

## The Impact of Information Technology on Quality Assessment of Independent Auditors

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### ABSTRACT

Financial statements audited by independent auditor is a very good reliable for data transformation. Independent auditor, is the most qualified person to comment on the accuracy and the preparation of financial reporting. Auditor ability is because he does auditing according to auditing standards to ensure that the items included in the financial statements have been prepared in accordance with accounting standards. In this study the impact of information technology on the quality of the CPAs in Tehran. This study is a combination of the methods of library and field research, and through its purpose is a descriptive-survey research. the impact of information technology on the five hypotheses related to the quality of the components of the independent auditors' assessment containing identification and similarity of reports, reduction in time of auditing, synchronization of auditors in taking charge with problem, identification of professional judgment limit and increasing auditing reports are discussed. To collect data we used questioner with Likert rate and to assess data SPSS software and statistical T test were used. The result of this study confirmed the entire hypothesis.

**KEYWORDS:** information technology, quality assessment, independent auditors, independent auditing

### INTRODUCTION

The advent of digital computers, at the beginning of the second half of the twentieth century has changed the face of accounting and management information system and several mechanisms of storage and processing, although the scope of these changes are very significant and serious but necessary because of the high initial investment and relatively running costs of machine system on the one hand , and the complexity of the hardware on the other hand , many small and medium enterprises and even large organizations have not the willingness or ability to use computer-based systems.

Informatics revolution since 1980 , undoubtedly due to the emergence of a new generation of computing machines precipitated microcomputers and a new accelerated industrial development of the information system and most improved systems of things that changed the face of the company and the organization . Very quick and miraculous growth of information technology (IT) over the last two decades caused a dramatic change in all administrative and financial systems and even small and medium-sized enterprises also were changed. Very high acceleration of data processing equipment manufacturing was accompanied by the rapid growth of telecommunications technology and precipitated the development of information systems tremendously. This new development was not restricted to information systems and organization but changed of all activities and elements of production and trade. Development of systems for maintaining, processing and exchange of information produced by extraordinary acceleration and incredible growth in the areas of information technology, not only changed information systems but also these complex organizations and companies associated with this system were brought serious changes.

#### Problems statement

Variable objectified in the present world of organizations is information technology. Information technology is a key element in eliminating the constraints of time and place, better and faster access to information which is called exchange of electronic information. Following this change, much shorter time we expend and information and monetary transactions of financial resources has changed and instead of money, the financial information is exchanged. Following this change, much shorter time information and monetary transactions of financial resources has changed and instead of money, the financial information to be exchanged.

The increasingly use of this technology is recently used in Iran and different studies have been and are being conducted. Different studies have used different definitions of information technology which in the present the study, information technology is a set of hardware (the lower mind ), and software such as applications (financial applications such as integrated financial systems), intelligent software, databases, networks, the Internet and its tools , and other technologies that affect accounting and reporting (which are given in Chapter II ). Application of information technology at a high level (this is considered as the higher level) is use of the Internet so that integrated financial system directly connected to the Internet companies and users of accounting information from anywhere in the world to be able to admit to the website of the company and every minute with the latest alterations analyze and even manipulate the financial statements, (using intelligent software,

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HTML, XML, XBRL , will be discussed in the second season ) and do not need printing and distribution only at fiscal year-end, and this financial statements and the financial reporting period in which any type of information via the Internet is available is called On-line continues financial reporting.

Information technology consists of two words; information and technology. Generally, technology is a connection between human and environment which can control the society and human and information is defined as everything that informs us about events, issues and topics. There is a fundamental difference between data and information. The unprocessed raw figures are called data which are almost meaningless such as the number of workers and the number of hours they work, but when the data are processed they are changed into information that will be meaningful to different people.

Auditor credits to claims provided by another person as financial statement. The increasing complexity of society justifies the need for relevant and reliable financial information and information systems and processes generating the data needed to expand the audit as part of the reporting process. The concept of quality prevents everyone to think the same about it. Audit quality is a multidimensional latent structure; it is fundamentally difficult to measure, so there is not a general definition that covers all types of audit and auditor's audit quality. Di Angelo defines audit quality fairly comprehensive. He defines discovering and reporting possible violations of the accounting system used by the auditor as audit quality (Nick Khah, 2008).

Palmrose (1988) defines audit quality as auditor's credit amount. Since the purpose of the audit is to ensure the financial statements, audit quality is defined as the audited financial statements free of distortions is important. In fact, this definition emphasizes on the audit results; the reliability of audited financial statements reflects audit quality. Titman (1986); audit quality is defined by the accuracy of the information that after the audit is available for the investors. Davidson (1993) defines audit quality as auditor's ability to detect and remove distortions and discover the importance of the work done on the net. Ja'fari (2006) defines measure of real quality of audit as total merit (discovery of significant distortions) and the independency of auditors (Reporting distortions discovered). Audit process, as the final product of the audit report has the nature of goods (services ) that public use does not preclude the use of other public services , and its use is not the monopoly of any consumer (Mahdavi and Karjooei, 2005 ).

The public good like other goods and services must be of suitable quality to be a continuing demand for it. If the audit is a monitoring tool that handles the multiple roles assumed to be constant after all other conditions audited by financial statements that are in high quality will have a greater confidence among consumers mainstay. Studies and empirical findings indicate that audit quality mainly is associated with performance audit of two key variables (audit firm) that these variables include qualifications, independence and performance of professional knowledge and accounting practices. These findings indicate that audit quality is deeply connected to these two factors, i.e., audit quality is the discovery of significant distortions ( merit ) and reflection in the audit report ( independence ) (Hasas Yeganeh2003).

Financial statements audited by independent auditors, is an excellent means of transmitting information. Auditor ability is because she audits according to accounting standards to ensure that the items contained in the financial statements have been developed in accordance with accounting standards. Thus, Auditor credits to claims provided by another person as financial statement and increase the reliability of financial information used in economic decision (Nick Khah, 1:2000). The quality of auditors consist of five components which include: 1) synchronization and assimilation of audit report. 2) identifying professional judgment limits. 3) Reduction in the time of audit. 4) Coordinating the action in dealing with cases of problem. 5) Increase in the reliability of auditors' reports. In our study, we want to answer the original question: does information technology increase the quality of claims of independent auditors or not? To answer this question, five questions arises:

- 1) Is there any positive relationship between IT and synchronization and assimilation of audit report?
- 2) Is there any positive relationship between IT and identifying professional judgment limits?
- 3) Is there any positive relationship between IT and reduction in the time of auditing?
- 4) Is there any positive relationship between IT and coordinating the action in dealing with cases of problem?
- 5) Is there any positive relationship between IT and increase in the reliability of auditors' reports?

### **Importance and necessity of research**

Financial statements audited by independent auditors, is an excellent means of transmitting information. Auditor ability is because she audits according to accounting standards to ensure that the items contained in the financial statements have been developed in accordance with accounting standards. Thus, Auditor credits to claims provided by another person as financial statement and increase the reliability of financial information used in economic decision (Nick Khah, 1:2000).

The users of statements and financial information, such as managers, investors, credit agencies and banks always want to be prepared this statement based on the same principles and standards of comparison to decide with no difficulty. The increasingly need in auditing and accounting in Iran to principles that can reduce problems and anomalies existed in financial statements is an undeniable fact. Technology and electronic tools in the recently past decades has caused information explosion. Today, not only scholars and merchants are forced to use the information but also researchers and all people are forced to use. System users use information as an important source. As this information is valuable and important, an organization is needed to produce and manage this information. Today, IT plays a key role in all fields of activities. Generally IT is regarded as a valuable source and increases the ability of managers and staff and improves the effectiveness and feasibility of the organization's goals. (Dastgir and Saedi,2011).

### Research hypotheses

- 1) There is a positive relationship between IT and synchronization and assimilation of audit report.
- 2) There is a positive relationship between IT and identifying professional judgment limits.
- 3) There is a positive relationship between IT and reduction in the time of auditing.
- 4) There is a positive relationship between IT and coordinating the action in dealing with cases of problem.
- 5) There is a positive relationship between IT and increase in the reliability of auditors' reports.

### The research method

This research was a descriptive-survey study that is based on field research. Different aspects of the research (research methods used in this research) are as follows;

### Statistical population

The statistical population includes all members of certified public accountants audit firms of Iran located in Tehran.

### Sampling

In the present study, classified sampling has been used in which each statistical group is given the sample according to their number and chance. In the present study, because the data are quantitative we use quantitative formula. So we define sample size according to influences of success rate (p) , as well due to being infinite the population sample size, calculation formula is: According to the statistical population of 1699 people, including senior supervisor , supervisors and senior auditors , audit firms of certified public accountants registered in the province of Tehran, the resulting sample is calculated as follows ;

$$n = \frac{1699 * (1.96)^2 * .5 * .5}{1698(.1)^2 + (1.96) * .5 * .5} \approx 91$$

### Research findings

*First hypothesis : 1) There is a positive relationship between IT and synchronization and assimilation of audit report.*

#### • definition of statistical hypothesis

H1 : There is a positive relationship between IT and synchronization and assimilation of audit report.

H0; There is not a positive relationship between IT and synchronization and assimilation of audit report.

$$H_0 : \mu \leq 3 \quad \text{claim rejection}$$

$$H_1 : \mu > 3 \quad \text{claim}$$

Statistical test calculation

Table 1. Statistical test calculation of the first hypothesis

Sig	Degree of freedom	Statistical T	Mean	Number of observation
0.000	94	30/270	4/1684	95

Decision; according to the sig level, we can conclude with confidence level of 95 percent that there is a positive relationship between IT and synchronization and assimilation of audit report.

*The second hypothesis; There is a positive relationship between IT and identifying professional judgment limits*

#### • Definition of statistical hypothesis

H1; There is a positive relationship between IT and identifying professional judgment limits.

H0; There is not a positive relationship between IT and identifying professional judgment limits.

$$H_0 : \mu \leq 3 \quad \text{claim rejection}$$

$$H_1 : \mu > 3 \quad \text{claim}$$

Statistical test calculation

Table 2. Statistical test calculation of the second hypothesis

Sig	Degree of freedom	Statistical T	Mean	Number of observation
0.000	94	27/605	4/3	95

Decision; according to the sig level, we can conclude with confidence level of 95 percent that there is a positive relationship between IT and identifying professional judgment limits.

*The third hypothesis; there is a positive relationship between IT and reduction in the time of auditing.*

H1; There is a positive relationship between IT and reduction in the time of auditing.

H0; There is not a positive relationship between IT and reduction in the time of auditing.

$H_1: \mu > 3$       **claim**       $H_0: \mu \leq 3$       **Claim rejection**  
Statistical test calculation

Table 3; Statistical test calculation of the third hypothesis

p-value	Degree of freedom	Statistical T	Mean	Number of observation
0.000	94	96	4	95

Decision; according to the sig level, we can conclude with confidence level of 95 percent that there is a positive relationship between IT and reduction in the time of auditing.

*The fourth hypothesis; There is a positive relationship between IT and coordinating the action in dealing with cases of problem.*

H1; There is a positive relationship between IT and coordinating the action in dealing with cases of problem.

H0; There is not a positive relationship between IT and coordinating the action in dealing with cases of problem.

$H_1: \mu > 3$       **claim**       $H_0: \mu \leq 3$       **Claim**

Statistical test calculation

Table 4. Statistical test calculation of the fourth hypothesis

p-value	Degree of freedom	Statistical T	Mean	Number of observation
0.000	94	32/071	4/1	95

Decision; according to the sig level, we can conclude with confidence level of 95 percent that there is a positive relationship between IT and coordinating the action in dealing with cases of problem.

*The fifth hypothesis; There is a positive relationship between IT and increase in the reliability of auditors' reports.*

H1; There is a positive relationship between IT and increase in the reliability of auditors' reports.

H0; There is not a positive relationship between IT and increase in the reliability of auditors' reports.

p-value	Degree of freedom	Statistical T	Mean	Number of observation
0.000	94	32/650	4.31	95

Decision; according to the sig level, we can conclude with confidence level of 95 percent that there is a positive relationship between IT and increase in the reliability of auditors' reports.

## Conclusion

Today, the computer has become a tool that is able to perform everyday tasks keeping with the unprecedented speed and accuracy. Computer has made some information that was not provided previously. Auditors know computer as a tool for many useful methods. [Migs et al 1996]. Need to use computers have been expressed in accounting, international accounting standards. In some accounting systems in which the computer system is used for processing applications it may gain some needed information that is difficult or impossible to audit without the help of computers (audit procedures IOC 2006) Davis and his colleagues believe that some accounting practices without the use of computers would be difficult or impossible. They stated that the technical aspects can print all the records in computer databases and the use of computers to handle them but in most cases it is not practical due to the large volume of information, for example, a large company that has been daily selling thousands of products. Manually handle such volumes of data in terms of the time are required to deal with obstacles in the way [Davis et al 2005]. Chartered Accountants in England and Wales in one of its publications have mentioned the overall benefits of using computers. In addition, other researcher has hinted to cases that the sum is given as follows:

1. Improve the quality of auditors' judgments: The main benefit of the use of information technology is proposed for institutions is enhancement of quality auditing.

2. Improvement of competitiveness: Big Six audit partners and managers in their interviews to maintain its competitive position with other institutions have emphasized.

3. Increase efficiency and reduce cost in accounting practices; in a magazine, IT Brifing 1 Chartered Accountants in England and Wales are: "for many auditors ultimate goal to computerize the audit is improve efficiency and cost." [Maijor, 2002].

In general, the purpose of the computer auditing audit is to enhance operational efficiency and effectiveness and reduce audit risk, audit costs, improve response time and reduce the level of technical knowledge necessary to perform the audit, a decrease in information level so that less-experienced staff take charge the responsibility of the major staffs.

The auditor has expressed interest in using a computer:

- Possibility to improve the quality and maturity of time audit is provided.
- Auditors knowledge technologies are available.
- Automated can eliminate repetitive operations audit process.
- Computer could things to sort, search and perform calculations for large amounts of data in few second.

Modern information technology can prevent or reduce some of handheld system risks which are an inherent risk that must be addressed in the following three examples;

1. Human error; in manual systems, human has a key role while automatic systems tend to use their resources. Computers in calculations do not make mistake contrasting to human. Mistakes made in manual systems are not allowed in automatic systems.

2. Lack of process stability; in manual systems, lack of process stability causes many problems but it is a merit in automatic systems. Computers do their work according to pre-established, fixed and predetermined programs and there is no error in these programs.

3 - There are the motivations for fraud of the Human Factors: Computer are not motivated for illegal acts or never do persuade while betraying employees and members are basically persuaded to deceive [Arab Mazar Yazdi, 2001]. The result of this study regarding to confirmation of all hypothesis emphasize on quality of auditing and ultimately on more use of IT in the field of increasing the quality of auditing as.

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### REFERENCES

- Accounting Principle Board. (1970). "Basic Concepts and Accounting Principle Underlying
- Akkermans, J., Vanderhorst, H. (2002). "Managing IT Infrastructure Standardisation In The Networked Manufacturing Firm". International Journal of Production Economics. Vol 75. Issue 1-2. pp 213-228.
- Anderson, J., Segars, H. (2001). "The Impact of IT on Decision Structure and Firm Performance In Different industrial Settings". Journal of Strategic Information Systems. Vol 10. Issue 2. pp101-119.
- Anonymous. (1999). "A Survey of Business and the Internet: The imporetative". The Economist. 26(1-34).
- Ashbaugh, H., Johnstone, K. and Warfield, T. (1999). "Corporate Reporting on the Internet". Accounting Horizons. 13 (3): 241- 257.
- Blanning, W., Roms. and Wang, R. (1995). "Information Technology and Systems". Decision Support Systems. Vol 13. Issue 3-4. pp 219-221.
- Bookholdt, J. L. (1999). "Accounting Information Systems: Transaction, Processing and Controls". Irwin/McGraw-Hill. 5th ed.
- Bradford, M., Florin, J. (2003). "Examining the role of innovation diffusion factors on the implementation success of enterprise resource planning systems". International Journal of Accounting Information Systems. Vol4. pp205-225.
- Claver, E., Gonzalez, R. and Liopis, J. (2000). "An Analysis of Research In Information Systems". Information and Management. Vol 37(4). Pp 181-195.
- Covin, J., Slevin, D. and Heeley, B. (2001). "Strategic Decision Making In An Intuitive vs. Technocratic Mode: Structure and Environmental Considerations". Journal of Business Research. Vol 52(1). Pp 51-67.
- Crowston, K., Sawyer, S. and Wigand, R. (2000). "Investigating The Interplay Between Structure and Information and Communication Technology In The Real Estate Industry". Information technology and people. Vol 14. No 2. pp 163-183.
- Currie, L. (1996). "Organization Structure and The Use of IT : Preliminary Findings of a Survey In The private and Public Sector". International Journal of Information Management. Vol 16(1). Pp 51-64.
- Drof, C. (1998). "Information Systems". The Technology Management Hand Book. Chapter 11.
- Dull, R. B., Graham, A. W. and Baldwin, A. A. (2003). "Web-based Financial Statement: Hypertext Links to footnotes and their effect on decisions". International Journal of Accounting Information Systems. Vol 4. pp 185-203.
- ELECTRONIC COMMERCE RESOURCE CENTER (ECRC). <http://www.ecrc.uofs.edu/title.Htm>.
- Ettredge, M.V.J. Richardson. and S.Scholz. (1999). "Determinants of Voluntary Dissemination of Financial Data at Corporate web sites". Working paper, University of Kansas
- Financial Statement of Business Enterprises". APB Statement NO.4. AICPA. New York. October. P 48.
- Financial Accounting Standard Board Steering Committee. (2000). "Business Reporting Research Project". FASB. [www.fasb.org](http://www.fasb.org)
- Financial Accounting Standard Board. (1978). "Concept NO.1: Objective of Financial Reporting by Business Enterprises". FASB. Stanford. November. Para 6.
- Fulwiler, R. (2001). "The Role of Management Information Systems". The Journal of Academic Librarianship. Vol 27(5). pp 386-390.
- Hendrikson, Eldons and Wanberda, M. F. (1992). "Accounting Theory".
- Hoffman, Charles. and Others. (1999). "The XML Files". Journal of Accountancy. May. pp 71-79.
- Hollander, A. S., Denna, E. L. and Cherrington, J. O. (1999). "Accounting, Information Technology and the Business Solution". Tow edit. Irwin/McGraw-Hill.
- Huang, Shi-Ming, Ou Chin-Shyh, Chen, Chyi-Miaw, Lin, Binshan, (2006), "An Empirical Study of Relationship Between IT Investment and Firm Performance: A