The risks of communication between department of internal control & computer and its impact on the efficiency of the accounting information systems in the commercial banks

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Abstract
This study aimed to identify the risks of communication between internal control and computer departments and its impact on the efficiency of the accounting information systems at the commercial banks. The study sample consisted of 62 employees in the computer & internal control departments. The study adopted the theoretical and field approaches of the descriptive analytical methodology. The study findings showed that there is a significant effect for the risks of communication between internal control and computer departments on the efficiency of the accounting information systems at the commercial banks. It illustrated a positive effect for each component of risks of communication between internal control and computer departments (problems of the centralization of decisions, problems of the absence of the legislations and laws, problems of the external environment) and the efficiency of the accounting information systems at the commercial banks.

Keywords: Accounting information systems, risks of communication, internal control & computer departments, commercial banks.

1. Introduction
The world is currently witnessing a tremendous development in the technology of computer, and the essential changes this technology has caused in the field of accounting information system. This technology introduces vast potentials and very significant characteristics, such as the capacity of storing, swiftly and accurately, information and accounting data, in addition to the development in the sphere of local and wide communication networks. The establishment, through its local networks, is capable to link all the departments, administration and branches of the establishment, and to link itself, through the wide networks, with external parties such as the clients, suppliers and government as well as any other party. The Internet is the most significant example of these networks. The availability of an internal control system, aiming to controlling and protecting the required information, constitutes a prominent element in any establishment seeking excellence, competition and survival. That is the inability to reach the information by any unauthorized person without a prior permission. It can be said that the accounting information system is the science that provides protection to important accounting information from being threatened or assaulted.

This kind of protection is fulfilled through certain measures, tools and means required to protecting the accounting information from the internal and external risks.

In this regard we have to study the obstacles of communication between the internal control department and the computer department, and its impact on the efficiency accounting information system.

The tremendous advancement in the computer technology made the companies face a great challenge. Therefore, the problems caused by this technology in the field of communication and information exchange negatively affect the competence and efficiency of the accounting information system performance.

The previous studies, and the scientific books and references related to the process of communication risks between the internal control department and the computer department reveal a set of problems that affect the efficiency of accounting information system, represented by the following questions:

The study gains its significance from the main role played by the internal control system and the role of the computer in helping the accounting information system to develop the aspects of efficiency in the commercial Jordanian banking sector, as well as in helping to define the spots of defects and deficiency, and to define, their reasons and impacts, in accordance with organized scientific basics, far away from haphazard. And consequently, define the measures and priorities of correction and controlling the intentional and non intentional risks in the process of communication and the interchange of information in the light of prevailing possibilities and circumstances. However, the significance of this study can be summed up in the following points: This study is
considered as one of the studies that discuss the risks of communication between the internal control units and the computer units and their impact on the efficiency of the accounting information systems in the Jordanian commercial banks, acquires additional significant importance through the increasing interest attention given to the Jordanian banking sector and to the main role played by these banks in consolidating the national economy. The accounting information systems not a target by themselves, but they form a means of providing information to assist different parties, whether internal or external parties in decision-making. Because of the efforts exerted by the internal control systems and by the computer system in order to protect the process of interchanging accounting information, the study of the internal control risks and the computer risks in interchanging of information among the Jordanian commercial banks, was very urgent, as it helps in achieving protection to private information, and that may contribute to increasing the customers of the banks that strive to maintain good reputation among the banking community.

2. Objectives of the Study

This study aims to achieve its main and principle objective which is defining the risks of communication between the units of internal control and the units of the computer, and the impact of such risk on the efficiency of the accounting information systems in the Jordanian commercial banks. Therefore, the objectives of the study can be limited by the following: Identifying the risks of communication between the departments of internal control and the departments of electronic computer that affect on the efficiency of the accounting information systems in the Jordanian commercial banks. Reaching to results and recommendations to be added to the knowledge required in the field of accounting information systems in order to achieve the hoped for results, in addition Presenting suggestions to contribute in limiting and reducing the risks of the interchange of accounting information in the field of Jordanian commercial banks.

3. Theoretical Framework and Prior Studies

Accounting systems generate accounting information that help rationalize and support economic decisions which affect the resources of communities and consequently the well-being of community members (Kahaleh, Hanan, 1997). The accounting system is strongly connected with various administrative processes; it helps rationalize decisions, makes the administrative process more effective in satisfying the needs of the organization’s management and raises the levels of performance in order to realize goals. Information technology has played an important role in various fields at all levels, and the profitable or provide service organizations considered the most affected by this technology that have entered into all its activities and work, and the information plays an important role in determining the effectiveness and efficiency of the organization, so the organizations headed to design and build information systems to control the vast amount of necessary information for the administration of the organization so as to ensure that the information is reliable, correct and accurate to all levels of administration in an appropriate form and time so as to use it in making rational decisions that contribute in achieving the objectives of the organization.

There are several definitions of accounting information systems, such as "a set of sub-systems and parts related to each other and to the surrounding environment, and works as one set in which relationships are interrelated with each other and within the system where each part depends on the other in achieving the goals of the overall accounting system (Chill, 2010). Hussein (2004) defined accounting information systems as an essential part of the management information system at the economic unit of business which collects financial data from sources inside and outside the economic unit, then operates such data and transforms it into useful financial data for users inside and outside the economic unit. Later definitions of accounting information systems include Makhadmeh (2007), who defined accounting information systems as a set of financial and human resources at the organization responsible for preparing financial information, in addition to information resulting from the processing of collected data, then providing such information to all managerial levels and for planning and monitoring purposes at the organization as well as other parties related with the organization.

From the above, we conclude that accounting information systems in any given organization include a set of qualified individuals, computers, software, databases and procedures which control its work, where all the mentioned components interact with each other to provide useful information which help take the right decisions. Khattab (2002) conducted a study in which he aimed analyzing the influence of the environmental factors, organizational factors, the behavioral factors of the information systems users, the computer sets and programmers and the models of the administrative decisions, on the efficiency and effectiveness of the accounting information systems. The study concluded that the environmental and the behavioral factors of the user of the accounting systems affect the efficiency and effectiveness of the Jordanian commercial banks information systems, and that the
computer sets the computer programmes used, have their great influence on the effectiveness and efficiency of the accounting information systems in the Jordanian commercial banks. Also, A Study Al Qashi (2003) aimed to define the problems that encounter the accounting information systems in the electronic trade, and the developing of a model that would link between the accounting information systems and the electronic trade. And in order to achieve these objectives most of the previous studies were reviewed, and one of the most important electronic trade auditing projects that was formulated jointly between the institutes of charted accountants (The American & The Canadian) was analyzed. The researcher concluded that the electronic trade being a very advanced technology, it has influenced all professional fields in general, and the two professions of accounting and auditing in particular. However, the absence of documentation of most electronic trade transactions has contributed in creating two main problems, they are: The mechanism of verification and admitting the amount of income, and the problem of levying taxation on the sales and revenues generated from the electronic trade transactions. The researcher also concluded that a link system must be developed on the internet in order to link between the accounting system of a firm and its electronic site. The link is composed of several policies and measures that would insure safety, validity and conformity of the customers and clients transaction with the firm through its electronic site.

Another study was conducted on Banks in Jordan Siyam (2004) to evaluate the computerized accounting information systems in the Jordanian commercial banks, through a set of standards that reflects the effectiveness of the performance of these systems, represented by quality, elasticity, simplicity and validity. In order to achieve the objectives of this study, a questionnaire was designed and distributed to the financial managers and the employees working at the financial circles of the general managements of the nine (9) Jordanian commercial banks listed at Amman money market for the year 2003. 45 questionnaires were distributed of which 42 questionnaires were valid to be analyzed. The study reached to a number of results, most important of which: The computerized accounting information systems in the Jordanian commercial banks are characterized of being of a high quality due to the accuracy and efficiency of the outputs of these systems, and the appropriate time of presenting such outputs to the decision maker, in a way that may contribute in making the adopted decision more wise. The computerized accounting information systems in the Jordanian commercial banks are also characterized with high quality, elasticity, simplicity and validity, and the descending order of these systems is also characterized with high quality, elasticity, simplicity and validity.

In a similar study, Abu Akr (2005) aimed to survey the opinion of the Jordanian banks managers so as to be ascertain of the control system and of its efficiency, and of the confidentiality, the security and the protection in the banking service provided through the internet in order to achieve a reliable system in which the basic principles, represented by the readiness, the integration of procedures, the security and the possibility of modernizing and maintaining the system within the Jordanian banks are available. In his study, the researcher depended on the related previous studies, in a simple attempt to reach to some recommendations that may serve the Jordanian banks. The researcher found that the security factor in the accounting information systems, the efficiency of the control system and the maintaining of confidentiality, security and protection are available in the banking services provided through the internet, but there are some difficulties in obtaining certain initial information, from the Jordanian banks, related to the study, such as disclosing some types of security available within the banks subject of the study. For instance, Kankan Hali, (2003) presented an integrated model for the security effectiveness of the information system and to practically examine this model through a questionnaire distributed on the manager of the information system at different economic halls. The ratios, the averages and Alfa values were used in the process of data analysis, and the study reached to a fact that the small and medium projects are practicing deterrent activities lesser than the larger organization in order to protect their information security, and that the organizations that their higher management supporting the information system are practicing protective measures more than those whom their higher management does not support the information system. The study also concluded that the financial organizations exert deterrent and strict efforts on the security of the information more than others, and that the deterrent and protective efforts to protect the information consolidate the security effectiveness of the information system.

Miski,(2001) focused on risks of using information systems can be limited by observing fixed principles when developing information systems, and suggested a number of principles such as the principle of firmly fixed development that forces the accounting system to be subordinated to accurate accounting standards. And the principle of review that suggests that the financial activities can be controlled by the visitors, without any collaboration with the employees in the used system .The study concluded that the software inclination to swift development imposed risks on the software used by the firms in the financial operations, so the risks can be confronted by stressing on certain principles when dealing with the software, so that there should be firm principles that do not affect the employed software. This study had its importance in dealing with expected risks while employing and developing the software, and the rules and basics that allow to confronting the risks.
In a study conducted by Serafeimidis & Smithson, (2003) entitled “Evaluating of Information Systems as Organizational Institution-Experience from a Study of Test Case”. This study aimed to describe the organizational initiative related to evaluating the information systems. This study was conducted on a British firm regarded as one of the ten largest life insurance companies in the world. The study was applied on a sample consisted of (160) employees working at the circles of information systems of the firm subject of the study. The study concluded that the evaluation of the information systems have their social and organization dimensions that would be taken into consideration when conducting the evaluation process. The information systems process is a complicated one and is in need to huge efforts to be exerted by the employees of the firm for being the closer and well acquainted by the secrets and potentials of the system. The results also indicated that the process of evaluation must be synchronic with the performance of the work, periodical and planned for.

Based on the earlier discussion and results from prior studies, hypotheses in the present can be formulated as below:

H01: There is statistical significant effect of problems of the centralization of decisions at the internal control department and the computer department on the efficiency of the accounting information systems at the commercial banks.

H02: There is statistical significant effect of problems of the absence of the legislations and laws concerned with the interchanging of importance on the efficiency of the accounting information systems at the commercial banks.

H03: There is statistical significant effect of the problems of the external environment in the department of the internal control and computer department on The efficiency of the accounting information systems at the commercial banks.

4. Method

4.1 Methodology of the Study

The study depended on the analytical descriptive method, and refers to the books, periodicals, electronic articles, specialized leaflet, laws and related legislative to cover the theoretical side of the study. The population of the study consists of employees from the electronic accounting information systems in the internal control department and the computer department in the Jordanian commercial banks, and the sample of the study randomly selected from the population of the study.

4.2 Instrumentation

The study's data collection tool was questionnaire designed particularly for the purposes of this study in order to measure the risks of communication between internal control and computer departments.

Of computer, and its impact on the efficiency of the accounting information systems In the commercial banks. The questionnaire was developed in accordance with the study literature, with items divided on three sections: the first section included general information about study sample individuals, the second section included twenty-four items to measure the risks of communication between internal control and computer departments (independent variable) and its dimensions (problems of the centralization of decisions, problems of the absence of the legislations and laws, problems of the external environment) which were categorized as follows: (see appendix No 1)

- problems of the centralization of decisions, measured by questions 1-8.

- problems of the absence of the legislations and laws , measured by questions 9-18.

- problems of the external environment measured by questions 19-24.

- The third section of the questionnaire consisted of ten items designed to measure the dependent variable (the efficiency of the accounting information systems In the commercial banks). It was measured by items 25-34. (See appendix No 1).

The responses were rated on a five-point Likert scale as follows: strongly agree (1 point); agree (2 points); neutral (3 points); disagree (4 points); strongly disagree (5 points).

4.3 Validity

The study questionnaire was reviewed by a number of academics specialized in the field of accounting and computer in order to identify their opinion on the consistency between items of the study and their correlation with the domain. Proposed amendments and changes were taken into consideration before finalizing the questionnaire. To determine the reliability of the study tool, the value of Cronbach Alpha's coefficient of internal consistency was 69-
84%, well above the statistically accepted value. This shows that the scale has statistically acceptable reliability.
(See appendix No2).

4.4 Statistical Treatment
For statistical treatment of data that were collected in light of study objectives and variables measured, the following statistical methods were employed:
- Frequencies and percentages to describe participant characteristics.
- Means and standard deviations to identify degree to which respondents were responsive to instrument items.
- Cronbach alpha coefficient for internal consistency to test for instrument reliability.
- Simple regression to test for study hypotheses.

5. Results and Discussion

5.1 Variables
Table (1) shows that dimensions of the risks of communication between internal control and computer departments were not widely disparate, where the problems of the centralization of decisions was placed top (M=4.20), compared with that problems of the external environment was placed down (M=3.00). Compared with the hypothesized mean (M=3), the overall risks of communication mean was higher; whereas the mean score of the efficiency of the accounting information systems (dependent variable) reached (M=3.23).

Table (1)
Means and Standard Deviations of Study Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>SD</th>
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<tbody>
<tr>
<td>problems of the centralization of decisions</td>
<td>4.20</td>
<td>.62</td>
</tr>
<tr>
<td>problems of the absence of the legislations and laws</td>
<td>3.55</td>
<td>.79</td>
</tr>
<tr>
<td>problems of the external environment</td>
<td>3.00</td>
<td>.81</td>
</tr>
<tr>
<td>The efficiency of the accounting information systems</td>
<td>3.23</td>
<td>.78</td>
</tr>
</tbody>
</table>

5.2 Testing Hypotheses and Discussion of Results
To test for study hypotheses, results from the simple regression analysis were as shown by table (2).

Table (2)
Simple regression analysis to find out whether there is impact for the risks of communication between internal control and computer departments on the efficiency of the accounting information systems

<table>
<thead>
<tr>
<th>Model Variable Statistics</th>
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</thead>
<tbody>
<tr>
<td>Independent Variables</td>
</tr>
<tr>
<td>problems of the centralization of decisions</td>
</tr>
<tr>
<td>problems of the absence of the legislations and laws</td>
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<tr>
<td>problems of the external environment</td>
</tr>
</tbody>
</table>

Table above shows a relationship between problems of the centralization of decisions and the efficiency of the accounting information systems. Influence coefficient Beta was at (.377) with statistical T-value being at (4.720) at statistical level (α=0.00) which is below significance level (α=.05). The first hypothesis "There is statistical significant effect of problems of the centralization of decisions at the internal control department and the computer department on the efficiency of the accounting information systems" so, this hypothesis was accepted.
Second hypothesis “There is statistical significant effect of problems of the absence of the legislations and laws concerned with the interchanging of importance on the efficiency of the accounting information systems”. Results supported a statistically significant association at significance level ($\alpha=0.00$) which is below the adopted significance level of ($\alpha=0.05$), Beta coefficient of influence (0.369) was significant with T-value being (3.92), so, this hypothesis was accepted.

Results from the current study supported the third hypothesis "There is statistical significant effect of the problems of the external environment in the department of the internal control and computer department on The efficiency of the accounting information systems". Results confirmed a statistically significant association at significance level ($\alpha=0.001$) which is below the adapted significance level ($\alpha=0.05$). Beta coefficient of influence was at (0.310), and statistical T-value was at (3.088). So, this hypothesis was accepted.
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