

INFORMATION QUALITY AND THE ORGANIZATIONAL EFFECTIVENESS: THE MODERATING EFFECTS OF ORGANIZATIONAL CULTURE AMONG CONVENTIONAL AND ISLAMIC BANKS

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ABSTRACT

Quality of information is a priceless asset for organization to possess as it assist in carrying out business plans and changes. These business changes usually support the management executive in decision makings. In view of that, this study examines the information quality in AIS and its effects on organizational performance among conventional and Islamic banks in Jordan. To achieve that, proportionate stratified random sampling is applied to the information system users of sixteen conventional and Islamic banks in Jordan. Total copies of 600 questionnaires were distributed and only 250 among the returned copies were valid, suggesting a valid response rate of 41.7%. The study adopts the partial least square (Smart PLS 3) method to enhance the data analysis and perform hypotheses testing. Findings clearly show that quality of information is the key for business growth as it indicates a positive effect on organizational performance. Further result shows that organizational culture improves and increases business performance when combined with information quality. For this reason, conventional and Islamic banks in Jordan should have well-developed AIS as it assists organizations to -attain higher performance. There is need for more development in management skills to fully exploit the AIS in order to realize a greater organizational performance. In other words, full implementation of AIS should be given more priority by the managements of these conventional and Islamic banks.

Keywords: *Information Quality, Organizational Effectiveness, Organization Culture*

I. INTRODUCTION

In the present global arrangement, there is a growing concern among financial institutions and other corporate organizations regarding the significance and quality of information system in daily operational activities. The quality of this information system not only highlights the procedures and functions of Accounting Information System (AIS) but also integrates its wider opportunities into the innovative applications of information technology. Meanwhile, the quality of information system has really becomes a criteria for decision making and a measure of efficiency among enormous organizations due to increased application of information technology in daily functional activities. Information has turn out to be a useful resources for corporate bodies, economies, and to a larger extend the overall civilizations (Xu, 2003). Information contexts are broadly utilized by numerous organizations to systematize existing operations and heighten the accomplishment of activities towards high performance and greater efficiency (B. J. Ali, Omar, & Bakar, 2016; Hussein, 2011; Kharuddin, Ashhari, & Nassir, 2010).

Because of the information significance, AIS has become one of the most essential and critical element of information system particularly to the larger portion of financial institutions. Innovative developments within the areas of information technology within the preceding decades of twentieth century have broadened the roles of AIS and increased its relevance in the activities of conventional and Islamic banks, respectively (B. J. Ali, Bakar, & Omar, 2016; Mitchell, Reid, & Smith, 2000).

Organization makes decisions, and these decisions depend largely on the volume and quality of information available to the management, hence the need for efficient AIS. A decision is concerned with choice of an alternate among variety of alternatives. Therefore, to select the most effective, decision-makers need a steering and navigating alternative in the process, and such criteria are embedded in information quality through AIS. There is much concern among organization stakeholders with regards to the quality of information that organization should possess given the believed that information technology is fast becoming a vital issue for attaining organizations objectives. Undeniably, various factors such as inefficient management system and fast environmental changes might cause problem to the organizations thereby derailing away from higher performance and decreases its competitive drive (Hilman, 2011).

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Information age has modified the approach and transmitted from how the traditional accounting system works and operates to the modern information system. Prior to that, the whole accounting system cared-for mirror traditionally established manual accounting procedures. For that reason, traditional AIS were powerless to adapt to changes in supporting essential business procedures and models, and to gratify users' information necessities, because the modern system is dynamic and continually changes over time. The modern AIS has the potentials to create numerous kinds of information relating to accounting and non-accounting information with the view to assisting the organization in dealing with the short-run issues and incorporates operational issues into the long-run strategic plans (Mitchell et al., 2000). However, in spite of the significance of AIS in managing organizational resources, there still remains a large vacuum in the research domain and deficiency of all-inclusive study that will examine the interrelationship between information quality in AIS and the performance of organization (B. J. Ali, Bakar, et al., 2016; Noori, 2010; Petter, DeLone, & McLean, 2014; Sami, 2011).

Despite the massive and huge investments in information systems across several organizations in recent years, the impact of this information systems particularly when measuring its performance has proven to be extremely challenging (Bazae, 2010; Mahmood, Mann, & Zwass, 2000; Rai, Patnayakuni, & Patnayakuni, 1997). In view of the aforementioned arguments and empirical evidences, there is a vacuum in the literature propelling the further need to investigate the interrelationship between information quality in AIS and the organizational performance in Jordan with particular emphasis on the operational activities of conventional and Islamic banks, respectively. From this, the study derives its motivations and intended to investigate the relationship between the strategic role of information quality in AIS and organizational performance in the Jordanian economy.

Research Questions

Following the previous discussions, this study identifies numerous gaps from the literature, hence warranting the need for a detailed and comprehensive study on the relationship between information quality and organizational performance. In view of that, a number of research questions were raised to guide the study; and are given as follows:

1. What is the relationship between information quality in AIS and organizational performance among conventional and Islamic banks in Jordan?
2. What is the moderating effect of organizational culture in the interaction of information quality in AIS with organizational performance amongst conventional and Islamic banks in Jordan?

Research Objectives

The main objective of this research is to examine and identify the strategic role of information quality factors towards enhancing organizational performance. Other specific objectives therefore, include:

1. To examine and identify the relationship between information quality in AIS and organizational performance among conventional and Islamic banks in Jordan.
2. To measure the moderating effects of organization culture in the interaction of information quality in AIS with organization performance among conventional and Islamic banks in Jordan.

II. LITERATURE REVIEW

Numerous studies from both developed and developing countries awash the literatures on the relative significance of information quality in AIS towards realizing greater organizational performance, but these literatures create more questions than answers; hence results are inconsistent with conflicting views among many practitioners. A good number of these literatures are identified and synthesized in the following sub-sections.

Information Quality

There is no better time that stakeholders in various organizations based its assessments on the information quality available to the organizations than the present time. Guaranteeing the quality, promptness, and fairly good cost of information has come to be a precedence for decision-makers and their organizations (Noori, 2010; Sami, 2011). Given the rapid business environment, corporate intelligence can change day by day so as the information quality needs of administration or management. As the development of the learning age venturing up the value of an association's or organization's information assets, accounting staffs should be more skilled in adding significant value by improving the quality of their association's information and helping to decrease associated costs. As clarified and put together by (Huh, Keller, Redman, and Watkins, 1990), the four major dimensions of information quality includes accuracy, completeness, consistency, and currency. Accuracy is agreement with an attribute regarding a real-world entity, a value saved in another database, or the outcome of an arithmetic computation. Completeness is to be depicted regarding some particular application; likewise it alludes to whether every one of the information interrelated to that application are available. Though consistency identifies with an absence of conflict among two data sets, currency denotes to up-to-date information (Noori, 2010). Furthermore, (DeLone &

McLean, 1992) identified about 6 factors in the realization of information systems and are critical to the organizations; hence includes the system quality, system utilization, information quality, individual impact, user satisfaction, and organizational impact. While (Seddon, 1997) in continuation to the work of DeLone and McLean (1992), carried on their factor and additional features. Because of these divergences, researchers became confused on what are the exact measures of AIS and therefore remain a foremost encounter to investigate the conceptual and theoretical framework explaining the effects of information systems on organizational performance. Similar scenario is applied to the AIS since it is the major integral component of information system.

Information Quality in Accounting Information System

Information quality could be explained as that consists of accuracy, timeliness, completeness and validity characteristics. As indicated by (Boritz, 2005), the word accuracy alludes to the data that relates with the truth and lack of bias. The expression completeness relates to information, which changes the client requirement's dimensionality. In addition, the term of 'Timeliness' clarified the information that portrays the ongoing and present status that are significant to the viable of administrative basic leadership or decision-making. The term validity relates to information that are openness for the authority and possessed the feature of granted users. The information quality that comes out as a consequence of the AIS implementation generates the value to the organizations such as managerial performance (Chong & Eggleton, 2007).

At any time in the organization, information plays a deeply important role for organization decision makers. Unclear information might lead the decision-makers to have ambiguities throughout the decision process. Extra efforts required to fix the ambiguities increases the trouble to the task. This trouble leads the information givers to perform further errors; thereby causing huge damage to the organization and decreases its efficiency among the major competitors (Borthick, Bowen, Liew, & Rohde, 2001).

Information quality is derived from the information systems perspective, to the quality of outputs; the information system produces and generates the organizational reports (DeLone & McLean, 1992).

According to (Sori, 2009), AIS is a component and integral key parts of information systems (IS), hence it is vital to all organizations. Most organizations both profit and nonprofit-oriented required to maintain and develops the Accounting Information Systems (AIS). To adequately understand the concept of AIS, the word emanates from three letters, that is; accounting, information, and system hence are detailed accordingly. First, accounting is perhaps considered as the language of business, and the source or origin of financial information. Second is the information aspect, defined as the data processing mechanism that supplies bundles of records and act as a base for decision making and selecting action. Lastly is the system, which is an integrated entity between AIS and the knowledge management.

Accounting Information System (AIS) and its various dimensions has been explained by (Hurt & Zhen, 2008) "as a set of interrelated activities, documents, and technologies formed to gather data, process data, and report information to a several groups of internal staff within the organization and external decision makers in organizations." Moreover, a well-designed AIS must characterize with collecting data on the essentials of financial statements, converting those data into proper and reliable information (Sami, 2011).

In contemporary periods, AIS is perceived as a strategic tool for supplying quality information to improve organizational performance (Sami, 2011). While some researchers considered AIS as fundamental or critical for effective decision making (Prasad, Green, & Heales, 2013). Notwithstanding, effective AIS depends upon its capability to supply information that serves several system users. Generally, AIS has five central and key components; and these components include Inputs, Processes, Outputs, Storage, and Internal Controls (Hurt & Zhen, 2008). By methods of systematic AIS, organizations will have the best quality of business intelligence (data, information and knowledge) and this must engage them to anchor higher authoritative execution or organizational performance (Chong & Eggleton, 2007).

Given the recent innovations, information technology could change the adoption strategy of accounting practices, which might lead to greater performance with high efficiency. As supported with empirical findings by (Daoud., 2013), the organizational performance may properly be assessed by the level to which accounting techniques would be facilitators of performance.

Information Quality and Organizational Effectiveness

The relationship between information quality and the organizational performance has remained a debatable subject with mixed results, especially on issues relating to the way by which net benefits are measured. However,

to reach a conclusion on this relationship, further comprehensive research is required to assess the phenomena. However, to get high information quality (accuracy, completeness), significance of the basic leadership can bring about high organizational effect in phrase of market information support and also for internal organizational efficiency (Bharati & Chaudhury, 2015). The AIS information quality, which is mostly in terms of accounting reporting and analysis is reported by (Al-Hiyari, AL-Mashre, & Mat, 2013; AlZwyalif, 2012)(Ali, et al., 2016) to be fundamentally interrelated to management responsibility. It is in addition to that, other literature saw that it effects user performance and organizational performance (Bukenya, 2014; Radlovački, Beker, Kamberović, Pečujlija, & Delić, 2011), by means of perceived usefulness as well as perceived ease of use (B. M. Ali & Younes, 2013). Further researches that examine the relationship between information quality and the performance of Iraqi companies while gathering data through questionnaires; revealed a noteworthy positive interrelationship between the independent variable namely; the Information Quality and the dependent variable; Organizational Performance (Noori, 2010). In addition, (Kharuddin et al., 2010) examined the effect of AIS on SME execution and the discoveries demonstrated a huge enhancement in execution when contrasted with non-adopters.

Organizational Effectiveness

In today's competitive business environment, organizational effectiveness is the wide name for organizational performance is extremely significant and a critical factor in determining the success or otherwise of an organizations. In addition, organization performance is also vital in relationships of knowing if the organization accomplished its clearly stated mission and vision in line with the organizational standard. As highlighted, organization that has poor firm performance could be having some difficulties either internal or external, and that must be solved cautiously with utmost importance. The concept of organizational performance encompasses all the outcomes of an organization as tools that will be utilized to measure the aims within an organization. Many scholars and other academic professionals have measured and defined the organizational performance differently with diverse opinions (Ahmad, 2015).

In essence, Organization performance can be deduced as a concept that includes the actual output or results of an organization as measured against its purposeful objectives. Moreover, Mitchell (2002) added that there are four main criteria to measure organizational performance, and these include the following elements:

- Relevance: which can be explained as the degree to extent that an organization's parties feel the organization relevant to their needs or requirement and interests
- Effectiveness: which can be explained as the degree to which an organization is successful in performing its goals
- Efficiency: which can be explained as the degree to which an organization benefits from its resources excellently and comes out with larger value of its inputs
- Financial Viability: which can be explained as how viable an organization is; not only in the short term period rather in the long term, that means both short and long term viability.

Organizational Culture as a Moderator

In the literature, there is no unanimous agreement among scholars as to the accurate or concise definition of organizational culture. A number of scholars explain culture as "shared values," another group viewed the concept as "way of working," while others consider it as the combination of both (Gallear & Ghobadian, 2004). There is lack of understanding on the theoretical and empirical relationships among information quality and culture among organizations, and their applicable power as predictors of quality to a project (AL-Jaafreh, 2011). The phrase 'culture' relate to professional culture, organizational culture, and national culture. Indicated by a researcher Hofstede (2000), national culture is explained as "the collective programming of the mind which categorizes the members of one human group from another"(Hofstede, 2000). This examination makes utilization of organizational commitment to explore organizational culture. Additionally inquire about by (Babulak, 2006) expressed that work performance is considered as the yield created by individual employees at work. The individual factors that affect work performance are motivation, knowledge, capabilities, skills, and also attitudes. The transitional mechanisms which help in yielding best performance results at work are performance management system, fundamental interactions with colleagues and superiors, staff encouragement by organization, and reward measures or plans in recognizing the excellent performance. All these recorded variables envelop organization culture, and the determinant individual organization in conformity to the objectives within the organization.

Another research conducted by (Katou & Budhwar, 2010) examined the causal impacts of Human Resource Management (HRM) performance in Greek. The research utilizes the contingency theory, resource-based view and the Capabilities, Motivation and Opportunity (AMO) theory. The exploration disclosed that the capacity to perform, for example, resource and development, motivation to perform, and opportunity to perform are

moderated by business strategies. These outcomes recommend that knowledge management, employee motivation and innovation with positive influence on organization performance by actualizing, implementing and supporting organizational policies that motivate workers positively and also by learning and developing the activities that stimulate optimal task and contextual job performance. In lieu of the hitherto argument, this present study aims to measure the moderating effect of organizational culture in the interrelationship between information quality in AIS and managerial performance among conventional and Islamic banks in Jordan.

III. METHODOLOGY

Data Collected and Technique of Analysis

The motivation behind this exploration is to examine and measure the effects of the AIS achievement factors in particular information quality on organization performance. To accomplish that, this exploration endeavors to examine the moderating effect of organization culture on the interrelationship between the information quality in AIS and organizational performance. The populaces of this investigation are the managers of conventional and Islamic banks in Jordan. This is on account that; the study is occupied with surveying the opinions of considerable number of managers irrespective of their job or role, since the selected banks are all utilizing the AIS. To facilitate the estimation procedure, proportionate stratified random sampling method is utilized as a strategy of sampling to successfully cover all the 16 conventional and Islamic banks in Jordan. Data were gathered utilizing a structured and well-developed questionnaire survey. An aggregate of 600 questionnaires were disseminated among the 16 conventional and Islamic banks, lastly 250 were found in usable condition. The information gathered is analyzed utilizing the Partial Least Square Structural Equation Modeling (PLS SEM 3). In the measurement model, quality criteria of the model have been evaluated, and after that the structural model tested the hypotheses of this study. Discoveries of PLS SEM analysis has been exhibited all through the study to explore the connection between exogenous variables and one endogenous variable while the moderating effect of organizational culture is also investigated.

IV. RESULTS AND DISCUSSIONS

This study used PLS SEM 3 as a technique for analyzing the collected data. In essence, the PLS measurement is adopted to estimate the reliability and validity of data; and the criteria contain the Item loading, Cronbach's alpha values, Composite reliability, Average Variance Extracted (AVE) values, and Discriminant validity (see Figure 1.1 in appendix section). Other available information as presented in Table 1.1 explains the values of all such criteria. As reported previously the research has one independent variable specifically the information quality (IQ) in AIS, with one dependent variable, the organizational performance (OP) while incorporating and measuring the moderating effect of organizational culture (OC) into the interrelationship.

Table 1
Cronbach alpha values, Composite reliability, Average Variance Extracted (AVE) values

Variable	Cronbach Alpha	Composite Reliability	Average Variance Extracted (AVE)
Information Quality (IQ)	0.950	0.956	0.590
Organizational Culture	0.941	0.948	0.566
Organizational Performance (OP)	0.938	0.946	0.555

Reliability test is examined and measured utilizing Cronbach alpha values. As seen from Table 1 presents the cronbach alpha values for the constructs are; 0.950 for information quality; 0.941 for organizational culture and 0.938 for organizational performance. Since all the cronbach alpha values are over and above 0.7, hence it is grasped as satisfactory and acceptable reliability values. In extension to this, the composite reliability was also examined and the acceptable value of composite reliability is 0.7 (Hair et al, 2010). All the constructs had composite reliability greater than 0.70. As a results disclosed excellent internal consistence. Furthermore, convergent validity is equally examined to see if the items represent the constructs or not. The estimated results are evaluated by assessing the value of items loadings and average variance extracted (AVE). Generally, the decision criteria or the acceptable values of item loading are 0.60 (Hair et al., 2006). As shown by Figure 1.1 (see appendix), every items loading are greater than 0.60, which gave convergent validity at indicators levels as proposed by (Bagozzi & Yi, 1988). In other words, every AVE values for the constructs are greater than the minimum level of 0.5, respectively. Therefore, it can be concluded upon the basis of aforementioned results that every values of AVE and item loadings are excellently sufficient for the data validity.

Discriminant Validity

Discriminant validity is examined utilizing smart PLS 3.0 among other measurements. Results and other empirical evidences as presented in Table 1.2 explain the discriminant validity output of the research. It is stated by Compeau, Higgins, & Huff (1999) that the average variance shared between each construct and its indicators ought to be more prominent than the variance shared between the construct and other constructs. At the point when the AVE is higher than the assessed interrelationship or correlations between every pair of constructs, the discriminant validity is established. The measurement model likewise demonstrates amazing discriminant validity since the square root of the AVE for every constructs is higher than its correlation by means of other factors.

Table 2
Discriminant Validity

Construct	Information Quality	Organization Culture	Organization Performance
Information Quality	0.768		
Organization Culture	0.478	0.753	
Organization Performance	0.671	0.664	0.745

As can be seen from Table 2 values of the square root of AVE for every construct are higher in that specific diagonal; and that shows good discriminant validity, hence desirable and consistent with the study objectives.

Coefficient of Determination (R²)

The value of the coefficient of determination (R²) shows how considerably variation in an endogenous variable is produced by the exogenous variables. The current research obtained the R² value of 0.602 which shows that the dependent variable (organizational performance) is influenced by the independent variables (information Quality) by 60%. In other words, over 60% variations or changes in organizational performance are caused by the information quality of that organization. Meaning that, information quality has a major influence in determining the performance of an organization.

Predictive Relevance (Q²)

The predictive sample relevance technique (Q²) is measured and utilized as a predictive relevance criterion (Fornell & Cha, 1994). Interestingly, the Q² explains how good is the data collected empirically can be reconstructed with the assist of model and also the smart PLS (Fornell & Cha 1994). As mentioned and supported by Chin (1998), the Predictive Relevance values of 0.02, 0.15 and 0.35 base for small, medium and large predictive relevance are considered desirable. For this study, the estimated Q² value is found as 0.245; hence considered as excellent predictive relevance capability of the model.

PLS Structural Model

Based on the smart PLS structural model test, hypotheses analysis can be conducted and tested. For this study, the path coefficient, t-statistics, average estimate and error are considered. Estimated results from Table 1.3 shows the outcome of structural model for the examined hypothesis.

Table 3
Structural Model Output

Relationship	Hypotheses	Path Coefficient	T-Value	P-Value	Level of Significance
IQ -> OP	H1	0.674	12.847	0.000	*****

As presented in Table 1.3, the outcome of the formulated hypotheses are examined and tested in this research. The formulated hypothesis 1 (H1) is examined and structured as thus: Hypothesis 1: There existed positive and substantial interrelationship between the information quality (IQ) in AIS and organizational performance (OP). This hypothesis is supported with empirical findings as shown in Table 1.3 since the path coefficient value is 0.674 with a positive sign and the corresponding t-statistic is 12.847 (P<0.00), hence significant at 5% level. With these empirical results therefore, the study concludes that information quality has a positive effect on organizational performance.

Output of the PLS measurement

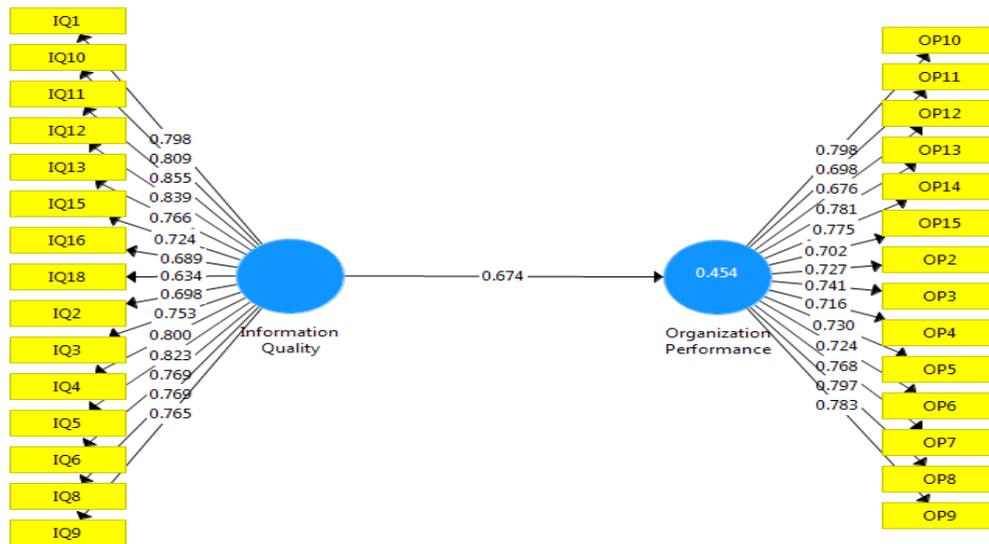


Figure 1: PLS Measurement Model Output

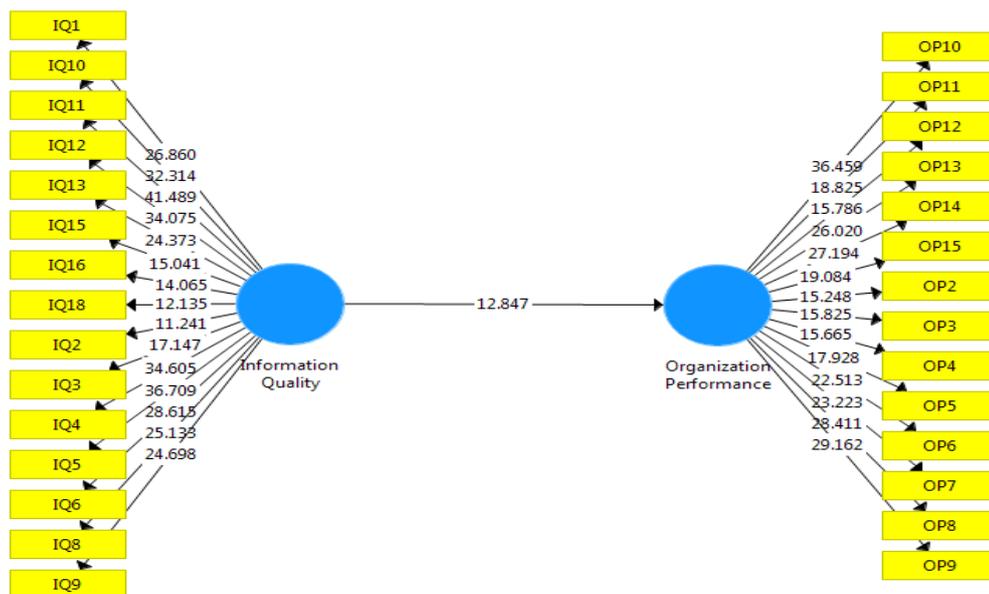


Figure 2: PLS Structural Model

Moderating Effect of Organizational Culture

In this research, the moderating effect of organization culture (OC) is examined in the relationship between information quality and organization performance. Results from Table 1.4 presents the estimated findings for the moderating effects of organizational culture in the model

Table 4
Moderating Effect Results

Relationship	Path Coefficient	t-statistic	P value	Comment
IQ* OC-> OP	0.458	3.938	0.000	Positive effect

Results in Table 4 show the outcome of the formulated hypothesis 2 that is tested in this research. The formulated hypothesis 2 (H2) is examined and structured as thus: Hypothesis 2: Organizational culture moderates the relationship between Information quality and organizational performance. In conducting analysis using the PLS SEM 3, moderating effect is available if the interaction path is significant. That is, the resultant t-statistic value of the interaction effect must be 1.96 ($p < 0.05$), hence considered as significant. (Hair, 2010). As shown in Table 1.4, the interaction path of information quality in AIS and organizational culture (IQ*OC) towards organizational performance is 0.458 with a corresponding t-statistic value of 3.938 and p value of 0.000 significant at 5% level. Given these empirical findings, the null hypothesis is therefore accepted; and the study further concludes that organizational culture moderates the interrelationship between information quality and organizational performance.

PLS moderating model

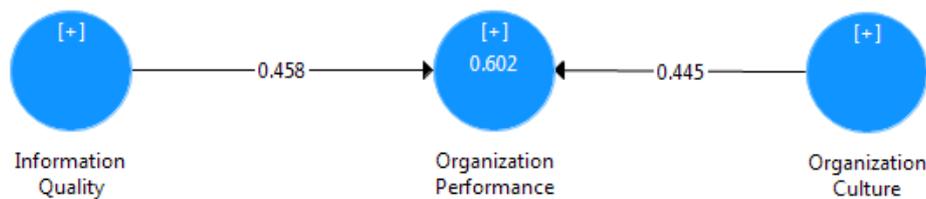


Figure 3: 1PLS Moderating Model

V. CONCLUSION

Accounting Information System (AIS) has the potentials to create a number of information, containing accounting and other non-accounting information to assist in making managerial decisions (Hussein, 2011) while, information quality in AIS increases the outcome of organizational performance. This research has demonstrated quality information as essential characteristic for augmenting organizational performance. In other words, organizations can enhance their overall performance by utilizing the quality information available to them in decision making. As demonstrated by other studies, high information quality within the domain of information context (accuracy, completeness, relevance to decision making) can cause high organizational impact (Bharati & Chaudhury, 2015) which consequently, leads to higher organizational performance. In addition, the impact of organizational culture is equally found to be a significant factor for enhancing organizational performance in this study. The estimated data collected from both the conventional and Islamic banks shows that organizations can improve its performance when committed properly to their culture. This study therefore concludes that organizational culture when combined with information quality can enhances performance. When organizations have proper culture, it motivates the members of staff and certainly affects performance positively. It can be inferred from this research that organizations concerned particularly the conventional and Islamic banks in Jordan can upsurge their performance by fully adopting and implementing the AIS. In addition, there is need to further implement the AIS success factors together with organizational culture with the view to enhancing greater efficiency. However, the situation in Jordan shows that the level of adoption and implementation of AIS is low. As a matter of recommendations, further studies should identify the reasons why some organizations in Jordan still have not fully adopted and implemented the AIS. There is need for more development in management skills to fully exploit the AIS in order to affect a broader organizational performance. In other words, full implementation of AIS should be given more priority by the managements of these conventional and Islamic banks. All these will assists the financial system especially the banking sector in Jordan to enhance their competitiveness in today's business environment.

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