an extensive database, improving organizational effectiveness and aiding in resource optimization and process management.

#### 4. The Jordanian Banks

The number of operating banks in Jordan reached twenty-four by the end of 2022. These banks are distributed into sixteen Jordanian banks, including three Islamic banks and thirteen commercial banks, and eight branches of foreign banks, including a branch of an Islamic bank. All these banks

conduct their activities through 871 branches and 70 offices distributed within the kingdom, compared to 861 branches and 81 offices at the end of 2021 (Abutaber, 2023).

According to Smreen (2018), bank credit is defined as the trust given by a bank to an individual, whether natural or legal, to provide them with a specific amount of money for a specified period and under certain conditions, in return for an agreed-upon return and with guarantees that enable the bank to recover its loan in case the client defaults. Abutaber et al. (2023) argue that banks need to establish sound foundations and policies to reduce risks and secure them, as well as develop high-quality accounting standards and principles. Thus, banks play an active role in stimulating investment and revitalizing the economy in the countries where they operate (Almajali et al.,2023).

### **Literature Review**

Global technical and economic transformations are putting a lot of strain on businesses. Exploring the newest technologies has become crucial and essential due to the substantial improvements in information technology. As a result, there is now a greater need for information, which is integrated into many other domains and is used by economic entities as a business strategy to set one organization apart from another (Bashatweh et al., 2022).

Accounting information dependability is regarded as one of the most significant subsystems of an information technology governance, and it is essential to a company. Accounting systems have evolved to require accurate and trustworthy information for creating information systems that help handle the enormous amount of necessary data, as a result of technology improvements and the rise of globalization. Because cloud computing automates data processing, it has significantly aided in this (Ababneh and Alrabei, 2021).

Consequently, information technology governance has emerged, which have improved the quality of financial reports by providing timely and high-quality information. This assists users of this information in making better decisions (Abdul Latif et al., 2019).

A study by Amrul (2014) emphasized that the reliability of accounting information systems relies on accuracy and high-speed processing and execution of financial data, providing management with the necessary information to choose among a set of available alternatives, flexibility, and scalability, and providing services and performing various types of administrative tasks, such as decision-making, planning, control, and coordination. This was also supported by a study by Turner et al. (2018). Furthemore, Hazaa and Jogdand (2020) and Al-Hattami and Kabra (2019) highlighted the positive impact of using accounting information systems in commercial banks, considering dimensions such as human resources, procedures and instructions, credit organization data, software used, and IT infrastructure in credit decisions.

COBIT's role characterizes the relationship between COBIT and cloud ERP systems in banks as an IT governance and management framework, which ensures the effective and secure utilization of cloud ERP systems. By providing a comprehensive framework for IT governance, COBIT assists banks in establishing clear policies and procedures for managing these systems. It ensures that cloud ERP implementations align with the strategic objectives and aspirations of the bank (Al-Mahidli, and Al-Mufiz, 2021).

Furthermore, COBIT aids banks in identifying and assessing risks associated with cloud ERP systems, encompassing security, privacy, and regulatory compliance risks. This framework empowers banks to develop robust strategies for effectively managing these risks, thereby ensuring business continuity and operational efficiency (Abu Al-Khair, 2023).

After reviewing the accounting literature and previous studies that addressed the research topic, the study formulated the following hypotheses:

H0: There is no statistically significant impact at a significant level ( $\alpha \le 0.05$ ) of information technology governance (COBIT19) in the cloud-computed ERP system in terms of its dimensions (technological competence, cooperation with external experts, support of senior management to employees, institutional culture, system characteristics, and digital administrative communication) in the Jordanian commercial banks.

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

**H01.** There is no statistically significant impact at a significant level ( $\alpha \le 0.05$ ) of information technology governance (COBIT19) on technological competence in Jordanian commercial banks.

**H02.** There is no statistically significant impact at a significant level ( $\alpha \le 0.05$ ) of information technology governance (COBIT19) on cooperation with external experts in Jordanian commercial banks.

**H03.** There is no statistically significant impact at a significant level ( $\alpha \le 0.05$ ) of information technology governance (COBIT19) on support of senior management to employees in Jordanian commercial banks.

**H04.** There is no statistically significant impact at a significant level ( $\alpha \le 0.05$ ) of information technology governance (COBIT19) on the institutional culture of the Jordanian commercial banks.

**H05.** There is no statistically significant impact at a significant level ( $\alpha \le 0.05$ ) of information technology governance (COBIT19) on system characteristics in Jordanian commercial banks.

**H06.** There is no statistically significant impact at a significant level ( $\alpha \le 0.05$ ) of information technology governance (COBIT19) on digital administrative communication in Jordanian commercial banks.

### Methodology

The researchers employed an analytical descriptive technique to explore and analyze the phenomenon of information technology governance, specifically COBIT19, and its impact on cloud-based enterprise resource planning (ERP) systems within Jordanian commercial banks. Data for the research was collected through a questionnaire, which was subsequently analyzed. The analysis revealed a correlation between the variables and the perspectives expressed regarding them, as well as the associated processes and their resultant effects.

1. Type and nature of the study.

The primary data for this study was collected through a field survey, making it a field and illustrative study. Its purpose is to investigate the relationship between variables, and it is deductive in nature as it builds upon previous studies.

2. Strategy of the study

The scanning technique is used to identify the factors that contribute to the occurrence of phenomena, with the objective of understanding its influence and outcome, as well as studying the present facts pertaining to the nature of the event.

3. Study population and sample.

The research sample consisted of the main departments of the Jordanian commercial banks, totaling 12 institutions as at the end of 2022. Considering the constraints of the research population, the comprehensive survey approach was used to choose the study sample, which included the complete study population.

4. Unit of Analysis

The unit of analysis was represented in the individuals working in the higher administrative levels (general and executive managers), the intermediate administrative levels (managers, heads of units and departments of financial management, information technology department), and the lower administrative levels (employees in the previous departments) in the main departments in the Jordanian commercial banks. In view of the inability to obtain the exact number of employees, the researcher distributed (16) questionnaires in each bank in order to target the largest number of employees, as the number of distributed questionnaires reached (195) questionnaires. The researcher was able to retrieve (179) questionnaires, of which (11) were not valid for analysis, so that the researcher was left with (168) valid questionnaires for analysis, with a recovery rate of (86.2%) of the total distributed questionnaires.

## 5. Methods of data collection

The study relied on collecting data on two sources: First, secondary sources refer to articles, peerreviewed scientific periodicals, research reports, publications, and previous studies, both Arab and foreign, that have addressed the topics and aspects related to the variables of the current study. The purpose of consulting these sources is to gain a comprehensive understanding of the study subject and stay informed about the latest advancements in the field. Secondly, the primary sources of this study are represented by the major research tool, which is a questionnaire specifically constructed to fulfill the study's objectives. The questionnaire comprehensively covers all the components outlined in the theoretical framework, including the questions and hypotheses upon which the investigation is founded. The questionnaire had many paragraphs that accurately represented the factors and aspects of the investigation. divided into two segments: Part I: COBIT19 IT Governance. Part II: the cloudcomputed enterprise resource planning system, which included (technological competence, cooperation with external experts, support of senior management to employees, institutional culture, system characteristics, and digital administrative communication).

### Statistical methods

The study used the Statistical Package for Social Sciences (SPSS) tool to address the research objectives and hypotheses.

First: Descriptive Statistic Measures: for the purposes of describing the dimensions and variables of the study, which included:

- Mean: to measure the average of respondents' answers to the questionnaire paragraphs.
- Standard Deviation: to measure the extent to which answers dispersed from their mean.

Second: Relative importance: which was determined according to the following formula and according to the five-point Likert scale for the answer alternatives for each paragraph, where the number of levels are: low, intermediate, and high.

Relative importance =  $\frac{\text{The upper limit of the alternative} - \text{The lower limit of the alternative}}{\text{Level #}}$ 

$$=\frac{1-5}{3}=1.33$$

Where the level is considered

- Low if the mean is from 1.00 to less than 2.33.
- Intermediate if the mean is from -2.33 to less than 3.66.
- High if the mean ranged from 3.66 to 5.00.

Third: internal consistency coefficient "Cronbach Alpha": to identify the stability of the study instrument. to identify the stability of the study instrument, which was used to measure the reliability of the study tool.

Fourth: Simple Linear Regression Analysis: To test the hypotheses of the study. Which was used to measure the effect of the independent variable (COBIT) on the dependent variable (cloud-computed enterprise resource planning system).

Testing the stability of the study instrument

To assess the reliability of the instrument used for assessing the variables in the research, the Cronbach Alpha Coefficient test was employed. According to Sekaran and Bougie (2016, p. 311), the scale is considered statistically acceptable if the Cronbach Alpha value exceeds 0.60. The proximity to (100%) indicates greater levels of stability for the study instrument. Based on the data provided in the table, the Cronbach alpha internal consistency coefficient was calculated for the study variables, their dimensions, and the study instrument, to assess the consistency of the responses. The results are presented below:

Number	Variable	Number of	Cronbach	
	Variable	Paragraphs	Alpha	
1	Information Technology Governance COBIT19	8	0.836	
2	Technological Competence	7	0.909	
3	Cooperation With External Experts	7	0.812	
4	Support of Senior Management to Employees	6	0.896	
5	Institutional Culture	7	0.832	
6	System Characteristics	8	0.910	
7	Digital Administrative Communication	7	0.898	
8	Cloud-Computed ERP System	42	0.971	
Study Ins	strument	50	0.974	

Table (1): The values of the internal consistency coefficient for the items of the study instrument

The table (1) displayed the range of Cronbach alpha internal consistency coefficients for the items of the research instrument, which varied from 0.812 to 0.971. Furthermore, the Cronbach alpha coefficient for all items of the research instrument was determined to be 0.974, indicating that all values above 0.60. This indicates the coherence among the paragraphs of the research tool, the dependability of the research tool, and the potential for utilizing it in statistical analysis.

# Practical side of the study

# 1. The Response Description of the Sample

The means, standard deviations, and relative importance ranks, used to describe the respondents' responses to the questionnaire items and their variables, and the results were as follows:

 Table (2): Means, standard deviations, ranks and relative importance for describing the dimensions and variables of the study.

Variable	Moon	Standard	Donk	Relative	
V al lable	Wiean	Deviation	Nalik	Importance	
Technological Competence	3.969	0.735	3	High	
Cooperation With External Experts	4.491	0.471	1	High	
Support Of Senior Management to Employees	3.930	0.700	4	High	
Institutional Culture	4.130	0.658	2	High	
System Characteristics	3.867	0.747	5	High	
Digital Administrative Communication	3.663	0.809	6	High	
Cloud-Computed ERP System	4.077	0.589		High	
It Governance (Cobit19)	4.317	0.537		High	

Table (2) indicates that the trends of the respondents were towards the high relative importance of the cloud-computed enterprise resource planning system. Where the mean was (4.077) and the standard deviation was (0.589). All dimensions of the cloud-computed enterprise resource planning system showed high relative importance, where the dimension (cooperation with external experts) ranked first, with mean of (4.491) and standard deviation of (0.471), while the dimension of (digital administrative communication) ranked last, with a mean of (3.663) and a standard deviation of (0.809). It also appears from the table that the trends of the respondents were towards high relative importance of IT governance COBIT19, where the mean was (4.317), with a standard deviation of (0.537).

# 2. Testing the Study Hypotheses

The main hypothesis of the study: There is no statistically significant impact at a significant level ( $\alpha \le 0.05$ ) of information technology governance (COBIT19) in the cloud-computed ERP system in terms of its dimensions (technological competence, cooperation with external experts, support of senior management to employees, institutional culture, system characteristics, and digital administrative communication) in the Jordanian commercial banks.

The main hypothesis includes six sub-hypotheses, each of which deals with the impact of information technology governance COBIT19 on every dimension of the cloud-computed enterprise resource planning system.

To test the main hypothesis and its branches, simple linear regression analysis used, and the results were as follows:

Table (3): \* Results of simple linear regression analysis to show the impact of information technology governance on the cloud-computed enterprise resource planning system in terms of its combined and individual dimensions.

Dependent Variable	Independent Variable	R	R <sup>2</sup>	R <sup>2</sup> Adj.	The Standard Error of the Model	F Value	Sig F*	В	T Value	Sig T*
technological competence		0.688	0.473	0.470	0.588	149.086	0.000	0.916	12.210	0.000
cooperation with external experts		0.601	0.361	0.357	0.481	93.701	0.000	0.594	9.680	0.000
support of senior management to employees	information	0.670	0.449	0.446	0.557	135.186	0.000	0.826	11.627	0.000
institutional culture	technology governance	0.537	0.288	0.284	0.664	67.139	0.000	0.694	8.194	0.000
system characteristics	COBIT19	0.646	0.418	0.414	0.605	119.151	0.000	0.843	10.916	0.000
digital administrative communication		0.558	0.311	0.307	0.734	74.931	0.000	0.811	8.656	0.000
Cloud-computed ERP system		0.682	0.465	0.761	0.469	144.091	0.000	0.718	12.004	0.000

\* The effect is statistically significant at significance level of ( $\alpha \leq 0.05$ ).

Table (3) presents the results of a simple linear regression analysis of the impact of information technology governance (COBIT19) on the cloud-computed enterprise resource planning system and its sub-dimensions. The table showed that there is a statistically significant effect of information technology governance in the cloud-computed enterprise resource planning system and its sub-dimensions, as all the values of the significance level (Sig F, Sig T) appeared, respectively, less than 0.05.

In addition, the value of the correlation coefficient R showed there are strong and positive correlations between the governance of information technology (COBIT19) and the cloud-computed enterprise resource planning system and its sub-dimensions, which all appeared positive and greater than 50%. The table indicated that the sub-dimensions of the cloud-computed enterprise resource planning system experienced changes as follows: technological competence increased by 47.3%, cooperation with external experts increased by 36.1%, support from senior management to employees increased by 44.9%, institutional culture increased by 28.8%, system characteristics increased by 41.8%, digital administrative communication increased by 31.1%, and the cloud-computed enterprise resource planning system increased by 46.5%. These changes were attributed to the change in the governance of information technology under COBIT19.

Based on the foregoing, the main hypothesis and its branches rejected and the alternative hypothesis is accepted, which states that there is a statistically significant impact at a significant level ( $\alpha \le 0.05$ ) of information technology governance (COBIT19) in the cloud-computed ERP system in terms of its dimensions (technological competence, cooperation with external experts, support of senior

management to employees, institutional culture, system characteristics, and digital administrative communication) in the Jordanian commercial banks.

### **Discussion and Conclusion**

1. Discussion

The results of the current study indicated a high relative importance of COBIT19 information technology governance in Jordanian commercial banks. The current study was relatively consistent with the study of (Haay and Sitokdana, 2022). The result was that information technology governance in the Department of Communications and Information in Papua Province is working well, but it still needs to development.

The results of the analysis of the study tool indicated a high relative importance of the cloud-based enterprise resource planning system in Jordanian commercial banks, and the current study agreed with (Assaf and Al-Ghaish, 2021) that enterprise resource planning systems support and enhance the achievement of sustainable competitive advantage for the supply chain of Egyptian industrial business facilities. The results indicated Testing the main hypothesis and its ramifications revealed that there is a statistically significant effect of COBIT19 information technology governance on the cloud-based enterprise resource planning system and its dimensions (technological efficiency, cooperation with external experts, senior management support for employees, institutional culture, system characteristics, and digital administrative communication) in Jordanian commercial banks, and it was agreed that The current study is with the study (Adrian and Wang, 2022), the results of which were that it is possible to increase the productivity of companies in the banking sector by creating a technical work environment between information technology and the activities and services provided by the company, and the study (Al-Taie and Al-Najjar, 2021) that increasing Knowledge of the concept of information technology by the Internal Audit Department, as internal audit is one of the important roles on which readers rely. A study (Mansour, 2021) revealed the existence of a relationship between the dimensions and requirements of cybersecurity (processes and procedures, cyber risks, confidentiality and privacy protection, logical security, strategy) on modern frameworks for internal control (COBIT) and the value of the economic unit. The study (Abu Afifa, 2021) showed that there is an impact of the governance and management of information and its accompanying technology according to the COBIT framework on the characteristics of primary accounting information (the suitability characteristic and the reliability characteristic) in Jordanian commercial banks. The researchers recommend that more research be conducted considering developments related to cyberattacks on accounting systems and ways to combat them through cybersecurity.

## 2. Conclusion

the study aimed to measure the impact of information technology governance (COBIT19) on the cloud-computed enterprise resource planning system in terms of its dimensions (technological competence, cooperation with external experts, support of senior management to employees, institutional culture, system characteristics, and digital administrative communication) in Jordanian commercial banks. The results of the analysis of the study instrument indicated a high relative importance of information technology governance (COBIT19) in the Jordanian commercial banks. This indicates a high level of awareness of the management of Jordanian commercial banks of the importance of information technology governance (COBIT19) in managing the desires and needs of customers according to the general framework of the bank's strategy and directing it towards achieving their interests. This also reflects the level of interest of the management of Jordanian commercial banks in improving and developing their technologies used to keep pace with the changing requirements in the surrounding environment, controlling their information technology and its outputs, and improving the level of performance in the bank. and the results of the study instrument analysis indicated a high relative importance of the cloud-computed enterprise resource planning system in the Jordanian commercial banks. This indicates a high level of awareness of the management of Jordanian commercial banks of the importance of the cloud-computed enterprise resource planning system in running activities and operations, providing channels of communication between the various departments and units of the bank, and relying on a common database to facilitate functions and operations by achieving flexibility in providing data and information.

The results of testing the main hypothesis and its branches indicated that there is a statistically significant impact of information technology governance (COBIT19) on the cloud-computed enterprise resource planning system and its dimensions (technological competence, cooperation with external experts, support of senior management to employees, institutional culture, system characteristics, and digital administrative communication) in Jordanian commercial banks. The presence of this impact indicates the importance of information technology governance in achieving efficiency and effectiveness in the cloud-computed enterprise resource planning system. As it contributes to achieving harmonization between the bank's strategy and the information technology strategy, and helps protect and provide information security and privacy in commercial banks, as it represents a tool that helps manage the risks associated with the application of the cloud-computed enterprise resource planning system, represented in not meeting the requirements of users, failure to achieve integration Incompatibility with the technical structure, supplier support problems, in addition to the high cost and complexity of installing the system, and that its application helps achieve

the bank's objectives by providing integrated information that contributes to supporting the decisionmaking process and drawing up policies and strategies for banks.

Based on the results reached, the researchers recommend the management of Jordanian commercial banks should adopt a clear methodology for the implementation of the cloud- computed enterprise resource planning system, which includes good preparation for the application of the system, and the preparation of business plans that include all stages of implementation. and increasing the level of interest of the management of Jordanian commercial banks in applying the cloud-based ERP system; Because of the many advantages it achieves that contribute to the bank's performance. and the management of Jordanian commercial banks must provide all material, human, and organizational elements that support the application of the cloud-computed enterprise resource planning system and the implementation of information technology governance COBIT19. and the management of Jordanian commercial banks should adopt more concepts related to information technology governance (COBIT19) as a general framework for achieving information protection and security and the management of Jordanian commercial banks should conduct periodic updates and developments on the COVID-19 information technology governance system applied by them to keep pace with changes in the work environment.

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