

# The influence of information technology on the efficiency of the accounting information systems in Iran Hotel industry.

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**ABSTRACT :** These days, technological advances in information technologies have had remarkable influences such as cost reduction and quality and life-standard improvements in many personal as paces of life. Which have led to various impacts an economical and business departments. Accounting information systems are a man those systems for reliable and on-time collecting and processing of information to be applied in useful and effective decision- makings, to do so concerning new technologies such as accounting information systems to collect and save financial information's is of a great significance. Therefore the purpose of this study is the evaluation of the information technology influence on the efficiency of the accounting information systems. The statistical population of this research includes all the Iranian hotels, in which 37 three-star four-star and five-star ones are located in Tehran, After distributing the questionnaires for data collection, the total number of 69 questionnaires were accepted. The average comparison of test (t-test) and correlation Solidarity tests were applied to test the theories. The results of this study reveal that the hotels utilize effective and high-tech accounting information systems and applying advanced technologies increases the efficiency of the accounting information systems.

**Key words:** efficiency; accounting information systems; information technology industry.

## INTRODUCTION

Many advancements occurred in the field of technology have made the researches concern more to some subjects like new accounting; e-commerce, and new information systems and perform more researches in these fields. As applying accounting information systems make the companies and organization face with new condition which leads to the data collection and analyses in shorter time and lower costs, then the hotels also utilize accounting information systems for data collection and analysis and providing on-time information for the decision-making of the managers and other beneficiaries.

It could be stated that applying accounting has to use the technology which has a significant role in the efficiency of special accounting information systems and clarifying the high levels of complexities and covering different levels and parts of the hotels.

Continuous changes and quick advancements in economical operation like accounting are happening and have made it faced with evolution in such a way that the role of accounting and accountants are changing and it has made the related financial information and data collection and presentation, that are reliable and comparable by the economical departments necessary.

Therefore in this article, are looking for the evaluation of the efficiency level of this continuous-changing technology and its influences on the efficiency of the accounting information systems. In other words, the changing style of these influences are determined problem description.

### **Statement of the problem**

Hotels, like any other economical parts need efficient information systems for their logical decision-makings, such as pricing, operational evaluations, control, resource allocation, developments, etc ( Pyker R, Nanth R.1998)

Therefore this article deals with the hotels and their utilization of accounting information systems and advanced technologies, and the relation between these advanced technologies and accounting information systems.

### **Research theoretical principles**

#### **Information technology**

The development of technologies have facilitated the business processes which its great representation is in the field of products and services that it has made the final users and customers of these products and services to obtain their needed products and services with the least time and cost.

These days hotels apply these technologies to after and provide their services such as the reservations which cause the passengers to have the greatest benefits with the lowest time and benefit from its advantages such as the discounts.

#### **Information systems**

Information systems which are generated from technological advancements have provided conditions and situations from which great amounts of information can be saved and perform data processing to obtain the management and organization goals. This fosters the intra and inter organizational reporting and provide some information from which one can apply them in their decision-makings.

The acceptance of computer-based information systems make great changes in the duties of the staff and through their tools, a great change takes place in an organization ( Mohmood Zadeh M.2009)

Applying reliable information systems can help the organizations to arrive to an optimized point, because using those tools can enhance the determination of the competitors with other advantages.

As Staves et al. state, the information systems include 6 steps:

Step 1. Decision-making and the acceptance of information systems.

Step 2. Obtaining the information systems.

Step 3. Operating the information system, which is the most costly and expensive step.

Step 4. Information system maintenance and applications.

Step 5. Information system gradual improvements.

Step 6. Withdrawal Investment bank ( Zahir A.2003)

#### **Efficiency**

One of the key features of any system or activity which should always be concerned is the efficiency. In its general definition efficiency it doing proper actions. It has a lot of applications in accounting and auditing. Lack of concern to this issue leads to those processes without any benefits. One of the items in which the efficiency should be concerned is the accounting information systems. This system should be efficient enough, if not, a system is set up and operated that is not able to lead the organizations to their intended goals. Like many other department and organizations utilizing accounting systems. Hotels should also take into account the efficiency of the system they are applying in order to completely process the information and provide the managers with proper information for their decision-makings.

#### **Hotel industry**

Hotel industry is a developing one in recent years because the tourism industry has been regarded as a profit-making. The hotel quality and those systems offering in them have a great role in tourist attraction. Therefore the hotels are ranked based on the service quality they provide and the systems they apply. One of the new technologies the hotels are applying is using the websites to after offer their services and products to the travelers which those websites.

Can make the tourists more familiar with the comfort facilities of the hotels. In this regard, financial data analysis and registration should be concerned. One of the systems applied for data processing is the accounting information system which it dose the recording, analysis and reporting the great amount of data.

Nowadays in the globalization era of the information, hotel industry have been concerned by the social active politicians and scholars to develop were sustainable developments and introducing the national potentials to the others. The determination and understanding of this issue can extract some positive results with the conclusion of Iran tourism industry development in the shade of information technology industry. What is important is the fact that Iran should accompany it self with this trend, that is due to its numerous technical and special facilities is great human resources ( Hemat far M, Ezadi MM.2010)

Nowadays tourism is considered as a cultural, social and economical factors in the developments of the countries. Accordingly, the authorities of tourism and hotel management are trying to improve and increase it. It should be stated that this development requires special technological, welfare, social, political and cultural conditions. We also know that the mere reasons of great historical heritages and so-long ancientness of any country cannot develop the tourism, because the present of proper infrastructures such as the welfare and comfort facilities and places of a great importance.

Hotels and any other tourist facilities can become a consolidated department and unit in the countries which it is not only applicable by the tourists and travelers, but by the merchants. Therefore, the hotel industry is considered as a major part of the tourism industry and for its success, the residential facilities such as the hotels should meet the travelers demands. Their service quality is a major factor to attract and satisfy the travelers and if this quality is low the tourism industry encounters with great losses.

Based on the great potentially to attract tourists and the approaches to transfer from benefit-making from the oil to non-oil produces and industries. Iran can benefit from the investments made in this sector.

There are great capacities for mere investments for the technological applications in the accounting information systems of the Iranian hotel management. The application of cyber space's to develop the hotel management industry is a great concern. and because of the special cultural and social atmosphere and condition of the country, it can have and provide major benefits.

While there are many e-medias from websites to weblogs and Studio E are active in the hotel management sector of Iran and based on the facilities, interest and methods or styles of the designers which has made great windows open for the foreign customers, but Iran is little bit far from the other countries ( Alsarayreh MN, Jawabreh OAA, Falah Jaradar MM, Alamro SA.2011)

Undoubtedly the improvement condition of hotel industry status development in Iran is the cyber knowledge. It means the easy trend of cyber receipts. This knowledge is now divided into four categories of basic, functional, technological and informative ones and having enough knowledge and information in any of the above four categories leads to the ease and simplicity of the cyber era ( Steves JM, Carvalho JA, Stantons AA.2001)

The second condition is after the concepts in bi-lingual or multi-lingual style. To do so strong and powerful informative e-resources are required to inform a lot of different audiences ( Khodadadian F.2006.)

Another necessity is the introduction and presenting of e-resources to the search engines which are consecutively increasing. It's evident that in any part of the world, there are some local and regional explorers by the main ones. Therefore it's better to improve our access to the informative resources by determining wide different explorers ( Lahmardi N.2007)

### **Review of literature**

Hematfar et al (2010) provided an article entitled with the evaluation of information technology applications in accounting and auditing. They dealt with the influences and applications of information technology in auditing and accounting, and introduced the information technology and its different approaches and styles in accounting and auditing. Finally they found that by great developments of information technology, all the companies and organizations have to invest in this sector to keep their stability, and the accountants should determine and realize the new technologies and properly apply them to offer proper solution to decrease the risks and damages [13]

Baharmfar and Rassoli (2001) in an article entitled with the qualitative features of management accounting information and its role in management decision-makings, have evaluated the qualitative characteristics of accounting information and its influences on the managers, decision-making. They also evaluated the relation between these features and their applications in the decision-makings and concluded that accounting information is considered as a management tool for the decision-making and it is generated to help the management and improve its decision-making level. They also stated that the management on lack of information application means the low quality of the information, because if accounting information is of good quality, they influence in the decisions, but without the same effect and size ( Bakr S.1995)

Etemadi et al (2006) proposed an article entitled with the influence of the information technology on the qualitative features of accounting information, and in order to determine these influences, they first widely evaluated the theoretical principles, and developed the logical network of information technology influences on each qualitative features of accounting information. Then the research theories were formed based on the main components and their relations. As last experimental statistical methods, variance analyses and (Duncan) – test were applied to verify the theories. The findings of this research reveal that information technology increases the relation of accounting information and reduces its reliability capability and it also a little reduces the comparability ( Ed H, Julie M.2000)

Mahmood Zadeh (2009) in an article called the influence of information technology on the work force productivity in factory industries, has evaluated the FAVA influences on the productivity growth of 23 manufacturing industries and users of information technologies in Iran. The findings depict that the influences of

FAVA on the productivity growth of manufacturing industries and FAVA users, is not statistically meaningful, but its effects on the work force productivity is greater than the other industries ( Mohmood Zadeh M.2009)

Dastgir and Talebi (2010) in an article entitled the evaluation of the qualitative features of accounting information systems, assessed the characteristics of accounting information, such as its understanding relation and reliability in Bandar-e-Emam petro-chemical company. Their results reveal that the accounting system of Bandar-e-Emam petro-chemical company has the qualitative features of accounting information( Dastan, Surmen Y.2004)

Alqashi (2003) has determined the problems facing with the accounting information systems in e-commerce. This research has found some results affecting on the special and general features of e-commerce. Its general influences are on the technical professions and its general ones are on the auditing and accounting professions. This research has some suggestions to help the pre-evaluation of accounting and auditing to apply new e-commerce technologies such as applying a chain of accounting information system, their websites on the internet, applying an auditing body for the approaches and policies of company accounting and auditing systems and their relations with e-commerce ( Steves JM, Carvalho JA, Stantons AA.2001)

Dastan and Surmen (2004) proposed research regarding the relation between accounting information systems and information technology in which the hystorical trend of accounting systems and information technology are proposed, and the great influences of information technology in its different aspects on the accounting information systems are expressed ( Bazargan A, Sarmad Z, Hejazi E.2000)

Dyker and Nanh (1998) have measured the efficiency of computerized accounting information systems via some variables like software, hardware, data, personnel, and approaches. This research revealed that there are some satisfaction regarding the equipments, operational methods and information system maintenance personnel. which increase the general satisfaction of the customers. This study suggested that computer users should know its physical components in such a way that they become familiar with the operational requirements of the software and central processor units ( Mohmood Zadeh M.2009)

Reyes, Rodrigues and Javier (2007) have commented on the major influences of XBRL technology (extensible business reporting language) on the electronic relation of the business units and the advantages of generation such relation to improve and increase the reliability and accuracy of financial information [22].

Ed (2000) has evaluated the influences of information system features on the judgment and decisions of the users. The results revealed that accounting information system provides the primary data for the decision-makings ( David JS, Dunn CL, MC-Carthy W, Poston RS.2005)

Al-Sarhan (1995) has evaluated the presence and influences of the technology on the focus level, formality, complexities and the proportion share of Jordani companies and their influences on various organizational variables, especially the human components. The results of this research reveals the relation between technology and focus level, formality level, the complexity level and the geographical change levels ( Aqazamani AM.2006)

Ramadan (1999) has measured the influences of environmental factors, organizational elements and decision-making approaches on the accounting information systems applied in Jordani industrial companies. This research found a relation between the environmental factors and accounting information systems. There was no relation between the environmental factors and accounting information systems. This research also found that the mere the complexities of the tasks, the mere the decentralization is needed. Under these condition, the accounting information system becomes more complex and sensitive which leads to the consolidation of the resulted information. This research also found that there is a relation between the decision-making models and accounting information systems when the companies consider long-term consequences of their decision-making regarding the unknown future conditions ( Reyes E, Rodrigues D, Dolado J.2007)

American Financial standard development leading comity, in their research in (2000) provided their results in this way that internet has transformed the monthly, quarterly and annual reporting into on-timely one. Therefore it is by internet-based reporting that not only manager, analysts and experts, but also the users can have quicker and cheaper access to the information.

However it's not possible to predict that if the information is complete or not [10] David et al (2005) explained in their researches that accounting information systems act as a mediator which influence on the three separate organizational behavior variable. Accounting information system provide some information about economical events and the decision-making can apply them in decisions regarding organization planning, governance and control. They also stated that decision-making is a function of the three variables, of purposes, concepts and symbols. As they say, accounting information systems should provide understandable and comparable information for the users and change them into economical concepts for themselves ( Dastgir M, Galebi R.2010)

Griffin (1998) has reviewed that how hotels use the information through databases. In this study, just 7 hotels of 12 ones underwent the information manipulation and only 2 of the 7 ones developed their datacenters. Some hotels didn't have databases while they were planning and scheduling for development of this technology. Most of these hotels applied the information for the supporting of strategic market analyses, such

as new target market, loyalty planning setup, sales analyses, and administrative tendency analyses. The result was that the capability hotels to collector and process a lot of data, and their accessibility helps to provide competitive advantages ( Financial Accounting standard Board steering committee. 2000)

Mack (2006), in their research entitled the concepts of accounting and data value, has expressed the information determination value, and this value and significance leads to the suitable and proper application of accounting information systems. In also has a great role in controlling planning and decision-makings of the managements. As the seats, teaching and training the personnel regarding accounting information systems and the data in the organization, the evaluation of these information and the system model feedbacks are of a great significance ( Malian SR.2004)

### **Research purposes**

The research purpose are the evaluations of the following:

The influence of information technology on the efficiency of accounting information systems in Iranian hotel industry.

The relation between information technology and the efficiency of accounting information system in Iranian hotel industry.

Whether or not the hotels apple effective accounting information systems.

### **Research Hypothesis**

The hotel has applied an effective accounting information system.

The hotel has applied a new information technology.

There is a meaningful statistical relation between the efficiency of accounting information systems and new information technologies in the hotels.

### **Research method**

In order to collect the data, the field approach and questionnaire are used. The scale which is applied in the questionnaires is the ranking one and a 5-option one it utilized. SPSS software is used for data analyses and the descriptive statistics are used to describe occupational features, experiences and education. Deductive statistics like t-test are used to test the theories.

The tests are valid when their questions represent all the fields of skills, abilities, concept comprehension and other behaviors performed and evaluated in the tests.

It's clear that validity analyses of the tests are performed by the subject experts. If these experts confirm the validity after the analyses, then they are applicable. In order to determine the validity the validity, the research questionnaire was distributed among some of the professors and scholars of accounting major.

The validity of the tests are exactly measured and they have two different meanings. One meaning is the stability of the test scores in time; that is, if a test is performed several times for an item, the score should be the same, and in its second definition, it refers to its inner similarity authenticity, which means how correlated the test items are ( Bahram Far N, Rassoli VA.1998)

For questionnaire validity measurements, the research questionnaire was distributed between 10 subjects and then. They were collected. It was done in limited level with the duration of 10 days and in two intervals. Spearman correlation test were utilized for validity measurements, and the questionnaire correlation was found about 78%. It shows that the questionnaire is valid enough for the subject evaluation.

### **Statistical population**

The statistical population includes the hotels in Iran. It's worth noting that the questionnaires were distributed among the top managers, vice-chair men, the department managers and other authorities responsible for the activities in the hotels with the educational levels of high school diploma, associated of are diploma, B.A and M.A degrees. Because the research domain is wide, this research was just performed in Tehran.

### **Statistical samples**

Because the hotel industry is wide and separate in different cities of Iran the samples of this research are the three, four and five-star hotels in Tehran which their total number is 37 ones.

Because of this prediction that the subjects do not cooperate to have an optimal number of the samples, about 150 questionnaires were distrusted among which just 90 ones were returned and after final evaluation 69 ones were accepted to be used in data analyses.

### **The experiments and tests of the theories**

Table 1. Is a description of the occupational and personal factors of the evaluated samples.

Table 1. The description of personal and occupational factors of the hotel staff.

Percentage	No.	Factors Education
10.1%	7	High –school diploma
20/3%	14	Associate of art diploma
65/2%	45	B.A degree
4/3%	3	M.A degree
100%	69	Total
		Work experience
40.6%	28	Less than 5 years
26/1%	18	6 to 10 years
11/6%	8	11 to 15 years
21/7%	15	More than 15 years
100%	69	Total
13%	9	Top manager
5/8%	4	Vice-manager
20/3%	14	Manager
60/9%	42	Authorizes responsible for various operations
100%	69	Total

**The evaluation of the first hypothesis**

The hotel is applying an effective accounting information system.  
 H0: The hotel is not applying an effective accounting information system.  
 H1: The hotel is applying an effective accounting information system.

The mean comparison tests (t-test) was applied to solve and answer this problem. As the t-variable is -300/12 and p=0.00, then the zero assumption of the test in the level of 0/05 is rejected. that means the hotel is applying an effective accounting information system.

Table 2. t-test for the evaluation of the hotels applying effective accounting information system.

Hypothesis	Mean	Criteria	Deviation	t-variable	Meaningfulness level (p value)
1	2.2440	0.51057		-12.300	0.000

**The evaluation of the second hypothesis**

The hotel has applied new technology.  
 H0: The hotel has not applied a new technology.  
 H1: the hotel has applied a new technology.

In order to perform the experiments for this hypothesis, mean comparison test (t-test) was applied. As the t-variable is -365/15 and p=000.0 the zero assumption of the test is rejected. That means the hotel. The hotel is applying a new technology.

Table 3. t-test for the evaluation of the hotel applying advanced technologies

Hypothesis	Mean	Criteria	Deviation	t-variable	Meaningfulness level (p-value)
2	2.0902	0.49186		-15.65	0.000

**An evaluation on the third hypothesis**

there is a meaningful relation between the efficiency of the accounting information systems and new technologies in the hotels.

H0: There is not a meaningful relation between the efficiency of the accounting information systems and new technologies in the hotels.

H1: There is a relationship between the efficiency of the accounting information systems and new technologies in the hotels.

Here, the correlation test is applied to solve and answer the problem. As in the correlation test the correlation coefficient in the level of 0/99 between two variables is 0/486 and p=000/0, then the zero assumption in the level of /01 is rejected, that is, there is a meaningful relation between the efficiency of the accounting information systems and the development of the technology.

Table 4. correlation test for the presence of a relation between the efficiency of an accounting information system and the development of the technology.

The efficiency of the accounting information system and the development of the technology	Correlation coefficient
0/486	Meaningfulness level
0.000	

**CONCLUSION**

In the information world of today which everything's quickly changing and developing accompanying with these change should be concerned to improve the efficiency and after better service. One of the aspects of

the development includes applying accounting information systems in accounting which is greatly increasing in economical units and organizations. Therefore this research dealt with the relation between the efficiency of accounting systems and the development of the technology, and it evaluated whether or not the hotels are applying effective accounting systems and advanced technologies. At last the following conclusions were obtained.

The hotels are applying effective accounting systems.

Hotels have utilized new information technologies. There is a meaningful relation between accounting information systems and new technologies.

### **Suggestions**

The data collection is performed by surveying the inter-organization staff and personnel. It is suggested that in future, other groups like the auditors, creditors, etc. could be considered and evaluated.

As this research is performed on there, four and five-star hotels it's better to evaluated other hotels in future studies.

This research is done on the hotels in Tehran. so it's a good idea to perform it in other big cities like Mashhad, Isfahan, Shiraz, Kish, etc.

An evaluation on the quality of the other information systems and the role of the technology in hotels in Tehran or all around the country be performed.

It's possible to perform some researches on the role of information systems developments and accounting information systems to improve the service quality efficiency, and time and cost saving in hotel management industry.

### **Footnote**

XBRL: extensible Business Reporting language

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