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The Impact of Modern Information Technology Governance on Financial Performance (An Applied Study on a Sample of Private Iraqi Commercial Banks)

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Abstract

This research aims to identify information technology governance and its impact on financial performance. To achieve this, a hypothetical scheme was designed from which hypotheses emerged that stipulate correlations and influence between information technology governance and financial performance. The experimental approach was used to explore and address the research problem of whether information technology governance has The information has the ability to influence and raise the level of financial performance of the research sample. A questionnaire form was used to collect data, and a number of private Iraqi commercial banks were chosen together to implement the research. Their number was (10) banks, namely (Assyria International Bank, Bank of Baghdad, Commercial Bank of Iraq, Bank International Development, Iraqi Middle East Investment Bank, Khaleej Commercial Bank, Hammurabi Bank, Babylon Bank, Al-Mansour Bank, National Bank of Iraq). (322) questionnaires were distributed and (320) of them were retrieved. The data was analyzed and results were drawn through the statistical program. (spss V 25) Many conclusions were reached, the most important of which is (the clarity of the role that information technology governance plays among the employees of the banks studied and its effective role in completing the work and building their commitment and thus raising the level of the banks' overall financial performance. Based on the conclusions, a set of proposals were proposed, the most important of which is (The researched banks are interested in keeping pace with global development in technology governance, which in turn contributes to improving financial performance.

Keywords: *information technology, financial performance, data.*

Introduction

Information technology governance is one of the important indicators in the success of organizations to invest available financial resources and improve their financial performance. Given the involvement of information technology governance in various administrative activities, including financial ones, therefore, financial management in organizations of all types, including banks, must invest in information technology governance and benefit from it through... Employing it to raise the efficiency of financial performance, financial management service and its various activities. Through this study, it will be determined whether banks that have adopted information technology governance have improved their financial performance, by measuring performance indicators before and after adoption and application of these technologies.

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The first axis

First: the research problem

The banking sector is considered one of the most important and vital economic sectors, as it deals with a broad base of clients, whether individuals or institutions, and has been influenced by the development that has occurred in the field of modern technology, due to the scientific achievements and innovations it entails that have had an effective impact on improving financial performance, in many ways. More precisely, the features of the research problem are determined in each of the following questions:

1 - To what extent does information technology governance affect the financial performance of the banks under study?

2 - Do the banks under study follow good information technology governance that keeps pace with global development in increasing their financial performance, and what is the ability of this technology in governance to achieve a competitive advantage for the banks under study?

Second: The importance of research:

The research seeks to know the extent of the benefit of research variables in public organizations in general and in the private commercial banks studied in particular, and in a way that helps their development and application in the practical aspect in terms of adopting information technology governance in its dimensions (technical planning and organization, technical investment and creativity, information technology strategy). And enhancing financial performance.

Third: Research objectives

The research aims to determine the impact of information technology governance in raising the efficiency of financial performance. This can be summarized in the following points:

1- Knowing the reality of information technology governance in the banks under study.

2- The necessity of adopting integrated information technology governance within the banking institutions under study.

3 - Knowing the type of relationship between information technology governance and the financial performance of the banks under study by processing the obtained questionnaire data.

Fourth: Research hypotheses

1 - There is no statistically significant correlation between information technology governance and financial performance.

2 - There is no simple statistically significant relationship between information technology governance and financial performance.

3 - There is no statistically significant multiple influence relationship between information technology governance and financial performance.

Fifth: Limits of research

1- Human limits: It included workers within the administrative levels (general manager, department manager, division manager, unit official, senior employee) in the private commercial banks studied.

2- Time limits: It is represented by the time period that the researcher took to prepare the theoretical aspect of the current research and build a scale in light of the main research variables and its sub-dimensions, while presenting it to the experts and arbitrators, and introducing the necessary modifications so that the scale (questionnaire) is ready to measure the variables of the current research within the year (2023).

Sixth: The default model for research

For the purpose of addressing the research problem, the researcher adopted a hypothetical model as shown in Figure (1), which shows the correlation and influence relationships between the research variables

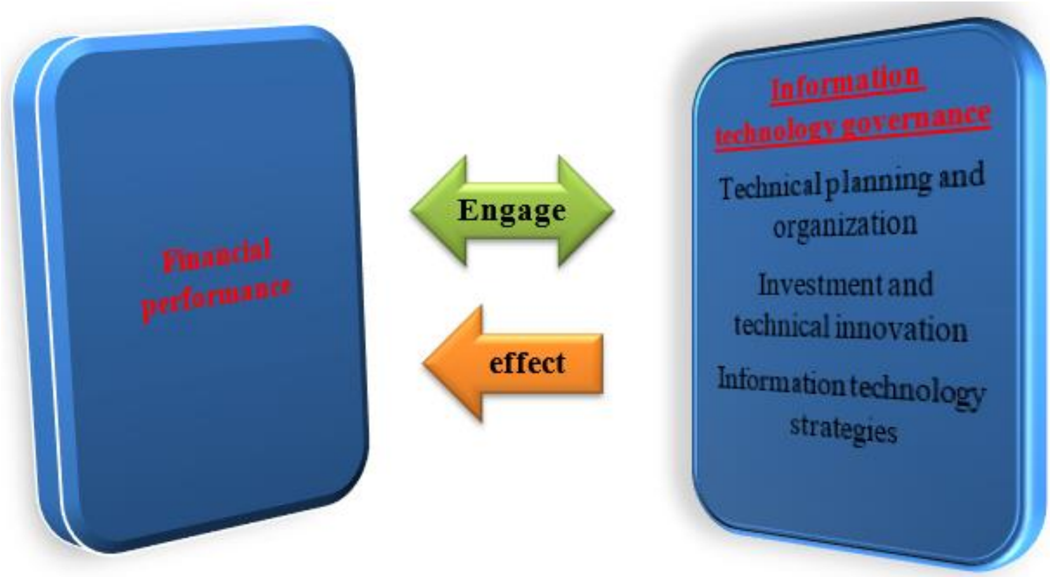

Figure (1) Hypothetical research plan / Source: Prepared by the researcher

The second axis

The theoretical aspect of information technology governance

Many studies have been conducted on the use of information technology by organizations, the results of which indicated the necessity of maximizing the benefit from that technology and successful investment in it that achieves the goals of all stakeholders. This requires adopting a strategy to adopt information technology applications, especially in light of the risks related to that technology, which are likely Cause negative effects on the organization. Therefore, organizational leaders realized the necessity of moving towards information and communications technology governance in order to create added value, reduce risks, and achieve effective management of all information technology resources.

(Gheorghe, 2010 : 32) (Schwarz &Hirscheim, 2003: 130) .

First: The concept of information technology governance

Many definitions of information technology governance have been provided by researchers and writers, as the Information Technology Institute (ITGI) defines it as “a set of relationships and processes that are designed to ensure that the organization’s information technology supports and improves the organization’s strategies and goals, achieves benefits, and monitors risks to keep them within the acceptable level.”(ITGI,2003:13)

Second: The importance of information technology governance

There are many functions on which IT governance depends, including:

1- Conveying complete information about information technology standards and designs to the relevant authorities and disseminating the necessary knowledge in this regard.

2- Apply information technology standards and designs through consensus and proactive initiative in management, and provide appropriate information technology standards.

3- Continuously monitor to ensure adherence to information technology standards and designs and provide support throughout operations.

4 - Maintaining information technology standards and designs to ensure their conformity with the best global examples of technology. (Al-Shammari, 2016: 147-148) .

Third: Dimensions of information technology governance:

Researchers have varied opinions in defining the dimensions of information technology governance and presented multiple classifications in their contents, as the research presents the most important dimensions of information technology governance .

1- Technical planning and organization:

This concept includes the optimal use of technology in organizations, so that it helps these organizations in implementing their public and private goals. In addition to the above, this concept sheds light on the form of infrastructure and organization for information technology in organizations, to reach satisfactory results (Zyoud et al., 2014: 198). As pointed out by Al Hila et. al., 2017:199) This concept includes the optimal use of information technology in organizations, and helping organizations implement their public and private goals. In addition, this concept highlights the form of infrastructure and organization in organizations to achieve satisfactory results while using technology .

2- Investment and technical innovation:

Today, technical creativity is considered a decisive factor in enhancing the organization's ability to survive and grow, and developing new processes or improving existing processes has become policies adopted by most organizations and seeks to invest them in designing a product that satisfies the customer's need and desire and meets his multiple and renewable requirements.

Technical innovation has been defined as "a process that requires cooperation and coordination between a number of overlapping activities in the organization in order to adopt and use new ideas and technical developments by adopting scientific and systematic methods for the purpose of providing a good or service that is new to the organization or improving it, or designing a new production process or improving it for the purpose of achieving goals." The organization can survive, grow, and make it more competitive" (Aziz, 2019: 15). Alayoubi et.al 2020:8) defined technical creativity as "the basis for the development, growth, and continuity of modern organizations, as it helps in developing the services provided to customers, and encourages employees to create new ideas that affect the organization positively in achieving high competitive advantages .

3-Information technology strategy:

Information technology governance is in fact a continuous life cycle that begins with the strategy and its compatibility with all parts of the organization, then this strategy is implemented and the strategic value is delivered, in addition to developing plans to confront risks and reduce their effects, as well as the necessity of following up on the strategy and measuring performance to submit reports. And take the necessary measures. (ITGI,2003,19-20)

The third axis: financial performance

Contemporary organizations seek to use modern methods and keep pace with rapid developments in various ways through financial performance management in an effort to achieve development and provide services in the best possible way, in order to confront many challenges, the most important of which are: the multiplicity of goals, the increase and diversity of society's needs, the scarcity of resources and economic transformations. Which led to countries racing to attract capital and investments by creating the appropriate environment, so the planned organizational efforts that aim to achieve continuous improvements and excellence and respond to the forces that support excellence and permanent competitive advantages are called “excellence management” (Jaber and Saeed, 2018: 517-518). .

First: The concept of financial performance of banks

The concept of financial performance is one of the important concepts for business organizations in general, as through it it is possible to give a complete and comprehensive picture of the progress of the organizations’ activities and work at the level of the internal and external environment. In addition, financial performance is the main axis around which the efforts of all banks that strive diligently to perform Its functions are efficient and effective, and therefore the performance evaluation is through identifying the strengths and weaknesses in the bank’s performance. (Charity, 2012: 11) explained that financial performance is a process through which the strengths and weaknesses are identified, monitored, measured, recorded and developed, and (Shahmehr) explained et al., 2014:190) It is the method used by managers in following up on the set goals to set a common vision according to which work is done to achieve the set goals according to the correct path. (Yondo, 2015:21) emphasized that financial performance is evidence of the bank’s knowledge of its financial situation and its ability to Generating sustainable profitability, which is the organization's first line of defense against unexpected losses.

The fourth axis: the practical framework

This axis includes examining and testing the quality of the data and its suitability for conducting statistical analyzes by testing the normal distribution of the data and testing the study measurement tool by testing the consistency between the components of the scale through the Cronbach’s alpha coefficient, and testing the correlation relationship and simple and multiple effects:

First: stability and reliability:

Table (1) Indicators of consistency results between components of the scale

the decision	Cronbach's alpha coefficient	Search variables
Good stability	0.889	Information technology governance
Good stability	0.828	Financial performance
Good stability	0.950	Total stability

Source: SPSS V26 output

It is clear in Table (1) that the values of the Cronbach’s alpha coefficient for the information technology governance variable reached (0.889) and for the financial performance variable reached (0.828), and the value of the overall reliability of the research reached (0.950). All results are greater than the acceptable percentage (0.60), and this indicates The variables have appropriate internal consistency, and these results indicate that the research measure (questionnaire) has a good level of reliability .

Second: Testing the correlation between the research variables

(There is no significant correlation between information technology governance and financial performance)

Table (2) shows that the value of the correlation coefficient between information technology governance and financial performance reached (**0.756), at a significance level (0.000), which is less than the significance level (0.01), with a strong positive direct relationship, and is confirmed by the value of the t-test. It reached (10.844), which is greater than the tabular (t) value of (2.33), and these results confirm the rejection of the null hypothesis and the acceptance of the alternative hypothesis, which states (there is a significant correlation between information technology governance and financial performance), and the researcher attributes this to the fact that The investigated banks are working to develop themselves through the use of modern technology in their banking work, the role of which is reflected in their financial performance .

Table No. (2) Results of the analysis of the correlation between the information technology governance variable and dimensions and the financial performance variable

	Planning and organizing Technical X1	Investment and creativity Technical X2	Technical strategy Information x3	Technology Governance Information X
financial performance Y	.633**	.625**	.713**	.756**
Significance level	0.000	0.000	0.000	0.000
Calculated t-test values	**7.67**	**7.507**	**9.54**	**10.844**
Tabular t-values	2.33	2.33	2.33	2.33
**. Correlation is significant at the 0.01 level (2-tailed).				

Third: Testing the simple influence relationship between the research variables

(There is no statistically significant impact relationship between information technology governance and financial performance)

Table (3) shows the results of the statistical analysis for the first main effect hypothesis, as the calculated (F) value reached (424.966). It is greater than the tabulated (F) value of (6.72) at the significance level (0.01), and with two degrees of freedom (1,318), as it is noted from this result that the influential relationship between the independent and dependent variables was positive, meaning that the greater the interest in information technology governance, this led to Increased improvement of financial performance, so we reject the null hypothesis and accept the alternative hypothesis, which states (there is a statistically significant effect between information technology governance on financial performance), which indicates that information technology governance has a clear impact on financial performance.

Table (3): Statistical indicators for analyzing the effect of the information technology governance variable X on the financial performance variable Y					
the decision	**Sig**	**(F)**	**R^2**	1.078	**(α)**
Accept the alternative hypothesis	0.000	424.966	0.572	0.749	**(β)**
319= **Sample volume** / , 2.34= **Tabular (t) value** /// 6.72 = **Tabular (F) value**					

Source: Prepared by the researcher based on the outputs of the SPSS V.25 program

Fourth: Testing the multiple influence relationship between the research variables

(There is no statistically significant multiple influence relationship between information technology governance with its combined dimensions and financial performance)

Table (4) shows the results of the statistical analysis of the first main multiple effect hypothesis, as the calculated (F) value reached (151.914). It is greater than the tabular (F) value of (3.84) at the level of significance (0.01), and with two degrees of freedom (3,316). It is noted from this result that the influential relationship between the independent variable, information technology governance, with its combined dimensions, and the dependent variable, financial performance, was a direct relationship. That is, the greater the interest in information technology governance and its dimensions combined, this leads to better financial performance development. Therefore, we reject the null hypothesis and accept the alternative hypothesis, which states (there is a statistically significant multiple effect between information technology governance and its combined dimensions in financial performance) Which indicates that information technology governance, along with its dimensions, has an effective and fundamental impact on financial performance. This result confirms that when the investigated banks work to pay attention to all dimensions of information technology governance together and in one way, that is, at one time, and without favoring one dimension at the expense of another dimension, this will help the banks. The subject seeks to improve her financial performance in a comprehensive manner.

Table (4) Statistical indicators to analyze the impact of the combined dimensions of information technology governance ((X) on financial performance (Y

Financial performance Y							Information technology governance X
the decision	Moral	F	R^2	Moral	Calculated t	Regression coefficients	
Accept the hypothesis	0.000	151.914	0.591	.000	7.673	1.097	Fixed limit
				.000	4.888	.226	Technical planning and organization X1
				.009	2.636	.129	Investment and technical innovation X2
				.000	9.904	.387	IT Strategy X3
Tabular (F) value = 3.84 /// Tabular (t) value = 2.34, 1.65 /// Sample size = 319							

The fifth axis: conclusions and recommendations

First: conclusions

1- The results indicated that the banks' senior management is developing plans to acquire technological equipment and software and determine the technological standards that must be applied.

2- The results showed that the investigated banks have technical staff qualified to use modern technical software, devices and equipment.

3- The statistical results showed that the investigated banks are working on designing information technology operations in a way that achieves high value for the bank.

4- Banks apply the results of financial performance in practice, and announce them transparently on their websites.

5 - The bank updates the financial system upon receipt of any amendments to the treatments in accordance with financial performance standards .

Second: Recommendations

1 - Determine the elements related to the installation and operation of the system, such as: training, the extent of the application software's performance, implementation plans, transforming the system and data, and examining change plans and strategies.

2 - Using modern technology used in the bank to provide the information necessary to plan revenues and costs at each level of activity in banks.

3 - Measuring the performance of implementing the information technology plan and the extent to which the desired objectives are achieved in the bank.

4 - Developing and developing the ideas of the bank's employees, which in turn enhances financial performance.

5 - Working to provide modern technical devices and equipment that keep pace with developments with the aim of improving financial performance.

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