

Evaluating the Efficiency of the Internal Control System in Light of the Introduction of Computers

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Abstract

This study aims to identify the effects of using computer in an internal control system, as well as identifying the required procedures which are in consistent with the requisitions of using computer in the supervisory work and its role in promoting efficiency and effectiveness of the financial control. It also aims to recognize the requirements of training, which works to promote workforce performance in the field of financial control and the extent to which these systems are compatible and reliable to secure accuracy of the accounting data and the control work.

To achieve research objectives, the following hypotheses have been tested:

- 1- Will the usage of computer in the control system improve the process and provide accuracy in the system?
- 2- Will this process need a certain level of training and qualifying the workforce?
- 3- Does the introduction of computer into the control system change the results and provide a more trusted data?
- 4- Does the introduction of computer into the control system increase the efficiency of the control work?
- 5- Does the control system provide more clear and reliable reports with the use of computer?

Research Methodology

First: The research problem:-

Control process is one of the means by which management ensures what is being implemented in conformity with the plans in place. The controlling process includes proved accounting procedures as well as securing the assets and the properties of a project or an organization: this is achieved by a set of procedures and methods that are in the components and the steps of controlling. With the growth and expansion of work, as well as the growth in the size of the enterprises and with the complexity of their operations, the matter has led to an increase in the controlling process in these institutions. This led to necessitating of electronic systems in the implementation of these tasks on the basis of the system's holdings related to speed and accuracy in the implementation of tasks associated with them: therefore, to continue according to traditional formulas in the process of control functions in light of developments and expansions which will not be effective significantly and thus the computer input in the controlling process has become necessary commensurate with the functions of the controlling process in general: the problem associated with this matter will show up during this shift on the basic elements representing the ingredients of the controlling process in the project or the organization, and because of this, the problem appears with the knowledge of finding the influence caused by the introduction of automated computer on input elements and ingredients of the controlling process. Through this research the problem can be expressed in the context of the following questions: -

Second: The research goals:

This research achieves several goals in the field of computer entry into the internal control process:

1. The existence of a computerized internal control system in all economic units will work to raise the abilities of the controlling process in those units.
2. The ingredients of internal control will change through the introduction of the computer by entering into hardware and software which increases the effectiveness.
3. The management can achieve a relatively large interest through the computer input in the areas of control, through the trustworthiness, accuracy and speed of access of the controlling process's data.
4. The introduction of computer to the internal control processes raise the efficiency of the employees' performance in the financial units and allow them to deal with the technological development taking place in the financial operations.
5. Improve the reputation of the economic unit in the labor market in which increases the confidence of those interacting with it.
6. Increase management efficiency in the economic units which uses computer through an increase in their ability to interact with the resulting information in the reports submitted under the automated system.

Third: The research importance:

The Importance of the research is highlighted in the following points:

1. The significance of this research is to shape the necessity of internal control with the massive and continuing development in the communication information technology which concentrates their attention on improving

- the capacity of the accounting's data through automated treatment systems and increasing its potentials.
2. To ensure improving the performance level of the financial units because of the conviction made on the efficiently controls on financial transactions.
 3. striving to pursuit modernized means to resolve the problems facing the administration in the areas of financial and controlling work.
 4. Raise the efficiency of the control report and increase its effectiveness through the availability of accurate, timely and objectivity factors.

Fourth: The research method:

Researchers will depend on the research method facts through questionnaire form design which is the foundation to access relevant information. By using statistical methods, it will explore the results and evaluate the research hypotheses by benefiting from the answer respondents on the questionnaire form: it represents in itself a measure to evaluate the results and determine the processes influencing the results gained through the shift to exercise computerized internal control.

Fifth: The research hypotheses:-

Research is based on two main assumptions:

1. There are statistical relationships between the computer entry into the internal control processes and the efficiency of the controlling process procedures.
2. There are statistical relationships between computerized internal control process and the accuracy, speed and effectiveness to access controlling reports.

The theoretical side

Entrance to the Internal Control:

1. The Definition of Internal Control:

The overall concept of internal Control is expressed by a regulation plan and all coordinated ways and procedures which are used by the project management to protect its assets and to guarantee the accuracy and the safety of the accounting data and increasing the degree of reliability, and to increase operational efficiency and ensuring the obligation with the established administrative policies.

The starting point in designing or developing the internal Control system is considered the Controlling framework of the facility properly to facilitate the planning, controlling and following-up process.

The internal Control functionally is defined as the independent evaluation activity inside the project for the purpose of testing the accounting, financial and other aspects of the project's operating activities as a basis for management service in terms of controlling function and measuring the effectiveness of internal Control systems, the internal Control is also known as the independent evaluation activity which is exercised by the project's management.

Finally, the Internal Control is defined as the function of independent assessing organized within the organization to test and evaluate their effectiveness and help the organization members to perform their responsibilities effectively, which provides them with the analysis and recommendations and assessing the information about the audited activities. Hussen (1999).

2. The importance of internal controls:

The American Institute of Certified Public Accountants (AICPA) defines auditing as following: Auditing is an organized and systematic process of collecting and evaluating evidence objectively which are related to the results of economic activities, events, and to determine the extent and scope of compatibility between these results and the standards established to deliver it to related parties. Hadi (2004)

Audit has been known by the audit committee of the American Accounting Association as an organized and objectivity process to obtain evidence, regarding the facts of economic events, and to communicate the results to interested users of this investigation.

The Americans Accountants Union defines control procedures as an organized procedure in order to obtain and evaluate the evidence objectively relating to economic decisions (balances) and events: to determine the degree of the relationship between these decisions and measure the results of the beneficiaries. Fattah (2006)

3. Fundamentals of Internal Control:

A good and effective Internal Control system is characterized by a set of main characteristics, which represent the required fundamentals to consider Control system well and effective in achieving the main operational objectives.

There is no doubt that the availability of all these properties or constituents all or some of them particularly is the basis of judging on the strength or weakness of internal Control system and its applicable methods and tools in the entity. Saban (1996)

And these constituents represented in the follows:-

- 3.1 Controlling plan is based on the separation between the functions and responsibilities.

3.2 A system to specify the authorities and the way to complete the registration process so that it is possible to achieve control on the accounting of assets and liabilities income and expenses.

3.3 Fixed rules follow performing functions and tasks for each section.

3.4 A group of individuals with a sufficient degree of rehabilitation to perform the incumbent responsibilities. Saban (1996)

Some people adding other constituents to the internal control system, including: -

3.5 Proper accounting system is based on an integrated set of books, records and accurate documentary cycle classified as accounting guide.

3.6 Performing the internal auditing system, whether a review made before or after the disbursement, to be sure from the legal actions and the truthfulness of their adoption.

3.7 Using all automatic means that helps the truthfulness of the recorded accounting data in the books without any errors and manipulation. Hussam (2003)

4. Internal Control and the ways to Increase the Effectiveness of the Control Activity:

Controlling and preservation of the property is originated from the instinct of human ownership rights. Importance of such control is increased when human discovered the commercial exchange, state development, ownership of public property and specific financial resources to carry out its functions and reserving these property; it was necessary to have a system which determine and control its resources and the ways of spending them. From this aspect, the control over public money has been developed therefore the control is aimed to raise the productive efficiency to its finest level in addition to maintaining the property and ensure good use. Alagai (2000)

The Control on the quality of audit work is one of the most important things to be controlled to ensure the effectiveness and accuracy of the supervisory work or the works of financial control and auditing whether Supreme Control Board or Private Auditing Firms. Ali (2006)

According to the INTOSAI standards for oversight, the Controlling bodies has to establish a system and procedures designed to confirm the quality processes that aimed the guarantee of overall quality in the supervisory works as a means of ensuring the quality of performance as well as reviewing the business activity of the staff that have the responsibility of oversight operations.

4.1. The efficiency in supervisory work means: achieving the optimum relationship between the set of resources used as inputs in the process of operating program and the products of goods and other elements which represent the outputs in this process and this relationship will be achieved by using the less possible units of inputs and produce as much as possible number of the output, and so we see the efficiency, as a concept of running resources and optimal utilization, which helps to achieve the goals set before.

4.2. It also means the Effectiveness of Supervisory Action: focusing on achieving objectives of the previous planned program in the planning stage; efficiency mean: focusing on the quality of goods production and services consequently. Jawad (2000)

5. Internal Control Procedures in a Computerized Environment

The control procedures are more important in the electronic accounting information for those applied in the manual systems for the several reasons, including:

❖ Great amount of accounting data will be processed by the computer which exceeds the amounts that have been processed by hand which spared increasing the likelihood mistakes.

Accounting data will be collected, processed and stored in non-readable form. No man can monitor these data and verify their accuracy and objectivity, which can be easily conducted under the manual system of accounting information.

It is difficult to trace the auditing path, which can result the possibility of embezzling large sums of economic units by a non-trustees staff that are working in the IT environment, hence the basic elements in the manual systems should continue to exist and with it, the use of a computer affect the application of these elements in a multiple ways.

Control of information technology is used to mitigate the associated risks with the application systems and information technology environment, where the using of computers in operating the accounting data resulted to reconsider the information of internal control under the manual operation of data and treating resulted implications; therefore these procedures has been developed which represents in the: General Procedures - Applicable Procedures. Rowel (2001)

5.1 General Control procedure

These procedures deals with all aspects of information technology, including the administrative side and purchasing software and its maintenance, upkeep, physical protection of tangible machinery for the automatic account and data maintenance, preservation, development and preparation of alternative plans in case of emergency. Nassr (2003)

5.1.1 Control Procedures on the System Preparation and Documentation:

System documentation means the written description and flowing maps, menus, publications, document

samples, reports, and any other means of expression to identify the goals, features of information system and the way in which this system works and there are five categories of documentation in the computer environment: documenting procedures, system documentation, software documentation, documenting processes, and data documentation:

5.1.1.1 Documenting Procedures: are the master plan for all the system, which enable to get maximum possible efficiency of internal control in the electronic systems, these procedures are working on the creation and design of various records and documents related to the system and the importance of documentation procedures represent as follows:

5.1.1.1.1 Making company's management fully aware of all operations system activities.

5.1.1.1.2 Dependable as a basis for assessing internal accounting procedures by the internal auditor and external.

5.1.1.2 System Documentation: such as user manual, which describes the purpose of the system, including maps of system auditing and description of inputs, outputs, files and error messages and controlling lists, as it determine the responsibility of performing all operating and controlling procedures also identifies debugging procedures which are very important documents for systems analysts and software users.

We can clarify what includes systems documentation system as follows:

5.1.1.2.1 Determining the purpose of various system activities.

5.1.1.2.2 Auditing maps of information related to the system.

5.1.1.2.3 Operation methods (Operation Guide).

5.1.1.2.4 Specification and requirements of used devices.

5.1.1.2.5 List of change and approved modification procedures in the system.

5.1.1.2.6 Control point of the system.

5.1.1.3 Authenticity: such as guide of running programs, which describes the purpose of the program and includes auditing maps of the program, scheduling the decision, control features, form and components of the records, form of inputs and outputs with the examples of each one of them; results of testing the program, operating instructions, which are very important documents for programmer

5.1.1.4 Documenting Operation: such as operating guide that used by the in charge of the computer operating, which includes program instructions, required input and output files, storage units that stores these files, preparing and operating procedures, the procedures to be followed when there are problems in the operation and the estimated operating time; these documents are very important for responsible of operation the system. Hikmet(1997)

5.1.1.5 Data Documentation: such as data dictionary which contains the definition of each vocabulary or the data elements that used in the system; as describe total and partial perspective of data in the database system, is a very important document for the managing the database. Helmi (2003).

5.2 Applied Control Procedures (Accounting):

The term (Methods of Control Applications) is called on those methods that are used in the electronic accounting information systems, which is related to the private functions that are performed by electronic processing data section, which aims to provide a reasonable assurance degree of safety for registration operation, data processing and preparing reports. There are a number of procedures and records can affect the control of inputs method, control data processing and control methods of outputs.

The applied procedures in the case of electronic operation can be classified into three main groups:

First Group: Related to the Inputs, Second Group: Related to Operation, Third Group: Related to Outputs.

5.2.1 The Definition of Control Application Elements:

5.2.2 Control Elements on Inputs which is: Control inputs that are designed to provide the reasonable certainty that the obtained data are run in EDP.

5.2.2.1 Have been declared.

5.2.2.2 Have been converted to be read by the machinery.

5.2.2.3 Not established or increased nor duplicated when converted to the readable form by machine or converted through the lines of communication.

5.2.3 Elements of Operation Control: it will be designed to provide reasonable certainty that electronically running data has been as specified in its application.

5.2.4 Elements of Inputs Control: it will be designed to ensure the accuracy of operating results (such as preparing the list of the account or display it on a screen or reports preparation or an invoices or magnetic files or payable checks) or make sure that authorized people are the only ones who got this outputs. Ahmed (2004)

Practical Part

Analysis for the answers of the respondents and testing the results

First: Analysis for the answers of the respondents:

This chapter contains the clarification of the data collection and statistical methods which are used for the treatment of this study: which is the process of preparing a questionnaire form in order to distribute those forms to people whom are skilled in control and computer. We started searching for places where we could find people whom are specialist in the control process and the usage of computer. The best places we found were modern banks and Divan of Financial Control. We started distributing 45 questionnaire forms to these targeted places. In the following table we have mentioned the places which are involved in receiving the questionnaire forms. It also contains the details regarding the number of forms applied, the number of the forms returned and their percentages for each place differently and overall.

Table (1) Percentage of Responds from Each Place

Sequence	Places	Number of forms applied	Number of forms answered	Percentage of forms answered
1	North Bank	1 2	7	58.33 %
2	Kurdistan Bank	1 2	8	66.67 %
3	Divan of Financial Control	2 0	2 0	100 %
Tot		4	3	76.09 %

From this table we could find out that the total percentage of answered forms is 76.09 % which is a high percentage. Because our subject is really important, they were excited to help us by answering our questions.

Respondents' Properties

The following table provides the details regarding the respondents' properties which include their age, Experience and job positions. It also provides the number of forms answered by each property, including its percentage.

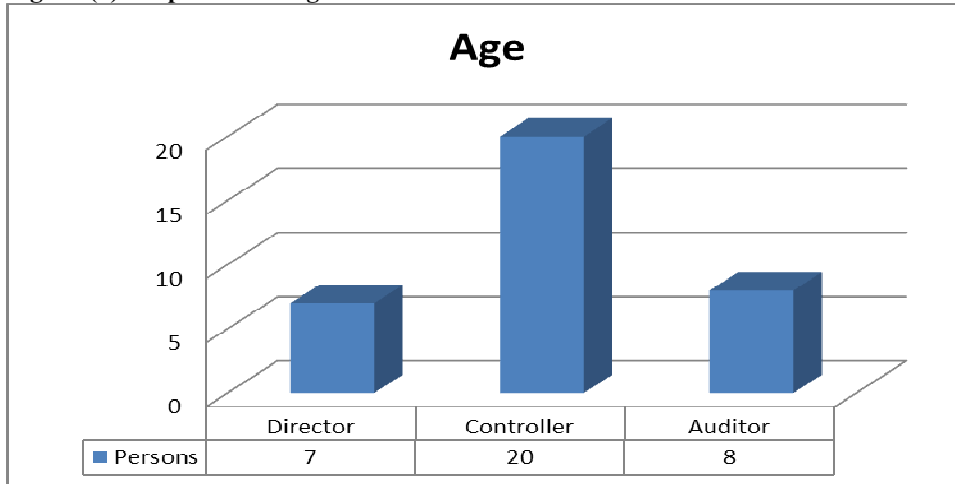
Table (2) The number of forms answered by each property

Details	Age	Experience	Job Position	Number of Forms	Percentage
Age	30-39			24	68.57 %
	40-49			10	28.57 %
	50-59			1	2.86 %
Experience		Accountant		26	74.29 %
		Finance & Banking		6	17.14 %
		Auditing		3	8.57 %
Job Position			Director	7	20 %
			Controller	20	57.14 %
			Auditor	8	22.86 %

1. Respondent's Age:

From this table we can find out those whom are at the age of 30 to 39 are 24 persons with the percentage of 68.57 % whom are mostly young generation and are capable of performing hard work. There are 10 persons at the age of 40 to 49 which is 28.57 % which contains mostly specialists. There is only one person at the age of 50 to 59 which is equal to 2.86 % whom are mostly people whom are retired.

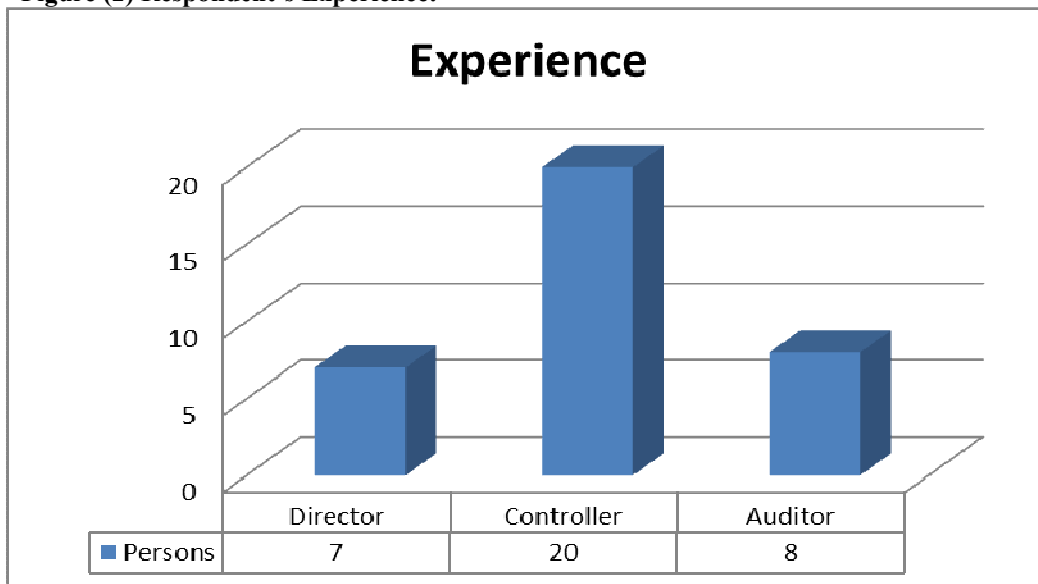
Figure (1) Respondent's Age



2. Respondent's Experience:

The table above (table2) also mentioned their experiences. Those whom have experience in accounting are 26 persons which is equal to 74.29 %. There are 6 persons whom have experience in finance and banking which is equal to 17.14 %. Those whom have experience in auditing are only 3 persons which is equal to 8.57 %. This shows that the each one of them is appropriate for their job position they have compared to their skills.

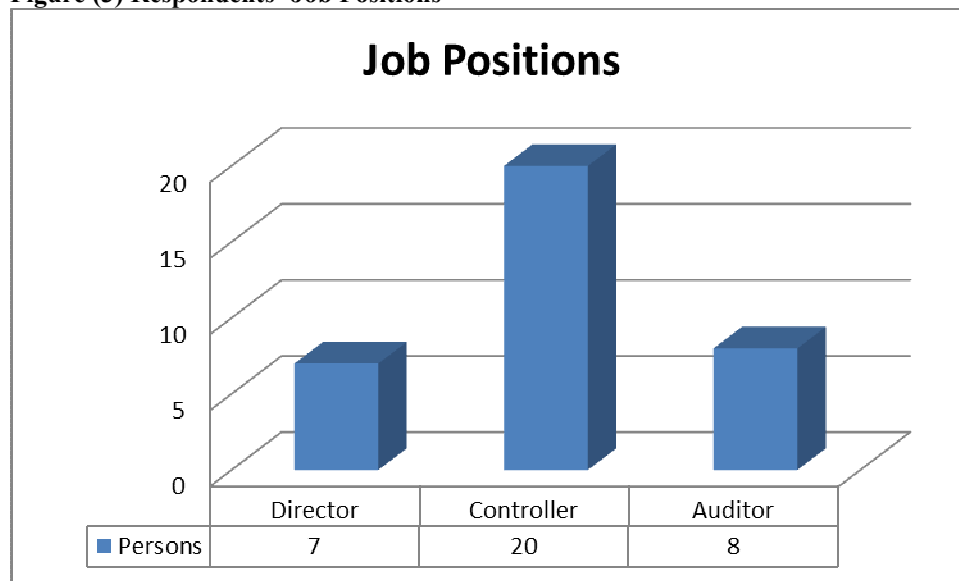
Figure (2) Respondent's Experience:



3. Respondents' Job Positions:

The third detail we found out from the table above (table 2) is their job positions. There are 7 directors which is equal to 20% and this is a low percentage because some of the directors we gave the questionnaire form did not return their forms to us. The controllers whom answered the questionnaire forms are 20 persons which is equal to 57.14 % which is a high percentage because we thought their opinions are important to our subject. There are 8 person whom are auditors which is equal to 22.86 % which is a low percentage but we thought their opinions are also important to be in our questionnaire forms.

Figure (3) Respondents' Job Positions



Second: Analysis for the results and testing the hypotheses

First hypothesis:

Description of the Sample Responds

The first result is about the procedures required in the entrance of computer into the control process; the percentage of those whom have agreed with our first question is a high percentage of 88.57 %. This means that when entering the computer into the control process it requires a change in the documentary cycle.

The second result is the percentage of those whom agree with the idea of using computer in the control process leads to focus on many important and useful control process steps is 74.29 % which is a high percentage.

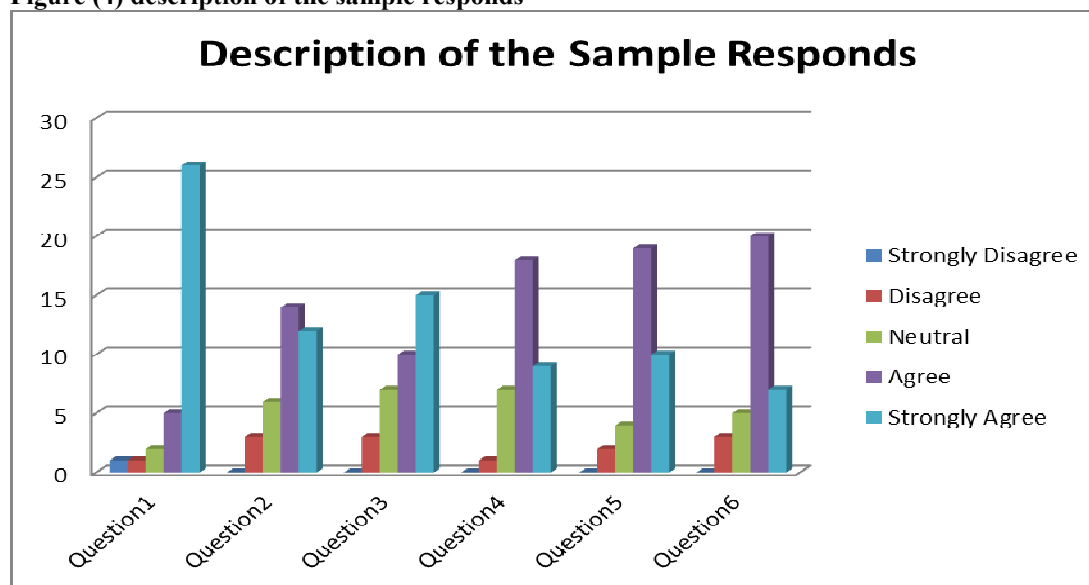
The third result is 71.43 % for those whom agree with the fact that using computer in the control process helps to give more sufficient reports and information than before.

The percentage of those whom agreed with the fact that using computer in the control process requires efficient measurements to prevent the system from penetration is 77.14% is the fourth result.

The fifth result is 82.86 % of those whom agree that the efficiency of the control procedures and operations increases with the introduction of computer. This is also a high percentage.

The percentage of those whom agreed that the introduction of the computer into the control operations boosted all the aspects of disclosures, procedures and results of the control work is 77.14% which is the sixth result.

Figure (4) description of the sample responds



• **Analysis for the answers and testing the hypothesis**

In this section we will analyses the answers we received for each question we asked according to two

parts. First part (Efficiency of control process under a computer system) and second part (Accuracy, speed and efficiency in the process of obtaining control reports).

o First Part:

Table (3) Efficiency of control process under a computer system:

Sequence	Questions	Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
		Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage
1	The entrance of computers into the control process requires a change in the documentary cycle.	1	2.86 %	1	2.86 %	2	5.71 %	5	14.28%	26	74.29%
2	The usage of computer has led to a focus on a number of important and useful control process steps.	0	0 %	3	8.57 %	6	17.14%	14	40%	12	34.29%
3	The introduction of computers into the control process has helped to give more sufficient reports and information than before.	0	0 %	3	8.57 %	7	20 %	10	28.57%	15	42.86%
4	The use of computer in the control process requires efficient measurements to prevent the system from penetration.	0	0 %	1	2.86 %	7	20 %	18	51.43%	9	25.71%
5	The efficiency of the control procedures and operations increases with the introduction of computer.	0	0 %	2	5.71 %	4	11.43%	19	54.29%	10	28.57%
6	The introduction of the computer into the control operations boosted all the aspects of disclosures, procedures and results of the control work.	0	0 %	3	8.57 %	5	14.29%	20	57.14%	7	20%

According to these analyses which consist of six sample questions about the efficiency of control process under a computer system which was distributed through the questionnaire forms: the result shows that most of the respondents accepted all the sample questions in general.

Regarding the first hypothesis of the research and in the purpose of finding a significance relationship between the efficiency of the internal control system and introducing the computer in control processes, it has been depended on regression analysis to identify the nature of that relationship from the following table:

Table (4): the simple regression of the efficient internal control variable over the introduction of computer variable.

Source	Freedom degree	Total squares	Squares average	Calculated F	Scheduled F
regression	1	0.448	0.243	3.01	2.13
Error	34	12.812	0.104		
Total	35	13.260			

The table above shows that the value of F calculated equals to 3.01, which is greater than the F scheduled that amounted to 2.13 with a freedom degree equals to (34.1) and a level of significance equals to (0.05). This means a significance relationship between the efficiency of the internal control system and the introduction of the computer into the control operations, consequently the first hypothesis is accepted, which states:

There are statistical relationships between the computer entry into the internal control processes and the efficiency of the controlling process.

Second hypothesis:

Description of the Sample Responds:

The first result is about the introduction of computers into the control work achieved a great speed in finishing up the work than it was previously done; the percentage of those whom have agreed with our first question is a high percentage of 80 %.

The second result is the percentage of those whom agree with the idea that the introduction of computer into the control work has provided sufficient accuracy in the performance of financial control functions and its results is 82.85 % which is a high percentage.

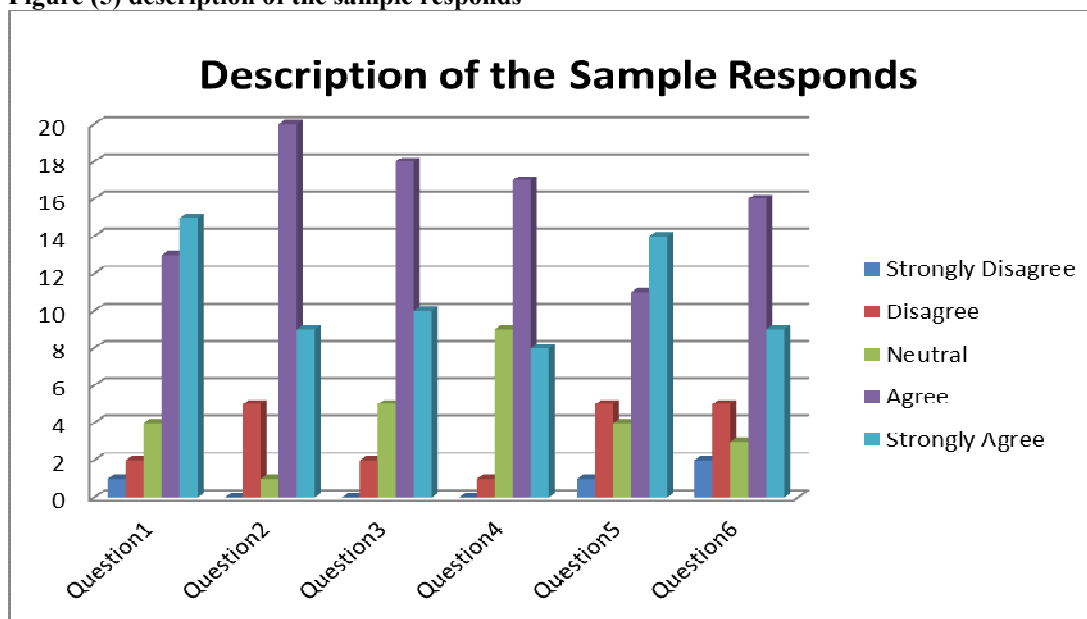
The third result is 80 % for those whom agree with the fact that Computers aid in achieving objectivity and appropriateness in the control processes.

The percentage of those whom agreed with the fact that with the use of computers in the control process more accurate and objective control reports are obtained is 71.43 % is the fourth result.

The fifth result is 71.43 % of those whom agree that the software available in the control process facilitates the application of the control process procedures. This is also a high percentage.

The percentage of those whom agreed that the use of computers has led to the acquisition of sufficient skills and experience for those working in the field of control, which is a reflection of the efficient control operations, is 71.43 % which is the sixth result.

Figure (5) description of the sample responds



O Second Part:

Table (5) Accuracy, speed and efficiency in the process of obtaining control reports:

Sequence	Questions	Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
		Number	Percenta	Number	Percenta	Number	Percenta	Number	Percenta	Number	Percentag
1	The introduction of computers into the control work achieved a great speed in finishing up the work than it was previously done.	1	2.86 %	2	5.71 %	4	11.43%	13	37.14%	15	42.86%
2	The introduction of computer into the control work has provided sufficient accuracy in the performance of financial control functions and its results.	0	0 %	5	14.29%	1	2.86%	20	57.14%	9	25.71%
3	Computers aid in achieving objectivity and appropriateness in the control processes.	0	0 %	2	5.71 %	5	14.29%	18	51.43%	10	28.57%
4	With the use of computers in the control process more accurate and objective control reports are obtained.	0	0 %	1	2.86 %	9	25.71%	17	48.57%	8	22.86%
5	The software available in the control process facilitates the application of the control process procedures.	1	2.86%	5	14.29%	4	11.43%	11	31.43%	14	40%
6	The use of computers has led to the acquisition of sufficient skills and experience for those working in the field of control, which is a reflection of the efficient control operations.	2	5.71%	5	14.29%	3	8.57%	16	45.72%	9	25.71%

According to these analyses which consist of six sample questions about the accuracy, speed and efficiency in the process of obtaining control reports which were distributed through the questionnaire forms: the result shows that most of the respondents accepted all the sample questions in general.

Concerning the second hypothesis of the research, and in order to find out the significant relationship between the accuracy, the speed, and the efficiency of the internal control system reports and the introduction of the computer in the control operations, it has been relied on regression analysis to identify the nature of that relationship from the following table:

Table (6): a simple regression of accuracy, speed, and efficiency of the internal control system reports variables on the introduction of computer variable.

Source	Freedom degree	Total squares	Squares average	Calculated F	Scheduled F
regression	1	0.656	0.523	4.51	2.13
Error	34	14.811	0.121		
Total	35	15.467			

The table above shows that the value of F calculated equals to 4.51, which is greater than the F scheduled that amounted to 2.13 with a freedom degree equals to (34.1) and a level of significance equals to (0.05). This means a significance relationship between the accuracy, speed, and efficiency of the internal control system reports and the introduction of the computer into the control operations, consequently the second hypothesis is accepted, which states:

There are statistical relationships between computerized internal control process and the accuracy, speed and effectiveness to access controlling reports.

Conclusions and Recommendations

From this research we have achieved some conclusions and recommendations as following:

First: Conclusions:

- 1- The field study proved that the programs used for improving the internal control by using computers have provided accuracy in the control work.
- 2- Introducing computer into the internal control system will cause a clear change in the results of internal control along with this computers provided the comparison of results and give us accurate and trustable data: it helps us to make efficient decisions.
- 3- The continuing procedures of following up and reviewing of this system increase the efficiency of the control work.
- 4- By using computer in the control we will be able to gain experience for those working in the areas of control and continuing trainings are required to make them understand the control procedures more.
- 5- Using computer in the control system has made the control procedures more clear and provides reports to the related parties as soon as possible.
- 6- The results of the research proved the validity of both of the research's hypotheses, which confirms that the introduction of computers into the control processes will increase its efficiency as well as the effectiveness of its reports.

Second: Recommendations

- 1- Testing is required for the procedure of securing the system from one time to another and makes changes which can protect us from hacking into the system.
- 2- It is required for those working in the areas of control to have complete experience and be trained continually to be updated and informed of modern systems.
- 3- The need to strength the internal control units with an efficient staff that is able to practice financial and observational work on the computer.
- 4- Giving more attention to control is required by making a private accounting and control system. Those whom participate should be specialists in accounting and control works to ensure us accurate outputs.
- 5- Attract sophisticated computers as well as modern and comprehensive software, which provides a high level of competence in the financial and observational work.
- 6- It is required for the procedures and instructions to be independent and neutral and to be reviewed and updated continually.
- 7- The controllers should give attention to organizational structure which helps to increase the efficiency of financial control through the determination of powers and responsibility

References

- Al-Waraq Foundation for publication and distribution, 1999.
- Hadi al-Tamimi. the entrance into audit through theory and practical, Amman: Dar Wael for publication,2004.
- Abdel Fattah Sahn. control and review of modern internal audit. Alexandria: Dar Jameaaya for Publication, 2006.
- Alaqai, Madani Abdul Qadir. The administration analytical study of the functions of administrative decisions. seventh edition, Jeddah: Dar Jeddah for publication, 2000.
- Jawad, Shawki Naji. business administration of a macro perspective. Amman, Dar Al-Hamed for publication,2000.
- Saban Mohammed , Jumma Ismail Ibrahim & Sawafiri Fathh Rizq. the entrance of control and internal review application, Alexandria: Dar Jameaaya for publication, 1996
- Rowel Janice M. Anderson, translated by Ahmed Mohamed Zamel.the function controller, Riyadh: Research Center Institute of Public Administration,2001.
- Ali Abbas. Administrative Control. Oman: Qalaa Al-Aulla Office,2006.
- Hussam Abokhaddr. Accounting Information Systems. Amman: Dar Al-Furqan for publication and distribution , 2003.
- Ahmed Hussein Ali, Accounting Information Systems mind framework and applied systems. Alexandria: Dar Jameaaya for publication , 2004.
- Hikmat al-Rawi. Accounting Applications on computer. Amman: Al-Mustaqbal for publication and distribution, 1997.
- Ahmed Helmi Juma. Accounting Information Systems. Amman: Dar Manahij for publication and distribution , 2003.
- Abdawahab Nasr Ali, Shehata Saed Shehata & Adel Najeeb. Advanced Revision. Alexandria: Dar Jameaaya for publication , 2003.

Questionnaire form

personal Information

Job Position: _____

Age: _____

Experience: _____

Dear Questioner, this form in your hands is a part of the requirements for completing our research in accounting. Please answer them carefully: your answers will be transferred into a statistical relation. There is no need to mention your name, thank you for your cooperation in serving scientific studies and supporting us to complete our research.

Sequence	Questions					Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
	First Part: Efficiency of control process under a Computerized System									
1	The entrance of computers into the control process requires a change in the documentary cycle.									
2	Using computer leads to focus on many important and useful control process steps.									
3	Using computer in the control process helps to give more sufficient reports and information than before.									
4	Using computer in the control process requires efficient measurements to prevent the system from penetration.									
5	The efficiency of the control procedures and operations increases with the introduction of computer.									
6	The entry of computer into the control operations boosted all the aspects of disclosures, procedures and results of the control work.									
	Second Part: Accuracy, speed and efficiency in the process of obtaining control reports									
1	The introduction of computers into the control work achieved much more speed in finishing up the work than it was previously done.									
2	The introduction of computer into the control work has provided sufficient accuracy in the performance of financial control functions and its results.									
3	Computers aid in achieving objectivity and appropriateness in the control processes.									
4	With the use of computers in the control process more accurate and objective control reports are obtained.									
5	The software available in the control process facilitates the application of the control process's procedures.									
6	The use of computers has gained sufficient skills and experience for those working in the field of control, which is a reflection of the efficient control operations.									