THE EFFECT OF THE ELEMENTS OF ACCOUNTING INFORMATION SYSTEM (AIS) ON ORGANIZATIONAL CULTURE (OC) - A FIELD STUDY

Baker Akram Falah Jarah, Amman Arab University
Zeyad Almatarneh, Amman Arab University

ABSTRACT

This study examines the effect of the elements of accounting information systems (AIS) on the organizational culture (OC) in companies. The research used the questionnaire as a tool to collect data representing the views of the chosen sample. For the achievement of the objectives of the research, this study will adhere to the methodology of quantitative research. The survey included 165 employees of these companies. This study uses a statistical package for social science (SPSS). The results revealed a relationship at a significance of the effect of the elements of accounting information systems on the organizational culture. Also, the results revealed the hardware and software used in the accounting information system are the best and the latest currently available, and the results revealed the accounting information system provides financial information with a high predictive power which assists the users of the system. Also, the results revealed the proper understanding of organizational culture leads to the improvement of work quality. Furthermore; the organizational culture regulates and strengthens employees' efforts on the company's target track. Therefore, the study recommends, in order to improve quality AIS, companies must employ highly skilled and competent professionals and accountants to generate financial information and have appropriate academic qualifications.

Keywords: Accounting Information System (AIS), Organizational Culture (OC).

INTRODUCTION

An accounting information system is an absolute tool in the hands of managers striving to remain in a competitive advantage amidst the rapid technological advancement, increased awareness, and challenging demands from customers and business owners. Also, the AIS are regarded as one of the supporting information systems used in carrying out managerial functions such as planning, organizing, controlling and decision-making, for the better exploitation of the available resources (Aldegis, 2018). In which the AIS used in companies for financial decision-making must have high quality, in terms of accuracy, timeliness, and reliability of information used in planning, controlling, and decision-making. Moreover, it is widely known that accounting information was developed by the accounting system which is characterized by high quality. Nonetheless, some companies did not develop their accounting system, which affected their performance in the market (Stankovic et al., 2012). In this regard, the successful utilization of AIS has been proven to lead to faster and better quality information for decision-making, while also enhancing the relationship quality between organization members (Agung, 2015).

The AIS is important in the production of quality and timely accounting information as well as in the communication of the information to the decision-makers (Samuel, 2013). Furthermore, even though more studies are needed, the extant literature is proving the
relationship between AIS and organizational effectiveness. The value of information that AIS provides to shareholders and stakeholders is invaluable in their investment decisions. The financial and accounting data by AIS are crucial to financial managers in assessing the past performance of the organization and in making future plans. In the context of AIS quality, Wisna (2015) stated that it is affected by organizational culture. AIS can be improved further when organizational culture factors are considered, during its creation, development, as well as during its implementation. Also, the factors of the corporate culture also impact AIS. The organizational culture encompasses the values, principles, traditions, and all impacting organization members in their work. Similarly, organizational culture is associated with a mutual agreement on a system that a given organization has faith in, and the given culture can distinguish the organization from its counterparts. Relevantly, the concept of organizational culture was described in Schneider et al. (2013) as such, the success or failure of companies depends on the AIS that make decisions to be considered; the current reality, the future variables, the effects of the possibility of making decisions on the performance, and the ability to continue its activities in the financial market (Al-Kassar & Abed, 2014).

Therefore, the studies of AIS and its characteristics as well as figuring out the extent of the availability of quality in the outputs are important for making wise investment decisions and figuring out the problems which may rise as a result of using different software; such as that using the appropriate timing, the sincerity of expression, and impartiality for the purposes of decision-making (Mkhademh, 2007). In Wisna (2015), organizational or corporate culture is viewed as the system of shared actions, values, and beliefs which establish inside a given organization and become guides to the behavior of its members. Meanwhile, each member of the organization embraces different culture and beliefs than those embraced by the organization. Hence, it is important that these members have the chance to firstly internalize with the organization’s culture and values. This would allow the member to decide if he or she is able to adapt or not with the organization. In fact, employees’ capacity in coping with the culture of the organization will impact his or her commitment to corporate goals (Shahzad et al., 2012). AIS present information about a specific organization for the perusal of various groups of users. Users’ decisions on the course of action can indeed be facilitated by use accounting information. Meanwhile, the accounting units use the AIS to expedite the accounting process in producing understandable financial statements and reports in a timely manner (Jarah & Iskandar, 2019).

**LITERATURE REVIEW**

**Effect of the Accounting Information System (AIS) on Organizational Culture (OC)**

The utilization of information and AIS is greatly impacted by organizational cultures and subcultures. In this regard, in developing and implementing an AIS, it is important to take into account the organization’s meanings, norms, and power. Information systems should therefore be based upon the context of the organization as the bigger system. This way, the important factors can be identified and also considered in the determination of information requirements as well as in the design and implementation of AIS (Aldegis, 2018). The organizational culture is considered a guideline for all activities of an organization, whereby, organizational culture reflects its goals, vision, mission, and development plans of the organization. Also, for the AIS to take place smoothly, correctly, and bring high accuracy, the organizations need to base on issues related to organizational culture. Besides, when the AIS works well, it will provide a source of quality information for the business operation of an organization, which promotes the operation
of an organization to become more efficient (HA, 2020).

That the AIS designers when designing the appropriate information system for a company cannot change the norms that have become a culture within the organization for granted. They should be able to do something that would make the information system more relevant so that in time the culture will be one part of the information system. Organizational culture can affect the success of the implementation of the AIS of a company and is important in assessing the information system and relevance. Organizational culture can affect the way people behave and should be the benchmark in any organizational development program and policies taken. This is related to how the culture affects the organization and how a culture can be managed by the organization and its appropriateness (Rapina, 2015). In the study by Kuraesin (2015) there an important factor influencing the use of accounting information systems is organizational culture. Management Information system success is influenced by several factors, one of which is the organization's culture. Organizational culture has a very strong influence on the overall organizational and individual behavior due to the information system is a major component of the organization is influenced substantially by organizational culture.

The AIS presents information to many interested parties in the organization it also supports the culture of the organization (Patel, 2015), as among the most essential systems in any organization. Organizational culture is one factor that can support the establishment of a quality management accounting information system (Azhar & Meiryani, 2018). The study by Napitupulu (2018) proves that organizational culture affects the quality of the management accounting information system. The results of the study found that organizational culture affects the quality of the Management accounting information system. The results also found that the dimensions and indicators that are used to build the study model showed strong value, which means that the dimensions and indicators reflect the organizational culture and the quality of the management accounting information system.

Also, the study by HA (2020) focuses on determining the impacts of organizational culture on the AIS and the operational performance of small and medium-sized enterprises. The results show that mission, involvement, and inconsistency in organizational culture positively affect the AIS of small and medium-sized firms. Also, the finding of the study is that the AIS has a positive effect on the operational performance of small and medium-sized firms. The research by Kurnia Rahayu (2012) examines that Organizational culture and organizational structures are bound to influence the implementation of AIS. The research set out to find out whether organizational issues are at play in this particular project of AIS. Also, the research found that organizational culture and organizational structure influence to implementation of AIS in Small Taxpayers Offices. Kwarteng & Aveh (2018) examine the impact of organizational culture on AIS and corporate performance of firms. The study demonstrates that there is a statistically significant relationship between organizational culture on AIS and corporate performance. The results indicate that mission, adaptability, and consistency dimensions of organizational culture were significant, and also AIS influences corporate performance. Moreover, there are significant differences in the means of AIS in different industrial sectors.

According to Carolina (2014), this research examines the influence of organizational factors such as organizational culture, organizational commitment, and organizational structure on the AIS quality. The research found that organizational culture, organizational commitment, and organizational structure influence the quality of AIS. The study Nurhayati & Koesdiningsih (2018) to discover the influence of organizational culture and user competence on the effectiveness of AIS, the findings for this study the organizational culture significantly positively
affect the effectiveness of AIS, and user competence significantly positively affects the effectiveness of AIS. In Roni et al. (2015) where the organizational culture and complexity of AIS were introduced to see how these factors affect employees’ mal-intention when working with an organization AIS, the results explain how culture and AIS complexity induce or reduce the predictors’ effects on intention to misbehave. Wahyuni et al. (2020) this study examines the influence of an organizational culture that moderates individual behavior on the successful implementation of AIS in the context of planned behavior. The test results show that organizational culture strengthens the influence of behavioral attitudes and subjective norms on the success of AIS implementation; organizational culture weakens behavior control perceived success in implementing AIS.

In the study by Setyaningsih et al. (2021) the results showed that the implementation of AIS, the Implementation of internal control systems, and organizational culture significantly influence the quality of financial statements and performance. Also, the study by Ayoub et al. (2019) gathers evidence on the impact of organizational culture on the components of the internal control of AIS. The results of the study indicate that organizational cultural traits significantly influence the components of the internal control of AIS, and thus, such systems can be more successful in firms with supporting organizational cultural traits. In this study Maharani & Damayanthy (2020) the results of variable tests indicate that AIS, internal controls, and organizational culture affect employee performance. The results of Alawaqleh (2021) indicate that the AIS help enhances internal auditors’ quality and the organizational culture, ultimately improving internal audit quality.

In a study by Nusa (2015), a significant impact of organizational culture on AIS quality was found. However, Al-Mamary et al. (2014) delineated the notion of system quality, information quality, and organizational performance, while also explaining the linkage between system qualities. As indicated by the outcomes, system quality significantly affects system acceptance and the efficiency and effectiveness of organizational performance. Aldeges (2018), the effect of AIS quality on the linkage between organizational culture and accounting information in industrial public shareholding companies in Jordan was examined. From the results, the author found the impact of AIS quality on the linkage between organizational cultures and accounting information in the studied companies. Also, Ali et al. (2016), studied the impact of AIS on organizational performance as well as the moderating impact of organizational culture in the linkage between the success factors of AIS and organizational performance. From the achieved findings, the authors found service quality, information quality, and system quality as the significant AIS success factors in increasing organizational performance. From the findings also, the authors concluded that organizational culture assists in increasing performance via the interaction with information quality, data quality, and system quality. The authors further indicated that through the adoption and implementation of AIS success factors and the practice of positive organizational culture, banking sector organizations can increase their performance.

In a study by Omiiunu (2015) in Nigeria, the author found that organizations in this country have low and poor culture towards the use of management accounting systems (MAS) and management information systems (MIS). Wisna (2015) results show that the culture of the organization affects AIS quality. In this regard, the author stated the possibility of improving AIS quality by considering several factors particularly organizational culture. In fact, organizational culture affects AIS during its creation, development, as well as during its implementation. As highlighted in Rapina (2015), both Organizational commitment and organizational culture will positively affect AIS quality. From the obtained results, organizational commitment with the
dimensions of affective, continuance, and normative commitment will impact the application of computer-based information systems. The author further mentioned organizational culture being a vital factor in the implementation of information systems based on computers. Notably, any IT application not followed by a change of culture and behavior may not be functional. In Iskandar (2015), the author attempted to resolve the problems associated with AIS quality, accounting information quality when linked to management commitment, user competency, and organizational culture. From the findings, the author concluded the impact of management commitment and user competence on accounting information quality. Also, management commitment and user competence impact AIS quality.

Research Model

The literature review and theories were referred to in the design of the study model (Figure 1). Also, the following research model describes the relationships between an independent and dependent variable that this research seeks to test within the context of industrial and service companies in Jordan:

Hypotheses of the Study

The following hypotheses were formulated based on the study model and previous studies:

\[ H_1 \] There is a statistically significant effect (\( \alpha \leq 0.05 \)) of the elements of accounting information systems (Hardware and Software) on the organizational culture.

\[ H_2 \] There is a statistically significant effect (\( \alpha \leq 0.05 \)) of the element of accounting information systems (Users of the System) on the organizational culture.

\[ H_3 \] There is a statistically significant effect (\( \alpha \leq 0.05 \)) of the element of accounting information systems (Databases) on the organizational culture.

\[ H_4 \] There is a statistically significant effect (\( \alpha \leq 0.05 \)) of the element of accounting information systems (Network Communication Technology) on the organizational culture.

METHODOLOGY

This study focuses on identifying elements of the AIS that affecting the organizational culture. The research used the questionnaire as a tool to collect data representing views of the chosen sample. For the achievement of the objectives of the research, this study will adhere to the methodology of quantitative research. The survey included 165 employees of these
companies. This study uses a statistical package for social science (SPSS). Questionnaires are given to the participants to obtain their participants on the relative variables, and the questions attempt to measure the perception of participants on the effect of the AIS on organizational culture.

**The Population of the Study**

A sample frame defines the entire sampling element in a population, which forms the basis from which to draw a sample (Sekaran & Bougie, 2010). Going by this definition, the number of the population reported by the companies of the Amman Stock Exchange serves as the study’s sampling frame which was involved in continuous industrial and service activities, where all industrial and service companies operating in the Amman Stock Exchange participated in this study, the number of 165 companies. The companies participating in the study comprising 105 service companies and 60 industrial companies. Where each company is represented by the financial manager, one questionnaire was distributed per financial manager to get their opinions. A total of 153 questionnaires were completed and returned. As shown below (Table 1):

<table>
<thead>
<tr>
<th>Table 1</th>
<th>POPULATION AND SAMPLE OF THE STUDY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Companies</td>
<td>No of companies</td>
</tr>
<tr>
<td>Service</td>
<td>105</td>
</tr>
<tr>
<td>Industrial</td>
<td>60</td>
</tr>
<tr>
<td>Total</td>
<td>165</td>
</tr>
</tbody>
</table>

**Reliability**

In order to ensure the reliability of the instrument, Cronbach Alpha was applied to the study sample. Table 2 shows that the highest Cronbach’s alpha value was 0.83 for elements of AIS, whereas the alpha value was 0.79 for organizational culture. The highest network communication technology value was 0.82, for databases value was 0.80 and the alpha value was 0.78 for hardware and software and 0.76 for users of the system, indicating the acceptance of reliability. Table 2 shows that:

<table>
<thead>
<tr>
<th>Table 2</th>
<th>CRONBACH ALPHA COEFFICIENT TO TEST THE RELIABILITY OF STUDY INSTRUMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variables</td>
<td>Item No</td>
</tr>
<tr>
<td>Hardware and Software</td>
<td>6</td>
</tr>
<tr>
<td>Users of the System</td>
<td>8</td>
</tr>
<tr>
<td>Databases</td>
<td>5</td>
</tr>
<tr>
<td>Network Communication Technology</td>
<td>6</td>
</tr>
<tr>
<td>Elements of AIS</td>
<td>25</td>
</tr>
<tr>
<td>Organizational Culture</td>
<td>11</td>
</tr>
</tbody>
</table>

**RESULTS**

In order to test this hypothesis, and ascertain the effect of the elements of accounting information systems hardware and software on the organizational culture, Linear Regression analysis was carried out. Accordingly, Table 3 shows that:
RESULT OF LINEAR REGRESSIONS ANALYSIS FOR THE FIRST HYPOTHESIS

<table>
<thead>
<tr>
<th>IV</th>
<th>&quot;t&quot; value</th>
<th>&quot;t&quot; sig</th>
<th>R</th>
<th>R²</th>
<th>&quot;F&quot; value</th>
<th>&quot;F&quot; sig</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hardware and Software</td>
<td>19.588</td>
<td>0.00</td>
<td>0.713</td>
<td>0.508</td>
<td>383.671</td>
<td>0.00</td>
<td>Accept</td>
</tr>
</tbody>
</table>

Note: DI: Organizational Culture

In regards to the first hypothesis, Table 3 indicates a statistically significant relationship at the significance level of (α≤0.05) between the hardware and software and organizational culture. In this regard, the "F" Value was (383.671) and was statistically significant at (0.00). (R) Value was (0.713) and (R²) the value was (0.508); hence, the first hypothesis was accepted.

As for the second hypothesis in order to test this hypothesis, and ascertain the effect of the element of accounting information systems users of the system on the organizational culture, a Linear Regression analysis was carried out. Table 4 illustrates this finding:

Table 4
RESULT OF LINEAR REGRESSIONS ANALYSIS FOR THE SECOND HYPOTHESIS

<table>
<thead>
<tr>
<th>IV</th>
<th>&quot;t&quot; value</th>
<th>&quot;t&quot; sig</th>
<th>R</th>
<th>R²</th>
<th>&quot;F&quot; value</th>
<th>&quot;F&quot; sig</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Users of the System</td>
<td>24.037</td>
<td>0.00</td>
<td>0.779</td>
<td>0.607</td>
<td>577.79</td>
<td>0.00</td>
<td>Accept</td>
</tr>
</tbody>
</table>

Note: DI: Organizational Culture

Table 4 shows a statistically significant relationship at the significance level of (α≤0.05) between the users of the system on the organizational culture. In this regard, the "F" Value was (577.79) and was statistically significant at (0.00). (R) Value was (0.779), and (R²) the value was (0.607); hence, the second hypothesis was accepted.

With regards to the third hypothesis and in order to test this hypothesis, and ascertain the relationship between the databases on the organizational culture, a Linear Regression analysis was performed. Accordingly, Table 5 shows that:

Table 5
RESULT OF LINEAR REGRESSIONS ANALYSIS FOR THE THIRD HYPOTHESIS

<table>
<thead>
<tr>
<th>IV</th>
<th>&quot;t&quot; value</th>
<th>&quot;t&quot; sig</th>
<th>R</th>
<th>R²</th>
<th>&quot;F&quot; value</th>
<th>&quot;F&quot; sig</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Databases</td>
<td>19.289</td>
<td>0.00</td>
<td>0.707</td>
<td>0.500</td>
<td>372.084</td>
<td>0.00</td>
<td>Accept</td>
</tr>
</tbody>
</table>

Note: DI: Organizational Culture

Table 5 shows a statistically significant relationship at the significance level of (α≤0.05) between the databases and organizational culture. In this regard, the "F" Value was (372.084) and was statistically significant at (0.00). (R) Value was (0.707), and (R²) the value was (0.500); hence, the third hypothesis was accepted.

In order to test the fourth hypothesis, and ascertain the relationship between the network communication technologies on the organizational culture, Linear Regression analysis was executed. As shown in Table 6:

Table 6
RESULT OF LINEAR REGRESSIONS ANALYSIS FOR THE FOURTH HYPOTHESIS

<table>
<thead>
<tr>
<th>IV</th>
<th>&quot;t&quot; value</th>
<th>&quot;t&quot; sig</th>
<th>R</th>
<th>R²</th>
<th>&quot;F&quot; value</th>
<th>&quot;F&quot; sig</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Network Communication Technologies</td>
<td>23.969</td>
<td>0.00</td>
<td>0.779</td>
<td>0.607</td>
<td>574.505</td>
<td>0.00</td>
<td>Accept</td>
</tr>
</tbody>
</table>

Note: DI: Organizational Culture
Table 6 shows a statistically significant relationship at the significance level of (α≤0.05) between the network communication technology and organizational culture. In this regard, the "F" Value was (574.505) and was statistically significant at (0.00). (R) Value was (0.779), and (R²) the value was (0.607); hence, the fourth hypothesis was accepted.

Multiple Regression Results

In order to ascertain the relationship between the elements of accounting information systems on the organizational culture, Multiple Regression analyses were used. Accordingly, Table 7 shows that:

<table>
<thead>
<tr>
<th>IV</th>
<th>&quot;t&quot; value</th>
<th>&quot;t&quot; sig</th>
<th>(β)</th>
<th>R</th>
<th>R²</th>
<th>&quot;F&quot; value</th>
<th>&quot;F&quot; sig</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hardware and Software</td>
<td>6.723</td>
<td>0.000</td>
<td>0.205</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Accepted</td>
</tr>
<tr>
<td>Users of the System</td>
<td>6.709</td>
<td>0.000</td>
<td>0.230</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Accepted</td>
</tr>
<tr>
<td>Databases</td>
<td>5.902</td>
<td>0.000</td>
<td>0.210</td>
<td>0.911</td>
<td>0.829</td>
<td>297.245</td>
<td>0.00</td>
<td>Accepted</td>
</tr>
<tr>
<td>Network Communication Technology</td>
<td>7.823</td>
<td>0.000</td>
<td>0.244</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Accepted</td>
</tr>
</tbody>
</table>

Note: IV: Elements of AIS; DV: Organizational Culture

Table 7 shows a statistically significant relationship at a significance level of (α≤0.05) of the effect the elements of accounting information systems on the organizational culture.

In this regard, the "F" Value was (297.245) and was statistically significant at (0.00). (R) Value was (0.911), and (R²) the value was (0.82).

Also, the network communication technology element appears to play a greater effect in organizational culture with a t value of 7.823 (α≤0.05). As for the hardware and software elements, the t value was (6.723) (α≤0.05), while the users of the system element obtained a t value of (6.709) (α≤0.05). In regards to the databases element, its achieved t value was (5.902) (α≤0.05).

CONCLUSION AND FUTURE RESEARCH

Accordingly, the survey conducted in this study yielded the following outcomes:

- There is a statistically significant relationship at a significance level of (α≤0.05) of the effect of the elements of accounting information systems on the organizational culture. In this regard, the "F" Value was (297.245) and was statistically significant at (0.00). (R) Value was (0.911), and (R²) the value was (0.82).
- There is a statistically significant relationship at the significance level of (α≤0.05) between the network communication technology and organizational culture. In this regard, the "F" Value was (574.505) and was statistically significant at (0.00). (R) Value was (0.779), and (R²) the value was (0.607).
- There is a statistically significant relationship at the significance level of (α≤0.05) between the databases and organizational culture. In this regard, the "F" Value was 372.084 and was statistically significant at (0.00). (R) Value was (0.707), and (R²) the value was (0.500).
- There is a statistically significant relationship at the significance level of (α≤0.05) between the users of the system on the organizational culture. In this regard, the "F" Value was (577.79) and was statistically significant at (0.00). (R) Value was (0.779), and (R²) the value was (0.607).
- There is a statistically significant relationship at the significance level of (α≤0.05) between the hardware and software and organizational culture. In this regard, the "F" Value was (383.671) and was...
statistically significant at (0.00). (R) Value was (0.713) and (R^2) the value was (0.508).

Based on study findings and results, it is possible to make the following recommendations:

- Therefore, the study recommends, in order to improve quality AIS, companies must employ highly skilled and competent professionals and accountants to generate financial information and have appropriate academic qualifications.
- That company constantly develops the hardware and software used in the accounting information system in order to obtain better performance, and to be characterized by sufficient speed in the process of entering and retrieving information.
- The user in the accounting information system must have high efficiency in dealing with the available devices.
- Need to use a large database in order to accommodate the vast amount of data.
- Dependence on information technology to develop network communication techniques in order to assist in accurate decision-making.
- That the companies organize and strengthen the efforts of employees on the target path of the company.
- To this end, more research can be carried out on this subject to address these issues in companies.

**REFERENCES**


