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Identifying the Degree of Compatibility between Computer-based Accounting Information Systems, Requirements and Barriers to E-Commerce in Iranian Service Companies According to a Joint Project of the United States and Canada

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Abstract

The purpose of this study is to identify the degree of compatibility between computer-based accounting information systems, requirements, and barriers to e-commerce in Iranian service companies according to a joint project of the United States and Canada. The present study is applied in terms of purpose and descriptive-analytical in terms of method. The statistical *population* is service companies listed on the Iranian Stock Exchange (fifty-five companies). The statistical sample included 48 employees of accounting departments. So, the questionnaire was distributed among 48 employees in the accounting departments. All participants in the sample answered the questionnaire. We used the resources, references, books, papers, and scientific journals available in libraries (extracting studies related to the research topic) and the Internet (discovering new topics in the field of research) to collect data and information. Also, the main tool for collecting primary data was a questionnaire whose questions were prepared and designed based on a five-point Likert scale and a joint project between the United States and Canada (Al-Qishi, 2003 and Mahern, 2009).

Before distributing the questionnaire, some experienced professors and experts in the field of accounting sciences evaluated the apparent validity of the questions. The reliability of the questionnaire was also assessed through Cronbach's test. To analyze the data, SPSS software and arithmetic mean test and standard deviations were used to determine the degree of compatibility between the studied variables. The results showed that there is sufficient compatibility between computer-based accounting information systems and e-commerce requirements in Iranian service companies according to a joint US-Canadian project.

Keywords: Barriers to E-Commerce, Accounting Information Systems, US-Canadian Joint Project

1. Introduction

The growth of information technology and the globalization of markets is one of the most prominent developments in the contemporary world that has been achieved in the past few years. One of its effects is the evolution of various economic fields and business operations that we are witnessing in the world. Consequently, a great revolution has taken place in technology, knowledge, and the emergence of various means of communication. This trend has many positive effects, foremost of which is the ease of transfer of technology, investment flow, and reduction of transportation cost. Therefore, the world has become a small village and has led to the emergence of new concepts in business, such as e-commerce having many differences from traditional business. Information systems, especially accounting information systems, are important areas that are affected by e-commerce. Therefore, accountants need to be familiar with these systems and be able to work well with them. Accountants rely heavily on information when doing their job. They obtain this information through the accounting information system. The accounting information system is known as an effective tool to provide accurate information to users promptly. Information systems have become essential elements used in many fields to support various activities to achieve benevolent or malicious purposes.

Al-Qishi (2013), in his research, examined the effectiveness of accounting information systems in achieving security, assertiveness, and reliability in the context of e-commerce.

The results of this study show that the current accounting theory cannot manage the mechanism of verification and recognition of revenues from e-commerce operations.

The main solution to the problems related to revenue recognition and tax allocation in accounting and auditing businesses (due to the intangible nature of e-commerce and the lack of performance documentation) is to provide policies and operational procedures that ensure safety, assertiveness, and reliability in outputs of the accounting system. The issues of security, assertiveness, and reliability can only be achieved through the creation and development of a system that links the company's accounting process and the company's website to the Internet.

Matahan (2019) evaluated the ability of foreign auditors in Jordanian companies in the field of e-commerce. The results show that joint ventures between the United States and Canada have added an advanced technological dimension to both accounting and auditing that did not exist before the advent of e-commerce. The instances in the case study are fully aware of the terms of the joint US-Canadian project. Finally, it was found that the adherence of foreign audit offices to the project conditions is weak, and the interest of foreign auditors in Jordan in the field of e-commerce is not significant.

With the advent of e-commerce, the development of the principles of compatibility between accounting information systems for companies and the identification of unique e-commerce requirements has grown. In early 2002, the American Institute of Certified Public Accountants and the Canadian American Institute of Certified Public Accountants launched a joint project called Website Trust Services. The project identifies principles that must be present in accounting information systems to comply with e-commerce requirements. In this paper, based on the results of this joint project, we seek to identify barriers to compatibility between accounting information systems and e-commerce requirements in companies listed on the Iranian Stock Exchange. Consequently, we provide appropriate solutions to overcome these barriers. Our proposed solutions may have a positive impact on the service sector and the Iranian economy in general.

2. Research Questions

1- What is the level of compatibility between computer-based accounting information systems in Iranian service companies and adherence to the principle of protection?

2- What is the level of compatibility between computer-based accounting information systems in Iranian service companies and adherence to the principle of system readiness?

3- What is the degree of compatibility between computer-based accounting information systems in Iranian service companies and adherence to the principle of processing integration?

4- What is the level of compatibility between computer-based accounting information systems in Iranian service companies and adherence to the principle of privacy in the network?

5- What is the level of compatibility between computer-based accounting information systems in Iranian service companies and adherence to the principle of confidentiality?

6- Is there an obstacle to compatibility between computer-based accounting information systems and adherence to e-commerce requirements in Iranian service companies based on the joint project between the United States and Canada?

3. Theoretical Foundations of Research

E-Commerce Requirements: E-commerce requirements are the principles required by the US-Canada Joint Venture project to be available in e-commerce accounting information systems. Also, the process of their compliance with foreign auditors is performed in the service companies listed on the Iranian Stock Exchange. The method of measuring e-commerce requirements is based on the use of questionnaire questions.

The principle of security: The principle of security is one of the most important principles of the joint project between the United States and Canada to achieve the reliability of the website. This principle stipulates that this system is protected against unauthorized intrusions in service companies listed on the Iranian Stock Exchange. The method of measuring the principle of security is based on the use of questionnaire questions.

The principle of availability: The principle of availability is one of the principles of the joint project between the United States and Canada to achieve and ensure the reliability of the website. This principle states that the system is ready to operate in accordance with the policies set by Iranian service companies listed on the Iranian Stock Exchange. The method of measuring the principle of availability is based on the use of questionnaire questions.

The principle of processing integrity: The principle of processing integrity is one of the principles of the joint project between the United States and Canada to ensure website reliability.

This principle stipulates that all steps are processed and provide accurate, timely, and authorized information to the service companies listed on the Iranian Stock Exchange. The method of measuring the principle of processing integrity is based on the use of questionnaire questions.

The principle of online privacy: The principle of online privacy is one of the principles of the joint project between the United States and Canada to ensure the reliability of the website. This principle states that the use and disclosure of all information obtained from e-commerce are under control, in accordance with established policies to protect the privacy of individuals who trade with service companies listed on the Iran Stock Exchange. The method of measuring the principle of privacy is based on the use of questionnaire questions.

The principle of confidentiality: The principle of confidentiality is one of the principles of the joint project between the United States and Canada to ensure the reliability of the Website. This principle states that the confidentiality and reliability of all information are regulated in accordance with the policies of service companies listed on the Iranian Stock Exchange. The method of measuring the principle of security is based on the use of questionnaire questions.

Accounting information systems

Accounting information systems are one of the oldest and most vital information systems available because they are related to the recording, preparation,

And reporting of internal and external financial operations (Juma et al., 2003). This system is one of the components of the management information system that deals with collecting, classifying, and processing financial operations, converting them into information, and communicating them to different parties in order to justify their decisions (Isa, 2003, 21). The accountant should be familiar with all the factors affecting the information provided to management and all the factors affecting the accounting information system. These factors include:

Behavioral analysis: This process is done to identify the behavioral and psychological factors of the person while performing job duties.

Quantitative methods: These are analytical methods that are used by the organization to make appropriate decisions in the processes of supporting the accounting information system and increase the efficiency of the information provided.

Computer: In the past, institutions and companies did their work manually and spent a lot of time and effort. But with tremendous technological advances, the dependence of institutions on computers increased and led to savings in time and labor. This process helped institutions to store their accounting records on a computer.

Therefore, accounting information systems must take into account developments in the field of e-commerce. In particular, pay attention to the need to use modern electronic devices and redesign the system in accordance with the electronic performance of data. Because the components of accounting information systems are related to the human and material parts, that is, they are mainly dependent on human personnel. In addition, they are a set of simple automated or semi-automated tools that help accomplish the accounting process. But to work in the field of e-commerce, we are required to use electronic devices, i.e., the accounting information system relies on the electronic performance of data, and this is equivalent to the development of components according to the needs of work under e-commerce (Yahya and Al-Habiti, 2003, 41).

Abu Rahma (2019) has studied the methods of conducting e-commerce operations and accounting s*ettlement* systems in banks operating in the Gaza Strip. He found that despite the availability of structures, principles, and rules, the rate of use of e-commerce is low. One of the reasons for this is the lack of experience and lack of professional experts.

Also, the performance of accounting systems in Gaza banks is poor due to a lack of experience and a lack of appropriate infrastructure for efficient implementation of e-commerce operations. This process requires the development of a secure accounting system through which to conduct e-commerce operations.

Al-Jazrawi and Saeed (2019) examined information technology tools and their role in the efficiency and effectiveness of accounting information. The use of computer software in accounting information systems will lead to time and labor savings, ease of achieving efficient, effective, and timely results, and users' access to information and data.

In order for jobs to be realized faster and better, it is absolutely necessary to synchronize with the developments and make changes in the accounting profession. The main point is to make corrections and changes in the elements of accounting education to keep up with financial and future developments.

Katuna et al. (2012) studied the impact of e-commerce on the accounting information system of Jordanian banks. The results of this study showed that e-commerce has a statistically significant impact on the development of accounting information systems in Jordanian banks. The results also show the statistical importance between e-commerce and the reliability of accounting information systems. One of the quality features of accounting information is improving data management capabilities, reducing errors, evaluating data accuracy, security and protection. The study also shows the impact of e-commerce on reducing costs and improving each of the processes and services provided to customers through accounting information systems in Jordanian banks.

4. Research Methodology

The present study is applied research in terms of purpose, as well as descriptive-analytical research in terms of method. The statistical *population* is service companies listed on the Iranian Stock Exchange (fifty-five companies). The statistical sample used includes all employees of the accounting department (48). The questionnaire was distributed among 48 employees in the accounting departments. All participants in the sample answered the questionnaire.

We used the resources, references, books, papers, and scientific journals available in libraries and the Internet to collect data and information. Also, the main tool for collecting primary data was a questionnaire whose questions were prepared and designed based on a five-point Likert scale and a joint project between the United States and Canada (Al-Qishi, 2003 and Mahern, 2009). Before distributing the questionnaire, some experienced professors and experts in the field of accounting sciences evaluated the apparent validity of the questions. The reliability of the questionnaire was also assessed through Cronbach's test.

Table 1: Cronbach's alpha coefficient of components

No.	Variable	Stability coefficient value
1	The principle of protection	0.799
2	The principle of system readiness	0.927
3	The principle of processing integrity	0.915
4	The principle of privacy in the network	0.903
5	Principles of confidentiality	0.932
6	Accounting Information Systems	0.972

The researchers used SPSS software to analyze the data. Also, arithmetic mean test and standard deviations were used to determine the degree of consistency between the variables under study.

5. Results

In this sub-section, we try to assess the level of compatibility between computer-based accounting information systems, e-commerce requirements, and barriers.

1. Identifying the level of compatibility between computer-based accounting information systems and adherence to the requirements of e-commerce in Iranian service companies based on the joint project of the United States and Canada.

Table 2: A summary of the general means to identify compatibility between computer-based accounting information systems and adherence to e-commerce requirements

No.	Accounting Information Systems	Arithmetic Mean	Standard deviation	Ranking	Level according to the mean
1	The principle of protection	3.92	0.50	4	High

2	The principle of system readiness	3.90	0.65	5	High
3	The principle of processing integrity	3.71	0.58	3	High
4	The principle of privacy in the network	3.75	0.56	2	High
5	Principles of confidentiality	3.86	0.60	1	High
-	Total Arithmetic Mean	3.83	0.54		

The results of Table (2) show that the arithmetic means for all paragraphs in the range of 3.86-3.91 are variable. The general mean of the total answers of the respondents is equal to (3.83), and the standard deviation is equal to (0.54), which is higher than the mean. These parameters indicate that the sample members agreed with almost all of the paragraphs. That is, the degree of compatibility between computer-based accounting information systems and e-commerce requirements in Iranian service companies based on a joint US-Canadian project is desirable.

2. Identifying the level of compatibility between computer-based accounting information systems and adherence to the protection in Iranian service companies based on the joint project of the United States and Canada.

Table 3: Identifying compatibility between computer-based accounting information systems and adherence to protection principle requirements

No.	Statements	Arithmetic Mean	Standard deviation	Ranking	Level according to the mean
1	Documenting the definitions of warranty, security, and protection policies	3.02	1.82	10	Medium
2	Linking and communicating system protection policies to	4.21	0.45	2	High

	responsible authorities and authorized users				
3	Developing practical methods to achieve system protection	4.19	0.70	3	High
4	Monitoring the system and adhere to system protection policies	4.06	0.75	6	High
5	Pre-set and disclosed protection policies	3.88	0.95	7	High
6	User document protection requirements	4.10	0.75	4	High
7	Clarity of system commitments to the user protection process	4.10	0.92	5	High
8	Existence of mechanisms and procedures to prevent the entry of viruses and unauthorized programs	4.29	0.87	1	High
9	Monitoring technological changes in the environment of the protection system and their continuous monitoring	3.67	0,95	9	High
10	Periodic evaluation of the protection system and its compliance with established policies	3.71	0.79	8	High

	Total Arithmetic Mean	3.92	0.50	-	High

The results of Table (3) show that the arithmetic means for all paragraphs in the range of 3.14-14.29 are variable. The mean of the total answers of the respondents is equal to (3.92), and the standard deviation is equal to (0.54), which is higher than the mean. These parameters indicate that the sample members agreed with almost all of the paragraphs. That is, the degree of compatibility between computer-based accounting information systems and adherence to protection principles in Iranian service companies based on a joint US-Canadian project is desirable.

The results show that paragraph (8) (existence of mechanisms and methods to prevent the entry of viruses and unauthorized programs) is in the first place. Then paragraph (2) (linking and communicating the protection policies of the system to officials and authorized users) is in second place. And paragraph (3) (practical measures to protect the system) is in the third place. Paragraph (10) (periodic evaluation of the protection system and ensuring its compliance with the set policies) is in the eighth place. Paragraph (9) (monitoring technological changes in the protection system and their continuous monitoring) is in the last place. Finally, paragraph (1) (documenting definition of system security and protection policies) is in the last rank.

3- Identifying the level of compatibility between computer-based accounting information systems in Iranian service companies and adherence to the principle of system readiness?

Table 4: Identifying the level of compatibility between computer-based accounting information systems and adherence to the principle of system readiness

No.	Statements	Arithmetic Mean	Standard deviation	Ranking	Level according to the mean
11	Documenting the definitions of system readiness policies	4.04	1.82	10	Medium
12	Linking and communicating system readiness policies to responsible	4.25	0.78	2	High

	authorities and authorized users				
13	Developing practical methods to achieve system readiness	4.00	0.74	5	High
14	Monitoring the system and adhere to system protection policies	4.10	0.77	3	High
15	Periodic approval and evaluation of system readiness policies by specific individuals or groups	3.92	0.94	6	High
16	Periodic appointment of system readiness officials and their replacement	3.63	1.12	9	Medium
17	Clarity of system commitments to the system readiness policies	3.69	0.68	8	High
18	This system includes technological techniques that help readiness the system for use.	4.25	0.75	1	High
19	Monitoring technological changes in the environment of the system and their continuous monitoring	3.46	1.05	10	Medium
20	Periodic evaluation of the readiness system and its compliance with established policies	3.83	0.90	7	High
	Total Arithmetic Mean	3.90	0.50	-	High

The results of Table (4) show that the arithmetic means for all paragraphs in the range of 3.46-4.25 are variable. The mean of the total answers of the respondents is equal to (3.90), which is higher than the mean. These parameters indicate that the sample members agreed with almost all of the paragraphs. That is, the degree of compatibility between computer-based accounting information systems and adherence to readiness system principles in Iranian service companies based on a joint US-Canadian project is desirable.

Paragraph (18) (This system includes technological techniques that help readiness the system for use.) is in the first place. Then, paragraph (12) (Linking and communicating system readiness policies to responsible authorities and authorized users) is in the second place. Paragraph (14) (Monitoring the system and adhere to system protection policies) ranks third. Also, paragraph (11) (Documenting the definitions of system readiness policies) is in the eighth place. Subsequently, paragraph (13) (Developing practical methods to achieve system readiness) is placed in the penultimate rank, and finally, paragraph (19) (Monitoring technological changes in the environment of the system and their continuous monitoring) is in the last place.

4. Identifying the level of compatibility between computer-based accounting information systems in Iranian service companies and adherence to the principle of processing integrity?

Table 5: Identifying the level of compatibility between computer-based accounting information systems and adherence to the principle of processing integrity

No.	Statements	Arithmetic Mean	Standard deviation	Ranking	Level according to the mean
21	Documenting the definitions of processing integrity policies	3.88	0.64	3	High
22	Linking and communicating processing integrity of the system to responsible authorities and authorized users	3.81	0.64	5	High

23	Developing practical methods to achieve processing integrity	3.94	0.63	2	High
24	Monitoring the system and adhere to processing integrity policies	4.04	0.65	1	High
25	Periodic approval and evaluation of processing integrity by specific individuals or groups	3.77	0.90	6	High
26	Periodic appointment of processing integrity officials and their replacement	3.35	0.86	10	Medium
27	Clarity of system commitments to processing integrity policies	3.44	0.71	9	Medium
28	Ensuring the completeness, accuracy, and safety of operations performed through the e-commerce system	3.58	0.71	7	Medium
29	Monitoring technological changes in the system environment and their impact on safety and	3.50	1.01	8	Medium

	completeness of operations and their continuous monitoring				
30	Periodic evaluation of the safety and completeness of operations and its compliance with established policies	3.85	0.94	4	High
-	Total Arithmetic Mean	3.71	0.58	-	High

The results of Table (4) show that the arithmetic means for all paragraphs in the range of 3.46-4.25 are variable. The mean of the total answers of the respondents is higher than the mean. These parameters indicate that the sample members agreed with almost all of the paragraphs. That is, the degree of compatibility between computer-based accounting information systems and adherence to readiness system principles in Iranian service companies based on a joint US-Canadian project is desirable.

Paragraph 24 (Monitoring the system and adhere to processing integrity policies) is in the first place. After that, paragraph 23 (Developing practical methods to achieve processing integrity) comes in second place. Similarly, paragraph 21 (Documenting the definitions of processing integrity policies) ranks third. And paragraph 29 (Monitoring technological changes in the system environment and their impact on safety and completeness of operations and their continuous monitoring) ranks eighth. Paragraph 27 (Clarity of system commitments to processing integrity policies) is placed before the last, and finally, paragraph 26 (Periodic appointment of processing integrity officials and their replacement) is placed in the last rank.

6. Identifying compatibility between computer-based accounting information systems and online privacy requirements based on the US-Canadian joint project.

Table 6: Identifying the level of compatibility between computer-based accounting information systems and adherence to the principle of online privacy

No.	Statements	Arithmetic Mean	Standard deviation	Ranking	Level according to the mean
31	Documenting the definitions of online privacy policies	4.19	0.70	1	High
32	Linking and communicating online privacy of system to responsible authorities and authorized users	3.96	0.61	2	High
33	Developing practical methods to achieve online privacy	3.90	0.62	3	High
34	Monitoring the system and adhere to online privacy policies	3.79	0.77	4	High
35	Periodic approval and evaluation of online privacy by specific individuals or groups	3.79	0.82	5	High
36	Periodic appointment of online privacy officials and their replacement	3.79	0.82	8	High
37	The clarity of the network mechanism that connects the	3.69	0.87	6	High

	entire e-commerce system				
38	The system includes the necessary procedures for determining the duties of those responsible for the privacy	3.69	0.68	7	High
39	Monitoring technological changes in the system environment and their impact on online privacy and their continuous monitoring	3.44	0.89	10	Medium
40	Periodic evaluation of the online privacy and its compliance with established policies	3.48	0.71	9	Medium
-	Total Arithmetic Mean	3.75	0.56	-	High

The results of Table (6) show that the arithmetic means for all paragraphs in the range of 3.44-4.19 are variable. The mean of the total answers of the respondents (3.71) is higher than the mean. These parameters indicate that the sample members agreed with almost all of the paragraphs. That is, the degree of compatibility between computer-based accounting information systems and adherence to online privacy principles in Iranian service companies based on a joint US-Canadian project is desirable.

Paragraph 31 (Documenting the definitions of online privacy policies) ranks first, followed by paragraph 32 (Linking and communicating online privacy of system to responsible authorities and authorized users) and paragraph 33 (Developing practical methods to achieve online privacy) in second and third place, respectively. Paragraph 36 (Periodic appointment of online privacy officials and their replacement) ranks eighth. Paragraph 40 (Periodic evaluation of the online privacy and its compliance with established policies) is inserted in the penultimate position,

and finally, paragraph 39 (Monitoring technological changes in the system environment and their impact on online privacy and their continuous monitoring) is inserted in the last position.

6. Identifying compatibility between computer-based accounting information systems and Principles of confidentiality requirements based on US-Canadian joint project.

Table 7: Identifying the level of compatibility between computer-based accounting information systems and adherence to principles of confidentiality

No.	Statements	Arithmetic Mean	Standard deviation	Ranking	Level according to the mean
41	Documenting the definitions of confidentiality policies	4.15	0.74	2	High
42	Linking and communicating confidentiality policies to responsible authorities and authorized users	3.94	0.48	4	High
43	Developing practical methods to achieve confidentiality of the system	4.02	0.66	3	High
44	Monitoring the system and adhere to confidentiality policies	4.17	0.72	1	High

45	Periodic approval and evaluation of confidentiality policies by specific individuals or groups	3.71	0.79	7	High
46	Periodic appointment of confidentiality policies officials and their replacement	3.69	0.77	9	High
47	The clarity of the network mechanism that connects the entire network to protect the confidentiality	3.94	0.95	5	High
48	The system includes the necessary procedures for determining the duties of those responsible for protecting the confidentiality	3.79	0.74	6	High
49	Monitoring technological changes in the system environment and their impact on confidentiality policies and their continuous monitoring	3.54	0.87	10	Medium
50	Periodic evaluation of the confidentiality policies and their	3.71	0.84	8	High

	compliance with established policies				
-	Total Arithmetic Mean	3.86	0.60	-	High

The results of Table (7) show that the arithmetic means for all paragraphs in the range of 3.54-34.17 are variable. The mean of the total answers of the respondents (3.86) is higher than the mean. These parameters indicate that the sample members agreed with almost all of the paragraphs. That is, the degree of compatibility between computer-based accounting information systems and adherence to confidentiality principles in Iranian service companies based on a joint US-Canadian project is desirable.

Where paragraph 44 (Monitoring the system and adhere to confidentiality policies) is in the first place, followed by paragraph 41 (Documenting the definitions of confidentiality policies) and paragraph 43 (Developing practical methods to achieve confidentiality of system) are in the second and third places, respectively. Paragraph 50 (Periodic evaluation of the confidentiality policies and its compliance with established policies) ranks eighth. Paragraph 46 (Periodic appointment of confidentiality policies officials and their replacement) in position before the last and finally, paragraph 49 (Monitoring technological changes in the system environment and their impact on confidentiality policies and their continuous monitoring) is inserted in the last rank.

6. Identifying existing barriers to achieving compatibility between computer accounting information systems and e-commerce requirements

Table 8: Identifying existing barriers in descending order of importance

No.	Statements	Arithmetic Mean	Standard deviation	Ranking	Level according to the mean
57	Fear of the risks of e-commerce	3.83	0.753	1	High
56	2. Lack of sufficient experience in using e-commerce in Iran	3.67	0.663	2	High

60	3. Insignificant salaries of accountants	3.67	0.724	3	High
51	4. Insufficient mechanism for recognizing revenues and expenses in e-commerce compared to traditional commerce	3.60	1.005	4	Medium
62	5. Lack of government laws, regulations and controls to regulate e-commerce operations	3.60	0.939	5	Medium
61	6. Difficulty of the tax audit process in the field of e-commerce	3.56	0.796	6	Medium
59	7. Lack of specialized and educational courses in this field	3.54	0.824	7	Medium
63	8. High cost due to rapid technological advancement	3.54	0.849	8	Medium
58	9. Regulatory problems in the field of e-commerce operations	3.52	0.989	9	Medium
55	Lack of experience in senior managers in this field	3.48	1.111	10	Medium
54	Lack of experience in accountants in this field	3.35	0.934	11	Medium
52	Lack of sufficient documentation on e-commerce operations	3.23	1.016	12	Medium
53	High complexity in e-commerce operations	3.23	0.928	13	Medium
64	Insufficient infrastructure for wireless	3.06	0.665	14	Medium

	communication and high cost of internet				

The results of Table (8) show that the arithmetic means for all paragraphs in the range of 3.06-3.83 are variable. The mean of the total answers of the respondents is higher than the mean value. These parameters indicate that the sample members agreed with almost all compatibility barriers between computer-based accounting information systems and E-commerce requirements in Iranian service companies.

The results of the table show that the most important barriers to compatibility between computer-based accounting information systems with e-commerce requirements (given their relative importance) are:

Fear of the risks of e-commerce

Lack of sufficient experience in using e-commerce in Iran

Insignificant salaries of accountants

The insufficient mechanism for recognizing revenues and expenses in e-commerce compared to traditional commerce

Lack of government laws, regulations and, controls to regulate e-commerce operations

The difficulty of the tax audit process in the field of e-commerce

Lack of specialized and educational courses in this field.

High cost due to rapid technological advancement

Regulatory problems in the field of e-commerce operations

6. Conclusion

The purpose of this paper is to identify the level of compatibility between computer-based accounting information systems, requirements, and barriers to e-commerce in Iranian service companies based on a joint US-Canadian project. The experimental results showed that there is good compatibility between computer-based accounting information systems and e-commerce requirements in Iranian service companies.

One of the remarkable results of this finding is that accounting information systems increase the productivity of the company, and consequently, productivity can be enhanced through better information systems.

The results showed that there is sufficient compatibility between computer-based accounting information systems and the requirements of the security principle. One notable result of this finding is that accounting information systems capable of protecting systems can undoubtedly facilitate the firm's mission to convey its message and achieve its goals (including operations outside local markets and easy interaction with global markets).

Furthermore, the results of this study showed that the compatibility between computer-based accounting information systems and the requirements of the principle of availability based on a joint project between the United States and Canada is quite desirable.

The results also show that there is sufficient compatibility between computer-based accounting information systems and the requirements of the principle of availability based on a joint project between the United States and Canada. This finding means that all procedures developed based on accounting information systems provide accurate, timely, and virtual information. This feature is strictly in accordance with the requirements of the processing integrity principle.

The results showed that there is good compatibility between computer-based accounting information systems and the requirements of the principle of confidentiality, based on a joint project between the United States and Canada. One notable result of this finding is that accounting information systems constantly evaluate the confidentiality and reliability of all information in accordance with company policies.

Finally, despite the good compatibility between computer-based accounting information systems and e-commerce requirements in Iranian service companies, our case study showed that there are several barriers that reduce this compatibility. The most important known obstacle was the fear of e-commerce risk. Other barriers such as the novelty of this type of business in Iran, the low salaries of accountants, the lack of a revenue and cost recognition mechanism in e-commerce are also significant.

Officials and managers of companies consider the issue of hackers very important and find it unreasonably challenging for unrelated people to access company data and use this data by competitors. Also, the use of e-commerce in Iran is a big change, and it is difficult to accept because of the fear of risks that may jeopardize the interests of the company. Accountants' low wages may also be another barrier to using e-commerce. Accountants, like other employees, strengthen their performance if they have financial incentives. Because moving to e-commerce may require increasing effort and impose more responsibility on them.

The revenue and expense recognition mechanism used in traditional commerce is not sufficient to manage e-commerce. The use of e-commerce may incur additional costs and be a serious barrier to compatibility between accounting information systems and e-commerce. In addition, the lack of government regulations and controls to regulate e-commerce increases companies' fears about conducting e-commerce. Also, the difficulty of the tax audit process for e-commerce operations may be due to the lack of clarity and difficulty of tax audit procedures. The results of this study are consistent with the results of the study of Dehmash and Al-Qashi (2014). In their research, they showed that the accounting and auditing profession faces the challenge of lacking a revenue recognition and tax allocation mechanism in e-commerce.

Based on the above findings and relying on a joint project between the United States and Canada as a specialized reference, we recommend that the above terms and principles be followed in computer accounting information systems in companies dealing with e-commerce so that the company will adapt to the e-commerce environment.

Also, in order to eliminate or reduce the barriers of compatibility between computer-based accounting information systems and e-commerce requirements, the awareness of company officials and their training conditions in modern technological advances should be strengthened. We also recommend the following as effective items: Permanent introduction of e-commerce and the promotion of its practical tools, and showing the importance of using it in achieving company goals and continuous development of capabilities of employees (especially accountants) in business companies and the development of advanced systems to motivate workers (because of their role in increasing motivation to work and productivity).

7. References

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