

Accounting Information Systems of Kuwaiti Companies: Obstacles and Barriers

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Abstract—The aim of this paper is to identify and discuss the obstacles to the ability of the accounting information systems of Kuwaiti companies to deal with electronic commerce, and then to propose appropriate solutions to overcome the barriers. The study revealed a remarkable decrease in external auditors who have professional certification. The results also showed an agreement regarding the accounting systems and the ability to deal with e-commerce, with a different degree of importance, despite the presence of obstacles to the ability of accounting systems in dealing with different companies.

Keywords—Accounting information systems, obstacle, barriers, electronic commerce, Kuwait companies.

I. INTRODUCTION

IT has become more clear today of the importance for information systems and e-commerce in the global economy through the growth, speed and spread of Internet users over the last decade [1]. The advent of electronic commerce has motivated many organizations to develop their web presence and exploit the opportunities offered by the Internet that are so important to business today [2]. However, the absence of the documentation (Classification Company's Record Data), particularly in e-commerce transactions may reduce the information system accounting of its ability to cope with this virtual environment intangible [3], [4].

The purpose of this paper is to present an appropriate solution to overcome and reduce the obstacles that may stand in the way of the ability of information accounting systems in Kuwaiti companies, specifically those dealing with electronic commerce. Finding an alternative to the documentation may contribute to raising the level of accounting information systems applied in Kuwaiti companies and thus enable them to handle e-commerce and to achieve higher revenues, benefit and grow the financial market and the Kuwaiti economy, which is to be reckoned with, especially in light of the competitive world and open markets.

II. RESEARCH QUESTIONS AND HYPOTHESES

The research questions are:

- 1) Do the accounting information systems implemented in Kuwaiti companies have the ability to deal with e-commerce operations?

- 2) Are there any obstacles hindering the ability of accounting information systems in Kuwaiti companies in dealing with e-commerce operations?

A. Research Hypotheses

Based on the challenges identified in this study and the questions as indicated above, the following hypotheses can be formulated:

- *Premise 1:* "There is no ability of accounting information systems in Kuwaiti companies to deal with e-commerce operations (from the viewpoint of the study sample)."
- *Premise 2:* "There are no obstacles to the ability of accounting information systems in Kuwaiti companies to deal with e-commerce operations (from the viewpoint of the study sample)."

III. RESEARCH METHODOLOGY

Given the nature of this study and the goals that envisage the realization that addresses the ability of the information system of accounting in Kuwaiti companies to deal with e-commerce, we relied on the descriptive and analytical approach, where various studies in the field of information systems, accounting, electronic commerce, were investigated. The application of the analytical method in the analysis of the questionnaire, as part of the study, has been applied to determine the factors associated with the accounting information system applied in Kuwaiti companies and its ability to deal with e-commerce operations, and that from the perspective of two main categories (corporate financial management research sample, and the external auditors) [5].

A. Study Population

The study population consists of two categories:

1. Financial management of Kuwaiti companies listed in the financial market, which include financial managers and accounting department teams which have been randomly chosen from sample of 125 statistical units.
2. Auditors of companies listed on the Kuwait Stock Exchange have been randomly chosen as a sample of 63 statistical units.

B. Method of Solution

The questionnaire was designed specifically for the present study, in order to identify the extent to which the information systems of accounting in Kuwaiti companies deal with e-commerce in spite of the absence of documentation, it has been developed as a tool to cover the hypotheses assigned to them, using phrases to evaluate the answers for a selected sample of the study and scale them in five levels.

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Extensive readings have been carried out the on these issues, together with some of the references in this specialized field.

C. Credibility of the Measurement

This test - management's ability - is a measurement to ensure bias and error, at any stage, which may affect the validity of the methodological tools used for this study; therefore, to promote a high level of confidence in them, and to make sure the consistency of the responses reflect the objectives of the study and the questions [6].

D. The Stability of the Measurement

Table I shows the collected data using the Reliability coefficient.

E. Statistical Methods

Using SPSS program for processing data obtained through field study of the surveyed sample, and it was specifically the use of the following statistical methods:

1. Descriptive statistics: Descriptive Statistics, in order to describe the study sample opinions about the variables of the study includes:
 - Percentages (Percentages): to devise trends for disaggregated data in each paragraph of the study, in order to strengthen the validity of the basic assumptions or lack of data [7].
 - Frequency distribution tables (Frequencies): They reflect how the answers focus in favor or not in favor of a particular hypothesis.
2. Measures of central tendency:
 - The arithmetic mean: to identify the respondents rating of each paragraph.
 - Standard deviation: to measure the degree of dispersion values of each paragraph.
3. T-test: (One sample t-test), where the researcher used this test to conduct bilateral comparisons in test hypotheses of the study.

F. Methods of Data Collection and Information:

To achieve the objectives of the study and testing of the hypotheses, the researcher has dealt with two types of data; these are the preliminary data and secondary data [8]:

Preliminary data: data collected during the field study and the written questionnaire, which was designed for the purpose of the current study and was distributed to a sample by the researcher personally.

Secondary data: data that the researcher sought to be used for a description of each of the accounting information systems and to determine their ability to deal with e-commerce in the absence of documentation, and reference sources to various offices for them. These sources are:

1. References and sources related to the study of books and scientific methodology competency in management science and accounting.

2. International Journal- specialized bulletins- started on the subject of the study, in addition to the official statistics issued by the competent authorities [9]- [11].
3. Theses (MA and Ph.D.) by looking at the subject of the study.
4. Reports issued by the competent Kuwaiti and international bodies and research centers.
5. Internet and websites.

IV. RESULTS

Tables II and III show the distribution of the study sample by Qualification and Specialization. These results indicate that the majority of the study sample, both of Administration Finance or the auditors of the university, which lends credence to the ability of my sample study to answer questions about the questionnaire. Tables IV-VI show the distribution of the study sample according to Current Position Professional Certification and by years of experience, respectively. Tables XII and XIII show the distribution of the study sample dealing in and intention to deal in e-commerce, respectively. The subjects' responses to the question relating to the auditors represented the ability of accounting information systems in Kuwaiti companies to deal with e-commerce operations were all medium, as shown in Table IX. The overall averages for all dimensions (Mean and Standard deviations) are indicating that the ability came moderately.

TABLE I
 RELIABILITY COEFFICIENT

| Variable | The value |
|-------------------------------|-----------|
| Ability | 92.9 |
| Obstacles | 92.8 |
| Methods of reducing obstacles | 92.5 |
| Instrument as a whole | 991.0 |

TABLE II
 DISTRIBUTION OF THE STUDY SAMPLE BY QUALIFICATION

| Qualification | | Financial Management | | Auditors | | Total | |
|---------------|---------|----------------------|---------|-----------|---------|-----------|---------|
| Frequency | Percent | Frequency | Percent | Frequency | Percent | Frequency | Percent |
| 0 | 11.2 | 14 | 0 | Diploma | 7.4 | 14 | |
| 53 | 80.8 | 101 | 84.1 | Bachelor | 81.9 | 154 | |
| 10 | 8 | 10 | 15.9 | Master | 10.6 | 20 | |
| 63 | 100 | 125 | 100 | Total | 100 | 188 | |

TABLE III
 DISTRIBUTION OF THE STUDY SAMPLE BY SPECIALIZATION

| Total | | Auditors | | Financial Management | | Majors | |
|---------|-----------|----------|-----------|----------------------|-----------|---------------------|-----------|
| Percent | Frequency | Percent | Frequency | Percent | Frequency | Percent | Frequency |
| 59 | 111 | 52.4 | 33 | 62.4 | 78 | Accounting | |
| 11.2 | 21 | 20.6 | 13 | 6.4 | 8 | Management | |
| 18.1 | 34 | 22.2 | 14 | 16 | 20 | Economy | |
| 2.1 | 4 | 1.6 | 1 | 2.4 | 3 | Information Systems | |
| 9.6 | 18 | 3.2 | 2 | 12.8 | 16 | Others | |
| 80.4 | 170 | 100 | 63 | 100 | 125 | Total | |

TABLE IV
DISTRIBUTION OF STUDY SAMPLE ACCORDING TO CURRENT POSITION

| Total | | Auditors | | Financial Management | | Current Position |
|---------|-----------|----------|-----------|----------------------|-----------|-------------------|
| Percent | Frequency | Percent | Frequency | Percent | Frequency | |
| | | 0 | 0 | 9.6 | 12 | Financial Manager |
| | | 100 | 63 | 0 | 0 | External auditor |
| | | 0 | 0 | 8 | 10 | Internal Auditor |
| | | 0 | 0 | 69.6 | 87 | Accountant |
| | | 0 | 0 | 12.8 | 16 | Others |
| 100 | 188 | 100 | 63 | 100 | 125 | Total |

TABLE V
DISTRIBUTION OF THE STUDY SAMPLE BY PROFESSIONAL CERTIFICATION

| Total | | Auditors | | Financial Management | | Professional Certification |
|---------|-----------|----------|-----------|----------------------|-----------|----------------------------|
| Percent | Frequency | Percent | Frequency | Percent | Frequency | |
| 9 | 17 | 9.5 | 6 | 8.8 | 11 | Yes |
| 91 | 171 | 90.5 | 57 | 91.2 | 114 | No |
| 100 | 188 | 100 | 63 | 100 | 125 | Total |

TABLE VI
DISTRIBUTION OF THE STUDY SAMPLE BY YEARS OF EXPERIENCE

| Total | | Auditors | | Financial Management | | Current Position |
|---------|-----------|----------|-----------|----------------------|-----------|------------------------------------|
| Percent | Frequency | Percent | Frequency | Percent | Frequency | |
| 26.6 | 50 | 6.3 | 4 | 36.8 | 46 | Less than 5 years |
| 45.7 | 86 | 46 | 29 | 45.6 | 57 | From 5 years to less than 10 years |
| 17 | 32 | 25.4 | 16 | 12.8 | 16 | From 10 years to 15 years |
| 10.6 | 20 | 22.2 | 14 | 4.8 | 6 | Greater than 15 years |
| 100 | 288 | 100 | 63 | 100 | 125 | Total |

TABLE VII
DISTRIBUTION OF THE STUDY SAMPLE BY DEALING IN E-COMMERCE

| Total | | Auditors | | Financial Management | | Intention to Deal |
|---------|-----------|----------|-----------|----------------------|-----------|-------------------|
| Percent | Frequency | Percent | Frequency | Percent | Frequency | |
| 53 | 135 | 0 | 0 | 42.4 | 53 | Yes |
| 28.2 | 71.8 | 100 | 63 | 57.6 | 72 | No |
| 100 | 188 | 100 | 63 | 100 | 125 | Total |

TABLE XIII
DISTRIBUTION OF STUDY SAMPLE ACCORDING TO THE INTENTION OF DEALING IN E-COMMERCE

| Total | | Auditors | | Financial Management | | Intention to Deal |
|---------|-----------|----------|-----------|----------------------|-----------|-------------------|
| Percent | Frequency | Percent | Frequency | Percent | Frequency | |
| 12.2 | 23 | 0 | 0 | 18.4 | 23 | Yes |
| 57.4 | 108 | 100 | 63 | 36 | 45 | No |
| 30.3 | 57 | 0 | 0 | 45.6 | 57 | No answer |
| 100 | 188 | 100 | 63 | 100 | 125 | Total |

V. CONCLUSIONS AND RECOMMENDATIONS

The conclusions are: 1 - Based on the demographic analysis, most of the results showed that the study sample was specialized to a large extent from the premise that a large proportion of them carry out specialized accounting and work in their fields. 2 - The results also show the existence of obstacles to the ability of information systems, accounting in Kuwaiti companies to deal with the operations of e-commerce, but they differed in the degree of importance. The most important of these obstacles are: a - the risk of e-commerce operations and the concerns about them, b - lack of awareness of senior management in companies of the importance of the development of the financial system, c - the high cost of policy development and implementation. While auditors believe that the most important obstacles are: a - lack of

documentation for the recording of e-commerce operations b - lack of experience of financial management in this area c - the risk of e-commerce operations.

A. Recommendations

Based on the results that have been reached, recommendations are presented as:

1. Set up a seminars and specialized courses informing of the importance and the necessity of dealing in e-commerce.
2. Set up a system to reduce the obstacles that prevent the ability of accounting information systems in Kuwaiti companies to deal with e-commerce operations through:
 - a. Educating all financial management and external auditors of the vulnerabilities of e-commerce and training them on

- modern enterprise that contributes to a reduction of these risks
- b. Educating corporate boards of the importance of e-commerce and the need for the development of
- c. Cooperation with foreign companies specialized in the protection of e-commerce operations.

TABLE IX

MEAN AND STANDARD DEVIATIONS FOR THE ANSWERS OF THE STUDY SAMPLE OF AUDITORS FOR THE PARAGRAPHS OF THE FIRST QUESTION (THE ABILITY OF ACCOUNTING INFORMATION SYSTEMS IN KUWAITI COMPANIES TO DEAL WITH THE OPERATIONS OF E-COMMERCE)

| Grade | Rank | Standard Deviation | Arithmetic Mean | Statement | # |
|--------|------|--------------------|-----------------|--|----|
| | | | | Company's commitment to the principle of protection | |
| Medium | 2 | 0.61 | 3.27 | Develop policies regarding the protection of the financial system | 1 |
| Medium | 1 | 0.696 | 3.33 | Develop mechanisms and steps to link the work of private networks for the protection of the financial system | 2 |
| Medium | 3 | 0.368 | 3.16 | Establish procedures for the application of a specific mechanism for the protection of the financial system | 3 |
| Medium | 4 | 0.317 | 3.11 | Setting up a mechanism to monitor and implement policies and procedures for network connectivity and protection | 4 |
| Medium | | 0.498 | 3.22 | Arithmetic Mean | |
| | | | | Medium | |
| Medium | 4 | 0.215 | 3.05 | Develop policies, especially the readiness of the financial system | 5 |
| Medium | 3 | 0.246 | 3.06 | Establish mechanisms and action steps private networks connectivity to make the system ready | 6 |
| Medium | 2 | 0.534 | 3.19 | Put certain procedures to confirm the readiness of the financial system | 7 |
| Medium | 1 | 0.671 | 3.25 | Setting up a mechanism to monitor and implement policies and procedures and interconnection networks contribute to making the system ready for use | 8 |
| Medium | | 0.417 | 3.14 | Arithmetic Mean | |
| | | | | Medium | |
| Medium | 4 | 0.215 | 3.05 | Develop policies that emphasize the integration of the operation of the financial system | 9 |
| Medium | 2 | 0.353 | 3.14 | Develop mechanisms and action steps for private networks connectivity to make an integrated system | 10 |
| Medium | 2 | 0.353 | 3.14 | Put in place certain procedures for the application and confirm the deal system processes | 11 |
| Medium | 1 | 0.653 | 3.27 | Setting up a mechanism to monitor and implement policies and interconnection networks and procedures for certainly the integrity of the system processes | 12 |
| Medium | | 0.394 | 3.15 | Arithmetic Mean | |
| | | | | Medium | |
| Medium | 4 | 0.246 | 3.06 | Put special policies in place to ensure the privacy of dealing within the financial system on the web | 13 |
| Medium | 3 | 0.296 | 3.1 | Develop mechanisms and action steps, especially for interconnection networks that contribute to ensuring the privacy of the system and its clients on the electronic network | 14 |
| Medium | 1 | 0.525 | 3.17 | Put certain procedures of capable system in place to confirm specificity and customers on the electronic network | 15 |
| Medium | 2 | 0.470 | 3.14 | Setting up a mechanism to monitor and implement policies and procedures and interconnection networks contributing to securing the privacy of the system and customers on the web | 16 |
| Medium | | 0.384 | 3.12 | Arithmetic Mean | |
| | | | | Medium | |
| Medium | 3 | 0.458 | 3.13 | Put special policies in place to secure and protect the confidentiality of the financial statements | 17 |
| Medium | 4 | 0.406 | 3.11 | Develop mechanisms and steps to link the work of private networks that contribute to ensuring the protection of confidential financial data | 18 |
| Medium | 2 | 0.524 | 3.17 | Establish procedures to confirm and ensure the confidentiality of the financial statements | 19 |
| Medium | 1 | 0.797 | 3.43 | Setting up a mechanism to monitor and implement policies and procedures and interconnection networks contribute to securing the protection of confidential financial data | 20 |
| Medium | | 0.546 | 3.27 | Overall Mean | |

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