# THE CRITICAL SUCCESS FACTORS OF ACCOUNTING **INFORMATION SYSTEM (AIS) AND IT'S IMPACT** ON ORGANISATIONAL PERFORMANCE OF JORDANIAN COMMERCIAL BANKS

Basel J. A. Ali 💹

School of Business Innovation and Technopreneurship, University Malaysia Perlis, Malaysia basil8011@gmail.com

# Rosni Bakar

School of Business Innovation and Technopreneurship, University Malaysia Perlis, Malaysia

# Wan Ahmad Wan Omar

School of Business Innovation and Technopreneurship, University Malaysia Perlis, Malaysia

# Abstract

The present study is an attempt to investigate the effect of Accounting Information System (AIS) success factors on organizational performance. Four types of AIS success factors namely service quality, information quality, data quality and system quality have been used in this study as the determinants performance. Data were collected with a structured questionnaire survey from 273 respondents in Jordanian banking sector. The collected data were analysed with PLS SEM technique. The findings revealed that service quality, information quality and system quality are the significant AIS success factors for increasing organizational performance. It can be inferred from this study that organizations involved in banking sectors can increase their performance by adopting and implementing AIS success factors. And while the adopting of AIS not fully utilize do not help firms with a highly organization performance.

Keywords: AIS, organizational performance, service quality, information quality, data quality, system quality



# INTRODUCTION

Accounting Information System (AIS) is a collection of computer-based electronic systems used for collecting, storing and processing of financial and accounting data in view of supporting organizational decision making process (Romney, 1997). The use of AIS in the banking sector will support these organisational processes, and expectedly influence its organisational performance. As shown from the literature, factors like information quality, service quality, system quality and data quality are AIS success factors. It is opined that these factors are necessary recipes in the working of AIS before it can be successful within an organisational usage context. The use of AIS in Jordanian commercial banks is a development traceable to the growing IT revolution in developing countries generally (Hamdan, 2013). In this report, AIS is significantly stressed as an unavoidable tool in decision making process, strategic planning and financial monitoring (Alrabei, 2014). Generally, Jordanian firms and commercial banks specifically have been on the tread of maximizing the potent significances of AIS. AIS had been helpful in different roles in many administrative activities of the commercial banks. Examples are assessing financial position, performance and monitoring the flow of cash and no-cash expenditures (Hamdan, 2013).

Studies on the use of AIS and its effectiveness in Jordanian pharmaceutical and manufacturing industries have posited that AIS usage have been supportive to Jordanian economy (Alzoubi, 2011; Al-Dalabeeh & Al-Zeaud, 2012). The AIS assists in public shareholding measurement and cost thrift (Al-Dalabeeh & Al-Zeaud, 2012). The study revealed that AIS possesses the characteristics, and meet the requirements of an information system usable for data storage, data entry, processing and presentation of meaningful output that assists both financial and non-financial administrative decision making processes. Also, the use of AIS has been supporting the internal control mechanism of industries that employ ERP systems (Alzoubi, 2011). Considering the link between the use of AIS and organisational performance in commercial Banking, AIS is essentially considered a managerial decision making support aid. The need for specific information system that is capable of handling accounting-related information is explored, most especially with the recent experience of growing organisational data (Siyanbola, 2012). The use of AIS effectiveness in wide spread of information needed by different users of the organisation. It influences the decision making and aids organisation administrative coordination in the organisation. It is thus concluded that effective decision making is key to organisational performance. This essentially explains the link between the use AIS and organisational performance.



Considering the present event in Jordanian banking sector, the contemporary issues on the limelight now are the adaptive investment trend and the adoption of e-technologies in the banking sector. It is opined that with considerable compliance with the associated openness and restriction laws, Jordan's economy will be boosted with new entry of foreign investment. It is also reported that Jordanian commercial banks are now adopting e-banking service (El-Qirem, 2013). Due to this development, El-Qirem stated that the recent trend of e-banking and mbanking application development has called for studies related to the antecedent factors to the use of the AIS and its subsequent effect on the organisational performance. The critical success factors that influence the usage have become a contemporary research issue. It is therefore suggested that, from 2012 to 2013, Jordanian banking sector is now taking the issue on the foreign investment trend and e-technologies adoption more seriously. The issue of AIS adoption and its effect on the organisational performance of the Jordanian banking sector generally can be safely categorised as parts of the contemporary issues of concern to Jordanian banking sector. This study is also motivated to include the study of these critical factors, as previously mentioned as antecedents to the attainment of organisational performance by the organisations that are deploying the said technology. In this instance, information quality, data quality, system quality, and service quality are highlighted. The majority of the Jordanian banks rely on accounting systems. They employ AIS in the process of linking the services of the banks on its departmental basis to a point of connection that will make it time economical, reliable and customers' satisfactory (Wedyan, Gharaibeh, Abu-dawleh, & Hamatta, 2012). From this effort, it is recorded that commercial banks that have adopted AIS in Jordan have been achieving competitive advantage among others. The use of AIS has been pointed as the recipe for financial sustainability, most especially by its ability of showing accurate financial position to the clients, and a real time update of clients' banking activities like withdrawal, transfer and deposit (Hamdan, 2013; Wedyan et al., 2012). This essentially points to the necessity of an in-depth study of the impact of the use of AIS on banking financial and non-financial measures of the organisational performance.

Organisational performance is defined as the efficiency and effectiveness of quantifying process of action that increases the organisational productivity (Hyvönen, 2007) . In the business management context, performance measurement highlights the process of quantifying the efficiency and effectiveness of certain business actions which are considered to contribute to the achievement of business goals (Chan, Chan, & Qi, 2006). This can be measured using either the financial measurements (Ames, Brazel, Jones, Rich, & Zimbelman, 2012; Chow & Van, 2006), and/or non-financial measurements (Ames et al., 2012). Achieving organisational performance through the usage of AIS, and with due consideration of the organisational culture



is the main thrust of this study. From this ground, the present study aims to investigate the influence of service quality, information quality, system quality and data quality on organizational performance in the Jordanian banking sector.

### LITERATURE REVIEW

### Information Quality and Organisational Performance

During the early time of IS research Emery (1971) stated that information does not have intrinsic value; rather, its value is only related with the influence it may exert on the physical events. This however instigated the research carried out by Lucas Jr & Nielsen (1980). The research employed learning (in terms of performance improvement), as a dependent variable to understand the inventory using IS because issues of Information Quality (IQ) have become very significant for firms which projects better performance, obtaining competitive advantage, or survival in contemporary business environment. This is at a time where data was believed to be inherently inaccurate and incomplete, and could adversely affect organization competitive success (Redman, 1992). There are numerous past and recent studies that have explored the information systems influence and employed measures of organisational performance as their dependent variable (Bernroider, 2008; J. C.-J. Chang & King, 2005; Chervany & Dickson, 1974; Gorla, Somers, & Wong, 2010). Firstly, Emery (1971)documented information quality as a cause for the reduction of the operating cost activities that are external to the system of information processing. This motivated Chervany & Dickson (1974) to also choose general cost reductions as their dependent variable and reported that information quality positively influenced it.

In another large company's survey, Rivard & Huff (1984) requested managers to evaluate the cost reductions and company profits as a result of application programs developed by specific user. Hamilton & Chervany (1981) findings show that improvement of income of company could also be by computer-based information systems while Bender (1986) examined the information processing financial impact. Using their respective measures, all of them found information quality to have a positive significant influence on organisational performance. The review showed significant relationship between information quality and performance among ERP systems users (Kositanurit, Ngwenyama, & Osei-Bryson, 2006), and considering the knowledge management system context, Kulkarni, Ravindran, & Freeze (2007) found perceived content quality does not have a direct relationship with perceived usefulness. A study carried out on digital libraries discovered that relevance of information retrieved had a significant effect on perceived usefulness (Hong, Thong, & Wai-Man Wong, 2002).

At the level of organization, the relationship between information quality and benefits has shown mixed results, depending on the way by which net benefits are measured. Yet, to reach a



conclusion on this relationship, more research is needed. However, high information quality in information content context (accuracy, completeness, relevance to decision making) can cause high organizational impact in terms of market information support (i.e., anticipating customer needs) and internal organizational efficiency (high-quality decision making) (Bharati & Chaudhury, 2015). AIS information quality, which is mostly in terms of accounting report and analysis, is reported by (Al-Hiyari, AL-Mashre, Mat, & others, 2013; Al-Zwyalif, 2012) to be significantly related to management commitment. It is also observed that it influences user performance and organisational performance directly (Bukenya, 2014; Radlova/vcki, Beker, Kamberovi'c, Pe\vcujlija, & Deli'c, 2011; Soudani, 2012), through perceived usefulness and perceived ease of use indirectly (Ali, Younes, & others, 2013; Boonmak, 2008). These studies investigated big companies. From another end, while Kharuddin, Ashhari, & Nassir (2010) investigated the impact of AIS on SME performance also reported a significant improvement in performance when compared with non-adopters. Therefore it is hypothesized that; **Hypothesis 1:** Information quality positively influences organizational performance.

### Service Quality and Organisational Performance

The understanding of IS service quality impact can be gotten from the firm's service quality impact on the firm performance. Delivering service quality is a factor for business success that leads to loyalty of customer, higher profitability, lower cost (Bitran, Rocha e Oliveira, & Schilkrut, 2008; Kumar, Batista, & Maull, 2011; Rahaman, Abdullah, & Rahman, 2011), increased customer satisfaction, long-term economic returns for the firm (Angelova & Zekiri, 2011) and increased intensions of repurchase (Ferrand, Robinson, & Valette-Florence, 2010). There are two types of users in the context of IS to whom IS services are delivered. These include internal users and external users such as customers and suppliers. The IS specialists who provide prompt and reliable services to users and by understanding specific needs of users, can better anticipate and serve customer needs through the enhancement of appropriate product/service. This will eventually enable the successful business operations and continuous profitability (internal organizational efficiency). Before, business disruptions, as a result of 3inefficient IS operations have been stated by many sectors, including the brokerage, credit card, and ATM (Ravichandran, Lertwongsatien, & Lertwongsatien, 2005). Therefore, IS service quality is positively related to market information support, product/service enhancement, and internal organizational efficiency. Also, different other studies which employed both financial and nonfinancial measures recorded significant positive relationship between service quality service business performance (Duncan & Elliott, 2002; Kesuma, Hadiwidjojo, Wiagustini, & Rohman, 2013; Nazeer, Zahid, & Azeem, 2014; Zailani, Hj Din, & Abd Wahid, 2006). Ashill, Rod, &



Carruthers (2008) argued that service quality has a pivotal role in the sales of the company, market shares, profits and business performance. Additionally, successful service quality leads to costs reduction and productivity increment. This finding is in line with Kesuma, et al. (2013) and Nazeer, et al. (2014). Kesuma et al. (2013) showed that superior service quality helps in generating greater revenue which eventually yields greater profitability and Nazeer et al. (2014) found that service quality has a strong positive effect on the loyalty of respondents to the company. Also, Zailani, et al. (2006) and Chi & Gursoy (2009)Chi & Gursoy (2009) in their investigation of the relationship between customer retention and perceived quality reported that technical quality, functional quality, and general product characteristics as service quality dimensions, were significantly affected.

According to Duncan & Elliott (2002), there is a positive relationship between service quality and financial performance in financial service institutions. Similarly, T.-Z. Chang & Chen (1998) found a positive relationship between service quality and business profitability. This posited that service businesses give a high strategic priority to service quality with continuous improvements, premium prices, better customer value, and customer orientation as net benefits of implementing IT. Other studies that have also shown strong positive and significant relationship between service quality and organisational performance, using respective measurements, include Weerakoon & Wijavanayake (2013) Wei (2012) and Khan & Fasih (2014) which investigated organisational performance as customer loyalty. They all found that its dimensions are positively and significantly related to service guality. Wei (2012) documented that a positive relationship exists between service qualities and IS organisation impact, and Santos (2003) reported a positive relationship between service quality and e-commerce. Literatures have also shown that profit-oriented service organisations and academic researchers view service quality as a profit key driver (Mukherjee, Nath, & Pal, 2003). It is observed that many studies have studied the direct positive link between service quality and organisational performance within the context of traditional service delivery (Duncan & Elliott, 2002; Yasin, Correia, & Lisboa, 2004). Thus it is hypothesized in this study that; **Hypothesis 2:** Service quality positively influences organizational performance.

#### **Data Quality and Organisational Performance**

In respect to the essence of data quality on AIS, the organisation data management setting and the data scope must be featured (Al\_Qudah & Shukeri, 2014). This implies that all data are not linked with AIS, and fulfilling this is a data quality important measure, because of security. Data usually refer to the AIS input, as data are processed in the AIS for generating information that needed in making decisions (Emeka-Nwokeji, 2012). The quality and effectiveness of AIS



depend on the input quality, process, and output quality. This suggests the essence of data quality to AIS success (Hubley, 2011; Wongsim & Gao, 2010), because information quality becomes vague when there are many errors and inconsistencies (Thuma, 2009). In the same vein, Rahayu & others (2012) stated that accounting and AIS need quality data for effective work. Therefore, AIS adoption must be done with keen consideration of the quality of the system and the quality of data used for the decision making process of the organisation (Wongsim & Gao, 2010). Xu (2009) stated that information system improvement project needs quality data, and the foundation of the information system is good data (Rahayu & others, 2012). In a related study, Ahmad, Ayasra, & Zaideh (2013) addressed the importance of the data quality in any AIS and concluded that it must be seen as main priority in various organizations. Additionally, the research by Emeka-Nwokeji (2012) stated that the data quality in AIS must conform to data quality dimension of companies contributing to the AIS effectiveness.

The general factors affecting the information systems techniques are arguably the same as those affecting accounting information systems (AIS). Many researches concentrate on success factors and critical process factors which generally affect the information systems and AIS specially. Data quality (DQ) has been considered as one of the critical factor, according to Wixom & Watson (2001), and it is related directly to perceived decrease in time and effort for decision making. Increased reliance of the company on AIS to achieve their mission in this information era requires a strategic and proactive approach to DQ management (Al-Hakim, 2007). Also, information and data are essential components for all the activities of every human endeavour (Emeka-Nwokeji, 2012), and a strategic necessity for an organization's well-being and future success as oxygen for human life (Al-Hakim, 2007) . Xu (2003) observed that literature have been made for identifying and addressing critical success factors at data quality management level. However, there have been few attempts for identifying the critical data quality measures in the context of AIS. This has caused data quality in AIS to remain largely unspecified and unexplored. Emeka-Nwokeji (2012) showed that for the success of AIS, data quality is important because it provides the quality assurance of the provided data for improving firm's performance. Data quality management policies assist companies in proactively replying and providing services and products needed by the customers, and relevant processes of decision and operation.

Few studies have duly investigated the effect of the AIS' data quality, as its critical success factor, on organisational performance. Data quality was reported to be strongly related to and positively influences company internal auditors' perception (Al\_Qudah & Shukeri, 2014; Saleh, 2013). Other studies on data quality investigated its influence on AIS performance and



adoption (Ahmad et al., 2013; Emeka-Nwokeji, 2012)(Ahmad et al., 2013; Emeka-Nwokeji, 2012), and found that they are strongly related. Hence it is hypothesized that; **Hypothesis 3:** Data quality positively influences organizational performance.

#### System Quality and Organisational Performance

DeLone & McLean (1992) posited that system quality can affect use, user satisfaction and individual performance, and therefore influence organizational performance. The necessary prerequisites for driving organization benefits are a well-designed, developed, and implemented system. Those benefits that could be derived include cost reduction, increased revenues, and improved process efficiency (Bakos & Treacy, 1986). On the other hand, a non-well designed and constructed system will likely run into occasional system crashes, which are detrimental to business operations consequently resulting in increased firm product cost (Swanson, 1997)(Swanson, 1997). The case of data warehousing has shown system quality to be positively associated with perceived net benefits in terms of individual productivity and ease of decision making (Wixom & Watson, 2001), and at operational level, system quality is positively related to organizational impact within entrepreneurial firms(Bradley, Pridmore, & Byrd, 2006).In order to create firm's business value through its information systems, the system should ensure IS efficient delivery through the attributes of system such as documentation availability and ease of use (Salmela, 1997). Firm competitive advantage is directly related with software high quality (Slaughter, Harter, & Krishnan, 1998). Moreover, a system having high sophistication (due to high integration of functions possible with Enterprise Resource Planning (ERP) and Supply Chain Management (SCM) applications) influences increase in profitability and internal coordination among the functional areas (Hendricks, Singhal, & Stratman, 2007). This therefore leads to increased efficiency of internal organization.

Generally, the association between system quality and net benefits has been recorded modestly by literature. Although the relationship between perceived ease of use as a system guality measure and perceived usefulness has mixed results. Most studies reported that system quality is positively related with organisation's benefits (Gorla et al., 2010; Hsieh & Wang, 2007; Nelson, Todd, & Wixom, 2005; Wixom & Todd, 2005; Yang & Yoo, 2004). Other studies like: (Chau & Hu, 2002; Kulkarni et al., 2007; Wu & Wang, 2006) reported no significant association. (Seddon, 1997; Shih, 2004) stated that system quality is related to perceived usefulness significantly. However, Goodhue & Thompson (1995) and Gefen (2000) reported systems reliability and perceived ease of use does not have impact on productivity and effectiveness, and McGill & Klobas (2005) argued that no relationship exists between system quality and individual impact, as measured through decision-making quality and productivity. In other



studies, Kositanurit et al. (2006) found a significant relationship between perceived ease of use and performance, but no relationship between reliability and performance for individual ERP systems users. Bharati & Chaudhury (2015) discovered a significant relationship between system quality, measured using reliability, flexibility, ease of use, and convenience of access, to decision-making satisfaction. This posited that system quality is strongly related with net benefits at organizational level. Therefore it is hypothesized in this study that;

**Hypothesis 4:** System quality positively influences organizational performance.

### METHODOLOGY

This study is of exploratory research design because it attends to an area of study where there have been previous studies conducted, but yet required further exploratory study to answer other questions that are yet to be attended. This study aims at investigating the effects of the AIS success factors which are information quality, data quality, service quality and system quality, as earlier outlined, on organisational performance.

The survey instrument is developed through adaptation of similar questionnaires, or newly designed to measure the constructs being studied. The primary data were used to measure continuous variables in the research model (i.e. information quality, data quality, service quality, system quality, organisational performance and organisational culture). The population of this study is the assistant branch managers of conventional commercial banks in Jordan. This is because this study is interested in capturing the opinions of all the mangers irrespective of their role, since the banks are all using AIS. In this study, proportionate stratified random sampling method is used as a method of sampling so as to effectively cover all the 13 conventional commercial banks in Jordan. A total of 500 structured questionnaires were distributed among the 13 conventional commercial banks and finally 273 were found in usable condition.

The collected data have been analysed with Partial Least Square Structural Equation Modelling (PLS SEM). In the measurement model, quality criteria of the model have been assessed and then the structural model tested the hypotheses of this study. The findings of PLS SEM analysis have been presented in this study to investigate the relationship between four exogenous variables and one endogenous variable.

#### ANALYSIS AND FINDINGS

First the PLS measurement is analysed to assess the reliability and validity of data and the criteria include Cronbach alpha values, item loading, Average Variance Extracted (AVE) values, Composite reliability and discriminant validity (Table 1). As mentioned earlier that this study has



four independent variable namely Information quality (IQ), System quality (SYQ), Service quality (SQ) and Data quality (DQ); and one dependent variable which is organizational performance (OP).

Variable	Items	Loadir	ngs	Cror	bach	Composite	Average V	'ariance
				alph	а	Reliability	Extracted(AVE)	
Information	IQ1	0.800		0.94	4	0.951		
Quality (IQ)	IQ2	0.750						
	IQ3	0.796						
	IQ4	0.820						
	IQ5	0.789						
	IQ6	0.759					0.622	
	IQ7	0.768					0.022	
	IQ8	0.815						
	IQ9	0.859						
	IQ10	0.835						
	IQ11	0.753						
	IQ12	0.702						
Service	SQ1	0.747		0.90	7	0.925	0.608	
Quality (SQ)	SQ2	0.796						
	SQ3	0.786						
	SQ4	0.840						
	SQ5	0.807						
	SQ6	0.825						
	SQ7	0.745						
	SQ8	0.676						
Data C	Quality	DQ1	0.867	7	0.928	0.944	0.739	
(DQ)		DQ2	0.886	6				
		DQ3	0.852	2				
		DQ4	0.886	6				
		DQ5	0.822	2				
		DQ6	0.842	2				
System		SYQ1	0.756	5	0.924	0.935	0.631	
Quality		SYQ2	0.742	2				
(SYQ)		SYQ3	0.764	1				
		SYQ4	0.74′	1				
		SYQ5	0.786	5				
		SYQ6	0.775	5				
		SYQ7	0.813	3				
		SYQ8	0.858	3				
		SYQ9	0.849	9				
		SYQ10	0.799	9				
		SYQ11	0.824	1				
		SYQ12	0.815	5				

Table 1: PLS Measurement Model Output



Organization	OP1	0.749	0.946	0.953	0.568
al	OP2	0.757			
Performance	OP3	0.720			
(OP)	OP4	0.745	-		
	OP5	0.738	-		
	OP6	0.775	-		
	OP7	0.778	-		
	OP8	0.766	-		
	OP9	0.776	-		
	OP10	0.737	-		
	OP11	0.747	-		

In this study reliability test is done and evaluated using Cronbach alpha values. The table 1 depicted the Cronbach alpha values for the constructs are; 0.944 for information quality; 0.907 for service quality; 0.928 for data quality; 0.924 for system quality and 0.946 for organizational performance. So all the Cronbach alpha values are above 0.7 which is considered the acceptable reliability values (Nunnally & Bernstein, 1994). In addition to the Cronbach alpha values, Composite Reliability (CR) was also tested and the acceptable value of CR is 0.7 (Hair et al, 2010). In this study all the constructs had composite reliability more than 0.70. So the data of this study showed good internal consistence. Convergent validity is tested to see whether the items represent the constructs or not. In this study convergent validity was tested by evaluating the values of items loadings and average variance extracted (AVE). Usually the acceptable values of item loading are 0.60 (Hair et al., 2006). Table 1 shows that all the items loading are above 0.60 which gives convergent validity at indicators levels as suggested by (Bagozzi & Yi, 1988). On the other hand all the AVE values for the constructs are above the minimum threshold level which is 0.5. So it can be concluded on the basis of the findings that the values of AVE and item loadings are good enough for the validity of the data.

# **Discriminant Validity**

Discriminant validity was also tested using smart PLS M2.0 software. Table 2 shows the discriminant validity output of the study. According to Compeau, Higgins, & Huff (1999), the average variance shared between each construct and its indicators should be greater than the variance shared between the construct and other construct. When the AVE is higher than the estimated correlations among each pair of constructs, discriminant validity is established. The measurement model also demonstrates good discriminant validity since the square root of the AVE for each construct was higher than its correlation with other factors.



	DQ	IQ	OP	SQ	SYQ
DQ	0.859				
IQ	0.752	0.788			
OP	0.533	0.652	0.753		
SQ	0.663	0.723	0.648	0.779	
SYQ	0.738	0.785	0.608	0.702	0.794

Table 2: Discriminant Validity

Table 2 showed that the values of square root of AVE for each construct are higher in that particular diagonal and it indicates good discriminant validity.

# Predictive Relevance (Q<sup>2</sup>)

The predictive sample relevance technique (Q2) can effectively be used as a criterion for predictive relevance. Based on blindfolding procedure, Q2 evaluates the predictive validity of a large complex model using PLS. While estimating parameters for a model under blindfolding procedure, this technique omits data for a given block of indicators and then predicts the omitted part based on the calculated parameters. Thus, Q2 shows how well the data collected empirically can be reconstructed with the help of model and the PLS parameters (Fornell & Cha. 1994). According to Chin (1998), the Q2 values of 0.02, 0.15 and 0.35 stand for small, medium and large predictive relevance. The  $Q^2$  value of this study is 0.568 which is an indication of a good predictive relevance capability of the model

# Coefficient of Determination (R<sup>2</sup>)

The coefficient of determination  $(R^2)$  value indicates how much variation in endogenous variable is caused by the exogenous variables. The present study got a R<sup>2</sup> value of 0.480 which indicates that the dependent variable is influenced by the independent variables by 48%. So the four independent variables considered in this study are responsible for 48% variation in the organizational performance. The remaining 52% variation is caused by the other factors that have not been considered in this study.

# Goodness of Fit (GoF)

GoF (Goodness of Fit) index is crucial toassess the global validity of a PLS based complex model (Tenenhaus, Vinzi, Chatelin, & Lauro, 2005). It is the geometric mean of the average communality and average R<sup>2</sup> for all endogenous constructs. The GoF index is bounded between 0 and 1. Wetzels, Odekerken-Schröder, & Van Oppen (2009) suggest using 0.50 as the cutoff value for communality (Fornell & Larcker, 1981) and different effect sizes of R2 (Cohen, 1988)



to determine GoFsmall(0.10), GoFmedium (0.25) and GoFlarge (0.36). These may serve as baselines for validating the PLS based complexmodels globally. The model depicted in this study obtains a GoF value of 0.565, which exceeds the cut-off value of 0.36 for largeeffect sizes of R<sup>2</sup> (Cohen 1988).

### PLS Structural Model

In the structural model of PLS analysis, hypotheses testing can be done. Here the path coefficient, t statistics, average estimate and error are considered. Table 3 showed the structural model for hypothesis testing.

Relationship	Hypotheses	Path Coefficient	T-Value	P-Value	Level of Significance
IQ -> OP	H1	0.237	2.323	0.010	**
SQ -> OP	H2	0.310	3.030	0.001	***
DQ -> OP	H3	-0.005	0.063	0.474	-
SYQ -> OP	H4	0.209	2.333	0.010	**

The above table 3 showed the results of hypotheses testing for this study. The explanation for the hypotheses testing is given below.

# Hypothesis 1

There is a positive and significant relationship between the information quality and organizational performance. This hypothesis got strong support as the table 4.3 depicted that the path coefficient value is 0.237 with a positive sign and the corresponding t statistics is 2.323 (P<0.05) that indicates 5% significance level. So it is accepted that information quality positively influences organizational performance. This finding is consistent with the findings of Bharati & Chaudhury (2015); Ali et al. (2013); Bradley et al. (2006) which found positive relationship between information quality and organisational performance.

# Hypothesis 2

There is a positive relationship between service quality and organizational performance. The present study proves this hypothesis. The path coefficient here is 0.310 with a positive sign and this value is significant at 1% (t value; 3.030; P, <.01) level. So it is accepted that service quality is positively and significantly correlated with organizational performance. This finding is consistent with the findings of some related studies Ali et al. (2013); Wei (2012); Weerakoon &



Wijavanayake (2013) which found positive relationship between service quality and organisational performance.

# Hypothesis 3

There is a positive relationship between data quality and organizational performance. This hypothesis is not supported as the path coefficient got a negative value of -0.005 and this value is not significant. So the data quality is negatively and insignificantly correlated with organizational performance. This finding is inconsistent with the findings of past related studies Emeka-Nwokeji (2012); Saleh (2013) which found that data quality and organisational performance are positively correlated. So it requires further attention to investigate the issue.

### Hypothesis 4

There is a positive relationship between system quality and organizational performance. This hypothesis is supported as the path coefficient got a positive value of 0.209 and the corresponding t statistics is 2.333 (P<0.01); this value is significant at 5% level. So the system quality is positively correlated with organizational performance. This finding is consistent with the findings of studies done by Hsieh & Wang (2007); Wixom & Todd (2005)Wixom & Todd (2005) which found positive relationship between system quality and organisational performance.

# DISCUSSION AND CONCLUSION

Information age has changed the way in which traditional accounting systems work. AIS have tended to historically mirror the development trend from the years of the manual accounting processes. AIS can generate several types of information including accounting and nonaccounting information to help management in managing short-term problems and integrates operational considerations within long-term strategic plans Hussein (2011); Mitchell, Reid, & Smith (2000). And the AIS success factors namely information quality, service quality, data quality and system quality are affecting organizational performance a lot. This study also evidenced that information quality is vital factor for enhancing organizational performance. The findings from empirical data showed that organizations can increase their overall performance by quality information. It happens because information quality causes for the reduction of the operating cost activities that are external to the system of information processing. High information quality in information content context (accuracy, completeness, relevance to decision making) can cause high organizational impact in terms of market information support (i.e., anticipating customer needs) and internal organizational efficiency (high-quality decision



making) (Bharati & Chaudhury, 2015) which consequently leads to higher organizational performance. Then this study revealed that service quality is an important AIS success factor for organizational performance. The findings showed that service quality is positively and significantly related to organizational performance. A number of information service companies which had started to analyze by using SERVQUAL in order to evaluate identified performance and they found that SERVQUAL model can explain the performance to some extent. Measuring service quality might help management provide dependable information that can be used to observe and keep enhanced service quality. Service quality assessment allows management to better understand various dimensions and how they influence service quality and customer satisfaction. This may assist them to determine their advantages and disadvantages in addition to help make essential enhancement. So in fine it can be concluded that organizational performance can best be influenced by both services quality.

Data quality which is often thought of an important factor for increasing organizational performance has also been considered in this study. But the empirical data from the banking sector of Jordan didn't provide enough evidence that data quality might bring forth substantial increase in organizational performance. Though it is found in extant literature that data quality helps organizations to improve their performance, it requires further studies to investigate matter. Finally system quality which is a pivotal factor for the survival of organizations in the present global world has been found here as a critical AIS success factors in the Jordanian banking sector. The empirical data showed that system quality is positively and significantly related to organizational performance. And this finding is in line with the assertion of DeLone and McLean (1992) who posited that system quality can affect use, user satisfaction and individual performance, and therefore influence organizational performance. The necessary prerequisites for driving organization benefits are well-designed, developed, and implemented systems which play the important roles to run the organization properly and increase performance. The benefits derived from system quality include cost reduction, increased revenues, and improved process efficiency (Bakos & Treacy, 1986). On the other hand, a nonwell designed and constructed system will likely run into occasional system crashes, which are detrimental to business operations consequently resulting in increased firm product cost (Swanson, 1997). Therefore, it is a must for the organization to develop system quality for enhancing performance. It can be inferred from this study that organizations involved in banking sectors can increase their performance by adopting and implementing AIS success factors. Though this study brings some valuable implications for the banking sectors, it is not without any limitations as the pattern is only from the industrial banks in Jordan and consequently won't represent all of the sectors running in Jordan. Another limitation is participation in getting



comments on the questionnaire from respondents and few researches that were applied Jordan.

Form that ground, it is suggested that future studies will explore more AIS success factors to unveil their influence on organizational performance.

# REFERENCES

Ahmad, M., Ayasra, A. & Zaideh, F. (2013). Issues and problems related to data quality in AIS implementation. International Journal of Latest Research in Science and Technology, 2(2), 17–20.

Al\_Qudah, H. M. A. & Shukeri, S. N. B. (2014). The Role Of Data Quality And Internal Control In Raising The Effectiveness Of Ais In Jordan Companies. International Journal of Technology Enhancements and Emerging Engineering Research, 3(8), 298–303.

Ali, B. M., Younes, B. & others. (2013). The Impact of Information Systems on user Performance: An Exploratory Study. Journal of Knowledge Management, Economics and Information Technology, 3(2), 1-28. ScientificPapers. org.

Alrabei, A. M. A. (2014). The impact of accounting information system on the Islamic Banks of Jordan: an empirical study. European Scientific Journal, 10(4), 184 – 198. European Scientific Journal.

Alzoubi, A. (2011). The Effectiveness of the Accounting Information System Under the Enterprise Resources Planning (ERP). Research Journal of Finance and Accounting, 2(11), 10–19.

Al-Hakim, L. (2007). Information guality management: theory and applications (1st ed.). UK: IGI Global.

Al-Hiyari, A., AL-Mashre, M. H. H., Mat, N. K. N. & others. (2013). Factors that Affect Accounting Information System Implementation and Accounting Information Quality: A Survey in University Utara Malaysia. American Journal of Economics, 3(1), 27-31. Scientific \& Academic Publishing.

Al-Zwyalif, I. M. (2012). Using Six Sigma Approach to Improve Accounting Information Systems Performance. European Journal of Economics, Finance and Administrative Sciences, (55).

Ames, D., Brazel, J. F., Jones, K. L., Rich, J. S. & Zimbelman, M. F. (2012). Using nonfinancial measures to improve fraud risk assessments. Current Issues in Auditing, 6(1), C28-C34. American Accounting Assocation.

Angelova, B. & Zekiri, J. (2011). Measuring customer satisfaction with service quality using American Customer Satisfaction Model (ACSI Model). International Journal of Academic Research in Business and Social Sciences, 1(3), 232–258. Human Resource Management Academic Research Society.

Ashill, N. J., Rod, M. & Carruthers, J. (2008). The effect of management commitment to service quality on frontline employees' job attitudes, turnover intentions and service recovery performance in a new public management context. Journal of Strategic Marketing, 16(5), 437-462. Taylor \& Francis.

Bagozzi, R. P. & Yi, Y. (1988). On the evaluation of structural equation models. Journal of the academy of marketing science, 16(1), 74–94, Springer,

Bakos, J. Y. & Treacy, M. E. (1986). Information technology and corporate strategy: a research perspective. MIS guarterly, 107-119. JSTOR.

Bender, D. H. (1986). Financial impact of information processing. Journal of Management Information Systems, 3(2), 22–32. Taylor \& Francis.

Bernroider, E. W. (2008). IT governance for enterprise resource planning supported by the DeLone-McLean model of information systems success. Information \& Management, 45(5), 257-269. Elsevier. Bharati, P. & Chaudhury, A. (2015). Product customization on the web: an empirical study of factors impacting choiceboard user satisfaction.

Bharati, P. and Chaudhury, A.(2006), "Product Customization on the Web: An Empirical Study of Factors Impacting Choiceboard User Satisfaction," Information Resources Management Journal, 19(2), 69–81.



Bitran, G. R., Rocha e Oliveira, P. & Schilkrut, A. (2008). Managing customer relationships through price and service quality. IESE Business School Working Paper.

Boonmak, S. (2008). Strategically Involved, Accounting Information Systems Change The Way Businesses Compete. Submit to AAA IS Section Mid-Year Meeting. Chulalongkorn University.

Bradley, R. V., Pridmore, J. L. & Byrd, T. A. (2006). Information systems success in the context of different corporate cultural types: an empirical investigation. Journal of Management Information Systems, 23(2), 267–294. Taylor \& Francis.

Bukenya, M. (2014). Quality of Accounting Information and Financial Performance of Uganda's Public Sector. American Journal of Research Communication,, 2(5), 183-203.

Chan, F. T., Chan, H. & Qi, H. (2006). A review of performance measurement systems for supply chain management. International Journal of Business Performance Management, 8(2-3), 110-131. Inderscience Publishers.

Chang, J. C.-J. & King, W. R. (2005). Measuring the performance of information systems: a functional scorecard. Journal of Management Information Systems, 22(1), 85–115. Taylor \& Francis.

Chang, T.-Z. & Chen, S.-J. (1998). Market orientation, service quality and business profitability: a conceptual model and empirical evidence. Journal of services marketing, 12(4), 246-264. MCB UP Ltd.

Chau, P. Y. & Hu, P. J. (2002). Examining a model of information technology acceptance by individual professionals: An exploratory study. Journal of management information systems, 18(4), 191–229. Taylor \& Francis.

Chervany, N. L. & Dickson, G. W. (1974). An experimental evaluation of information overload in a production environment. Management Science, 20(10), 1335-1344. INFORMS.

Chi, C. G. & Gursoy, D. (2009). Employee satisfaction, customer satisfaction, and financial performance: An empirical examination. International Journal of Hospitality Management, 28(2), 245-253. Elsevier.

Chow, C. W. & Van, W. A. (2006). The Use and Usefulness of Nonfinancial Performance Measures. Management Accounting Quarterly, 7(3), 1–8.

Cohen, J. (1988). Statistical power analysis for the behavioural sciences. Lawrence Earlbaum Associates .: Hillsdale, New Jersey.

Compeau, D., Higgins, C. A. & Huff, S. (1999). Social cognitive theory and individual reactions to computing technology: A longitudinal study. MIS quarterly, 145-158. JSTOR.

Al-Dalabeeh, A. E.-R. & Al-Zeaud, H. A. (2012). Accounting Information Systems and Their Role in the Measurement and Cost Thrifting in Public Shareholding Industrial Companies in Jordan. International Journal of Business and Management, 7(12), 97. Canadian Center of Science and Education.

DeLone, W. H. & McLean, E. R. (1992). Information systems success: The quest for the dependent variable. Information systems research, 3(1), 60–95. INFORMS.

Duncan, E. & Elliott, G. (2002). Customer service quality and financial performance among Australian retail financial institutions. Journal of Financial Services Marketing, 7(1), 25-41. Palgrave Macmillan.

El-Qirem, I. A. (2013). Critical factors influencing E-Banking service adoption in Jordanian commercial banks: a proposed model. International Business Research, 6(3), 229. Canadian Center of Science and Education.

Emeka-Nwokeji, N. (2012). Repositioning accounting information system through effective data quality management: A framework for reducing costs and improving performance. International Journal Of Scientific Technology Research, 1(10), 86–94. Citeseer.

Emery, J. C. (1971). Cost/benefit analysis of information systems. Society for Management Information Systems.

Ferrand, A., Robinson, L. & Valette-Florence, P. (2010). The intention-to-repurchase paradox: A case of the health and fitness industry. Journal of Sport Management, 24(1), 83-105. Human Kinetics.

Fornell, C. & Cha, J. (1994). Partial least squares. Advanced methods of marketing research, 407, 52–78.



Fornell, C. & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. Journal of marketing research, 39-50. JSTOR.

Gefen, D. (2000). It is not enough to be responsive: the role of cooperative intentions in MRP II adoption. DATA BASE for Advances in Information Systems, 31(2), 65–79.

Goodhue, D. L. & Thompson, R. L. (1995). Task-technology fit and individual performance. MIS quarterly, 213-236. JSTOR.

Gorla, N., Somers, T. M. & Wong, B. (2010). Organizational impact of system guality, information guality, and service quality. The Journal of Strategic Information Systems, 19(3), 207–228.

Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., Tatham, R. L. & others. (2006). Multivariate data analysis (Vol. 6). Pearson Prentice Hall Upper Saddle River, NJ.

Hamdan, M. N. M. (2013). Improving the performance of accounting information systems of commercial banks in Jordan by using the balanced scorecard approach.

Hamilton, S. & Chervany, N. L. (1981). Evaluating information system effectiveness-Part I: Comparing evaluation approaches. MIS quarterly, 55-69. JSTOR.

Hendricks, K. B., Singhal, V. R. & Stratman, J. K. (2007). The impact of enterprise systems on corporate performance: A study of ERP, SCM, and CRM system implementations. Journal of Operations Management, 25(1), 65-82. Elsevier.

Hong, W., Thong, J. Y. & Wai-Man Wong, K.-Y. T. (2002). Determinants of user acceptance of digital libraries: an empirical examination of individual differences and system characteristics. Journal of Management Information Systems, 18(3), 97–124. Taylor \& Francis.

Hsieh, J. P.-A. & Wang, W. (2007). Explaining employees' extended use of complex information systems. European Journal of Information Systems, 16(3), 216–227. Nature Publishing Group.

Hubley, J. (2011). Data Quality: The Foundation for Business Intelligence.

Hussein, A. M. (2011). Use Accounting Information System as Strategic Tool to Improve SMEs' Performance in Iraq Manufacturing Firms.

Hyvönen, J. (2007). Strategy, performance measurement techniques and information technology of the firm and their links to organizational performance. Management Accounting Research, 18(3), 343-366. Elsevier.

Kesuma, I. A. W., Hadiwidjojo, D., Wiagustini, N. L. P. & Rohman, F. (2013). Service Quality Influence on Patient Lovalty: Customer Relationship Management as Mediation Variable (Study on Private Hospital Industry in Denpasar). International Journal of Business and Commerce, 2(12), 1-14. Asian Society for Business and Commerce Research and Pakistan Society for Business and Management Research.

Khan, M. M. & Fasih, M. (2014). Impact of service quality on customer satisfaction and customer loyalty: Evidence from banking sector. Pakistan Journal of Commerce and Social Sciences, 8(2), 331-354.

Kharuddin, S., Ashhari, Z. M. & Nassir, A. M. (2010). Information system and firms' performance: The case of Malaysian small medium enterprises. International business research, 3(4), 28-35. Canadian Center of Science and Education.

Kositanurit, B., Ngwenyama, O. & Osei-Bryson, K.-M. (2006). An exploration of factors that impact individual performance in an ERP environment: an analysis using multiple analytical techniques. European Journal of Information Systems, 15(6), 556–568. Palgrave Macmillan.

Kulkarni, U. R., Ravindran, S. & Freeze, R. (2007). A knowledge management success model: Theoretical development and empirical validation. Journal of management information systems, 23(3), 309-347. Taylor \& Francis.

Kumar, V., Batista, L. & Maull, R. (2011). The impact of operations performance on customer loyalty. Service Science, 3(2), 158-171. INFORMS.

Lucas Jr, H. C. & Nielsen, N. R. (1980). The impact of the mode of information presentation on learning and performance. Management Science, 26(10), 982-993. INFORMS.



McGill, T. J. & Klobas, J. E. (2005). The role of spreadsheet knowledge in user-developed application success. Decision Support Systems, 39(3), 355-369. Elsevier.

Mitchell, F., Reid, G. C. & Smith, J. (2000). Information system development in the small firm: The use of management accounting. Chartered Institute of Management Accountants.

Mukherjee, A., Nath, P. & Pal, M. (2003). Resource, service quality and performance triad: a framework for measuring efficiency of banking services. Journal of the Operational Research Society, 54(7), 723-735. Nature Publishing Group.

Nazeer, S., Zahid, M. M. & Azeem, M. F. (2014). Internal Service Quality and Job Performance: Does Job Satisfaction Mediate? Journal of Human Resources, 2(1), 41-65.

Nelson, R. R., Todd, P. A. & Wixom, B. H. (2005). Antecedents of information and system quality: an empirical examination within the context of data warehousing. Journal of management information systems, 21(4), 199-235. ME Sharpe.

Nunnally, J. C. & Bernstein, I. H. (1994). I.(1994). Psychometric theory. New York, NY: McGraw-Hill.

Radlova\vcki, V., Beker, I., Kamberovi'c, B., Pe\vcujlija, M. & Deli'c, M. (2011). Organization performance measurement and quality information system in Serbia-Quality managers' estimates. International Journal of Industrial Engineering and Management, 2(1), 13–20.

Rahaman, M. M., Abdullah, M. & Rahman, A. (2011). Measuring service quality using SERVQUAL model: A study on PCBs (Private Commercial Banks) in Bangladesh. Business Management Dynamics, 1(1), 1– 11.

Rahayu, S. K. & others. (2012). The Factors That Support The Implementation Of Accounting Information System: A Survey In Bandung And Jakarta'S Taxpayer Offices. Journal of Global Management, 4(1), 25-52. Citeseer.

Ravichandran, T., Lertwongsatien, C. & Lertwongsatien, C. (2005). Effect of information systems resources and capabilities on firm performance: A resource-based perspective. Journal of management information systems, 21(4), 237–276. Taylor \& Francis.

Redman, T. C. (1992). Data quality: management and technology. Bantam Books, Inc.

Rivard, S. & Huff, S. L. (1984). User developed applications: evaluation of success from the DP department perspective. MIS quarterly, 39-50. JSTOR.

Romney, M. B. S. P. J. C. E. B. (1997). Accounting Information System. Seventh.

Saleh, F. M. (2013). Critical success factors and data quality in accounting information systems in Indonesian cooperative enterprises: An empirical examination. Interdisciplinary Journal Of Contemporary Research In Business, 5(3), 321–338.

Salmela, H. (1997). From information systems quality to sustainable business quality. Information and Software Technology, 39(12), 819-825. Elsevier.

Santos, J. (2003). E-service quality: a model of virtual service quality dimensions. Managing Service Quality: An International Journal, 13(3), 233-246. MCB UP Ltd.

Seddon, P. B. (1997). A respecification and extension of the DeLone and McLean model of IS success. Information systems research, 8(3), 240–253. INFORMS.

Shih, H.-P. (2004). Extended technology acceptance model of Internet utilization behavior. Information \& Management, 41(6), 719-729. Elsevier.

Siyanbola, T. T. (2012). Accounting Information as an aid to Management Decision Making. International Journal of Management and Social Sciences Research (IJMSSR) ISSN, 2319-4421.

Slaughter, S. A., Harter, D. E. & Krishnan, M. S. (1998). Evaluating the cost of software quality. Communications of the ACM, 41(8), 67-73. ACM.

Soudani, S. N. (2012). The usefulness of an accounting information system for effective organizational performance. International Journal of Economics and Finance, 4(5), 136. Canadian Center of Science and Education.



Swanson, E. B. (1997), Maintaining IS quality. Information and Software Technology, 39(12), 845–850. Elsevier.

Tenenhaus, M., Vinzi, V. E., Chatelin, Y.-M. & Lauro, C. (2005). PLS path modeling. Computational statistics \& data analysis, 48(1), 159-205. Elsevier.

Thuma, J. (2009). Practical Approaches to Data Quality Management in Business Intelligence and Performance Management.

Wedyan, L. M. A.-R., Gharaibeh, A. T. S., Abu-dawleh Ahmad Ibrahim Mohammad, & Hamatta, H. S. A. (2012). The Affect of Applying Accounting Information System on the Profitability of Commercial Banks in Jordan. Journal of Management Research, 4(2), 112–138.

Weerakoon, W. & Wijavanayake, W. (2013). Impact of the information systems service quality on performance of IT sector organizations in sri lanka. Advances in ICT for Emerging Regions (ICTer), 2013 International Conference on (pp. 84-91).

Wei, M. (2012). Analysis of information systems applied to evaluating tourism service quality based on organizational impact. Journal of Software, 7(3), 599-607.

Wetzels, M., Odekerken-Schröder, G. & Van Oppen, C. (2009). Using PLS path modeling for assessing hierarchical construct models: Guidelines and empirical illustration. MIS quarterly, 33(1), 177-195. JSTOR.

Wixom, B. H. & Todd, P. A. (2005). A theoretical integration of user satisfaction and technology acceptance. Information systems research, 16(1), 85–102. INFORMS.

Wixom, B. H. & Watson, H. J. (2001). An empirical investigation of the factors affecting data warehousing success. MIS quarterly, 25(1), 17-41. JSTOR.

Wongsim, M. & Gao, J. (2010). Data Quality issues in Accounting Information Systems Adoption-Theory building. Networked Computing and Advanced Information Management (NCM), 2010 Sixth International Conference on (pp. 224-230).

Wu, J.-H. & Wang, Y.-M. (2006). Measuring KMS success: A respecification of the DeLone and McLean's model. Information \& Management, 43(6), 728-739. Elsevier.

Xu, H. (2003). Critical success factors for accounting information systems data quality.

Xu, H. (2009). Data quality issues for accounting information systems' implementation: Systems, stakeholders, and organizational factors. Journal of Technology Research, 1, 1. Academic and Business Research Institute (AABRI).

Yang, H. & Yoo, Y. (2004). It's all about attitude: revisiting the technology acceptance model. Decision Support Systems, 38(1), 19-31. Elsevier.

Yasin, M., Correia, E. & Lisboa, J. (2004). The profitability of customer-targeted quality improvement efforts: an empirical examination. The TQM magazine, 16(1), 45-49. Emerald Group Publishing Limited.

Zailani, S., Hj Din, S. & Abd Wahid, N. (2006). The Effect Of Internal Measures Of Service Quality On Business Performance: A Case Of Hotel Industry In Malaysia. 6th Annual Hawaii International Conference on Business (pp. 1-21).

