# INFORMATION TECHNOLOGY GOVERNANCE LINKAGE TO THE FINANCIAL REPORT QUALITY IN LIBYAN COMMERCIAL BANKS

Mohamed Ali Hussain IL Shatshat[1]; Sohail Ahmed[2]

[1] *Business management Department, Management & Science University, Malaysia,* shatshatnew@gmail.com
[2] *Business management Department, Management & Science University, Malaysia,* sohail25210@yahoo.com

| Information of Article | **ABSTRACT** |
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| | This study aims to investigate the linkage between information technology governance and financial report quality. This study has used the cross-sectional approach to present both the principles of IT governance procedures, and previous related studies, in order to investigate the most significant results achieved in this regard, while the analytical approach analyses the level of applying the principles of IT governance procedures on the quality of financial reports issued by Libyan commercial banks. The cross-sectional approach is used by this study, the data obtained through a questionnaire instrument adapted from the previous studies. The population of this study is represented by the top management members of the Libyan commercial banks, which in total equals to 128 managers. The result confirms a significant impact of information technology governance on the financial report quality. |

## 1. Introduction

The banking sector is one of the basic pillars, which plays an important role in supporting the national economy. Where it is distinguished from other sectors of the sensitivity of the commodity, which is handled (money). Due to the importance of the sector, the focus of banks has become an interest in accounting information systems. In light of the information and communication technology revolution, especially the Internet. In order to maintain its continuity, survival, and strengthen its financial position. The quality of financial reports is essential for investors, an important indicator for creditors and an important tool for measuring the efficiency of management in using its resources (Haddad, 2010).

Libyan banks have the latest technology to face intense competition, which has expanded internally and externally by providing the best services that keep up with the times. Accounting information systems are one of the main components of information technology (Barghathi, 2019). Accounting information systems are one of the main components of information technology. It has been shown that banks, like other international institutions, are suffering from the risks of using this technology such as piracy, manipulation and the trust gap between customers and modern technology, which can limit the profitability of these banks. This requires these banks to adopt accounting information systems, reliable and reliable.

Thus, contributing to the provision of correct accounting information free from manipulation, fraud, cheating, and reliability for both internal and external users according to their needs. Through the adoption of the principles of reliability of accounting information systems issued by the competent professional bodies, in addition to the control of the use of information technology. Through the implementation of information technology governance procedures, this is reflected on the quality of financial reporting in these banks

## 2. Literature Review

It is critical for organizations to control and maintain the security of information technology, where organizations are increasingly concerned that it is not possible to control monitoring of information technology, which in turn bring negative results, and that the success of information technology in the organizations, and the identify the risks they create such as risk of theft and virus attacks, it contributes to the protection of enterprises from slowing down, which ensures regulators, investors, employees, customers, and suppliers an appropriate degree of security for their organizations, and assures them of the information technology systems that exist, but this security level does not remain continuously, especially due to the tremendous progress in information technology and the accompanied unmanageable risks. Wu, Straub, and Liang (2015) stated that despite advances in information technology, the most organizations do not have adequate monitoring mechanisms for their business when using this technology. According to the information risks, the research studies have shown that less than 25% of the organizations have attributed the risk to external risks and weak rules of regulation,

leading to external sources of information technology suppliers globally, hence, managers, boards and shareholders should ensure that the information assets of their organizations are protected".

Weill and Ross (2004) tested the impact of deploying IT governance on the performance of companies, and the study was applied on "State Street" company which is one of the largest multi-business companies in the United States of America and Europe. The adoption of IT governance has achieved several short-term benefits such as cost-cutting, and a set of long-term benefits such as strengthening risk management associated with IT and improving relationships and communication between different departments of the company and IT department and improving the competitive position of the company. Joshi, Bollen, Hassink, De Haes, and Van Grembergen (2018) verify the role of IT governance in achieving additional returns from investment in information technology and its impact on improving the quality of financial reports generated by electronic information systems, and analyzing the relationship between the costs of technology investment and revenues expected from that investment, through a field study on a sample of 85 Egyptian companies, where a questionnaire was designed to measure the variables of the study, which are: IT governance, the quality of electronic financial reports, and the cost of investment in information technology and the expected returns from that investment, where the study findings are as follows: A direct correlation between IT governance mechanisms and the achievement of additional returns from investment in information technology. A direct correlation between the IT governance mechanisms and the quality of financial reports generated by electronic information systems. A direct correlation between the investment in information technology and the quality of the financial reports resulting from electronic information systems. A direct correlation between the costs of information technology investment and the expected returns from that investment.

Garrow, Awolowo, and Growe (2019) identify the extent of adopting IT governance in Jordanian banks from a perspective of the certified legal accountant, where the study population was selected from all auditors working and practicing the audit profession and number of (182) auditors working in (309) audit offices in Jordan. The sample of the study was selected from (290) auditors who worked in auditing the accounts of the Jordanian banks. For the purpose of testing the hypotheses of this study, the statistical package program (SPSS-22) was used to analyze data such as averages, deviations and (T) test to validate the hypotheses of the study. The test results showed that IT governance is applied in Jordanian banks from a perspective of the certified legal accountant through the four dimensions of: Identifying, directing and monitoring business needs, and applying the strategy of business technology in Jordanian banks, recruiting qualified staff adequately trained in IT, and applying the risk assessment strategy and compliance mechanisms.

## 3. Methodology

Targeted study population consists of all senior management employees (chief executive officer and his deputy, auditing director, compliance director, finance director, IT director, risk management director, information security directors) in commercial banks (total of 16 banks until the med of 2018) operating in Libya and registered with the Central Bank of Libya according to the website of the Central Bank of Libya. Therefore, the population of this study is represented by the top management members of the commercial Libyan banks, which in total equals to 128 managers. This data is confirmed by the central bank of Libya. The total population of this study is 128, based on a confidence level of 95% and margin error of 5%, the sample size of the study is 96 based on the sample size equation of Krejcie and Morgan (1970), the researcher has distributed 128 questionnaires to the targeted population as it is considered as a small population and then 122 questionnaires have been returned that are used for the statistical analysis.

The current study measurement tool (questionnaire) was constructed on the basis of criteria, some of which were tested and some developed, guided by the characteristics of the current study variables, combining the total and partial measurement, adaptation and adjustment, as well as deletion and addition to be consistent with the banking and the Libyan environment. The study model highlights the relationship between its variables, the independent variable represented by the IT governance and the dependent variable of the quality of financial reports, represented by the characteristics of the quality of accounting information (relevance and reliability). The data were analyzed by using the software of Statistical Package for the Social Science (SPSS).

## 4. Data Analysis and Results

Respondents were asked to choose from the most appropriate range that included their current age. The categories options are "Below 25 years old", "From 25 to 35 years old", "From 36 to 45 years old" and "More than 45 years old". However, the largest number of respondents was 62 indicated the age "from 36 to 45" years old with 50.8%. The second largest number was 26 indicated their age between 25 to 35 years old with 21.3% of the respondents indicating their age in this group. As for the third number was 23 reported that the age above 45 years old with a percentage of 18.9%, while only 11 respondents with 9.0% reported the age below 25 years. Disciplines have almost equal number of respondents which is about 25 respondents with 20.5% (accounting, finance and banking, and economics), while business administration discipline has 24 respondents (19.7%) and IT discipline has 23 respondents (18.9%). working experience of 11 – 15 years (n = 55, 45.1%). Following by the working experience of 15 years and above (n = 49, 40.2%). Another groups of respondents described lower length of their working experience as from 6 to 10 years (n =10, 8.2%) and the smallest group of respondents regarding working experience were like (n =8, 6.6%) representing the below 5 years. The frequency analysis showed that most of respondents has the qualification of "Master" (n = 55, 45.1%). While 29 of the respondents were qualified with bachelor (23.8%), and almost same (n=28, 23.0) were qualified with PhD. The smallest group of respondents regarding the qualification were like (n =10, 8.2%) high diploma. in term of job position as 14 (11.4%) of

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respondents have a Chief Executive Officer, 15 (12.2%) have a Deputy Executive Officer job position, 64 (52.4%) have a Managing Director job position, and also 29 (23.8%) have a Head of the Department job position.

Table 1: Respondents profile

|  | Frequency | % |  | Frequency | % |
|---|---|---|---|---|---|
| **Discipline** |  |  | 11 – 15 Years | 55 | 45.1 |
| Accounting | 25 | 20.4 | More than 15 Years | 49 | 40.0 |
| Finance and Banking | 25 | 20.4 |  |  |  |
| Business Administration | 24 | 19.6 | **Qualification** |  |  |
| Economics | 25 | 20.4 | High Diploma | 10 | 8.2 |
| IT | 23 | 18.8 | Bachelor | 29 | 23.8 |
| **Age** |  |  | Master | 55 | 45.1 |
| Below 25 years old | 11 | 9.0 | PHD | 28 | 23.0 |
| 25 - 35 yrs | 26 | 21.3 | **Job Position** |  |  |
| 36 - 45 yrs | 62 | 50.8 | Chief Executive Officer | 14 | 11.4 |
| 45 yrs & Above | 23 | 18.9 | Deputy Executive Officer | 15 | 12.2 |
| **Working Experience** |  |  | Managing Director | 64 | 52.4 |
| Below 5 years | 8 | 6.6 | Head of the Department | 29 | 23.7 |
| 6 – 10 Years | 10 | 8.2 |  |  |  |

The Cronbach's Alpha has been used to measure the internal consistency of the Likert's Scale for the estimation of the consistency of the individual respond to items extracted from the study variables within the scale. Sekaran (2006) states that the closer the alpha value to 1 means the data is more reliable. In general, reliabilities less than 0.60 are considered to be poor or not good, those in the range of 0.60 to 0.70 are acceptable, and those over 0.80 are considered good (Nunnally, 1978). Initially, the overall internal consistency of the study variables was tested and the finding showed good Alpha value ($\alpha = 0.970$). Thus, it concluded that the study variables were reliable and internally consistent as shown in table 2.

Table 2 Reliability test

| No | Variable | Items | Cronbach Alpha |
|---|---|---|---|
| 1 | IT Governance | 21 | 0.915 |
| 2 | Quality of Financial Reports<br>Adequacy Feature<br>Reliability | 7<br>8 | 0.776<br>0.910 |

In order to determine the correlation between "IT governance" as an independent variable and "the quality of financial reports" this consists of two variables that are relevance and reliability. Pearson's correlation analysis has been done and the results are shown in table 3. Table 3 shows that IT governance has significant correlation with the both dependent variables relevance and reliability. The Pearson's correlation values show the following results: The correlation of IT governance and relevance has a Pearson correlation value of 0.835 which indicates a high positive relationship which means that when the IT governance increases, the relevance will significantly increase too. The correlation of IT governance and reliability has a Pearson correlation value of 0.656 which indicates a moderate positive relationship which means that when the IT governance increases, the reliability will increase too.

Table 3 Correlations test for the first dependent variable adequacy feature

|  | **Relevance** | | **Reliability** | |
|---|---|---|---|---|
| **IT Governance** | Pearson Correlation<br>Sig. (2-tailed) | .835<br>.000 | Pearson Correlation<br>Sig. (2-tailed) | .656<br>.000 |

Firstly, the simple regression analysis was done for the relevance as the first IT governance variable, the analysis results are shown in the following tables:

Table 4 : Simple Regression analysis result of (R) value related to IT governance and the adequacy feature

| Model | R | R Squared | Adjusted R Square | F | Sig. |
|---|---|---|---|---|---|
| 1 | .835 | .697 | .694 | 275.585 | .000 |

Table 4 provides the R and $R^2$ values. The R value represents the simple correlation and it is 0.835, which indicates a high degree of correlation. The $R^2$ value indicates how much of the total variation in the dependent variable, relevance, can be explained by the independent variable, IT governance, which is 69.7% can be explained. In addition, the table shows that the value of (F) is 275.585 with a significance value of 0.000, which is less than 0.05, meaning that the regression model is significant and we can assume that there is a linear relationship between the both variables in our model. Table 5 represents the regression coefficients results related to IT governance and the relevance.

Table 5: Regression coefficient results of IT governance and relevance

| Model | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|
| | B | Std. Error | Beta | | |
| (Constant) | .330 | .184 | | 1.797 | .075 |
| IT Governance | .910 | .055 | .835 | 16.601 | .000 |

The regression coefficients table 5 provides the necessary information to predict the relevance variable from IT governance, as well as to determine whether the relevance is contributing statistically significantly (Sig = 0.000) to the model. B value (0.910) and Beta value (0.835) are positive which means the relevance will increase if the IT governance increase and vice versa. Secondly, the simple regression analysis was done for the reliability as the second IT governance variable, the analysis results are shown in the following tables:

Table 6: Simple Regression analysis result of (R) value related to IT governance and the reliability

| Model | R | R Squared | Adjusted R Square | F | Sig. |
|---|---|---|---|---|---|
| 1 | .656 | .430 | .426 | 90.663 | .000 |

Table 6 provides the R and $R^2$ values. The R value represents the simple correlation and it is 0.656, which indicates a high degree of correlation. The $R^2$ value indicates how much of the total variation in the dependent variable, the reliability, can be explained by the independent variable, IT governance, which is 43.0% can be explained. In addition, the table shows that the value of (F) is 90.663 with a significance value of 0.000, which is less than 0.05, meaning that the regression model is significant and we can assume that there is a linear relationship between the both variables in our model. Table 7 represents the regression coefficients results related to IT governance and the reliability.

Table 7: Regression coefficient results of IT governance and the reliability

| Model | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|
| | B | Std. Error | Beta | | |
| (Constant) | .333 | .303 | | 1.100 | .273 |
| IT Governance | .859 | .090 | .656 | 9.522 | .000 |

The regression coefficients table 7 provides the necessary information to predict the reliability variable from IT governance, as well as to determine whether the reliability is contributing statistically significantly (Sig = 0.000) to the model. B value (0.859) and Beta value (0.656) are positive which means the reliability will increase if the IT governance increase and vice versa.

According to the previous studies, there was a study done by Rahman (2017), the research was the place where the problem was raised in the light of a legitimate concern of the business associations for the idea of the IT government for its work in the control of financial information and improve its quality. The examination signified the enlistment, research and introduction of past research on the governance of information technology, the research of reasonable structure for their government and the investigation of the connection between IT governance and adequate ownership and reliability in the reports. The importance of the examination in the advanced idea of IT governance where it is currently in the subjects of near and global dimension should focus on the corporate governance of information technology and give a series of suggestions that can help the efforts in the use of information technology governance. The research was based on the authentic, deductive, inductive, clear technique; the logical examination used a survey framework as a device to collect information from the population examined (Prasad & Green, 2015). The examination proved the speculations that go with it: there is an objectively remarkable connection between IT governance and legitimate financial information, there is an enormously large connection between IT governance and the reliability of financial information. The research achieved some goals, among them: talking about the governance of information technology and the remarkable resources of the organization as they work to decrease expenses and increase quality, the IT governance of work in savings of time and effort and, in this sense, improve the administrations granted to clients' IT governance is trying to grant a state of abnormal authority over the single-dimensional level (Simkin, Norman, & Rose, 2014).

## 5. Conclusion

This study has used the cross-sectional approach to present both the principles of IT governance procedures, and previous related studies (whether at the local, regional or global level), in order to investigate the most significant results achieved in this regard, while the analytical approach (the practical aspect of the study) analyses the level of applying the principles of IT governance procedures on the quality of financial reports issued by Libyan commercial banks. The commercial banking sector was selected apart from other sectors in Libya to be the population of the study due to the role of Libyan commercial banks in supporting the Libyan national economy, as well as for their important role in the process of economic and social development. Moreover, banks in Libya in general and commercial banks, in particular, have special responsibilities in supporting Libya's emerging economy due to the problems and circumstances that the country is currently facing.

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