

EMPIRICAL ANALYSIS ON ACCOUNTING INFORMATION SYSTEM USAGE IN BANKING SECTOR IN JORDAN

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ABSTRACT

The use of accounting information system effectiveness is wide spread of information needed by different users of the banks. It influences the decision making and aids organisation administrative coordination in the banks. Therefore, the main goal of the current study is to describe the importance of the usage of Accounting Information System in banking sector in Jordan. the choosing target population are the assistant branch managers of the selected private banks in Jordan. A total number of thirteen private banks were employed and a set of questionnaires are made available and further distributed to the assistant branch managers of these banks.. factors of accounting information system namely; quality of service, quality of information and data. The finding of this study found that the highest positive is from quality of information and data which is signifying and important indicator that determines the usage of accounting information system in banking sector.

Keywords: Accounting Information System, Quality of Service, Quality of Information Data, Banking Sector.

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 organisational decision-making processes (Bawaneh, 2014). The use of accounting information system in the banking sector will support these organisational processes, and expectedly influence its organisational performance. The use of accounting information system in banking sector is a development traceable to the growing information technology revolution in developing countries generally. On a global scale, the World Economic Forum (WEF) of development report itemised the necessary drives for development required to be adopted by developing countries in order to support their economic reform (Hamdn, 2013). In this, AIS is significantly stressed as an unavoidable tool in decision-making process, strategic planning and financial monitoring (Alrabei, 2014). Generally, firms and financial institutions specifically have been lacking the tread of maximising the potent significances of AIS. Notably, the use of AIS will assist different roles in many administrative activities of the banks. Examples are assessing financial position, performance and monitoring the flow of cash and nocash expenditures (Hamdn, 2013). Furthermore, studies on the use of AIS and its effectiveness in manufacturing industries have posited that AIS usage have been supportive to countries economy (Aldalabeeh & Al-Zeaud, 2012; Alzoubi, 2011). The AIS assists in public shareholding measurement and cost thrift (Aldalabeeh & 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 organisations that employ quality information systems (Alzoubi, 2011). Considering the link between the use of AIS and organisational performance in banking sector, AIS is essentially considered a managerial decisionmaking 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 a key to organisational performance. This essentially explains the link between the use of AIS and organisational performance. Nowadays, through the efficient and productive use of AIS, many organisations incessantly pursue to develop and expand the efficiency and effectiveness of its functional operations for higher profitability and increased performance both in the short-run and long-run (Wongsim, 2012). Majority of the literature on AIS are merely descriptive in nature and hence, cannot show in a meaningful way the possible linkage between the effectiveness of AIS and organisational performance (Aleqab, 2009). While evidence has shown that management of banks has lacked the use of modern and developed AIS in the process of decision-making and other organisational planning (Ogah, 2013), more empirical study are recommended into the future to further extensively examine the effective use of AIS in banking sector in order to accelerate the development of electronic banking (Hamdn, 2013). Thus, the main objective of this paper is to describe the importance of the usage of Accounting Information System in banking sector.

Adoption of Accounting Information System

Accounting Information System (AIS) plays a significant role in the execution of accounting functions and activities (Alamin, 2013). The emergence and rapid expansion of information technology in 1950s led to an increased development in information storage and processing (Kharuddin et al., 2010; Oulowa, 2011; Rashid et al., 2002). The use of information has increased over the years due to innovations in information technology and its superiority in analysing large amount of data and in producing accurate and timely reports. These exceptional characteristics of information technology have resulted to the introduction of enormous information systems including the Manufacturing Resource Planning system (MRP), Human Resource System (HRS), and Accounting Information System (AIS).

Over the years, technological innovations in information system has certainly changed the channels on how businesses are conducted (Elliott, 1992). Increased organisational dependence on information systems motivates the attention of organisational management towards improving the quality of information systems (Gorla et al., 2010). Organisations that adopts and implement these innovations are regarded as being of competitive advantage (Alia et al., 2012). Notably, innovation in computer technology have significantly affected numerous organisation practices and routines, including the accounting process (Aleqab & Adel, 2013; Ismail et al., 2012). Inefficiencies resulting in the form of wrong data entry, ineffective tasks performance and large consumption of paper products, generated a lot of difficulties in daily business operations and at large, measuring organisational performance (Alabdullah et al., 2018). These, among other shortfalls and inefficiencies led to the advent of Accounting Information System (AIS). It is an information system that gathers, analyses and produces reports more efficiently (Kharuddin et al., 2010). The emergence and adoption of AIS resulted to the growing needs for Information Quality (IQ). Interestingly, Information Quality is a new development in the field of AIS; hence,

the need for empirical studies to measure and provides an understanding into issues and provides clarifications related to information quality in AIS adoption. A large number of information quality frameworks are proposed by many studies in the literature, but to the knowledge of this study, none of the previous literature extensively examined the area of AIS adoption. More evidence from (Wongsim, 2012) supported that, there is lack of standardised framework and adequate knowledge on information quality that will guide the organisation in the adoption of AIS.

Generally, the present state of AIS among several banks is yet to be fully utilised. Though the trend is improving, but much works are still needed to be done to ensure that the banking sector fully utilise the potentials of AIS in view of improving organisation performance (Hamdn, 2013). Although, to successfully implement the AIS adoption, it is of utmost significance to put into consideration the essential factors influencing the information quality in the process of AIS adoption (Wongsim, 2012). Interestingly, (Alamin, 2013) indicated that large number of corporate organisations have seen over the years adopting AIS, which is regarded as an essential factor to any industry in order to operate and manage efficiently.

Accounting Information System in Banking Sector

The AIS systems application has evolved and this has also aided the advancement of technology-supported banking operations. The banks in developed countries employ new technologies in facilitating data processing and information appropriate for speed and timely connection with the world's economic and financial market. This has encouraged to provide timely, adequate and error-free information for planning, controlling and decision-making purposes (Wedyan et al., 2012).

Banks are generally grouped as central banks, commercial, and specialised banks. The specialised banks include industrial, agricultural, cooperative, real estate, and saving deposit banks. The duties of the central banks include supervising and controlling other banks, as well as proposing monetary policy direction. The central bank is also called the apex bank and banker to the government, because it issues and manage local currency on behalf of the government, and also keeps public accounts. Other responsibilities are the management of gold and foreign currencies reserves, as well as establishing the financial policy of the state for monetary stability (Maziad, 2009). In any country, the fundamental unit of any banking sector is the banks since they deal with the acceptance and keeping of customer's deposit in the form of savings which are regarded as the essential components of investment. The duty of specialized banks, as another form of commercial bank, is to fund certain sectors of the nation's economy. Banks can also be categorised into industrial banks, because they make available medium and long-term services for business organisations and industries particularly those categorised as small-and-medium enterprises. Another category is the agricultural banks, which provide banking services to agro-allied industries and other small scale farmers, assisting them to perform their roles in the development of agriculture. Likewise the cooperative banks, which make available numerous services to the local multi-purpose cooperative societies including granting of loanable loans at a lowest possible rate of interest. Furthermore, the real estate or mortgage banks also make available a number of banking services to individuals or corporate organisations in respect to provision of residential houses, plots and other construction facilities. Finally is the saving deposit banks, which also provide credit facilities to micro enterprises, sole proprietorships and other small business employees (CBJ, 2014). Interestingly, literature on the measurement and efficiency of banking institutions has continued to grow rapidly in the western world particularly

over the last decade. On the other hand, little empirical research has been conducted in the Middle East region in terms of measuring the efficiency of banks.

HYPOTHESES

Quality of Service

literature regarding the measuring and conceptualization of e-service quality is quite various and lacks consensus (Chen et al., 2013) Core service can be referred to as all service components (Sureshchandar, et al., 2002) and the main products supplied which gives explanation on the “*what*” of a service (Seth et al., 2005). Rai et al. (2002) specified that from the service quality perspective, the organization goal is to make high quality services available for customers, and multiple processes are joined for achieving this. Also, service quality concept is applicable to information systems, since IS can be considered as a function of service in dealing with information needs of an organisation (Chang et al., 2012). Thus, an organization information department becomes a service provider.

Service quality may be defined as based on comparison of users of certain services among perceived services and expected services (Chang et al., 2012; Parasuraman et al., 2002). Zeithaml (2000) also stated that the expected services major decisive factors are: past experience, personal needs, word-of-mouth communications, and communications between service-providers and service-users. Other research established their argument on the justification of constructs developed by DeLone and McLean (2003) that service quality should be included in the success factors of information systems (Petter et al., 2008). Zaidi et al. (2014) suggested a broad and critical perspective on how best to measure the IS success factors which includes system quality, information quality, service quality and usefulness, amid the seven variables recommended for assessing the performance of e-government service and trust. Based on the aforementioned literature, it can be deduced that system quality, information quality, service quality and user-satisfaction has established a substantial effects on the evaluation of success factors for information systems.

Service quality is referred to the support in terms of effective service delivery of AIS to the banking industry. It is comprehensively measured by reliability, responsiveness, dependability, usefulness, increase in customers’ attention, and improvement in customers’ relationship. As earlier highlighted in the review above, these measures in service quality are potent in ensuring organisational performance. Therefore, based on major findings from past related studies (Bejjar & Younes, 2013; Weerakoon & Wijavanayake, 2013; Wei, 2012; Yee et al., 2010; Zaidi et al., 2014) that suggested the existence of positive associated link between service quality and organisational performance, this study hypothesizes that:

H1: Service Quality as AIS Positively Influences Financial Performance

Quality Information and Data

Quality information and data is widely utilised in the literature as both construct and dimension for measuring user satisfaction (Baroudi & Orlikowski, 1988; Doll et al., 1994). Several studies including Fraser & Salter (1995) established an information quality generic scale. Others make use of the information quality measures from the original D&M model Strong &

Wang (1996), while other modified the construct of D&M (2003) by including elements from other relevant perspective (Gorla et al., 2010; Wixom & Watson, 2001).

Numerous researchers have centred on evaluating basic quality of the system output through its published information. In initial studies, instruments provided by Gallagher (1974) added measures of informativeness, relevance, usefulness, and importance which were employed by Munro & Davis (1977) and later for measuring a perceived information value for decision-makers. Also, Swanson (1974) contributed by adding information characteristics such as conciseness, uniqueness, clarity, and readability, while Olson & Ives (1982) added appearance and accuracy as measures of information quality. In another perspective, Ahituv (1980) found five more information characteristics: accuracy, timeliness, relevance, formatting, and aggregation while King & Epstein (1983) suggested understandability, sufficiency, bias, reliability, freedom, comparability, quantitiveness, and decision relevance. Therefore, based on major findings from past related studies Bejjar & Younes (2013); Bharati & Chaudhury (2015) Bradley et al. (2006) that expressed and supported the existence of positive and significant associated linkage between information quality and organisational performance, this study hypothesizes that:

H2: Quality information and data as AIS Positively Influences Financial Performance.

METHODOLOGY

This study employs survey questionnaire as the instrument for its data collection from private banks in Jordan. In this study, the choosing target population are the assistant branch managers of the selected private banks in Jordan. In view of that, a total number of thirteen (13) private banks were employed and a set of questionnaires are made available and further distributed to the assistant branch managers of these banks. Therefore, it is imperative to carefully formulate the questionnaire items with due simplicity in view of reflecting the dimensions used in measuring the constructs of the research model. For this study, items of the questionnaires are designed through adaptation or adoption from past related studies. Items addressing the respondents' demographic details are elicited as part of the questionnaire, and each of the tow variables being studied with their items in their respective sections. which is the factors of AIS namely; quality of service, quality of information data. The development of the survey instruments is guided by relevant literatures. The selected target population of this study are assumed to be responsible for ensuring effective business performance and attainment of organisational objectives, since they includes among the fundamental part of the AIS. For measuring Quality of Information and Data was adopted from previous studies. Wongsim (2012) confirmed the validity of these measures of information quality using both Confirmatory Factor Analysis (CFA) and Exploratory Factor Analysis (EFA). Hence, the adapted measures of information quality was also confirmed to be valid and reliable from the study of Gorla et al. (2010) and Huang et al. (1999).

Quality of service ensures users' satisfaction is actualized. Measuring quality of service has been extensively done using the SERVQUAL model (Kettinger & Lee, 1997; Pitt et al., 1995). Items of quality of service are constructed to express the conceptualised term of service quality in this study by the adaptation of (Rahaman et al., 2011) SERVQUAL.

RESULTS AND DISCUSSION

In this research, the overall statistical description of variables are evaluated using descriptive analysis which includes the standard deviation, mean, minimum, maximum value of variables. Whereby, the standard deviation represents the amount of variance in the distribution of a variable, the mean depicts the average responses from the respondents, the minimum, depicts the lowest responses from the respondents, maximum represents the highest responses from the respondents.

Variables	Mean	Standard Deviation	Maximum Value	Minimum Value
Quality of Service	5.118	1.044	7	2
Quality of Information and Data	5.018	0.977	7	1

Table 1 represents the standard deviation, mean, minimum, and maximum of the AIS variables which includes quality of service, quality of information and data. It is clear from the Table that the variables (quality of service, quality of information and data) got a maximum response of 7 and in the case of minimum response Quality of Service got 2 while Quality of Information and Data got a minimum response of 1. The average answer is depicted in the mean column whereby for quality of information and data is 5.018 and quality of service is 5.11. The highest positive response is from quality of information and data which is at mean 5.018 and standard deviation at 0.977, signifying that information quality of accounting information system is an important indicator that determines the usage of AIS in banking sector. Other indicator got a mean value of more than 4.00 and very close to 5 indicating that service quality (5.911) bear some importance in determining the adopting and usage of AIS in banking sector. The assessment criteria, including coefficient of determination, effects size, goodness of fit, and predictive relevance, reveals a strong evidence in support of the significant usage of AIS in banking sector. A detailed but feasible and viable recommendations shall be offered both to the public sector and also to the management of commercial banks in order to facilitates the decision making process of the stakeholders and other private sector investors in the banking sector. Interestingly, the major findings from this study is found to be consistent with the current related studies regarding the associated usage of factors and Quality of Service and Quality of Information and Data as an AIS model. Moreover, unresolved issues related to these case still calls for further study to be conducted (Ali et al., 2016). Adopting evaluation of Accounting information systems and its impact on organisational performance is unending (Chang & King, 2005; Qiang et al., 2008; Alabdullah, 2016). This is as a result of duplication of the associated constructs (DeLone & McLean, 1992; Rai Lang & Welker, 2002) and the uncertainty of AIS success evaluation generally (Qiang et al., 2008). Most recent reviews on the effectiveness or success of AIS shows that associated and existing usage the constructs of quality of information and data effectiveness and organisational performance remains inconclusive, hence further upcoming literature should ensure critical evaluation of the impact of quality of information and data in banking sector in line with the suggestion provided (Argyropoulou, 2013; Petter et al., 2008:2012). This is undoubtedly extensible to AIS, being a typical type of quality of service, quality of information and data.

Any bank, more so in the banking sector, depends on its superior performance system for continued existence and growth. Similarly, superior banking performance depends on a host of factors, which are called antecedents to organizational performance (Alabdullah, 2016). From a critical literature review, examples of antecedents to organizational performance include: leadership, total quality management, workers' motivation, external environment, organizational culture, personnel training and development, compensation, organizational capabilities and resources, corporate entrepreneurship, service quality, and market orientation (Argyropoulou, 2013; Gavrea et al., 2012). Thus, there is a need to study the roles the information quality, service quality, system quality, data quality and performance, with samples taken from the service industry, banking sector in particular with a view to bridging the gap in the literature. Some studies indicate that AISs are generally not handled well in several developed countries and recommend making further study for banking sector. Generally, banking sector significantly contributes to the economic growth any nation irrespective of the developmental level. Nonetheless, the strength and performance of the banking sector is regarded as the determining factor for measuring its contribution to the national output growth and development.

CONCLUSION

The main objective of this study is to investigate the usage of Accounting Information System (AIS) in banking sector in Jordan. The present study is on the quality of service and quality information and data within accounting information system in banking sector. Fundamentally, this research was significantly encouraged by the results of current literature concerning the adopting that exists accounting information system in banking sector. A set of questionnaires were distributed and made available to the assistant branch managers of all the selected banks who are regarded to be well-informed and experienced in terms of Accounting Information System based on their designated official functions. These assistant branch managers are believed to possess the responsibility of evaluating how effective the impact of Accounting Information System in banking sector.

LIMITATIONS AND RECOMMENDATIONS FOR FUTURE RESEARCH

The findings of this study are based on a single industry (banking industry). As a result, it might be difficult to generalize the findings to organizations in other industries without carrying out a similar study on them. Therefore, future studies could conduct a similar study on institutions in other industries, possibly in the Jordan context with a view to corroborating the findings of this study.

Many previous studies have indicated challenges in the evaluation of information systems, and concluded with lack of understanding as to how, why, and when to measure AIS systems (Gorla et al., 2010; Wang & Liao, 2008). The present findings from this study is expected to encourage new approach and direction in the analysis of AIS adoption the field of IS by emphasising on how effective AIS may impact on the organizational performance.

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