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THE ROLE OF (IT) GOVERNANCE FRAMEWORK'S DIMENSIONS IN LIMITING THE RISKS OF (CAIS): APPLIED TO INDUSTRIAL FIRMS IN IRAQ

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Abstract:

This research seeks to determine the dimensions of (ITG) that could reduce CAIS risks in Iraq industrial firms. This research used a snowball sample technique to collect data from 291 employees worked in Iraq industrial firms. The results showed that all dimensions of (ITG) (Firm & Planning, Acquire & Implementation, Delivery & Support, Monitoring & Evaluation, Guidance & Control) have an impact on the decrease of CAIS risks significantly and positively.

Keywords: Information Technology Governance (ITG) - Cloud Accounting Information Systems (CAIS) risks

INTRODUCTION:

Over the past decade, the development of cloud computing and its applications have piqued the interest of numerous scholars and practitioners in various fields in general and the accounting field in particular.

Cloud accounting evolved as a cloud computing application that moves accounting information systems within businesses to cloud service providers' servers. Cloud accounting, like other cloud computing applications, offers numerous advantages to businesses, including cost savings, flexibility, expandability, and long-term competitive advantage. Otherwise, cloud accounting information systems may be vulnerable to a variety of threats. Dealing with data leakage, preventing data loss, transforming information security, and monitoring compliance has become a significant concern for commercial firms. As a result, firms have begun to implement information technology governance frameworks, which allow them to align their strategy and objectives while also providing a solid and safe platform for many new approaches (Alotaibi et al., 2021; Elazhary et al., 2023).

However, because there is minimal research available to analyses this role, the role of (ITG) in a dynamic environment and its impact on risk reduction of cloud accounting information systems is currently under investigation. Accordingly, this research seeks to verify the relationship between these variables applied to Iraq Industrial firms.

THE RESEARCH PROBLEM:

Missing or missing (ITG) is frequently reflected by bad information technology acquisition, development, and use, and ultimately by poor information technology capacity and performance. This is typically detected by inflated project estimates, unjustified increases in running expenses, and incurring excessive risks through unplanned responses.

The following questions raised the research problem:

The main question: How could (ITG) reduce (CAIS) risks?

This question is divided into the sub-questions listed below:

1- Is there any significant relationship between (ITG) dimensions and risk reduction of cloud accounting information systems (CAIS)?

2- Does information technology governance (ITG) affect risk reduction of cloud accounting information systems (CAIS)?

RESEARCH OBJECTIVES:

1. This study intends to accomplish the following goals:
2. Determine the direction & Strength of the relationship between IT governance dimensions and risk reduction of cloud accounting information systems (CAIS).
3. Investigate the Role of (ITG) dimensions on Limiting the risks of (CAIS)?

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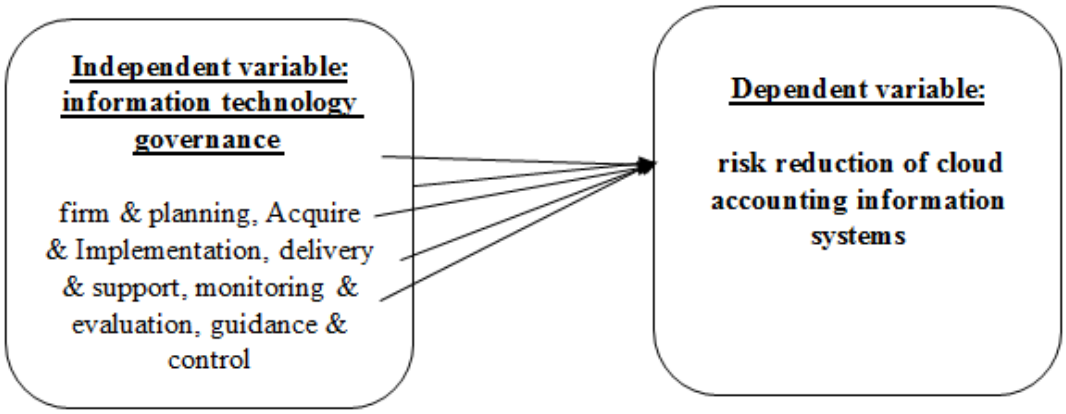
RESEARCH HYPOTHESES:

Based on the research questions and aims, the following hypotheses can be developed:

1- There is a significant relationship between information technology governance (ITG) dimensions and risk reduction of cloud accounting information systems (CAIS).

2- IT governance dimensions affect risk reduction of cloud accounting information systems (CAIS) significantly & positively.

The current research contains one independent variable represented in information technology governance, and one dependent variable represented in risk reduction of cloud accounting information systems as shown in Figure 1.



The import of the research arises from the importance of the variables explained, as effective (ITG) is regarded as the most important indication of information technology business value, and firms with more effective (ITG)had greater total profits. The importance of the research is also highlighted by the role of IT governance in decreasing the risks associated with cloud accounting information systems (CAIS). As a result, the recommendations of this research would enable Iraq industrial firmsto reduce the risks of cyber-attacks, and customer loss.

THEORETICAL FRAMEWORK:

1- Information Technology Governance (ITG):

(ITG) is the administrative control employed by the board of directors and senior management to achieve business objectives in a variety of environments (Elazhary et al., 2023).

Information Technology Governance dimensions:

It is clear from the literature review that there is no agreement among researchers about the dimensions of information technology governance, as Alotaibi et al. (2021) In their study, they covered four dimensions: align, plan, and organize (APO), build, acquire, and implement (BAI), deliver, service, and support (DSS), and monitor, evaluate and assess (MEA).While Alsaleem and Husin (2023) Their research focused on five dimensions of (ITG) : organization and planning, acquisition and implementation, delivery and support, monitoring and evaluation, and finally, guidance and control.

Meanwhile, Elazhary et al. (2023) presented in their study three dimensions to (ITG) mechanisms represented in; decision-making framework, formal procedure, and communication method. The study of Syed Ibrahim et al. (2023) addressed other four dimensions to information technology governance mechanisms represented in top management support, information technology strategy, information technology steering committee, and information technology support service.

This research adopts the five dimensions represented in the study of Alsaleem and Husin (2023) as they are the most frequent and common.

1/1-Organization and Planning:

It is the foundation of (ITG)since it seeks to synchronize the technology of an firm and activities through the planning process, and ultimately to improve the strategic alignment process. It aims to ensure that technical management requirements are available which include; organizational structure, technical infrastructure, technical staff, and communication with them (Alotaibi et al., 2021; Alsaleem & Husin, 2023).

1/2-Acquire and Implementation:

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This dimension is concerned with identifying the basic requirements for information technology as well as acquiring and deploying information technology within the firm, which includes taking an organized strategy to working with projects and portfolios of investments. In addition to knowledge management and managing changes, etc. (Alotaibi et al., 2021; Alsaleem & Husin, 2023).

1/3- Delivery and Support:

This dimension seeks to improve the information technology system, support the data and deal with it properly to maintain its business activities and the continuity of information flow, as well as making information continuously available and accessible to both internal and external users (Alotaibi et al., 2021; Alsaleem & Husin, 2023).

1/4- Monitoring and Evaluation:

This comprises a strategy for carrying out a follow-up and assessment process, which defines what needs to be done, what activities are required to implement the process, who is in charge of it, and when and where it will occur (Alotaibi et al., 2021; Alsaleem & Husin, 2023).

1/5- Guidance and Control:

Internal or external neutral evaluator or assessors can implement control & guidance for a firm, initiative, or program to assure stakeholders' transparency, deliver benefits, mitigate risks, and leverage resources (Alsaleem & Husin, 2023).

2- Cloud Accounting Information Systems Risks:

Firms may be cautious to transfer accounting data to the cloud due to fears that the data would be corrupted or attacked, therefore data security and compatibility with present systems, as well as information accuracy, are among the most significant hazards of employing cloud accounting information systems (Alotaibi et al., 2021).

Previous Studies:

In the context of the relationship between (ITG) dimensions and risk reduction of cloud accounting information systems, Al-Sartawi (2020) study concluded that (ITG) and the level of cyber security of the firm are directly and significantly related. This indicates the importance of appointing board members who are knowledgeable and experienced in the field of information technology. This leads to better decision-making by the bords when confronting cyber threats and challenges.

Viecco and Arevalo (2020) emphasized the role of IT governance on risk management and information security in their study, as did the findings of Alotaibi et al. (2021) study, which demonstrated the importance of (ITG) in limiting the risks of (CAIS). In their comprehensive literature analysis, Setyadji et al (2023) emphasized that the implementation of (ITG) can help firms identify, assess, mitigate, and manage risks connected to their business in order to better achieve corporate goals.

Alsaleem and Husin (2023) confirmed the effect of (ITG) within the framework of cobit-5 which comprises of (planning & firm, acquisition & implementation, support and delivery, monitoring and evaluation, guidance and control) on audit risk has been confirmed. The findings of this study also revealed that one of the most influential dimensions of (ITG) in reducing audit risks is monitoring and evaluation, which could be attributed to the nature of providing information technology within firms' systems and the implementation of their applications and services that will be provided.

Numerous studies highlighted the important role of (ITG) and as example; The results of Sofyani et al. (2020) study shows that the culture of compliance in the field of information technology is indirectly related to the quality of service, accountability, and transparency through effective governance of information technology.

Results from Awwad and El Khoury (2020) show that information technology governance (ITG) affects two of the accounting measures represented in Return on Assets (ROA) and Return on Equity (ROE). In this context, Talab and Flayyih (2023) highlighted the impact of (ITG) under the control objectives for information and related technologies (COBIT) on financial performance. Meanwhile, according to Syed Ibrahim et al. (2023), the performance of audit technology is positively and strongly correlated with two independent variables: top management support and IT support service. IT strategy and the IT steering committee, the other two independent variables of (ITG) Mechanisms, are not significantly connected to audit technology performance.

THE RESEARCH METHOD:

The questionnaire:

It consists of two parts; the first one related to the independent variable which represented in (ITG)and its five dimensions (firm & planning, acquire & implementation, delivery & support, monitoring & evaluation, and guidance & control). The second part represented the dependent variable risk reduction of cloud accounting information systems. This questionnaire was adopted from (Alsaleem & Husin, 2023).

The sample and data collection method:

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A survey was used as the main method of data collection. The survey targeted 70 of Industrial firms listed in Iraq Stock Exchange, so snowball sampling technique was used to obtain a representative sample of 291 employees working in these firms. The questionnaire was prepared with a Google form and sent via e-mail to ensure its expansion.

RESULTS:

Reliability Analysis Results:

Table (1) Reliability Coefficients

Variable	Dimensions	N	Cronbach's Alpha
information technology governance	firm & planning	11	0.988
	Acquire & Implementation	7	0.871
	delivery & support	7	0.969
	monitoring & evaluation	8	0.861
	guidance & control	8	0.901
risk reduction of cloud accounting information systems		11	0.953

Source: prepared by the researcher based on the outputs of the SPSS statistical program.

Table 1 represented high reliability, high internal consistency for research variables and its dimensions, as it shows that firm and planning have the highest value of reliability (α=0.988) followed by delivery and support (α=0.969), then guidance and control (α=0.901), acquire and implementation (α=0.871), and finally, monitoring and evaluation (α=0.861), while the reliability of risk reduction of cloud accounting information systems was (α=0.953). All the reliability values exceeded the prescribed threshold of 0.7 this means that the data collected by the questionnaire is valid for the following stages of the analysis.

Descriptive Statistics Results:

Table (2) Descriptive Statistics

Variables	Dimensions	Mean	Std. Deviation
Information technology governance	firm & planning	3.6751	0.57534
	Acquire & Implementation	3.8007	0.46432
	delivery & support	3.8802	0.57679
	monitoring & evaluation	3.7332	0.42988
	guidance & control	3.9631	0.42387
Risk reduction of cloud accounting information systems		3.7738	0.47941

Source: prepared by the researcher based on the outputs of the SPSS statistical program.

According to Table 2, (ITG)level at the firm's being studied ranged from (3.9631) as a high value represented the general average of guidance and control with a std. deviation of (0.42387) This indicates that it is of significant relative importance. This meant that the management of the firms under consideration monitors the level of compliance of IT activities with applicable laws and regulations, and (3.6752) as a minimum value represented firm and planning with high relative relevance, implying that the firms being researched have a committee specialized in planning and managing information systems. Finally, the general average for decreasing the risks reduction of (CAIS) was (3.7738) which means that data analysis and surveillance of the firms being studied leads to a relatively high degree of (CAIS) risks reduction.

Hypothesis Test Results:

H1: There is a significant relationship between information technology governance dimensions and risk reduction of cloud accounting information systems.

Pearson correlation coefficient (Pearson's r)) was used as a first step in employing regression analysis to test this hypothesis, and the results are presented in Table 3:

Table (3) Pearson correlation coefficient

	(1) PO	(2) AI	(3) SD	(4) ME	(5) GC	(6) R
(1) PO	1					
(2) AI	0.619**	1				
(3) SD	0.435**	0.722**	1			
(4) ME	0.587**	0.900**	0.715**	1		

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(5) GC	0.606**	0.660**	0.448**	0.603**	1	
(6) R	0.697**	0.893**	0.684**	0.846**	0.718**	1

**. Correlation is significant at the 0.01 level (2-tailed).
(PO) firm & planning, (AI) Acquire & Implementation, (SD) delivery & support, (ME) monitoring & evaluation, (GC) guidance & control, (R) risk reduction of cloud accounting information systems.
Source: prepared by the researcher based on the outputs of the SPSS statistical program.

From Table 3, The findings revealed a positive and significant association between the elements of information technology governance. (ITG) and risk reduction of cloud accounting information systems at a significance level of 1%. The values of the correlation coefficients for this relationship ranged between (r=0.684) as a minimum value that represented the significant positive relationship between delivery & support and risk reduction of cloud accounting information systems, and (r=0.893) as a maximum value which that reflects the significant positive relationship between Acquisition & Implementation and risk reduction of cloud accounting information systems.

H2: Information technology governance dimensions affect risk reduction of cloud accounting information systems significantly & positively.

To test this hypothesis, "Multiple linear regression" analysis was used, and the results are presented in table (4):

Table 4: Multiple linear regression results illustrating Information technology governance dimensions effect on risk reduction of cloud accounting information systems

Model (1)		**Beta**	**T**	**(Sig.)**
Independent Variables	Dependent Variable			
firm & planning	risk reduction of cloud accounting information systems	0.173	5.629	0.000
Acquire & Implementation		0.474	8.174	0.000
delivery & support		0.075	2.247	0.025
monitoring & evaluation		0.162	3.026	0.003
guidance & control		0.169	5.287	0.000
R= (0.924) **R^2=** (0.854) **Adjusted R^2=** (0.851) **F (Sig.) =**332.632 (0.000)				

Source: prepared by the researcher based on the outputs of the SPSS statistical program.

Table 4 shows the results below;

1- The value of F (Sig.) is 0.000, which means that the fit of the model is good.

2- All beta (β) coefficients are positive and their values (t) are significant, which mean that all dimensions of (ITG) affect decreasing the risks of cloud accounting information systems in a positive and significant manner. Acquisition & Implementation have a strong effect on risk reduction (beta= 0.474), then firm & planning (beta =0.173), followed by guidance & control (beta =0.169), then monitoring & evaluation (beta =0.162), and finally delivery & support (beta = 0.075). So H2 was accepted.

3- All dimensions of (ITG) and risk reduction of cloud accounting information systems are significantly & positively associated as (R-value) = (0.924).

4- The value of determination coefficient (R^2) = (0.851), which means that 85.1% of the changes in the level of risk reduction of (CAIS) in Iraq could be accounted for the dimensions of (ITG) at a confidence interval of 95%.

THE CONCLUSION:

According to the results, the risks of CAIS will decrease since Acquire & Implementation procedures are becoming more common in industrial firms since it is one of the most essential characteristics of (ITG) in mitigating CAIS risks. While delivery & support slightly reduced the risks of CAIS. This may be due to the nature of providing information technology within the corporate systems and its applications that will be provided, along with the accuracy of transaction records and judgements made in light of them, as well as the authorized use of information technology, all of these factors influence mistake detection and thereby lower the risks of CAIS.

The study recommended that the firm's being studied should establish a special department for Information technology governance, which would have an ideological leadership orientation for the firm's development to tackle

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the risks of cloud accounting information systems. In addition to the need to activate (CAIS) security measures of all types and increase the level of application in comparison to the environmental risks that the firm may face as a result of cloud accounting information systems. Finally, firms must recognize (CAIS) risks in order to comprehend the internal controls and feedback linked to the system that firms must apply to ensure the smooth and safe operation of the firm's business.

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