

Evaluating the Performance of Accounting Information Systems in Jordanian Private Hospitals

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Abstract: Problem statement: This study aimed at identifying the evaluation of accounting information systems performance used in the Jordanian private hospitals. **Approach:** In order to achieve the objectives of the study, a questionnaire has designed and developed for the purpose of data collection. **Results:** It was distributed to the individual's sample which are (15) hospitals, (SPSS) software program was used in order to analyze data, descriptive statistical methods were used to determine the views of employees in Jordanian private hospitals who use accounting systems. **Conclusion/Recommendations:** The study reached the following conclusions: The cost of modern equipment is very high. Using modern programs help individuals to get the job done quickly. Employees are unable to keep pace with human development in accounting systems.

Key words: Performance, private hospitals, modern instruments, information technology

INTRODUCTION

In the era of Industrial Revolution in the nineteenth century, it began to appear later large scale of joint-stock companies, which led to the separation of the ownership of these companies from their administration, as well as the emergence of an urgent need to prepare and publish financial reports about those companies periodically and annually after auditing them by an independent external auditor that their information gains the confidence and ensure that those managers of joint-stock companies act in line and wishes of shareholders as owners. In addition to the multiplicity and complexity of economic processes among private hospitals made it necessary to create and improve the report's entrances on the accounting information.

Finally, our current era is described as "Information Age", where the production and information's delivery of services has become a widespread product and the demand of it continues to increase. Accounting Information System plays a pivotal role in decision makers' service; this is what made the use of computers as processors of information as indispensable in the world of accounting.

It could be argued that the accounting system is the oldest systems of information, which is still considered the main source of economic information in the present day and in the future, because of the importance of financial information in the decision-making.

The accounting system has tended to be a system of information that does not stop at the limits of data and financial information, but also it includes data and

descriptive and quantitative information which is useful in decision-making for users distinct with plurality and diversity. Accounting information systems also provide additional information beside financial information.

The group of accounting programs users include current and potential investors, lenders, suppliers, creditors, customers, governments and the public, in addition to the administration, which its responsibility to prepare the accounting programs and then displaying it, that information must be capable of achieving the goal that it has been prepared for.

Significance of the study: The significance of the study is based on evaluating the performance of accounting information systems used in the Jordanian private hospitals, where the accounting information systems is consider as one of the components of the administrative organization specialized in Accumulating, Classifying, Processing, Analyzing and Communicating the financial information and the quantity to make decisions to internal and external parties.

The significance of this study shows through the attention of employees in Jordanian private hospitals, despite the fact that attention is often focused on their performance of public jobs.

Since this study concerned with assessing the performance of accounting information systems used in Jordanian private hospitals, this will give the study a serious dimension in studying the methods of designing and developing the accounting programs that form a large and growing importance to the issue of evaluating the performance of accounting information systems in private hospitals in Jordan.

Problem of the study: With advances in information technology, which will be reflected on the performance of employees, there should be a measure of information with certain quality to enable them to make decisions relevant to their work.

Due to the growing need for information in the Jordanian private hospitals, As in the other hospitals and being exist in a strong competitive market, both among themselves, or with others, the issue of preparing accounting programs has become of great importance.

The problem of the study was to show the impact of the presence of accounting information systems in Jordanian private hospitals and assess their impact on the performance of employees (users) and evaluation of used programs, the problem of the study lies in answering the following question:

“What is the impact of evaluating the performance of accounting information systems used in Jordanian private hospitals?”

Objectives of the study: This study seeks at achieving the following objectives:

- Acknowledge the extent of applying accounting information systems in Jordanian private hospitals
- Identify the impact of accounting information systems to improve the performance of employees in Jordanian private hospitals
- Make recommendations and suggestions to help in improving the performance of employees by strengthening the role of accounting information systems in Jordanian private hospitals

Previous studies:

Rauplence and Staerngis (2003) reached to a developed model to assess the effectiveness of accounting information systems that characterized with openness and clarity of the determinants and can be used in all stages of the system's life cycle (choice-application-exploitation) and evaluate mixed indicators (quantity-quality) of the accounting systems' effectiveness.

Salehi and Abdoreza (2011) reviewed barriers in implementation by postulating six hypotheses of accounting information system (middle managers, human resources, organizational structure, environmental factors, financial issues and organizational culture) in companies listed on Tehran Stock Exchange. Finally, some results were obtained in this manner: barrier of organizational structure with 26 percent, middle managers with 26 percent, human resources with 25 percent, environmental factors with 21 percent, organizational culture with 19 percent and

finally financial issues with 16 percent were identified as barriers factors influencing on the establishment of accounting information systems in listed companies on Tehran Stock Exchange.

Grande *et al.* (2011) research provided value added in accounting literature given the scarcity of works dealing with the relationship between the application and use of AIS and performance and productivity indicators in SMEs in Spain.

Banker *et al.* (2002), in their study, Impact of Information Technology on Public Accounting Firm Productivity, focused on five offices of an international public accounting firm that recently made large IT investments, primarily in audit software and knowledge-sharing applications. Both qualitative and quantitative information from the research site are analyzed to estimate the change in productivity following the implementation of IT. The results from both regression analysis and Data Envelopment Analysis (DEA) indicate significant productivity gains following IT implementation, documenting the value impact of IT in a public accounting firm.

Naranjo-Gil (2004) examined the effect of accounting information system design on the performance of organizations pursuing different strategic priorities. The results provide support of an indirect effect of sophisticated accounting information system on performance, acting through a prospector strategy.

Sajady *et al.* (2008) evaluated the effectiveness of accounting information systems of finance managers of listed companies at Tehran stock exchange. The results indicate that implementation of accounting information systems at these companies caused the improvement of managers' decision-making process, internal controls and the quality of the financial reports and facilitated the process of the company's transactions. The results did not show any indication that performance evaluation process had been improved.

Ismail and King (2005) focused on measuring the alignment of Accounting Information Systems (AIS) requirements with AIS capacity and then investigating whether this AIS alignment is linked to firm performance. The results indicated that a significant proportion of Malaysian SMEs had achieved high AIS alignment. Furthermore, the group of SMEs with high AIS alignment had achieved better organizational performance than firms with low AIS alignment. The findings provided evidence of the importance of AIS alignment and deepened current understanding of the requirements for accounting information and the use of IT as an important information processing mechanism. More importantly, it opens up possibilities for further study of AIS alignment in SMEs, both in Malaysia and on a global basis.

Mia and Chenhall (1994) examined the role of broad scope information, made available by Management Accounting Systems (MAS), in enhancing managerial performance. It is proposed that differentiation of activities into areas such as marketing and production is an organizational response to manage uncertainty. The study argued that such differentiation of activities moderates the association between the extent to which managers use broad scope MAS information and performance.

Badescu and Garces-Ayerbe (2009) proposes to analyze the impact of investments in Information Technologies (ITs) on the productivity of Spanish firms. The results obtained reveal that the sensitivity of labor productivity to changes in technological capital intensity is positive and significant when firm-specific effects are corrected.

Ajibolade *et al.* (2010) provide empirical evidence on the moderation effect of the level of Perceived Environmental Uncertainty (PEU) facing an organization on the effectiveness of MAS designs. Results obtained suggest a strong moderating effect of PEU on the relationship between MAS design and performance. Companies with high PEU appear to perform better when more sophisticated MAS designs are adopted.

Study hypotheses: To achieve the objectives of the study, many hypotheses were formulated in their null image as follows:

- First hypothesis: the used accounting systems do not use modern instruments
- Second hypothesis: the used accounting systems do not use modern accounting programs for information.
- Third hypothesis: the working accounting employees in this sector are not up to standard
- Total hypothesis: The used accounting systems do not keep pace with the requirements of information technology

MATERIALS AND METHODS

Population and the study sample: Population of the study includes all workers in Jordanian private hospitals and those who is holding the general secondary certificate (high school) and higher. The researchers selected a random sample of total population study which amounted to (15) hospital, that represented (2%) of the population study, (35) questionnaires were distributed, (25) of them were retrieved by a percentage of (71%).

Study methodology: The study relied on the research methodology descriptive, which starts from a study

evaluating the performance of accounting information systems used in the Jordanian private hospitals, through an office survey and recognizing the previous studies and theoretical, field and applied research, in addition to examine the most important previous studies and analyzing it with appropriate statistical methods in order to answer the study questions and test hypotheses.

Study tool: A questioner was developed taking advantage from previous studies, this questionnaire is composed of two parts.

Part One: This part consists of data and personal information (demographic variables) for individuals of the study sample (gender, age, educational qualification, experience, functional level).

Part Two: This part includes a group of (16) paragraphs that measure the availability of computer systems in Jordanian private hospitals. Paragraphs (1-6) measured the use of modern equipment, as paragraphs (7-11) measured the extent of using modern equipment, while paragraphs (12-16) measured the efficiency of human resources and the required level.

Tool's credibility: To verify the veracity of the tools content that presented before a specialists jury in Al-Balqa Applied University for the purpose of arbitration and to verify the authenticity of its amended paragraphs content, which they approved, after the introduction of their comments and proposed amendments at some of the amended paragraphs.

Statistical analysis: Data which was provided by the questionnaires were analyzed through subjecting them to (SPSS) to find the following statistical indicators. Credibility and validity of the study:

Sample	Alpha
25	86%

Table 1: Frequency distribution of the study sample based on gender

Gender	Repetition	Percentage
Male	13	52
Female	12	48

Table 2: Frequency distribution of the study sample based on age

Age group	Repetition	Percentage
Less than 25 Years	2	8
25-32 years	6	24
33-40 years	13	52
41-48 years	4	16
More than 48 years	0	0

Table 3: Frequency distribution of the study sample based on educational level

Age group	Repetition	Percentage
High school or less	1	4
Intermediate diploma	5	20
Bachelor	18	72
Master	1	4
Doctorate	0	0

Table 4: Frequency distribution of the study sample based on years of experience

Years of experience	Repetition	Percentage
Less than five years	8	32
5-10 years	12	48
11-16 years	5	20
17-22 years	0	0
More than 22 years	0	0

Table 5: Frequency distribution of the study sample based on the functional level

Functional level	Repetition	Percentage
Manager	7	28
Assistant manager	4	16
Accountant	13	52
Head of department	0	0
Other	1	4

Table 6: The arithmetic mean and standard deviation of Hypothesis

No. Hypothesis		Arithmetic mean	Standard deviation
1	The accounting systems do not use modern instruments	4.30	0.48
2	The accounting systems do not use modern accounting programs of information	3.73	0.66
3	The accounting working staffs for this sector are not up to standard	4.26	0.57
4	The used accounting systems do not keep Pace with information technology's Requirements	10.96	0.000

We can note in the previous Table that the value of alpha is equal to (86%), which is larger than the statistically acceptable percentage of (60%), reflecting the stability of the used measuring tool.

Study sample description:

Gender: The above Table 1 shows that the study sample included 52% “males” and 48% “females”.

Age: The above Table 2 shows that the study sample included a percentage of 8% of the age group of 25 and 24% of the age group 25-32 and 52% of the age group 33-40 and 16% of the age group 41-48.

Educational level: The above Table 3 shows that the study sample included a percentage of 4% of the employees which their educational level was high school or less, 20% of the employees which their educational level was intermediate diploma, 72% of the

employees which their educational level was bachelor, 4% of employees which their educational level was master and 0% of the employees which their educational level was PhD.

Years of experience: The above Table 4 shows that the study sample included 32% of employees which their years of experience were less than five years, 48% of employees which their years of experience were (5-10) years, 20% of employees which their years of experience were (11-16) years, 0% of employees which their years of experience were (17-22) years and 0% of employees which their years of experience were more than 22 years.

The functional level: The above Table 5 shows that the study sample included 28% of employees which their functional level was “manager”, 16% of employees which their functional level was “assistant manager”, 52% of employees which their functional level was “accountant”, 0% of employees which their functional level was head of department and 4% of employees selected the level “Other”.

Testing hypotheses:

The first hypothesis: The arithmetic mean of all the hypotheses came high as shown in the above Table 6, ranging between (3.73-4.3), where the first hypothesis which was stated “The used accounting systems do not use modern instruments, the highest arithmetic mean was (4.30), with a standard deviation of (0.48).

The second hypothesis: The second hypothesis which stipulates, “The used accounting systems do not use software accounting modern information” came with a higher arithmetic mean of (3.73) with a standard deviation of (0.66).

The third hypothesis: The third hypothesis which stipulates “The accounting working staffs for this sector are not up to standard” came with a higher arithmetic mean of (4.26), with a standard deviation of (0.57).

Total hypothesis: The total hypothesis which stipulates “The used accounting systems do not use modern accounting information programs” came with a higher arithmetic mean of (4.11), with a standard deviation of (0.46).

Testing Hypotheses by using (T-test): The above Table 7 showed that there were statistically significant differences at a significant level of (0.05) in the first hypothesis, where the level of significance was less than (0.05), therefore the basic hypothesis is rejected and the alternative hypothesis is accepted.

Table 7: (T-Test) Analysis

Field No	The value Hypotheses	Significance of "T"	level
1	The used accounting systems do not use modern instruments.	13.51	0.000
2	The used accounting systems do not use modern g accounting programs of information	10.96	0.000
3	The accounting staff working for this sector is not up to standard	5.51	0.000
4	The used accounting systems do not keep Pace with information technology's requirements	12.14	0.000

The above Table 7 showed that there were statistically significant differences at a significant level of (0.05) in the second hypothesis, where the level of significance was less than (0.05), therefore the basic hypothesis is rejected and the alternative hypothesis is accepted.

The above Table 7 showed that there were statistically significant differences at a significant level of (0.05) in the third hypothesis, where the level of significance was less than (0.05), therefore the basic hypothesis is rejected and the alternative hypothesis is accepted.

The above Table 7 showed that there were statistically significant differences at a significant level of (0.05) in the total hypothesis, where the level of significance was less than (0.05), therefore the basic hypothesis is rejected and the alternative hypothesis is accepted.

REDULTS AND DISCUSSION

The results of the study indicated the following:

First: The existence of modern equipment and technology forms a positive image of accounting systems' performance.

Second: The uses of modern programs increase the effectiveness of the systems' performance; that what the study approved in the statistical analysis.

Third: The presence of qualified human staffs plays an important role in raising the performance of accounting systems.

The study recommended the following:

- Working on the provision of modern devices and programs for employees in light of the use of accounting systems
- Working on the training staffs on how to use the systems
- Working on the provision of specialists in development and maintenance of the systems

CONCLUSION

The study critically evaluates from both descriptive and analytical point of view the performance of accounting information systems in hospitals.

This study contributes to the existing literature by providing evidence of the use of accounting information systems in Jordanian private hospitals. It has empirically investigated the use of modern instruments, programs and human efficiency.

The study reached that the cost of modern equipment was very high. Using advanced programs help individuals to get the job done quickly. Employees are unable to keep pace with human development in accounting systems.

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