AUDITING FINANCIAL STATEMENTS IN THE ELECTRONIC INFORMATION ENVIRONMENT

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ABSTRACT

The importance of the accounting information system for economic units is reflected in its main source of information, on which management relies to provide the necessary information in a timely manner, and therefore seeks to continuously develop the system through the use of information technology, which provides accuracy and speed in data processing at low cost. This reality has changed the processing and storage of data, necessitating the development of controls and audit methods to keep pace with this change.

The study dealt with determining the impact of the electronic operation of financial statements on the quality of external auditing and determining the nature of the audit under this environment, which required the auditor to study and understand this environment in which the data is processed in order to make it easier for him to understand the accounting system and the internal control system where scrutiny under this environment requires the use of modern methods and procedures and take advantage of the advantages of information technology.

Keywords: Audit, Financial Statements, Information System, Electronic Operation of Information, Accounting, Economic Units

INTRODUCTION

Since ancient times, people have been interested in preserving accounting documents and records, and accounting has been the main element used by human groups to organize their daily living and manage their simple projects. Accounting science developed gradually and at a slow pace until the industrial revolution, which marked a turning point in the history of economic development, became necessary to secure means that enable economic units to achieve good governance, and this goal was achieved through the existence of an effective accounting information system that meets the needs of the enterprise. The use of automated processing of accounting data began in the early 1960s, when the costs of using it were very high until the early 1970s, when the costs of electronic data processing devices decreased, and in the 1980s this method began to spread and expand as a result of accurate and rapid automated processing applications, these developments led to a large and extensive reliance on the use of computers and information systems in the completion of most of the work in organizations, and these advanced technologies led to a different role of the accountant as well as the auditor from his role in the Previous periods where these means shortened the work required of them and often made it more accurate and rapid. On the other hand, it has made it more complex, and from this point of view it has become necessary to keep up with the auditing profession of this technology and the changes it has brought to the accounting system, and to develop it to keep pace with developments and changes in the audit environment as well as to qualify the auditor to meet these new challenges by changing audit methods, and using information technology in the audit process, all in order to achieve auditing of the desired objectives efficiently and effectively.

Search Problem

Accountants and auditors face a number of challenges as a result of changes in the financial and business environment where it has become necessary to adapt to developments resulting from the emergence of so-called electronic processing of financial statements and the impact of such processing on the different stages of accounting and auditing, so that the elements of the study problem can be formulated in answering the following questions:

1. Are the objectives and audit methods under the manual accounting system different from those under the E-Accounting System?
2. Does training auditors in the use of IT in audit have an impact on the quality of external auditing?

Search Hypotheses

The First Hypothesis: The objectives of auditing under the manual accounting system are no different from that of the electronic system.

Hypothesis A-Second: The auditor must work to qualify himself scientifically and practically in order to have specialized skills that enable him to carry out the audit in the electronic operating environment of financial statements.

Information System

Definition of the system: In its simplest definition, it is a set of elements interacting with each other in order to achieve a particular goal.

It has also been defined as "a set of subsystems that are associated with environment by Relationships to achieve goal. Subsystems are the basic components of the system, and the environment surrounds the system and affects and affects the system, through the relationships between subsystems with the system, as well as relations between the system and the environment" (Al-Qahtani, 2005).

Elements of the System

Any system consists of the following elements:

- **Inputs:** These are elements that enter the system for processing such as raw materials, energy, and data.
- **Processing Operations:** A process of converting inputs into outputs.
- **Outputs:** These are the elements resulting from the conversion process and submitted to the stakeholders.
- **Feedback:** It relates to the process of correcting errors and deviations in the work of the system.
  With feedback, the system renews itself and closes the gap between actual performance and targeted standards.
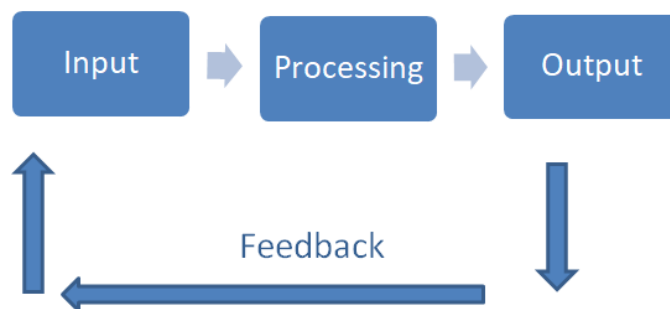
Source: By Researcher

FIGURE 1
SYSTEM ELEMENTS

Information System Definition

The information system is defined as "a framework through which resources (human and mechanism) are coordinated to convert inputs (data) into outputs (information) to achieve project objectives" (Al-Dharawi, 2000).

Accounting Information System Definition

The accounting information system is defined as "an integrated structure within the economic unit that uses available resources and other parts to convert economic data into accounting information in order to satisfy the needs of different users" (Debian, 2004).

Electronic Accounting Data Processing Automated Processing

Automated data processing systems are computer-based systems for data processing in the economic unit. These systems carry out previously human-performed work of collecting, organizing, classifying, comparing, etc., which are routine work that consumes most of the human effort. Technology and its development have facilitated many processes, and through the use of automated data processing technology, the process of obtaining, preserving and retrieving information has become a rapid and highly productive process, increasing the effectiveness of business and accounting processes (Romney, 2009).

Audit Portal in the Electronic Operating Environment of Financial Statements

One of the comprehensive definitions of audit is what a committee of the American Accounting Association has identified: "Auditing is a systematic and systematic process of collecting and evaluating evidence in an objective manner, relating to the results of economic activities and events, in order to determine the compatibility and compatibility between these results and the established criteria and inform the parties concerned with the results of the audit" (Al-Dharawi, 2000).

International IT-related Audit Standards

It is natural to keep up with the international audit standards of the audit profession and the changes and developments that are taking place. In the area of information technology and its impact on auditing, audit standards had to be issued as a guide for auditors to do their work

under this new environment. The International Audit and Confirmation Standards Board have issued several statements of international audit practice, the most important of which are:

- Statement No. 1001: Electronic information systems environment with the use of small computers.
- Statement No. 1002: The environment of electronic information systems under direct computer systems.
- Statement No. 1003: Environment of electronic information systems and use of database systems.
- Statement No. 1008: Risk Assessment Characteristics and Considerations and Internal Oversight of Electronic Information Systems.
- Statement No. 1009: Computer Audit Methods.
- Statement 1010: Considerations on environmental matters when auditing financial statements.
- Statement No. 1013: E-Commerce: Influencing Financial Statement Audit.

This is in addition to isa 401, the main IT-related standard.

The purpose of this international audit standard is to establish standards and provide guidance for the procedures to be followed when the audit of the computerized information systems environment is carried out (Sobh, 2014).

Electronic Auditing Methods for Financial Statements

As mentioned earlier, the objective of auditing electronically prepared data is no different from that of manual cases, but rather in the audit methods and procedures followed by the auditor when conducting auditing. The audit path is clear if data is prepared manually, while, if electronic accounting data processing systems are used, audit methods are multiple, the most famous of which are:

1. Auditing around the Computer
2. Auditing through the Computer
3. Auditing with the Computer
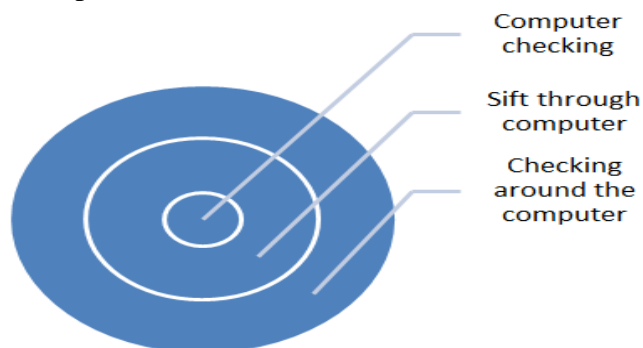
Source: By Researcher

FIGURE 2
AUDIT METHODS WHEN USING ELECTRONIC ACCOUNTING DATA PROCESSING SYSTEMS

The use of these methods raises the effectiveness and efficiency of the audit process because of the ability to test data, software and systems. Here's how these three methods are applied:

Computer Audit

It is also called "computerless control tests" Test of the Control without the Computer. Computer auditing can be defined as "tracking the audit path of the data entry point in computers, and then following it at its exit point from the devices in the form of printed paper reports" (Friday, 2009).
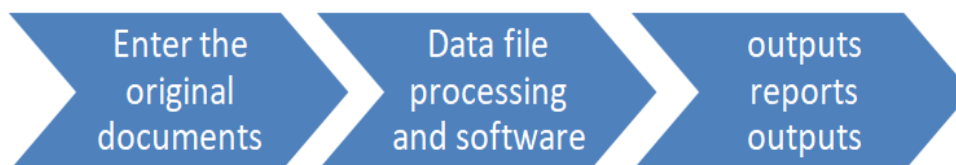
Source: By Researcher

FIGURE 3
COMPUTER AUDITING METHOD

Computer Auditing

As auditors of electronic data operating systems have become increasingly experienced, more advanced methods of testing the validity of the drivers themselves have been developed rather than looking at the computer as a closed black box, which is known as computer auditing.

Computer Assisted Audit Techniques (CAATs)

The INTERNATIONAL AUDIT PROFESSION 1009 statement issued by the International Federation of Chartered Accountants (IFAC) provided guidance on how to use computer-assisted audit methods. It describes its various uses and considerations taken when adopted as a method of scrutiny.

Field Study

The Sample Intended for the Study

The questionnaire targeted a group of certified auditors in Iraq, where the study community included 150 questionnaires and distributed them to the auditors, and after careful effort 105 questionnaires were retrieved.

Time and Space Limits for the Questionnaire

The questionnaire was distributed to a group of certified auditors from different regions of Iraq (central and southern Iraq). This questionnaire was extended from April 2020 to April 2021 through direct communication and delivery or *via* e-mail.

Discussion and Analysis of the Questionnaire

First: Descriptive Study of the Demographic Characteristics of the Study Sample

1. **Distribution of Study Sample Members by Sex**

	Table 1		
	DISTRIBUTION OF SAMPLE MEMBERS BY GENDER		
SEX	**Iteration**	**Percentage**	**Combined percentage**
Male	72	68.6 %	68.6
Female	33	31.4 %	100
Total	105	100 %	

Source: Prepared by researcher by questionnaire

The results of the survey indicate that most respondents are male at 68.6% and 31.4% female.

2. **Distribution of Sample Members by Qualification**

	Table 2		
	DISTRIBUTION OF SAMPLE MEMBERS ACCORDING TO SCIENTIFIC QUALIFICATION		
Scientific Qualification	**Iteration**	**Percentage**	**Combined percentage**
Vocational studies	15	14.3 %	14.3
Baclorius	48	45.7 %	60
Graduate	42	40 %	100
Total	105	100 %	

Source: Prepared by researcher by questionnaire

According to the results of the above table, 45.7% of the baccalaureate campaign represents the highest percentage, and graduate holders account for 40% of the total sample. Professional studies holders account for the lowest rate of only 14.3%.

3. **Distribution of Sample Members by Professional Experience**

	Table 3		
	DISTRIBUTION OF SAMPLE MEMBERS BY EXPERIENCE		
Experience	**Iteration**	**Percentage**	**Combined percentage**
Less than 5 years	21	20 %	20
5 to 10 years	21	20 %	40
10 years and older	63	60 %	100
Total	105	100 %	

Source: Prepared by researcher by questionnaire

From the table 3 above, about 60% of the sample members had more than 10 years of experience, which gives confidence to the results of the questionnaire as a result of their long experience and therefore the answers represent the reality of the situation in Iraq, reflected in the long experience of the responding experts.

Analytical Study of Questionnaire Questions Related to Study Hypothecs

Hypotheses Questions

Hypothesis A: The objectives of auditing under the manual accounting system are no different from that of the electronic system.

1. Question 1: The objective of the audit is for the auditor to obtain audit evidence of a set of assurances relating to financial reports.

Table 4 SHOWS WHETHER THE AUDIT'S OBJECTIVE IS FOR THE AUDITOR TO OBTAIN AUDIT EVIDENCE OF A SET OF FINANCIAL REPORTS CONFIRMATIONS			
Scaling	**Iteration**	**Percentage**	**Combined percentage**
I'm very agreeing	51	48.6	48.6
Ok	51	48.6	97.1
Neutral	3	2.9	100
I don't agree	0	0	100
I don't strongly agree	0	0	100
TOTAL	105	100	

Source: Prepared by researcher by questionnaire

The results in the above table show that 97.1% of the answers agreed that the objective of the audit was for the auditor to obtain audit evidence of a set of assurances relating to financial reports.

2. Question 2: The objectives of auditing under the manual system are no different from that of the electronic system.

Table 5 SHOWS WHAT THERE WAS A DIFFERENCE IN AUDIT OBJECTIVES UNDER THE MANUAL SYSTEM THAN IN THE ELECTRONIC SYSTEM			
Scaling	**Iteration**	**Percentage**	**Combined percentage**
I'm very agreeing	51	48.6	48.6
Ok	48	45.7	94.3
Neutral	3	2.9	97.1
I don't agree	3	2.9	100
I don't strongly agree	0	0	100
TOTAL	105	100	

Source: Prepared by researcher by questionnaire

The results in the table above show that 94.3% of the answers agreed that there is no difference in the audit objectives under manual operation than in the electronic system.

3. Question 3: Electronic data operation has helped the auditor achieve audit objectives in a better way.

Table 6 SHOWS WHETHER ELECTRONIC DATA OPERATION HELPS THE AUDITOR ACHIEVE AUDIT OBJECTIVES BETTER			
Scaling	**Iteration**	**Percentage**	**Combined percentage**
I'm very agreeing	30	28.6	28.6
Ok	57	54.3	82.9

Neutral	9	8.6	91.4
I don't agree	9	8.6	100
I don't strongly agree	0	0	100
TOTAL	105	100	

Source: Prepared by researcher by questionnaire

The results of the above table show that 82.9% of the answers agreed that the electronic operation of the data helped the auditor to achieve the audit objectives in a better way and thus obtain the auditor proof of quality and efficiency.

4. Question 4: The auditor should design the audit process to suit the objectives of the audit process.

Table 7 EXPLAINS WHETHER THE AUDITOR SHOULD DESIGN THE AUDIT PROCESS TO SUIT THE OBJECTIVES OF THE AUDIT PROCESS			
Scaling	Iteration	Percentage	Combined percentage
I'm very agreeing	51	48.6	48.6
Ok	45	42.9	91.4
Neutral	3	2.9	94.3
I don't agree	6	5.7	100
I don't strongly agree	0	0	100
TOTAL	105	100	

Source: Prepared by researcher by questionnaire

From the table above, 91.4% of the answers agreed that the auditor should design the audit process to suit the objectives of the audit process, as the design must take into account the electronic operating environment and the change in the process under this environment.

Appeals about the First Hypothesis

After analysing the theoretical study along with the questions of the first hypothesis in the questionnaire, it can be concluded that:

- The audit objectives have not changed in both environments (manual and electronic) as the audit objective is to ensure that the auditor obtains audit evidence for a set of financial reporting assurances.
- Electronic data operation has helped the auditor achieve audit objectives in a better way, taking into account the design and planning of the audit process under electronic operation.

Table 8 SIG RESULTS OF THE THIRD HYPOTHESIS					
		3.1	3.2	3.3	3.4
3.1	Sig (2-tailed)		0	0.004	0
3.2	Sig (2-tailed)	0		0.05	0.005
3.3	Sig (2-tailed)	0.004	0.05		0
3.4	Sig (2-tailed)	0	0.005	0	

Through theoretical analysis and SIG analysis (SIG is less than 0.05 per hypothesis question) the results have therefore validated the third hypothesis.

Hypothesis Thanetian

The auditor must work to rehabilitate himself scientifically and practically in order to have specialized skills that enable him to carry out the audit process in the electronic operating environment of financial statements.

The questions raised were aimed at finding out the reality of the profession in Iraq and determining the extent to which it is keeping pace with the technological development that is taking place.

1. Question 1: While you are auditing in an electronic environment, do auditors on your audit team have it knowledge?

Table 9 SHOWS WHETHER AUDITORS ON THE AUDIT TEAM HAVE IT KNOWLEDGE			
Scaling	**Iteration**	**Percentage**	**Combined percentage**
I'm very agreeing	33	31.4	31.4
Ok	48	45.7	77.1
Neutral	21	20	97.1
I don't agree	3	2.9	100
I don't strongly agree	0	0	100
TOTAL	105	100	

Source: Prepared by researcher by questionnaire

The results show that 77.1% of auditors have it knowledge of their audit team. This result reflects the current reality, which requires everyone to have adequate knowledge in the field of information technology that enables them to keep pace with the technological development taking place.

2. Question 2: While you are auditing in an electronic environment, are there specialists in information systems
On the audit team?

Table 10 SHOWS IF INFORMATION SYSTEMS SPECIALISTS ARE ON THE AUDIT TEAM			
Scaling	**Iteration**	**Percentage**	**Combined percentage**
I'm very agreeing	33	31.4	31.4
Ok	27	25.7	57.1
Neutral	30	28.6	85.7
I don't agree	15	14.3	100
I don't strongly agree	0	0	100
TOTAL	105	100	

Source: Prepared by researcher by questionnaire

The survey showed that 57.1% of the respondents agreed that they had information systems specialists on their audit team. This result reflects the reality of the profession in Iraq, which indicates that the computerized information system is not given the necessary

importance, due to many reasons, including the nature of the work of companies (family companies based on the principle of personal dealing) and their small size, and therefore the use of specialists in information systems becomes economically useless.

3. Question 3: While you are auditing in an electronic environment, is the audit team developing the accounting information system used at the facility to improve the audit process?

Table 11 SHOWS WHETHER THE AUDIT TEAM IS DEVELOPING THE ACCOUNTING INFORMATION SYSTEM USED AT THE FACILITY TO IMPROVE THE AUDIT PROCESS			
Scaling	Iteration	Percentage	Combined percentage
I'm very agreeing	30	28.6	28.6
Ok	30	28.6	57.1
Neutral	24	22.9	80
I don't agree	18	17.1	97.1
I don't strongly agree	3	2.9	100
TOTAL	105	100	

Source: Prepared by researcher by questionnaire

The table notes that 57.1% of the respondents are working on the development of the accounting information system at the enterprises in order to improve the audit process. It also reflects the decline in the ratio to the fact that the auditors do not do their work properly in accordance with international standards of audit and therefore do not keep up with the development of the profession in this field.

4. Question 4: While you are auditing in an electronic environment, are employees in the accounting department of the Economic Unit used to carry out the audit?

Table 12 SHOWS IF AUDITORS ARE USING EMPLOYEES IN THE ACCOUNTING DEPARTMENT OF THE ECONOMIC UNIT TO CARRY OUT THE AUDIT			
Scaling	Iteration	Percentage	Combined percentage
I'm very agreeing	15	14.3	14.3
Ok	57	54.3	68.6
Neutral	15	14.3	82.9
I don't agree	12	11.4	94.3
I don't strongly agree	6	5.7	100
TOTAL	105	100	

Source: Prepared by researcher by questionnaire

The results reflect that 68.6% of the respondents employ employees in the accounting department of the Economic Unit to carry out the audit. After analysing the theoretical framework of the study, it is important to hire employees in the accounting department during the audit process because these employees are responsible for operating these systems and are therefore the most familiar with these systems and their methods of operation, and by analysing the above results, it is clear that 31.4% of experts are still working to audit electronic systems in a random and unregulating manner without complying with the established standards.

5. Question 5: While you are scrutinizing an electronic environment, are auditors undergoing training courses to keep pace with the development of technology?

Table 13			
SHOWS THE EXTENT TO WHICH AUDITORS UNDERGO TRAINING COURSES TO KEEP PACE WITH THE DEVELOPMENT OF TECHNOLOGY			
Scaling	Iteration	Percentage	Combined percentage
I'm very agreeing	39	37.1	37.1
Ok	45	42.9	80
Neutral	15	14.3	94.3
I don't agree	6	5.7	100
I don't strongly agree	0	0	100
TOTAL	105	100	

Source: Prepared by researcher by questionnaire

The results show that 80% of the respondents agreed that they were undergoing training courses to keep pace with technological development. This ratio reflects the interest of auditors in developing their audit skills in the electronic operating environment and this desire for development has an important significance in the context of future plans that must be implemented in the field of career development to keep pace with developments.

Conclusions about the Second Hypothesis

Through theoretical and field study, it can be concluded that:

- The auditor should have knowledge of it and use experts and specialists when needed.
- The auditor should work to develop accounting information systems in economic units, which contributes to relying on internal controls and thereby improving the audit process.
- It is important for the auditor to have some competencies and skills to carry out the audit and therefore does not have to be an analyst or systems expert, but it is sufficient to have sufficient skill to understand and familiar with these systems.

Table 14						
SIG RESULTS OF THE HYPOTHESIS FOR A SECOND						
		5.1	5.2	5.3	5.4	5.5
5.1	Sig (2-tailed)		0	0	0.675	0
5.2	Sig (2-tailed)	0		0	0.246	0.032
5.3	Sig (2-tailed)	0	0		0	0.011
5.4	Sig (2-tailed)	0.675	0.246	0		0.04
5.5	Sig (2-tailed)	0	0.032	0.011	0.04	

Based on the study's theoretical, field and SIG analysis (analysis showed SIG results of less than 0.05 except question 4), it was found that the auditor had to work on a scientific and practical qualification to have the skills to carry out the audit of the electronic operating environment and therefore it can be said that the fifth hypothesis has been achieved.

CONCLUSION

1. The electronic operation of financial statements has changed the components of the manual accounting system, and changed some of the procedures and methods used in it.
2. The use of information technology has not affected audit objectives but has improved audit procedures and methods.
3. The auditor should take into account the risk factors that the audit process can be exposed to in the context of electronic data processing, especially in the presence of electronic systems free of regulatory methods.
4. The Association of Accountants and the Iraq Certified Auditors' Profession Board have not kept up with these changes, as no procedural measures have been taken related to the development of expert expertise and knowledge regarding auditing under the electronic business environment.
5. Despite the advantages of electronic operation of financial statements, there are some problems faced by the auditor, particularly those associated with evidence, failure to separate tasks, increase errors, plan the audit process, and the contents of the auditor's report.

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