



INVESTIGATING ON APPLICATION RATE OF ELECTRONIC COMMERCE ACCOUNTING SYSTEM

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Abstract:

This article investigates the weak points of the usual accounting system used in companies using Internet in performing their commercial and financial transactions. According to the results of this study, in order to reach an effective and applicable improvement in the accounting system first it is needed to prepare a suitable foreground including professional internet equipment and feasibilities. Electronic commerce rules and regulations specialized and appropriate soft wares in electronic commerce and solid and compiled systems capable of providing and enforcing security in inland and overseas internet commerce. The next step is to compile and complete accounting standards for internet electronic commerce with an eye on the user's approach towards it. Electronic commerce is called the industrial revolution of the twenty first century which still has not revealed its marvels fully. This is while internet which was born in the twentieth century is expanding and progressing speedily. Electronic commerce seems like the traditional commerce and the only difference is the working tool. The process of transaction in the virtual world (Electronic commerce) can be divided into separate parts; search and investigation of different commodities by the purchaser, negotiation with different marketers and selecting one, reaching an agreement with the marketer and signing a contract, paying the fee, delivery of the merchandise and finally after sale services.

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1. Introduction

Along with the rapid growth of the information processing by means of advanced communication systems and utilizing the information and communication technology. It is needed to enhance the quality of accounting data and the technology of its exploitation.

Accounting is established as knowledge for reporting the financial data of an organization to decision makers and the users.

With the expansion of the scope and spectrum of electronic commerce and related transactions and the entrance of new techniques of information technology (IT) to this scientific field of study, accounting has turned to a professional expertise which is in need of designing and compiling functionally comprehensive and timely methods and techniques. The executive and administrative methods of which should be proved through other scientific methods like accounting researches and investigations.

The electronic commerce is one of the innovations of the recent century and there is no doubt in the increasing expansion and spread of its use and capture of the financial and information transaction market by this technology. However, still there has not been any investigation about the state of its use in the current accounting system in Iran.

Despite the apparent importance of this issue, it has not been dealt with seriously in the scientific and accounting assemblies. Although the subject of commerce is discussed and debated briefly in the financial and commerce management section and lessons of the MBA major, none of them has analyzed it from the accounting viewpoint and the aspects discussed in this study are not found in them.

In simple words, the electronic commerce can be defined as *“the fulfillment of all commerce stages through computer and communication networks without the physical presence of the transaction parties”* (Nahavandian, 2003).

The expansion in the use of electronic commerce in the financial system because of its apparent and expansive advantages is an obvious thing. This research first investigates the subject from an accounting management viewpoint and after explaining logical proofs considering the need for exertion of this form of commerce, investigates the weak points of electronic commerce from an accounting point of view.

Furthermore, since the electronic commerce is a gate of entrance to the financial competition world. It deserves much more attention so that through eliminating the existing obstructions in the field of accounting. An achievement can be obtained in the improvement of its usage and also encouragement of the companies in putting it into operation. It is obvious that in the current competitive world if we manage to utilize this process fully. We are informed about the basic and fundamental principles of commerce and we are able to reach the most advanced techniques in the domain of

international competition by eliminating the commodities and inland services shortcomings.

On the other hand, the trend of expansion in the communication and the information exchange indicates that the internet and the electronic world has almost unconsciously eliminated the borders and distances between the countries and is capable of eradicating the geographical and economic constraints. Thereupon, before a sudden and unexpected entrance to this form of commerce it is needed to have an exact and appropriate financial and commercial planning considering the existing methods and techniques.

The enactment of the regulation for expanding the usage of electronic money services and the decree in regard to a comprehensive planning for the expansion of electronic commerce well demonstrates the importance of this issue. The institution of commercial investigations and researches also is working seriously to pave the way for the companies' usage of this trend.

Thus, the main hypothesis of this research is the challenges that electronic commerce confronts from which the most important ones are accounting methods, principles, assumptions and standards.

Below some of the important debates considering electronic commerce are presented for a clear familiarization of the topic and the completion of the investigation.

A. Security in electronic commerce

Security in utilizing electronic commerce is one of the most important aspects and challenges because:

- Internet is a public network.
- Computer systems have the capability of special programming.
- Abuses and swindling in internet cannot be sued easily.
- Information commerce is very difficult because of the possibility of simple replication, rectification and distribution.
- Computers are not an easy substitute for mankind.

B. Electronic commerce in Iran

Iran like many other countries has many companies who are depended on internet for the expansion of their market. The objective of most of these companies from establishing internet sites is to expand their export rate.

Many Iranian companies also have tried to establish such facilities, but since there is still no administrator and centrality for this phenomenon. These companies act in a self-centered manner, like an island, and their activities has not yet included the total commerce process and lived short.

In the sixtieth annual convention of the Asia, board EDIFACT assembly held in Tehran in July 1998. The below measures were placed to the committee's agenda:

- The creation of electronic commerce network;
- The compilation of standard EDI messages;
- Spreading the culture of using standard messages;
- The preparation of juridical enactment for electronic commerce.

C. Enhancing effectiveness through electronic commerce

As it is well known, mankind is always seeking to choose the best and most optimal choice for himself and is always looking for some logic to inference the best option. All subjects raised in electronic commerce also lead us to this route. So that providing EC helps us in finding a way to reduce extra expenditure and reaching an enduring, profitable commerce since:

1. All charges regarding provision, maintenance, registration and archiving written documents are eliminated.
2. The merchandise and services mediators who cause the raise in the prices and the improper distribution of commercial profits are eliminated.
3. The charges regarding transportation and physical transfer and also the need for having a special place and a specific position for creating a commercial market and advertising are reduced and to a great extent eliminated.
4. Although the reduction in prices and charges visually seem to be ineffective in the reduction of prices. but it provides a good atmosphere for the limpidity in commerce and obviation of obstacles for creation of fair commodity and service prices and this way a good condition is provided for the expansion of facilities in all markets.
5. An important point in electronic commerce which deserves much attention and a careful investigation is the fact that if policy makings are not done timely and flawlessly it is possible that an agitating and frightening atmosphere is created for small investors and countries who have recently entered this industry which leads to the stream of reserves and wealth to the rich countries.

2. Background

In the current competitive and technologically complicated world, the economic strategic decision makers and programmers need to take into account three important aspects which are namely time, cost and quality. This is one of the important subjects in strategic accounting management which is known as the TQC triangle (Industry Canadian, 2003).

All articles in this field clearly show that to benefit the rapid and invisible movement of this technology and do not be damaged from lagging behind. It is needed to look at the electronic commerce with a more profound perception and a double attention.

An article with the topic of *“electronic commerce accounting starting from the past”* investigates the necessity of studying accounting in the format of electronic commerce and the importance of this technology. The base of the abovementioned study is a research carried out in Canadian companies and raises some discussions about accounting principles, commercial rules and regulations, taxation, accounting and reporting in electronic commerce accounting. An interesting point in this research is the result of the investigations about the Canadian oil companies who have managed to reduce their annual paper costs a sixth using electronic commerce and have proved the need to using it.

The American Institute of Certified Public Accountants (AICPS) also has carried out many researches regarding different aspects of electronic commerce, each of which has delved into a new and important aspect of this subject.

One of these researches with the topic of *“the reporting of dependent accountants about electronic commerce accounting”* has considered different aspects of electronic commerce accounting as documenting security, reporting appropriate software and communication system and the method of transaction.

“Electronic accounting” is the topic of another article which was published in the Accounting Knowledge magazine in April 1998 and investigates the electronic commerce accounting from an accountant’s point of view.

Likewise, in our country some researches have been carried out in regard to the electronic commerce, but not from the viewpoint of accounting. In a research accomplished in 2003 by the Institute for Trade Studies and Research with the topic of *“the expansion of electronic commerce in Iran”*. Some of the obstacles for the expansion of electronic commerce are investigated.

Another research is related to the field of management which was done in 2002 by Dr. Seyed Mohammad Arabi and Dr. Saeedi with the topic of *“studying environmental obstacles in the way of e-commerce and offering an appropriate model for using it in Iran”* (Arabi, 2002).

On the basis of the results of this study for a more successful and extensive expansion of electronic commerce it is needed to enact some facilitating commercial regulations and eliminate the restrictive rules and regulations which nullify the creation of facilities for the expansion of electronic commerce.

Furthermore, in a seminar held in 2003 in the Albany’s university. several articles were presented about the electronic commerce and this is an evident proof to the fact that accounting researchers and intellectuals have a strong appeal to this aspect of the knowledge of accounting and it reveals some considerable changes in accounting and its underlying debates which should be taken into account in the future researches (Gangolly, 1999).

2.1 Research Hypotheses

Considering the nature of electronic commerce and the role of accounting in this system, the following hypotheses are posed to find the weak points of the current accounting in companies active in electronic commerce in Iran:

- 1) The current accounting system (suppositions, methods, standards and the existing accounting limitations) lack enough efficiency for the companies active in electronic commerce.
- 2) By the refinement of the method in which electronic and internet services are put to use, the current accounting system cannot account for the needs of the financial section.
- 3) The absence of a good knowledge and understanding of the efficiency of electronic commerce by its users and specially by the people working in the financial section of these companies is the main factor for the lack of a complete efficiency of the current accounting methods.

3. Method

3.1 Data collection method

This research used questionnaires as a means of data collection method and the questions were prepared on the basis of the research hypotheses in two parts of general questions and main questions of the research.

The general questions estimated the company from the viewpoint of financial power. The extent of transactions and other financial criterions to assess it later from the view point of importance and value of the investigation. Along with the main questions, some control questions were also asked in order to check the accuracy of the answers. In the main questions, the fundamental questions were designed based on the research's hypotheses.

In the process of fulfilling any research the base of sampling is on the reduction of costs, being up to date, accuracy of acquired data, best use of time and avoidance of wasting statistical community (in the control of commercial commodity's quality); so in the case it is impossible to reach these goals while sampling. Going through this process is not essential or profitable (Azar, 2001). But considering the nature of the research, the final results are concrete and tangible about the community under investigation.

Also, aside from the chosen statistical method for inferential statistics, its effectiveness depends on the sampling method. In the case, the sample is not the real representative of the community that means it is biased; an accurate and correct estimation about the community's parameters is not possible.

Also, in this study it was not possible to access active companies in electronic commerce in a widespread extent.

3.2. Analyzing method and examining the hypotheses

To check the value of the data collection instruments and to confirm the hypotheses since regression was used to show the relations between the variables and since obtained results were converted into measurable numerical quantities, inferential statistics criterion were utilized.

After the relation of the variables was determined and shown through regression line, it was needed to define the extent of confidence to this relation.

Standard error of estimate that here represents standard deviation, shows the inter data distribution around the regression line. So we can determine the accuracy of the regression line and its validity by comparing its quantity.

4. Results

As explained before, in this research the first hypothesis is considered as the most important one and most of the questions were devised based on this hypothesis. This hypothesis provides a good answer to the essential and important question asking whether it is necessary to revise the methods. Systems, standards and the theoretical basis of the current accounting system for a more profitable use of the electronic commerce or to eliminate the obstacles on the way of electronic commerce accounting, first we should deal with some other factors.

In addition, the commercial and transaction rules and regulations observing the commercial transactions should be defined for different commercial conditions so that we do not face challenges in executing the accounting standards and do not face diverse and biased reactions.

We should provide electronic money, special software that classify the quantities in accordance with the electronic system and prepare them for optimum recording and summarizing and the means of effective prompt and economical initiation of electronic commerce in order to reach desirable results in the recording and reporting of financial electronic activities.

The investigation of the third hypothesis indicated that the users' weakness in getting use of electronic commerce in the commercial and financial section of the companies did not have a noticeable effect on the existing weakness of ECAS. Since on one hand, the elevation of the level of awareness and expertise of the users is easily provided through EC instructional courses and on the other hand, in the companies that weakness was observed in their systems no such relation was demonstrated between the weakness and the users.

The results of this investigation considering the presented explanations in the previous section show that:

The current accounting system (existing assumptions, methods, standards and limitations of accounting) have a relative effectiveness in the accounting of companies

active in electronic commerce and in the scope of this research the current principles, assumptions and methods of accounting can answer the needs of accounting and financial section.

With a refinement of the utilization method of electronic and internet systems services, the current accounting system can meet the needs of financial section. Furthermore, the lack of awareness and recognition of the usage of electronic commerce by the users, the instruments and the using method of electronic commerce services is not an important factor in the lake of efficiency of the current accounting system.

5. Suggestions in the framework of hypotheses under investigation

Although the nature and subject of this research does not let the institutes and companies' managers and decision makers to have much control over the effective parameters and factors. Many field researches should be undertaken to improve the utilization of the current accounting system in electronic commerce and reach the proper operation method and other aspects.

Furthermore, in regard to the deficiencies of the accounting standards in Iran we can refer to the fact that:

“Since Iran’s approach in regard to the place of accounting knowledge is an independent system approach, and in this approach accounting is in attendance of commerce to overcome the complexities of the real world and the everlasting ambiguities. The trial and error method is the only way which can help us to encounter continues changes in the commercial atmosphere. Commerce obtains its methods and concepts from practice and experience. So, accounting is a service that gets its concepts and principles from the commercial cycle to which it serves not from a scientific field of study as economy.

That is why in this approach accounting has turned to an independent scientific field, the development of which is fulfilled on the basis of some informal principles through judgment and trial and error. Hence, the fulfillment of underlying and complimentary transactions in accounting not only needs to be accomplished continually, but also is considered as an essential in compiling standards so that based on the obtained results we can truly and conveniently reach a national standard setting and eliminate the society’s needs based on the effective factors in accounting expansion.

It should be considered that the most important deficiency and gap in Iran’s accounting standards is the fact that it is not based on prerequisite researches, thus the standard’s compilation board was obliged to translate international standards and use it as a model since the needed mechanisms were not prepared and they had to start the job anyway.

One of the defects for which some of the standards are criticized is their complete discrepancy with our social, cultural and national needs. This deficiency could have been

easily eliminated through doing field researches and it is still possible to settle them this way."

(Khoshtinat, 2004)

The present research presents the below suggestions based on the subjects considered in the scopes of this investigation.

5.1 Subjects to be considered in ECAS

- 1) In order to reach positive and favorable domains of accounting operation in electronic commerce it is needed to prepare a suitable basis for the information system of accounting. This way we can get to the route of expansion and enhancement of the efficiency of this technology.
- 2) More accuracy and attention should be devoted to the distinct compilation of topics in the fields relating to electronic commerce and other new subjects in the information technology in the theoretical debates of accounting (such as the use of computer in accounting).
- 3) Commercial institutes and companies who can offer financial services in the form of presenting special and professional services for setting up. Guiding, establishing, facilitating, founding and consulting in ECAS should be established and needed measures in this regards should be undertaken.
- 4) Needed programming should be undertaken for reaching professional software and efficient financial and computer accounting programs in the field of electronic commerce.
- 5) An explicit and defined method and criterion should be formulated by getting use of comprehensive researches in regard to the way of fulfilling electronic commerce activities and this technology's general and systematic procedure and trend, and this uniform and constant trend should be considered and utilized by all users of this technology as the legal route.
- 6) The theoretical basis, principles, methods, limitations and standards of the current accounting system should be interpreted and explicated for efficient conformity and effectiveness in electronic commerce accounting and if needed the unclear cases and exceptions and the trend of confronting with special situation should be presented using accurate accounting researches. and appropriate measures and debates.
- 7) Complete accounting systems are designed and incorporated in the theoretical accounting subjects based on the reporting method to internal and external users, internal controlling of accounting system, defining headlines for the accounts, method of recording electronic activities and applying the needed modifications and rectifications at the end of each financial period so that proper techniques are provided for the ECAS users.

6. Suggestions for Further Research

Presenting useful suggestions in any research is in fact a way to keep the continuity of the trend to reach more thorough results in the subject under investigation and it is possible that with the continuation of researches the main objective of the research is ascertained, specifically about new subjects and the requirements of new technologies. As for the electronic commerce, many subjects and debates have been discussed to reach an applicable and effective pattern in ECAS.

A. Investigating the requirements of financial and accounting sections to rules and regulations observing the financial events

This can be done through investigating companies active in the field of EC from the viewpoint of existing challenges about legal requirements for matching them with the financial system and the administration of the electronic accounting standards. During this process, all deficiencies and important points for deciding commercial and business rules should be defined so that we can get use of these rules and regulations for determining the trend of electronic transactions' accounting in the same way that we use trading regulations in many different aspects of financial activities.

B. The necessity for compiling, modifying or interpreting the accounting standards for effective utilization in ECAS

Since the effective and practicable standards require a good understanding of different aspects of the subject in practice, it is needed to execute some extensive and comprehensive researches considering the electronic commerce environment and its governing situation and use the results of these researches for the improvement of the standards. Furthermore, we should consider and reflect the theoretical principals and opinions of experts who are adequately acquainted with the accounting standards compilation and interpretations and along with doing the researches reach an appropriate agreement and concordance with them.

C. Investigating necessities and requirements of ECAS to software's equipment and computer facilities for a better effectiveness in EC

In this regard, we should learn about the possible deficiencies and shortcomings of the foregoing companies on the electronic accounting information system by investigating their accounting environment, based on their needs, and in accordance with their working method suggest them the appropriate programs. For offering the most comprehensive system we are required to be acquainted with the most advanced technologies in other countries as well since a complete acquaintance with the operation process of this technology from one hand and being expert in accounting subjects on the other hand are essential for gaining effective equipment.

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