The study of Non-Familiarity of Iranian Association of Certified Public Accountants with IT in Auditing (Computer Auditing)

Ali Molaiy El Zolh, Roohalla Golmakani

Faculty Member, Department of Accounting, Payam Noor University, Tehran, Iran.

ABSTRACT

Auditors may consider computer as an essential tool in auditing. In the study we try to study the reasons why Iranian Association of Certified accountants are not familiar with computer auditing. To test the hypotheses questionnaires were distributed among the certified accountants who were professional auditors. To test the reliability of the questionnaire cronbach’s alpha was the calculated which was 79 % which shows that the results are reliable. In this chi-square was used to test statistical hypotheses and to rate them Friedman test was used the result of which show that all five hypotheses of the test are approved and educational factors, understanding of the concepts and application principles, economic problems, uncertainty, and the lack of need are amongst the reasons why certified accountants are not familiar with computer auditing.

INTRODUCTION

The growing rate of IT in every single field as a useful tool with different uses has caused numerous changes in scientific fields. In this range, the daily use of computer in accounting and auditing is not an exception. Especially because the nature of accounting requires clarity, responsibility, authority. For this reason it is required for financial managers, accountants, and auditors to understand the basis of IT and its risks and rewards.

In our world, a major part of information systems in any entity is based and IT and information systems are less practical without computer. Using IT in any scientific, industrial, and service field has its advantages but the most common ones include, the high speed and accuracy in data processing. IT can make a lot of parts of accounting quicker and more accurate which in turns will improve efficiency. Although manual accounting and auditing using common methods is practical, it is not effective and efficient. With entities now storing most of their financial information on a computer, processing them requires familiarity with IT and a special attention must be drawn toward studying different aspects of using IT, now that the business requires making information systems and financial systems in entities.

The special attention toward IT over the past 20 years, led to consideration of IT and its usage in financial systems and information systems in entities. Since it has been 20 years after those researchers were conducted and because the results of those studies show that CPAs are not familiar with IT yet, this study has tried to study the reasons to this non-familiarity.

Despite the effort to motivate the accountants to use electronic information and to use computer services for a more effective and efficient accounting, it is not comprehensive yet to use computer among Iranian Association of Certified public Accountants (IACA) and it is at most EXCEL Software that accountants and auditors use as their computer activities.

Fortunately due to the following reasons auditors have understood the need to use IT in accounting:
1. The growth in accounting information
2. Economic crisis and the need to lower costs, mostly human resources costs
3. The new generation of auditors who have entered the profession and have made the bed for managers and other partners to make sure that changing accounting methods will be safe and secure. Kramer et al, 2004 have emphasized that with the growing rate of computer usage in entities has caused the growth in using data analyzing tools among the auditors. They have also emphasized that CAAT is more useful if the relationship between the analyzed data is measured as a whole which makes them more effective in the results.
In a study titled “continuous auditing through a system based on the operator”, Charles Ling Yoo suggested a model for auditing through using IT. The results of their study show that intelligent operators can provide the best evidence in less time. In this study using intelligent operators is suggested because they can learn from the past experiences and are able to choose the best method. The model suggested in this model was a model for continuous auditing using intelligent operators. The operator in this study can be directly used in the information system of the employer. Also, this system can automatically conduct auditing in a timely manner and can adapt to changes in the information system.

Marius [7] conducted a study titled “the study of necessary features of information systems auditing”, and suggested that one of the most important properties of the operator auditing information systems is a high level of skill in the field of IT&C.

They have also emphasized that the auditors must be always following the changes in the technology and analyzing its effects on auditing, and that they have to always try to standardize procedures in information systems auditing.

Aydí Ami [1] studied the properties and advantages of using GAS (GENERALISED AUDIT SOFTWARE) by independent auditors in England. They have named IDEA and ACL as the two best examples of GAS which are widely used for data processing.

They have classified the factors affecting the use of GAS into six groups:
1. Technological factors
2. Organizational factors
3. Professional factors
4. Client factors
5. Individual factors
6. External factors

In the end they believe the growing rate of using GAS is inevitable.

Isabel Pedrosa and Carlos Costa, 2012 found out that in America using CAATT (computer auditing analyzing technology and tools) is only common in some big companies and there are no centers to teach necessary skills for these tools and technologies.

They also brought two examples of practical use of CAATT in financial activities of a bank and a Poly Technic center.

In a study titled “the study of barriers in the way of using advanced systems of decision making support in accounting”, Salehi says that the purpose of his study is to clarify some aspects of the problem to pin on some reasons why these systems are not used in accounting. The methodology of this study was comparative-analytic and T Student and Chi-square tests were used in this study. The results showed that the main barriers in this way are the lack of enough Persian resources and lack of appropriate software. Meanwhile, the effects of being cost-effective, better judgment in the case of using those systems, and the software being appropriate with the accounting method were more significant.

Asgari [2], studied the reasons why auditing techniques are not conducted using computer in private sector auditing firms. To do so some hypotheses are set as the following:
1. The lack of familiarity with computer technics of auditing causes auditors not to use those technics
2. The cost of computer auditing technics causes auditors not to use those technics
3. The cost of training for using computer auditing technics causes auditors not to use those technics
4. The problems caused by computer auditing technics cause auditors not to use those technics

The populations are the certified accountants who are working professionally in auditing firms in the private sector. In this study descriptive statistics is used to analyze the data and to test the hypotheses chi-square was used and bivariate test was the alternative test. The results show that the most important reason for not using computer auditing systems is the non-familiarity with those technics.

Khan Mohammad [5] study titled the study of the barriers for using intelligent operators by independent auditors, suggests that using intelligent operator is a very nice tool for in-time auditing. So auditors must consider their standpoint to get used to the new reporting environment and then learn necessary skills to meet the requirements of the new environment and improve the speed with which they do their job. Whereas there has never been a study on the reasons of not using intelligent operators in Iran it seems important to work on that matter which is the reason we have conducted this study.

The results of this study show that professional auditors in Iran do not use those operators because of: 1. lack of awareness about those technics, 2. Lack of clarity in the advantages of those technics, 3. Lack of enough references and instructions for using the technics, 4. Lack of appropriate software for auditing, 5. Ambiguity in the fact that those technics lead to a better judgment.

Khaledian [4] in a very recent study has worked on the substructure of IT and worker-training for using computer auditing in Iran. The hypotheses of this study are:
1. Security and legal substructures caused the use of computer auditing systems in public sector
2. IT substructures caused the use of computer auditing systems in public sector
3. Training the staff caused the use of computer auditing systems in public sector
4. Management factors caused the use of computer auditing systems in public sector

The results form that study show that all four hypotheses are factual. The only thing is that the existence of IT substructures is the most significant factor in using computer auditing.

The main question which this study is trying to answer is:
What are the reasons of non-familiarity of IACA members with computer auditing?

MATERIALS AND METHODS

Regarding the question this study is trying to answer and also the background of study, 5 hypotheses are assumed for this study:

First hypothesis: lack of enough training courses is the reason of non-familiarity of the IACA members with computer auditing.
Second hypothesis: lack of need for computer auditing is the reason of non-familiarity of the IACA members with computer auditing.
Third hypothesis: lack of trust in the results form computer auditing is the reason of non-familiarity of the IACA members with computer auditing.
Fourth hypothesis: difficulty in understating the concepts and using bases is the reason of non-familiarity of the IACA members with computer auditing.
Fifth hypothesis: economic problems and not being cost-effective is the reason of non-familiarity of the IACA members with computer auditing.

To test the abovementioned hypotheses some questions were designed in the form of a questionnaire. Independent variables in this study are:
- The lack of training courses
- The lack of need for computer auditing
- The lack of trust in auditing
- Difficulty in understating the concepts and using bases
- Economic problems and not being cost-effective

So the reasons for the non-familiarity IACA members with computer auditing is tested.

In this study, with regard to the purpose, the five range likert scale is used because it is easier to interpret the results in comparison with (definition variability, Triston, Guttmann, and Bogart Duos). The range in the questionnaire is very little, a little, medium, high, and very high. In this study chi-square was used to test statistical hypotheses and to rate the hypotheses Friedman test was used.

The questions include three general questions, 4 comprehensive questions about the subject, and 17 technical questions which were designed for the five scale questionnaire. And at the end of the questionnaire there were descriptive questions (open answer).

Regarding the subject of this study, the population in this study were the members of IACA. At the time this study was being conducted, the number of members was 168 firms in which there were 564 professional partners working. The sample was set on 120 people using statistical methods. To improve the reliability, the number of samples was extended to 150.

RESULTS AND DISCUSSION

To test the hypotheses, non-parametric statistical method namely, chi-square was used and the rejection level for zero hypotheses of the study was assumed at 5 percent. The hypotheses were designed in the form of statistical assumption test and for every single one of them the test was conducted.

The first hypothesis:
First hypothesis: lack of enough training courses is the reason of non-familiarity of the IACA members with computer auditing.

<table>
<thead>
<tr>
<th>Statistics</th>
<th>Chi-square statistics</th>
<th>Degrees of freedom</th>
<th>Significance level</th>
<th>The result of the hypotheses</th>
</tr>
</thead>
<tbody>
<tr>
<td>First hypothesis</td>
<td>86.436</td>
<td>7</td>
<td>0.000</td>
<td>Hypothesis H₀ of the study rejected</td>
</tr>
<tr>
<td>Second hypothesis</td>
<td>87.342</td>
<td>4</td>
<td>0.000</td>
<td>Hypothesis H₀ of the study rejected</td>
</tr>
<tr>
<td>Third hypothesis</td>
<td>1.239</td>
<td>7</td>
<td>0.000</td>
<td>Hypothesis H₀ of the study rejected</td>
</tr>
<tr>
<td>Fourth hypothesis</td>
<td>87.114</td>
<td>8</td>
<td>0.000</td>
<td>Hypothesis H₀ of the study rejected</td>
</tr>
<tr>
<td>Fifth hypothesis</td>
<td>72.799</td>
<td>7</td>
<td>0.000</td>
<td>Hypothesis H₀ of the study rejected</td>
</tr>
</tbody>
</table>
Regarding the results of table 1 and the score for chi-square test which is 86.436, and also the significance level which is 0 for the chi-square test, with the confidence level of 95 % hypothesis \( H_0 \) is rejected and hypothesis \( H_1 \) of the difference in the answers is approved. It means that the lack of training courses caused the lack of familiarity of IACA members with computer auditing.

**Second hypothesis:**
To what degree does the lack of need for computer auditing lead to lack of familiarity of IACA members with IT in accounting?
Regarding the results of table 1 and the score for chi-square test which is 87.342, and also the significance level which is 0 for the chi-square test, with the confidence level of 95 % hypothesis \( H_0 \) is rejected and hypothesis \( H_1 \) of the difference in the answers is approved. It means that the lack of need for computer auditing caused the lack of familiarity of IACA members with computer auditing.

**Third hypothesis:**
To what degree does the lack of trust in computer auditing lead to lack of familiarity of IACA members with IT in accounting?
Regarding the results of table 1 and the score for chi-square test which is 1.239, and also the significance level which is 0 for the chi-square test, with the confidence level of 95 % hypothesis \( H_0 \) is rejected and hypothesis \( H_1 \) of the difference in the answers is approved. It means that the lack of trust in computer auditing caused the lack of familiarity of IACA members with computer auditing.

**Fourth hypothesis:**
To what degree does the difficulty in understanding of the basis of using computer auditing lead to lack of familiarity of IACA members with IT in accounting?
Regarding the results of table 1 and the score for chi-square test which is 87.114, and also the significance level which is 0 for the chi-square test, with the confidence level of 95 % hypothesis \( H_0 \) is rejected and hypothesis \( H_1 \) of the difference in the answers is approved. It means that the difficulty in understanding of the basis of using computer auditing caused the lack of familiarity of IACA members with computer auditing.

**Fifth hypothesis:**
To what degree do the economic problems and not being cost-effective lead to lack of familiarity of IACA members with IT in accounting?
Regarding the results of table 1 and the score for chi-square test which is 72.799, and also the significance level which is 0 for the chi-square test, with the confidence level of 95 % hypothesis \( H_0 \) is rejected and hypothesis \( H_1 \) of the difference in the answers is approved. It means the economic problems and not being cost-effective caused the lack of familiarity of IACA members with computer auditing.

<table>
<thead>
<tr>
<th>Rating the barriers for familiarity and using computer auditing.</th>
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<tbody>
<tr>
<td>Friedman test statistics</td>
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<tr>
<td>Educational barriers</td>
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<tr>
<td>Barriers in the way of understand the concepts and using basis</td>
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<td>Economic problems</td>
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<td>Lack of trust</td>
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<td>Lack of need</td>
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<td>Chi-square statistic</td>
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<td>Significance level</td>
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Rating the barriers was done using Friedman test. As you can see in table 2, educational barriers, problems with understanding the concepts and the using basis, economic barriers, lack of trust, and lack of need are the most important barriers respectively.

**Conclusion:**
Comparing the results with the results from the past studies
Gathering and studying the results of the past studies, in the cases of lack of enough references and instructions and not being cost-effective, the results are consistency with those of other studies and in the three cases of lack of need, lack of trust, and difficulties of understanding the concepts and using basis the results extended the knowledge about the reasons of non-familiarity of IACA members with computer auditing was extended.

Other results and complementary suggestions
The growing speed of using computer and IT in sciences has taken financial sciences as no exception. In this direction the five aspects in need of consideration by auditors in their investigation are:
The effects of IT on internal controls systems
- Understanding and evaluation of IT system by the auditor
- Types of controls IT system considers which are important to the auditor
- Using the services by experts
- Understanding the process of the system by the auditor

The new wave of IT is lowering the innate value of financial statements. As a result, this leads to a decrease in the earnings of auditing firms. Auditing firms have to either accept this decrease as a fact or think of dramatic changes in the services they are offering. To solve the abovementioned problem and to move towards adaption with the changes in technology, two basic changes are necessary:
The first is tending toward evaluation of the processes and performances of companies
And the second one is to move toward a more emphasis on internal controls system depending on information systems

Auditors must know that E-business, as a consequence of IT will bring a new challenge to the auditing profession. Therefore, manual procedures being used nowadays will inevitably lose effectiveness in electronic era. The must know how advanced technologies affect auditing process and where they have the most effectiveness. They also must learn the new skills and knowledge to use processes like continuous auditing to audit electronic trades. For this reason it is necessary for auditors to change the thoughts for entering the new reporting atmosphere and to learn the skills to meet the requirements of the new atmosphere, to maintain their credibility and popularity.

The basic matter to IT auditing, and more generally IT management, is to firmly understand the risks, values, and the controls around the technology atmosphere of the organization. So IT auditors add the value of the organization through lowering the risk, improving security, obeying the rules and regulations, and facilitating the connection between IT and business management.

IT auditors play a key role in financial, performance, and observation auditing, although each follow a different standpoint.

Separating general and IT auditing limits the auditing knowledge and as a result narrows the effectiveness of auditing approach. So, general and IT auditing must work closely together to form an effective and efficient auditing.

In auditing profession risk evaluation is the first bit to integrally manage an auditing process, to determine where, when, and by who should the auditing process begin. Nowadays auditors need to know that IT is an inseparable part of the process.

Understanding the fact that despite all dramatic changes in communication and technology, and the interaction between auditing and IT, basic assumption to accept the cat that IT is more of a useful tool in auditing process and in no way it is going to replace human resources is necessary. Because this profession is naturally human-oriented and judgment-based in which computer cannot replace human and computer are merely used for their ability to improve effectiveness and quality.

Contrary to common belief, approaches used by international auditing firms is not so difference to those used by Iranian firms. Normally a group of a number of experts, according to properties and the size of work, cooperate and build substructure of using IT to facilitate the auditing process and their job requirements. This substructure has made an integral and systematic tool for auditing groups to enable the access to necessary details easily and simultaneously by all the members of auditing group. The procedure is so that the auditor writes his opinion according to the observations and their manager who probably is somewhere else reads the results and adds necessary observations.

REFERENCES
