

INTELLECTUAL IMPACT OF CYBER GOVERNANCE IN THE CORRECT APPLICATION OF CLOUD ACCOUNTING IN JORDANIAN COMMERCIAL BANKS-FROM THE POINT OF VIEW OF JORDANIAN AUDITORS

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ABSTRACT

This study aimed to know the intellectual impact of cyber governance in the correct application of cloud accounting in Jordanian commercial banks. The study population consisted of external auditors practicing the profession of auditing in Jordan, which numbered till the end of 2018, (477) practicing certified public auditors. Taking a simple random sample that included (213) auditors, and for the purpose of analyzing the study data and testing the hypotheses, the statistical package for social sciences "SPSS" was used. In various statistical analyzes, a descriptive statistics and internal consistency coefficient (Cronbach's alpha) was also used, multiple linear correlation test using the Pearson correlation coefficient and the Variance Inflation Factor, Multiple linear regression and stepwise regression analysis were used to test the study hypotheses. The study found many results, one of the most important results was the existence of the intellectual impact of cyber governance in the correct application of cloud accounting, where it was found that (Cybersecurity policy) came first, which explained (65.5%) of the variance in the dependent variable, and when adding (Cyber Information Security Management) the rate of interpretation increased to (72.9%) and the addition of the (Cybersecurity Program) increased the rate of interpretation to (75.7%). The addition of (cyber risk assessment and management) has led to an increase in the rate of interpretation to (77.0%), while the rate of interpretation reached to (77.8%) when adding (cybersecurity governance's requirements). The most important recommendations are that Jordanian banks, before making a change in their ICT environment, operations or procedures, or after any event that affects their security, should ascertain whether changes or improvements to the cybersecurity policy and program are needed.

Key words: Cyber governance; Cloud accounting; Jordanian commercial banks.

INTRODUCTION

An effective and integrated risk management and internal control system, using cloud computing technologies, is a key factor in establishing a good cyber governance system within companies and banks, and a key indicator to support and strengthen the overall control exercised by the Board of Management, the Board of Directors or the Monitoring Board according to the

style or the method of management which Companies and banks choose to conduct their affairs, Continuous monitoring and evaluation of the internal control system and information systems by the various Supervisory devices will help to provide additional emphasis on the effectiveness and efficiency of the internal control system and information systems; By confronting the risks that prevent banks and companies from achieving their goals and adding value to them. The cyber governance framework is important for managing IT risks with cloud computing applying is important for managers, auditors, and users in understanding the IT systems of their companies and banks, and helping to develop their cyber governance model and It also guides the selection of the level of security and control necessary to protect corporate assets, efficiently and effectively. Therefore, this study worked to try to find out the impact of cyber governance on achieving the requirements of cloud accounting as the reality, which is reflected through its pioneering data. The study aims to: Identifying the level of application of cyber governance by Jordanian commercial banks, Identifying the correct level of application of cloud accounting in Jordanian commercial banks, and Investigating the statistically significant impact of the intellectual impact of cyber governance (cybersecurity governance requirements, cybersecurity program, cybersecurity policy, cyber security information management, cyber risk assessment and management) in the Correct application of cloud accounting in Jordanian commercial banks. The research problem focuses on the following question: Is there significant impact of the cyber governance (cybersecurity governance requirements, cybersecurity program, cybersecurity policy, cybersecurity information management, cyber risk assessment and management) in the correct application of cloud accounting in Jordanian commercial banks. The main contribution of the research is study the program of cybersecurity governance requirements and cybersecurity policy in the correct application of cloud accounting in Jordanian commercial banks according to instruction the central bank of Jordan (Central Bank of Jordan, 2018).

Study Hypotheses

Current studies are based on the hypotheses which are:

H₀ : there is no statistically significant impact of the intellectual impact of cyber governance (cybersecurity governance requirements, cybersecurity program, cybersecurity policy, cybersecurity information management, cyber risk assessment and management) in the correct application of cloud accounting in Jordanian commercial banks.

This Hypothesis is subdivided into the Following Sub-Hypotheses:

H₀₁: There is no statistically significant impact of cybersecurity governance requirements in the correct application of cloud accounting in Jordanian commercial banks.

H₀₂: There is no statistically significant impact of cybersecurity program in the correct application of cloud accounting in Jordanian commercial banks.

H₀₃: There is no statistically significant impact of cybersecurity policy in the correct application of cloud accounting in Jordanian commercial banks.

H₀₄: There is no statistically significant impact of cybersecurity information management in the correct application of cloud accounting in Jordanian commercial banks.

H₀₅: There is no statistically significant impact of cyber risk assessment and management in the correct application of cloud accounting in Jordanian commercial banks.

Cloud Accounting

Its emergence, concept, benefits and constraints

The twentieth century witnessed significant progress in the transfer of information. Technology has also evolved rapidly and social networks have emerged. The Internet has become faster, more reliable, less expensive and has expanded in almost every field. But more importantly, they have laid the foundations for traditional business model. Furthermore, smartphones have encouraged the spread of cloud services. Relevant and constantly updated information is crucial in the process of making any economic decision, especially in a competitive environment like today. It enables companies to grow or disappear at the same speed, depending on their ability to evolve and adapt to the best existing technological frameworks, as traditional frameworks are no longer sufficient to face the huge technological development (Pacurari & Nechita, 2013).

Cloud accounting software is becoming increasingly popular over time, leading to major accounting firms as well as accounting organizations including the American Institute of Certified Public Accountants (AICPA). Emphasized the need to work to increase the level of attention to cloud technology. By providing a wide range of services and guidance based on cloud technology benefiting the accounting profession by taking a systematic approach to risk assessment including effective policies for using cloud applications and a risk response plan, (Kinkela, 2013). This enables companies to test the effectiveness of this new technology and increase operational efficiency in their accounting business (Dimitriua & Mateia 2015).

Therefore, cloud accounting can be defined simply as the storage, processing and use of data available on the company's multi-site computers through access to the Internet. This means that users of these data can take advantage of the high capacity of computer systems, which do not require large capital investment in order to meet their needs, and that they can access their data from anywhere as long as they are connected to the Internet (Jones et al., 2017).

Effectiveness of Cloud Accounting on Corporate and Banking Functions

The Internet is the most common tool for real-time sharing of knowledge and information in all economic and social fields, which in recent years has led to the emergence of the digital economy. Experts emphasize that the development of information technology and automation makes it possible to follow the tradition of previous innovations. The creation of new products, new industries thus causing economic growth, in addition to gain more profits, ensure the accuracy and quality of information, and reduce technological difficulties.

In a study conducted by the International Data Corporation (IDC) for board members, executives and hiring managers of 600 global companies, these companies are increasingly accepting the shift towards cloud accounting systems for their solutions. As nearly 50% of those surveyed indicated that these solutions are high or very high on their company's IT priority list and 67% of respondents use or will use computerized computing solutions. (PricewaterhouseCoopers) noted in a 2014 study that despite the rapid development of cloud technology in the last decade, in addition to the evolution of accounting standards, no practical guide has been identified for cloud application users (Campbell, 2014; Wyslocka & Jelonek, 2015).

Therefore, the researchers believe that there is a logical necessity of the existence of real frameworks trying to protect this modern technology, which is embodied here with the frameworks of cyber governance for the correct application of cloud accounting, Therefore, the Central Bank of Jordan has issued special instructions to banks to try to face the risk of the use of information technology for computing and cloud accounting, which led to the solution founded by the Central Bank through using what is known as cyber governance, and was in accordance with the following conditions and instruction

Cyber Security Governance Requirements

Banks must adhere to the following (CBJ, 2018)

- A) The Board of Directors shall include in its membership and who delegates its committees and senior executive management, persons with appropriate skills and knowledge to understand and manage cyber risks.
- B) The Board or any of its committees shall assume the following responsibilities and tasks according to their location:
 - 1. Adoption of the Cyber Security Policy.
 - 2. Adoption of the Cyber Security Program.
 - 3. Checking compliance with cybersecurity policy and program.
- C) The Senior Executive Management shall assume the following responsibilities and tasks, depending on their location:
 - 1. Ensuring implementation and updating of cybersecurity policy.
 - 2. Ensuring the implementation of the cybersecurity program to be integrated with the overall IT risk management framework, and continue updating and developing it.
 - 3. Ensuring the existence of a comprehensive Cyber Risk Register and that it is continuously updated and compliant with the Company's IT Risk Profile.
 - 4. Reviewing and monitoring the level of cyber risks on an ongoing basis.
 - 5. Adoption of lists of powers related to the management of security and cyber risks in terms of identifying the entity or entities or person or parties responsible initially, and those who are permanently responsible (Accountable), and consultant, and those who are informed, for all management operations along with controlling those risks and auditing.

METHODOLOGY

Study Sample

The study population consisted of external auditors practicing the profession of auditing in Jordan , which numbered till the end of 2018, (477) practicing certified public auditors .Taking a simple random sample that included (213) auditors , It was determined based on the Krejcie &

Morgan table (Krejcie & Morgan, 1970), and after the distribution of the questionnaires, 197 questionnaires were retrieved, of which (12) were not valid for analysis as they were incomplete, while the number of questionnaires recovered and analyzable was (185) Questionnaire, with a recovery rate of (86.9%), which is statistically acceptable.

Sources of Data Collection

The study relied on two types of data sources to collect the data necessary to achieve the purpose of the study:

First: secondary sources, and these sources are represented in scientific books, studies and previous research, doctoral theses, master theses, articles and scientific journals , whether it's in Arabic or in a foreign language, in addition to web pages and bulletins and statistics related to the topics of study and it's variables.

Second: primary sources, and these sources are represented in the questionnaire, which was designed to achieve the purpose of the study, and in a manner consistent with the problem of the study and its questions, and the nature of data and information to be obtained, and that's after reviewing the literature on the subjects of the study, and benefit from the views and expertise of specialists.

To determine the extent of the respondents' approval of the questionnaire paragraphs, the Likert scale was used to measure the responses of the study sample. Given in the following: (strongly agree=5, agree=4, neutral=3, disagree=2, strongly disagree=1. The relative importance of the questionnaire topics and paragraphs were judged as follows Table 1:

TABLE 1 DETERMINE THE RELATIVE IMPORTANCE OF THE RESPONSES OF THE SAMPLE MEMBERS			
Mean	Less than 2.33	From 2.33 to less than 3.66	From 3.66 to less than 5.00
Relative importance	Low	Intermediate	High

Statistical Methods Used

The Statistical Package for Social Sciences (SPSS) program was used to analyze the study data and test its hypotheses. The following statistical tools were used:

1. Descriptive statistics measures, through repetitions, percentages, arithmetic averages and standard deviations, to describe the characteristics of the study sample and the degree of their agreement to the paragraphs of the study tool and its variables.
2. Cronbach's Alpha to test the stability of the study tool.
3. Pearson correlation coefficient to test the existence of the phenomenon of multiple linear correlations Multicollinearity.
4. Analysis of multiple linear regression and Stepwise Regression, to test the hypotheses of the study.

Study Tool Stability Test

The stability of the tool used to measure the variables involved was tested using the Cronbach's Alpha Coefficient, where the result of the scale is statistically acceptable if the value of Cronbach's Alpha is greater than (0.60) (Sekaran, 2006) and the more it's close to (100%) This indicates a higher degree of stability for the study tool. Given the data in the following table, the coefficient of Cronbach's alpha for the study variables and their dimensions and for the study tool as a whole, was measured to determine the consistency of the responses as follows:

Number	Dimension	Pharagraphs Number	Value of Alpha
1	Cybersecurity governance requirements	5	0.734
2	Cyber Security Program	5	0.755
3	Cyber Security Policy	5	0.806
4	Cyber Information Security Management	5	0.824
5	Cyber Risk Assessment and Management	4	0.759
6	Cyber Governance	24	0.928
7	Provision of information technology infrastructure	6	0.850
8	Provision of software for users	5	0.860
9	Provision of communication	5	0.859
10	Provision of easy-to-use applications	5	0.745
11	Flexibility in performing various tasks	5	0.845
12	Costs saving and reduction	6	0.911
13	Cloud Accounting	32	0.957
14	All paragraphs	56	971

From Table 2, the values of the internal coefficient coefficient of Cronbach's Alpha for all paragraphs of the study tool was (0.971), and the number of paragraph was (56), the coefficient of Cronbach's alpha was (0.928) for paragraphs measuring cyber governance, while the coefficient of Cronbach's alpha was (0.957) for paragraphs Measuring cloud accounting, and therefore all values are greater than (0.60) This is an indication of consistency between the paragraphs of the study tool, and the reliability of the study tool for statistical analysis.

Description of The Characteristics of The Study Sample

Variable	Category	Repetition (N=185)	Percentage
Qualification	BSc	152	82.2
	MSc	17	9.2
	Doctorate	6	3.2
	others	10	5.4
Number of professional certificates (in addition to JCPA)	None	142	76.8
	One Certificate	33	17.8
	Two Certificates	7	3.8
	More than Two Certificates	3	1.6
Practical experience	Less than 5 years	21	11.3
	From 5 years to less than 10 years	41	22.2
	From 10 years to less than 15 years	58	31.3
	From 15 years to less than 20 years	36	19.5
	20 years or more	29	15.7

Table 3, indicates that the majority of respondents have a university degree of BSc, which their percentage reached (82.2%). This indicates that the external auditors possess the necessary academic qualifications and knowledge that enable them to practice the audit profession with sufficient knowledge. It was found that the majority of respondents did not have a professional certificate (in addition to the JCPA certificate) which their percentage reached (76.8%). This may be due to the increased professional workload of the external auditor, which impedes his ability to obtain other professional certificates. It was also found that the largest percentage of the respondents ranged (from 10 years to less than 15 years of experience) in terms of practical experience where it reached (31.3%). which confirms that the study sample has sufficient practical experience in the field of audit profession.

Answers of the Sample Members (respondents) Description

Arithmetic averages (Mean), standard deviations, and ranks of relative importance were used to describe the responses of the respondents to the questionnaire paragraphs and their dimensions. The results were as follows:

First : The Dimensions of Cyber Governance

These dimensions included: Cybersecurity governance requirements, cybersecurity program, cybersecurity policy, cybersecurity information management, and cyber risk assessment and management.

Dimensions	Mean	Standard Deviations	Ranks	Relative importance
Cybersecurity governance requirements	3.926	0.694	3	High
Cyber Security Program	3.896	0.637	4	High
Cyber Security Policy	3.945	0.706	2	High
Cybersecurity Information Management	3.868	0.721	5	High
Cyber Risk Assessment and Management	4.169	0.643	1	High
Cyber governance	3.961	0.569		High

Table 4, indicates that the attitudes of the respondents were towards the high relative importance of cyber governance. with a mean of (3.961) and a standard deviation of (0.569), and the Cyber Risk Assessment and Management ranked first, with a Mean of (4.169). With standard deviation of (0.643), with high relative importance, while (Cybersecurity Information Management) ranked last, with an arithmetic mean of (3.868), standard deviation of (0.721), and also with high relative importance. All dimensions of cyber governance have emerged with high relative importance.

Second: The Dimensions of Cloud Accounting

These dimensions included: Provision of information technology infrastructure, Provision of software for users, Provision of communication Provision of easy-to-use applications, Flexibility in performing various tasks, Costs savings and reductions.

Dimensions	Mean	Standard deviations	Ranks	Relative importance
Provision of information technology infrastructure	4.105	0.709	1	High
Provision of software for users	3.806	0.773	4	High
Provision of communication	3.741	0.799	5	High
Provision of easy-to-use applications	3.902	0.683	3	High
Flexibility in performing various tasks	4.051	0.719	2	High
Costs saving and reduction	3.609	0.951	6	Intermediate
Cloud accounting	3.869	0.648		High

Table 5, indicates that the attitudes of the respondents were towards the high relative importance of the dimensions of cloud accounting, where the arithmetic mean was (3.869), standard deviation of (0.648), and the (provision of information technology infrastructure) ranked

first, with an arithmetic mean of (4.105), With standard deviation of (0.709), with high relative importance, while cost saving and reduction came last, with an arithmetic mean of (3.609), standard deviation of (0.951), and with Intermediate relative importance. We note that all other dimensions of cloud accounting have emerged with high relative importance.

Hypotheses of the Study Test

In the hypothesis test, the study relied on multiple linear regression analysis and Stepwise regression analysis to answer the study questions. Before starting the analysis, data were confirmed to be free from multiple correlation. This phenomenon indicates a near linear correlation between two or more variables. It amplifies the value of R^2 and makes it greater than its actual value, so the linear correlation coefficient was calculated at each variable being tested. The results were as follows:

Variables	Cybersecurity governance requirements	Cyber Security Program	Cyber Security Policy	Cyber Security Information Management	Cyber Risk Assessment and Management
Cybersecurity governance requirements	1				
Cyber Security Program	0.602**	1			
Cyber Security Policy	0.475**	0.728**	1		
Cyber Security Information Management	0.419**	0.698**	0.730**	1	
Cyber Risk Assessment and Management	0.510**	0.681**	0.727**	0.703**	1

**Significant at the significance level of 0.01

Table 6 shows that the highest value of the correlation coefficient appeared between the two independent variables (cybersecurity policy) and (cybersecurity information management), which was (0.730), while the value of the correlation coefficient between the other independent variables is lower. This indicates the absence of the phenomenon of multiple linear correlation between the variables of the independent study, as the values of the linear correlation coefficient exceeding (0.80) may be an indicator of the existence of multiple linear correlation (Guajarati, 2004), and therefore can be said that the study sample is free from the problem of high linear multiple correlation.

RESULTS

Results of Main Hypothesis Test

H₀: there is no statistically significant impact of the intellectual impact of cyber governance (cybersecurity governance requirements, cybersecurity program, cybersecurity policy, cybersecurity information management, cyber risk assessment and management) in the correct application of cloud accounting in Jordanian commercial banks.

Dependant Variable	Model summary				Variance analysis-ANOVA	
	Correlation coefficient	coefficient of determination R2	Adjusted coefficient of determination R2	Standard error of model	Value of Calculated (F)	Sig (F)
Cloud accounting	0.882	0.778	0.772	0.310	125.381	0.000

Table 7 shows the significance of the model, where the value of (F = 125.381) and the level of significance (SigF = 0.000) which is less than (0.05), and this confirms the significance of the model, and the value of the correlation coefficient (R = 0.882) indicated the relationship between independent variables and dependent variable The value of the coefficient of determination (R2 = 0.778) indicated that (77.8%) of the variability in (cloud accounting) can be explained by the variation in the independent variables, with any other factors remain constant.

We therefore reject the main null hypothesis, and accept the alternative, which states: there is statistically significant impact of the intellectual impact of cyber governance (cybersecurity governance requirements, cybersecurity program, cybersecurity policy, cybersecurity information management, cyber risk assessment and management) in the correct application of cloud accounting in Jordanian commercial banks.

The results of the sub-hypothesis test from the main hypothesis are presented below, based on the regression coefficient Table 8.

Regression coefficients				
Independant Variable	Factors (B)	Standard error	Calculated T value	Sig (T)
Cybersecurity governance requirements	0.105	0.042	2.505	0.013
Cyber Security Program	0.165	0.062	2.658	0.009
Cyber Security Policy	0.303	0.056	5.417	0.000
Cyber Security Information Management	0.236	0.052	4.551	0.000
Cyber Risk Assessment and Management	0.161	0.058	2.779	0.006
Regression Constant	0.033	0.165	0.201	0.841

Results of the First Sub-Hypothesis Test

The regression coefficient value (0.105) indicated the effect of cybersecurity governance requirements on the correct application of cloud accounting, which is a significant effect, where the value of T was (2.505) and the level of significance was (Sig=0.013). We therefore reject the first sub-null hypothesis, which reads:

"There is a statistically significant effect of cyber security governance requirements in the correct application of cloud accounting in Jordanian commercial banks"

Results of the Second Sub-Hypothesis Test

The value of the regression coefficient (0.165) indicated the effect of the cybersecurity program on the correct application of cloud accounting, which is a significant effect, where the value of T was (2.658) and the level of significance was (Sig=0.009). We therefore reject the second sub- null hypothesis, which reads:

"There is a statistically significant impact of the cyber security program in the correct application of cloud accounting in Jordanian commercial banks"

Results of Third Sub-Hypothesis Test Results

The value of the regression coefficient (0.303) indicated the effect of the cybersecurity policy on the correct application of cloud accounting, which is a significant effect, where the value of T was (5.417) and the level of significance was (Sig. = 0.000). We therefore reject the third sub null hypothesis, and accept the alternative that reads:

"There is a statistically significant impact of cybersecurity policy on the correct application of cloud accounting in Jordanian commercial banks"

Results of Fourth Sub-Hypothesis Test

The value of regression coefficient (0.236) indicated the effect of cyber security information management on the correct application of cloud accounting, which is significant, where the value of T was (4.551) and the level of significance was (Sig=0.000). We therefore reject the fourth sub-null hypothesis, and accept the alternative that reads:

"There is Statistically Significant Effect of Cybersecurity information Management in the correct Application of Cloud Accounting in Jordanian Commercial Banks"

Results of the Fifth Sub-Hypothesis Test

The value of regression coefficient (0.161) indicated the effect of cyber risk assessment and management on the correct application of cloud accounting, which is a significant effect, where the value of T was (2.779) and the level of significance was (Sig=0.006). We therefore reject the fifth sub null hypothesis, which reads:

"There is a Statistically Significant Impact on Cyber Risk Assessment and Management in the Correct Application of Cloud Accounting in Jordanian Commercial Banks"

In order to determine which of the cyber governance dimensions is the most influential in the correct application of cloud accounting, Stepwise Multiple Regression analysis has been made, the results are as shown in Table 9.

TABLE 9
THE RESULTS OF THE STEPWISE REGRESSION ANALYSIS OF THE MAIN HYPOTHESIS H0

Model	Correct application of cloud accounting	B	Calculated T	Level of Significance Sig*	R ² Determination coefficient	Calculated F	Sig* level of Significance
First	Cyber Security Policy	0.743	18.657	0.000	0.655	348.092	0.000
Second	Cyber Security Policy	0.477	9.205	0.000	0.729	244.795	0.000
	Cyber Security Information Management	0.357	7.029	0.000			
Third	Cyber Security Policy	0.365	6.634	0.000	0.757	187.784	0.000
	Cyber Security Information Management	0.273	5.306	0.000			
	Cyber Security Program	0.265	4.552	0.000			
Fourth	Cyber Security Policy	0.305	5.376	0.000	0.770	150.741	0.000
	Cyber Security Information Management	0.225	4.288	0.000			
	Cyber Security Program	0.223	3.839	0.000			
	Cyber Risk Assessment and Management	0.186	3.223	0.002			
Fifth	Cyber Security Policy	0.303	5.417	0.000	0.778	125.381	0.000
	Cyber Security Information Management	0.236	4.551	0.000			
	Cyber Security Program	0.165	2.658	0.009			
	Cyber Risk Assessment and Management	0.161	2.779	0.006			
	Cyber Risk Assessment and Management	0.105	2.505	0.013			

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

The results of the stepwise regression analysis show the order of entering the variables in the regression model, which represents the intellectual impact of cyber governance in the correct application of cloud accounting, where it was found that (cybersecurity policy) came first, and explained (65.5%) of the variance in the dependent variable, When adding (Cybersecurity

Information Management), the rate of interpretation increased to (72.9%), and the addition of (cybersecurity program) led to an increase in the rate of interpretation to (75.7%). The addition of (cyber risk assessment and management) led to an increase in the rate of interpretation to (77.0%), while the rate of interpretation increased to (77.8%) when adding (cybersecurity governance requirements). It is noted that the effect of all independent variables was significant at a level less than (0.05).

MAJOR FINDINGS

1. (Cyber risk assessment and management) ranked first, with mean of (4.169), standard deviation of (0.643) and high relative importance, while (cybersecurity information management) ranked last, with mean of (3.868) and standard deviation of (0.721), It is also of a High relative importance. All dimensions of cyber governance have emerged with high relative importance.
2. (Provision of information technology infrastructure) ranked first, with an arithmetic mean of (4.105), With standard deviation of (0.709), with high relative importance, while cost saving and reduction came last, with an arithmetic mean of (3.609), standard deviation of (0.951), and with Intermediate relative importance. We note that all other dimensions of cloud accounting have emerged with high relative importance.
3. The results of the stepwise regression analysis show the order of entering the variables in the regression model, which represents the intellectual impact of cyber governance in the correct application of cloud accounting, where it was found that (cyber security policy) came first, and explained (65.5%) of the variance in the dependent variable, When adding (Cyber security Information Management), the rate of interpretation increased to (72.9%), and the addition of (cybersecurity program) led to an increase in the rate of interpretation to (75.7%). The addition of (cyber risk assessment and management) led to an increase in the rate of interpretation to (77.0%), while the rate of interpretation increased to (77.8%) when adding (cybersecurity governance requirements). It is noted that the effect of all independent variables was significant at a level less than (0.05).

RECOMMENDATIONS

1. Prior to a change in the ICT environment, operations or procedures, or after an event affecting its security, Jordanian banks should ascertain whether changes or improvements to the cybersecurity policy and program are needed.
2. The cybersecurity policy should be a document dedicated to cybersecurity in the Bank. In preparing and updating the policy, the participation of all parties concerned and the adoption of international best practices and updates such as references, lessons learned from cybersecurity incidents are also taken into account.
3. Jordanian banks can include cybersecurity policy in the information security policy under the name of "information security policy and cybersecurity" as well as the inclusion of cybersecurity programs within the information security program, provided that a real complementary relationship between cyber security governance and cloud accounting should be fulfilled.

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