

The Applicability of AIS Practices within Modern Business Environment – Case Study of Amman Stock Exchange

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Abstract

Current study aimed at examining the applicability of Accounting Information Systems within modern business environment in Amman stock exchange between the variables of **Software** (Industrial application structure, Business application structure, Cloud computing structure) and **Hardware** (Stand-alone structure design, Multi-user structure design, Network structure design, Cloud computing structure design). In order to be able to highlight extent of applicability researcher has chosen quantitative approach through applying the study tool (questionnaire) on accounting managers within (102) companies in Amman Stock Exchange. After application process total of (65) accounting managers responded to questionnaire with a response rate of 63.72% which was statistically acceptable. Results of study indicated a high level of applicability of AIS within Amman Stock Exchange companies attributed to high awareness of accounting managers regarding AIS. In addition to that, it appeared through the analysis that the applicability degree is more influenced by software equipment more than the hardware which explains that high awareness of individuals. In light of such results; study recommends companies in Amman stock exchange should continue embracing AISs in their business practices to increase their speed of processing tasks, use data entered into the system to compile reports, and make correction easily where necessary.

Keywords: accounting information system AIS, stock exchange, business environment, AIS applicability

1. Introduction

Accounting Information System has increasingly been adopted in the Kingdom of Jordan. It has grown into complex decision-support systems known to increase the accuracy and speed of traditionally accounting tasks. Businesses are using this system to automate traditional bookkeeping processes and paper-based ledgers and morphed these processes into full decision-making systems. This accounting system has been recognized as important in securely collecting, processing, sending, and distributing business intelligence information utilized by various professions to make decisions including chief financial officers (CFOs), tax agencies, regulators, managers, accountants, business analysts, and consultants. This section explores AIS and its applicability. The study empirically examines the applicability degree of AIS practices within modern business environment in Amman stock exchange. Section 1 covers the problem statement, hypothesis guiding the research, and the framework linking dependent and independent variable.

1.1 Study Problem

Accounting has experienced multiple improvements, including the computerization of accounting processes as traditional paper-based systems; bookkeeping processes and paper-based ledgers have been improved through automation. These systems have been transformed by embracing AIS which as reflected in the extant literature as according to (Quinn & Kristandl, 2014; Gelinas et al., 2015; Ghasemi et al., 2011; Hurt, 2016). For example, Gelinas et al. (2015) noted that AIS is useful in providing assistance and traffic monitoring for organization's financial and accounting activities. According to Gelinas et al. (2015) AIS is one of the main components in any establishments, it is a key factor to achieve financial stability as it helps accountants in companies to identify and measure their financial wealth, which includes the rates of liquidity and profit, and without accounting companies they will not be able to make various decisions short-term or long-term. For Hurt (2016) AIS improves efficiency because it is known to be more efficient and faster than the traditional accounting systems in

processing data. Hurt (2016) also added that AIS makes information available immediately and hardware such as scanners are useful to companies as they automatically generate useful accounting information. Other studies have discussed the features of AIS, including what constitutes these systems, namely people, procedure and instructions, data, technology (hardware and software), information technology infrastructure, and internal controls (Abernethy, & Lillis, 1995). Yet other studies have examined the use of AIS in the business environment noting that these systems perform various functions in the business world, including business analysis, fundamental analysis, strategic management and planning, business valuation, feasibility studies, accurate and effecting costing, investment analysis and appraisal, fighting fraud, and variance analysis (Gelinias, Dull, & Wheeler, 2015).

From that point, current study sought to answer the following question:

- Are AIS tools and variables applicable within the modern business environment among companies in Amman stock exchange?

1.2 Importance of Problem

Business environment is becoming more complicated with time. There are many procedures and activities that are taking place to complete organizational activities, and technology appeared to be a man character in the scene. Though studies have demonstrated applicability of AIS within the modern business environment, few have investigated the applicability of these systems within the context of Jordan Kingdom. The current study sought to examine the applicability degree of AIS practices within modern business environment in Amman stock exchange. This study is expected to help decision makers within SMEs in Jordan to understand the undeniable profit that can be generated from involving technology into organizational activities, in addition to that, study would be able to measure the degree of awareness that Amman stock exchange organizations have in the field of AIS.

1.3 Relevant Scholarship

Accounting Information System (AIS)

Accounting information system (AIS) is a formal computer-based system used to securely collect, process, send, and distributes both non-financial and financial business intelligence information used by chief financial officers (CFOs), tax agencies, regulators, managers, accountants, business analysts, and consultants. Organizations use AIS to collect, process, and store accounting and financial data, as well as generate information reports used by managers and other parties to make business decisions (Kwarteng and Aveh, 2018). According to Wisna (2013), AIS have three basic functions. First, these systems ensure there are controls to accurately process and record data. Secondly, AIS information used to make decisions, including producing financial statements and managerial reports. Third, AIS are effective and efficient at data collection and storage with regard to financial activities of the organization, including sourcing transaction data from source materials, posting data to ledgers from journals, and recording transactions in journals (Sisaye and Birnberg, 2014).

According to Ammar (2017) AIS are constituted by features including: people, procedure and instructions, data, technology (hardware and software), information technology infrastructure, and internal controls. People are system users of accounting systems, including system administrators, designers, managers, accountants, business analysts, auditors, chief financial officers, and other professionals. Instructions and procedure/processes are the ways of collecting, storing, retrieving, and processing data. These automated and manual methods allow data to come from external sources and internal sources. They are coded into AIS software and employees through training and documentation.

Choe(1996) argued that AIS require a database structure for storing data or information, including a computer languages and structured query language (SQL). AIS also require various input screens used for data entry, system users, and output formats to meet different users' needs. In general data contained in AIS, includes sales orders, sales analysis reports, customer billing statements, tax information, timekeeping, payroll information, inventory data, general ledger, vendor invoices, check registers, and purchase requisitions. The software part of AIS is computer programs used for data processing, while internal controls and checks are crucial security measures for protecting data processed and stored in the AIS. However, Robust and high quality AIS are characterized by the following inputs and infrastructure: accuracy, timely, completeness, security, comparability, clarity/understandability, neutrality, verifiability, compliance conscious, relevance, cost effective, and close alignment with the organization's business objective(Wisna, 2013; Trigo, Belfo, &Estebanez, 2014; Strauss, Kristandl, & Quinn, 2015).

AIS within Business Environment

AIS produce information used in the business environment for various functions: business analysis, fundamental analysis, strategic management and planning, business valuation, feasibility studies, accurate and effecting costing, investment analysis and appraisal, fighting fraud, and variance analysis (Soudani, 2012). In the business world, AISs are used by managers to make important financial decisions, Trigo et al, (2014) stated that managers use AIS to gather, process, analyze and store organization's financial data as well as retrieve and report it to its users: financial officers, consultants, accountants, government tax authorities, and auditors. On the other hand, Richardson et al, (2014) saw that AIS serve three important functions in the business world; first, organizations use AIS to fulfill their statutory obligations of collecting, preparing and publishing accounting information and statements, secondly, organizations use AIS to provide accurate and reliable financial data to their users and analyze financial data and thirdly, organizations use AIS to protect accounting data from theft or breach. For others (e.g., Al-dmour et al., 2017) AIS are used within the business environment to improve business performance of organizations. According to Al-dmour et al. (2017) are used within the business environment to improve the firm's performance and as an enabler to competitive advantage. According to Abbasi et al. (2015) AIS helps firms improve their business performance, and recognize potential benefits of investing in Information Technology (IT).

Other businesses have used AIS to automate traditional bookkeeping processes and paper-based ledgers and morphed these processes into full decision-making systems (Boczko, 2007; O'Donnell & David, 2000). In this context, AIS serves a set of processes, cohesive organizational structure, documents and technologies and interrelated activities that captures, analyzes, processes, and reports data, and provide crucial information used for control purposes and decision-making to external and internal parties (Hurt, 2016; Quinn & Kristandl, 2014).

For Gulinas et al. (2015) firms within the business world integrate AIS with other information systems and use it as a specialized subsystem as specialized Management Information Systems (MIS) subsystems. Gulinas et al. (2015) further added that with the rise of enterprise resource planning (ERP) and material resource planning (MRP), firms has made it easier for firms to integrate AIS with other information technology systems. Supporting Gulinas et al. (2015), Wisna (2013) indicated that AIS are being used by firms as decision-support systems, and to increase the accuracy and speed of traditional accounting tasks. According to Wisna (2013), AIS are used to improve the quality of accounting information measured in terms of usefulness, flexibility, scope, reliability, timeliness, and aggregation (Chapman and Kihn, 2009).

Organizations in Jordan operate in a highly competitive and uncertain environment, increasing uncertainty about their circumstances, which increases the likelihood that these companies will face crises that threaten their viability, growth and sustainability. These companies have faced some crises and difficulties as a result of being affected by the repercussions of the contemporary global financial crisis and most of them were unable to manage their financial resources efficiently and some profits declined due to the loss of their foreign investments. In addition to that, the value of its shares and financial portfolios in the Amman Stock Exchange, represented in the value of shares of Jordanian companies listed on the stock exchange, to which these organizations contribute. Bad collateral, as well as lower collateral mortgages due to the decline in prices and thus the inability of borrowers customers to repay their debts. Hence, accounting information systems represent one of the most important tools to provide the necessary information for financial management in the organizations operating in Jordan. , By providing early warnings and reporting on appropriate events in a timely manner

Practices of AIS

AIS can also be also categorized into three based on the nature of practices, process or activity involved: processing mode AIS, entity objective AIS and time based AIS. Based on the processing mode, AIS can be identified as online real-time systems, online batch systems, and batch processing systems (Toth, 2012). Batch processing systems involves the user entering transactions periodically and when they occur, as well as running a batch process by integrating the process the financial transactions into accounting records. Online batch systems take a similar form to batch processing systems. However, unlike batch processing systems, online batch systems process batches and record transactions using online-based accounting software (Wisna, 2013; Trigo, Belfo, & Estebanez, 2014; Strauss, Kristandl, & Quinn, 2015).

Types of AIS based on the objectives of the systems involve people purchasing AIS for recording financial transactions, and for decision making via customized reports. The three types of AIS based on system objectives include decision support systems, transaction processing systems, and expert systems. Transaction processing systems are primarily used to generate reports and process transactions. Decision support systems build models

by utilizing different areas of business. Expert systems helps managers diagnose and solve problems(Hurt, 2016; Granlund, 2011; Ghasemi et al., 2011).

Hardware

The hardware is the information technology infrastructure used to operate AIS (Grande et al, 2011). These hardware items include servers, computers, surge protectors, mobile devices, backup power supply, storage media, routers, and printers (Toth, 2012). Hardware design methods of AIS often embraced by modern enterprises include stand-alone structure design method, multi-user structure design method, network structure design method, and cloud computing structure design method(Fu, 2014).

Stand-alone structure design

According to Sori (2009) this design method requires that business information should be supplied to each computer to enable it to effectively handle different accounting information businesses while maintaining its independence. This method ensures independence among multiple computers, stability, low cost, simple configuration and management, and privacy of accounting data. Rom and Rohde (2007) saw that the independence of each computer is disadvantage in the sense that the system's efficiency is low given that only one user can use one computer at a time. The argument is that data sharing performance is not achieved and data exchange relation cannot be directly produced by computers. This design method is frequently applied in units that lack local area network, notably in small-and-medium-sized enterprises' AIS(Fu, 2014).

Multi-user structure design

In this multi-user structure design, same host computer is linked to multiple terminals. Host computers in this system can store all the databases and applications, and store and handle data intensively. The terminals of computers used in this structure lack external memory or CPU, however, they have output and input equipment (Stefanou, 2002). Host computers serve as disks for sharing information as according to Toth (2012) who stated that terminal access store data when the operating corresponding procedures store data in the host computer. This design can solve data output and input challenges and facilitate the sharing of various databases. One of the shortcomings of this design method is that under certain conditions notably high data volume and large size of software application, the system can be overloaded, obstructed, and cause data collision (Ismail and King, 2005). This may occur during the transfer of corresponding procedures, and the delivery of relevant documents. This design is also associated with poor expansion performance, high maintenance cost, and low application software. It is thought to be appropriate to firms' centralized data processing and large volumes of accounting business data(Fu, 2014).

Network structure design

This variable involves many computers at different geographical locations being connected via network equipment. The aim of linking many computers is to facilitate resource sharing and direct data exchange. Network structure design can be categorized into two based on forms of data transmission and their mode of operation: browser/server and client/server (Ismail, 2009). The client/server design method is characterized by one or more servers, network communication equipment, and multiple clients. It functions based on the principle that the distribution of tasks and applications is implemented between the client and server. In the browser/server category, the attention is on data access security, implementation of indexing and retrieval, and backup and recovery(Pan, 2014; Fu, 2014).

Cloud computing structure design

Cloud computing has emerged as a commercial supercomputing mode involving developing distributed processing, grid computing, and parallel processing. Infrastructure as a Service (IAAS) exemplifies the hardware design developed under cloud computing environment(Fu, 2014). Components that make the infrastructure in cloud computing environment include data pool, network resources, and servers. These components are used by customers as a service when needed(Scavo, Newton, & Longwell, 2012). Thus, these services are fully owned by suppliers who are also fully in charge of operation of the machine room. Customers can use these services by renting the storage capacity and computing power(Pan, 2014).

Software

The software is one of the components of AIS. This software is made up of computer programs used to retrieve, store, analyze and process financial data of an organization. Examples of these programs include Oracle's PeopleSoft, Sage Group's MAS 200 or MAS 90, Microsoft's Dynamics GP, SAP's Business One, Sage's Sage 50 Accounting, and Intuit's QuickBooks. Effective AIS software has the following as key components:

security, reliability, and quality (Scavo, Newton, & Longwell, 2012; Fu, 2014). Industrial design methods of AIS of embraced by modern enterprises, include industrial application structure design, business application structure design method, and cloud computing structure design method (Pan, 2014; Fu, 2014).

Industrial application structure

Production and management are the industrial enterprises' main business. These enterprises are social organizations and recognize that three organically connected links characterize production and management: sales, production and supply (Fu, 2014). They recognize the role of reproduction in generating profits to the enterprise, and that during the implementation of reproduction; enterprises often realize monetary capital appreciation in three stages: sales, production and purchasing. In this way, industrial enterprise accounting includes cost control management, financial accounting, and sales management (Zhang, 2013).

Business application structure

This method identifies commercial enterprises as economic organizations belonging to the commodity circulation category, and that their aim is to profit. This method recognizes that the defining feature of business application structure design method is a combination of retail and wholesale (Li, 2013). In view of this method, various expenditures are independently checked by different departments, and that commodity varieties should be used to get statistics of sales, purchasing and storage data. It requires suppliers to count the sales receivables and volume in line with trade debtors, and the accounting statement prepared for submission to the relevant competent department. According to Li (2012), two design methods are used by business enterprises: extended application structure and basic application structure.

Cloud computing structure

Software designing under cloud computing suggests that software as a service (SAAS) should be used as it is an emerging design mature design method which is maturing as network technology is further developed (Scavo, Newton, & Longwell, 2012). Software service is responsible for installing application software in infrastructure (Fu, 2014). This service is also responsible for preliminary operations of the enterprise as well as its management and maintenance. Under this SAAS mode, modules related to AIS, including checking system, accounting management system, and decision-making maintenance are installed in cloud. Users can manage the enterprises' accounting activities by ordering the corresponding business module without necessarily purchasing the usage and maintenance of license of financial software (Huang, 2012; Li, 2012).

The Applicability of AIS within Modern Business

Organizations across industries and sectors are applying AIS programs provided by bands like Microsoft and Oracle to meet organization's needs. For example, within the banking industry, AISs are being used to convert financial data into useful accounting information including inventory data, payroll information, sales analysis reports, general ledger, and vendor invoices. The reliability and accuracy of this data is regulated by federal and state agencies. As indicated by (), decision makers such as managers and CFOs are using data from AISs to improve customer experience, streamline their operations, and foster improved financial performance (Granlund, 2011).

These AISs, including mortgage banking applications, general ledger systems, accounting software programs and others are being used for different purposes, including collecting and managing financial data, and sharing it with other interested parties, including managers, chief financial officers, auditors, and accountants. These software programs are being used in modern businesses to generate comprehensive reports, and track accounting activity (Ghasemi et al., 2011).

Loan Accounting Applications

Loan accounting applications AISs are designed for loan life cycle process automation. These systems do this by analyzing and processing customer data with a view to determining creditworthiness of loan applicants. Employees use this system to process customer's information. Programs in this AIS category feature advanced solutions for debt management, application management, collateral tracking, loan processing, loan and lease structuring. These systems can store, analyze, and process large volumes of data, and streamline regulatory compliance. These systems can eliminate or minimize human error and free up employees' time because they require minimal manual work (Hurt, 2016; Granlund, 2011; Ghasemi et al., 2011).

General Ledger Systems

General ledge systems are used by organizations to manage their financial reports and accounting entries. These AISs generate detailed reports according to rules enforced by the organization. These reports include balance

sheets, account statements, and profit and losses(Mauldin, &Ruchala, 1999). They make it easier for firms to balance their books by recording each transaction, and identifying unusual transactions that help organization prevent fraud. These AIS also data for evaluating the financial status of the organization as well as reduce manual processes involved in financial analysis. Other includes components in general ledge systems include fixed-asset tracking, document management tools, communication tools(Ghasemi et al., 2011).

Mortgage Accounting Software

Mortgage accounting software is used by financial brokers and mortgage banks. Organizations use this software to manage, streamline, and automate administration tasks involved in mortgage, and track all customer journey steps. Advanced mortgage administration and accounting systems offer key features such as contact management, credit reporting, amortization schedules, trend analysis, and loan servicing. These systems can automatically track payments and process electronic mortgage, and generate tax and customer statements, eliminating the manual data processing and allowing for faster data processing and entry. Organizations are also using web-based AIS applications, including customer account applications, internet banking, and other programs to achieve faster computing transactions and effectively manage data. These systems automate time-consuming tasks, and minimize the risk of fraud and data loss(Hurt, 2016; Granlund, 2011).

Manual Systems and Legacy Systems

Manual AISs are used mostly by home-based businesses and small businesses. However, these systems require general ledger, source documents, subsidiary journals or special journals.Legacy systems are used by business firms to retrieve valuable historical data. These systems can be customized to the individual firm's specific needs(Wisna, 2013; Trigo, Belfo, &Estebanez, 2014; Strauss, Kristandl, & Quinn, 2015 Richardson, Chang, & Smith, 2014).

1.4 State Hypotheses and Their Correspondence to Research Design

In order to be able to reach a precise resolution following set of hypotheses was generated:

Main hypothesis:

AIS variables are applicable within the modern business environment among companies in Amman stock exchange.

Sub-Hypotheses:

H1: Hardware tool of AIS are applicable within the modern business environment among companies in Amman stock exchange.

H2: Software tool of AIS are applicable within the modern business environment among companies in Amman stock exchange.

Based on the above argument, and launching from the presented question and hypotheses which supported the question; researcher developed the following model of study depending on recent studies and articles including (Kaluarachchi, 2016; Fakeeh, 2015; Meng, 2014).

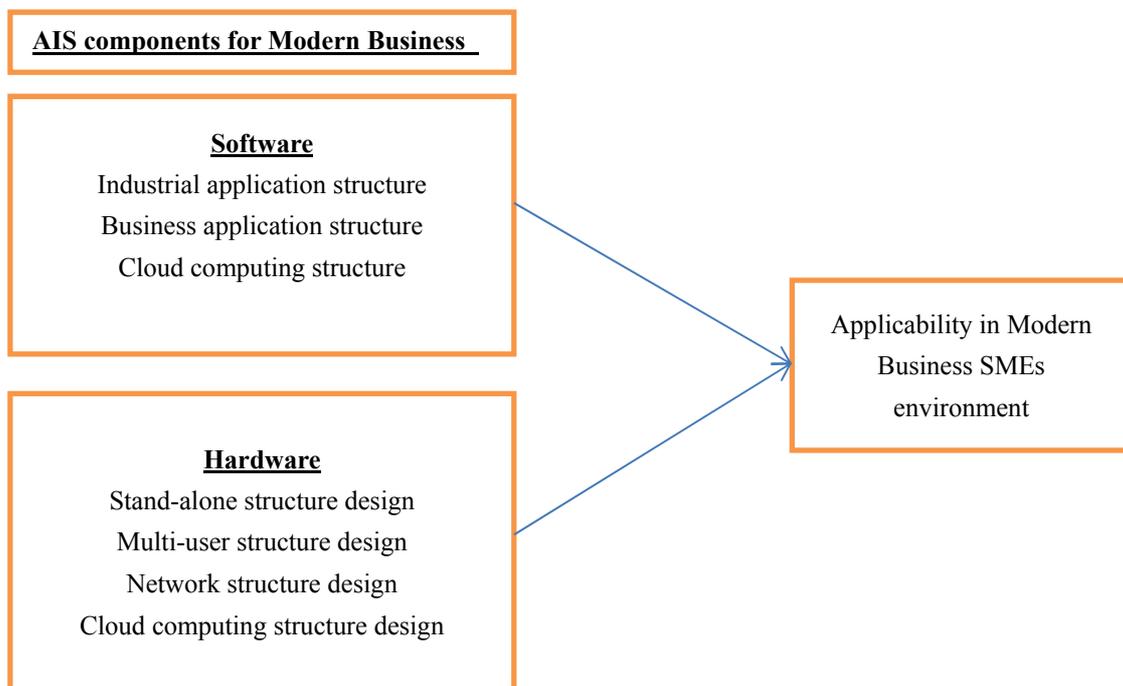


Figure 1. Study Model (Kaluarachchi, 2016; Fakeeh, 2015; Meng, 2014)

2. Method

2.1 Methodological Approach

This study adopted a quantitative research approach: descriptive correlational research approach. In this way, the problem was quantified by generating numerical data relating to study variables (AIS components) and applicability into business environment. Accordingly, attitudes and opinions were quantified and data generalized from a large sample population. It involved exploring and observing relationships between AIS components for modern business namely software and hardware and applicability to modern business SMEs environment. Variables under the software components were cloud computing structure, business application structure, and industrial application structure. On the other hand, variables under hardware component of AIS included stand-alone structure design, multi-user structure design, and cloud computing structure design (Creswell, 2013).

Quantitative data used in this study was collected using a structure questionnaire. The questionnaire contained two sections: section A and section B. Section A contained questions on demographic variables while section B contained closed-ended questions on the key study variables: AIS hardware and software variables and the applicability of AIS in business environment. Section B questions were scored on a 5-point Likert scale ranging from strongly disagree (1) to strongly agree 5 with 3 denoting neutral. Using this scale, participants expressed how much they disagreed or agreed with a particular statement relating to key study variables: hardware AIS component, software AIS component, and the applicability of AIS in business environment. Data was analyzed using SPSS version 22 into descriptive statistics and correlation coefficients.

2.2 Population and Sample Procedures

Population of study consisted of brokerage companies registered officially within Amman stock exchange during the fiscal year 2018-2019. Total number of companies was (102) and based on that, researcher has chosen 102 companies to resemble sample of study. Accounting managers were chosen to respond to the questionnaire from each company. During the application process 102 questionnaires were distributed, after the data gathering researcher was able to collect 65 properly filled questionnaires which were valid for data analysis reaching a ration of response to 63.72% which was statistically acceptable.

3. Results

3.1 Demographic results

Table 1. Sample Characteristics According to Gender

		<i>Frequenc</i>	<i>Percen</i>	<i>Valid</i>	<i>Cumulative</i>
		<i>y</i>	<i>t</i>	<i>Percent</i>	<i>Percent</i>
Valid	Males	49	75.4	75.4	75.4
	Females	16	24.6	24.6	100.0
	Total	65	100.0	100.0	

According to table 1, it appeared that the majority of the sample was mean forming 75.4% of the sample with frequency of 49 individuals compared to females who appeared to form only 24.6% of the total sample.

Table 2. Sample Characteristics According to age

		<i>Frequenc</i>	<i>Percen</i>	<i>Valid</i>	<i>Cumulative</i>
		<i>y</i>	<i>t</i>	<i>Percent</i>	<i>Percent</i>
Valid	22-27	9	13.8	13.8	13.8
	28-33	29	44.6	44.6	58.5
	34-39	16	24.6	24.6	83.1
	+40	11	16.9	16.9	100.0
	Total	65	100.0	100.0	

As for the sample characteristic according to age, it appeared in table 2 that the majority of the sample was individuals within the age range of 28-33 years old forming 44.6% of the sample. The least age range within the sample appeared to be individuals within the age range of 22-27 years old forming 13.8% of the sample.

Table 3. Sample Characteristics According to educational level

		<i>Frequenc</i>	<i>Percen</i>	<i>Valid</i>	<i>Cumulative</i>
		<i>y</i>	<i>t</i>	<i>Percent</i>	<i>Percent</i>
Valid	BA	7	10.8	10.8	10.8
	MA	46	70.8	70.8	81.5
	PhD	12	18.5	18.5	100.0
	Total	65	100.0	100.0	

Looking at table 3, it can be seen that the majority of the sample was MA degree holders forming 70.8% of the sample compared to only 10.8% of the sample who held BA degree.

Table 4. Sample Characteristics According to experience

		<i>Frequenc</i>	<i>Percen</i>	<i>Valid</i>	<i>Cumulative</i>
		<i>y</i>	<i>t</i>	<i>Percent</i>	<i>Percent</i>
Valid	2-4	20	30.8	30.8	30.8
	5-7	31	47.7	47.7	78.5
	+8	14	21.5	21.5	100.0
	Total	65	100.0	100.0	

Table 4 highlighted respondents' answers to the experience demographic. It appeared that the majority of the sample had an experience within accounting information system ranging between 5-7 years forming 47.7% of the sample. While experienced individuals with more than 8 years appeared to be 21.5% of the sample. This can be attributed to the modernity of AIS in general.

3.2 Questionnaire Analysis

Table 5. Descriptive Statistics

	<i>N</i>	<i>Minimum</i>	<i>Maximum</i>	<i>Mean</i>	<i>Std. Deviation</i>
AIS in Business Environment					
AIS supports financial performance which is for the benefit of business	65	1	5	4.45	.730
Modern business needs to be reliable and well-built, this can happen through AIS	65	1	5	4.29	.805
AIS application are well-known and applied within the organization	65	2	5	4.38	.700
We always look for better practices of AIS	65	1	5	4.38	.784
The organization makes sure that the auditing process is well done and matched the modern AIS applications	65	2	5	4.35	.717
Software Applicability					
Industrial application structure					
AIS is more involved within industrial sector that is concerned with production and management	65	2	5	4.38	.764
AIS is needed for sectors that are more into production, supply and sales	65	1	5	4.51	.773
Financial organization can better organize the flow of work depending on AIS applications	65	2	5	4.28	.740
There a high level of awareness regarding the needs of AIS applications	65	1	5	4.22	.838
Business application structure					
Modern business is based on technology so if the business have good technology then AIS applications is the best choice	65	1	5	4.11	.921
Business environment within modern business is suitable for AIS applications	65	2	5	4.18	.727
We have all the needed technology that support our use of AIS applications	65	3	5	4.23	.656
Staff is trained to depend on technology when completing tasks	65	1	5	4.20	1.003
Change acceptance in modern business supports AIS applications	65	1	5	3.97	1.000
Cloud computing structure					
Cloud storage is important, but traditional storage through paper is also important as a back up	65	1	5	4.00	.984
All staff is well-informed with the importance of cloud computing	65	1	5	3.98	.976
Cloud computing and data mining is a basic part of AIS application in modern business	65	1	5	3.92	.941
Hardware Applicability					
Stand-alone structure design					
Our infrastructure is supported with external equipment so as to handle various different accounting information businesses	65	1	5	3.92	.989
All appliances can be handled through the accounting department	65	1	5	3.98	1.082
The staff are all trained to be able to use modern technologies in accounting	65	1	5	3.91	1.042

Multi-user structure design					
We involve more than one user for the sake of maintaining the best practices in accounting department	65	1	5	3.94	.933
The same host computer is connected to multiple different terminals in this structure	65	1	5	4.06	1.102
All computer enjoy the best performance and applications	65	1	5	4.09	.861
Host computer can store all applications and databases in this system so as to handle and store data intensively	65	1	5	4.00	1.090
Network structure design					
Multiple computers scattered in different geographic locations are connected via network equipment so that computers can realize direct data exchange and resource sharing.	65	1	5	4.05	.799
The management makes sure that the network is well-built and supported in all types of maintenance	65	3	5	4.14	.682
The network was designed for the sake of making sure that all locations are connected and aware of the work flow	65	1	5	4.12	.910
Cloud computing structure design					
Storing data is important, cloud computing is important	65	1	5	4.18	.864
All information are stored on the cloud so it can be retrievable later one	65	3	5	4.14	.768
Cloud computing is the development of distributed processing, parallel processing and grid computing under modern <i>informatization</i> conditions and an emerging commercial supercomputing mode under network environment	65	1	5	4.11	.937
There is a high awareness of cloud computing within modern business	65	3	5	4.20	.666
Valid N (listwise)	65				

Based on table 5, it can be noticed that respondents have a highly positive attitudes toward above questions because their means are greater than mean of the scale (3)

3.2.1 Reliability Test

The value of Cronbach’s alpha coefficient of the instrument was calculated. It is found that alpha was 0.903 which is greater than 0.60. Thus, the instrument is reliable and its internal consistency is high (Sekaran, 2003).

3.2.2 Hypotheses Test

Main hypothesis:

One-Sample Statistics				
	N	Mean	Std. Deviation	Std. Error Mean
H	65	4.3723	.50729	.06292

One-Sample Test					
<i>Test Value = 3</i>					
t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
				Lower	Upper
H	21.810	64	.000	1.37231	1.2466 1.4980

One sample t test is used to test above hypothesis, it is found that t = 21.81 is significant at 0.05 level. That means AIS variables are applicable within the modern business environment among companies in Amman stock exchange.

Sub-Hypotheses:

H1: Hardware tool of AIS are applicable within the modern business environment among companies in Amman stock exchange.

<i>One-Sample Statistics</i>				
	N	Mean	Std. Deviation	Std. Error Mean
H1	65	4.1059	.52831	.06553

<i>One-Sample Test</i>						
<i>Test Value = 3</i>						
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
H1	16.876	64	.000	1.10588	.9750	1.2368

One sample t test is used to test above hypothesis, it is found that t = 16.876 is significant at 0.05 level. That means Hardware tool of AIS are applicable within the modern business environment among companies in Amman stock exchange.

H2: Software tool of AIS are applicable within the modern business environment among companies in Amman stock exchange.

<i>One-Sample Statistics</i>				
	N	Mean	Std. Deviation	Std. Error Mean
H2	65	4.1330	.47814	.05931

<i>One-Sample Test</i>						
<i>Test Value = 3</i>						
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
H	19.104	64	.000	1.13297	1.0145	1.2514
	2					

One sample t test is used to test above hypothesis, it is found that t = 19.104 is significant at 0.05 level. That means Software tool of AIS are applicable within the modern business environment among companies in Amman stock exchange.

4. Discussion

Current study investigated the applicability degree of AIS practices within modern business environment in Amman stock exchange; it sought to determine whether AIS variables are applicable within the modern business environment among companies in Amman stock exchange. It also sought to determine whether software tool of AIS are applicable within the modern business environment among companies in Amman stock exchange. The study further investigated whether hardware tool of AIS are applicable within the modern business environment among companies in Amman stock exchange.

Result confirmed at 0.05 significant levels that there is a positive and significant association between AIS variables and their application within the modern business environment among companies in Amman stock exchange. This suggested that AIS variables are applicable within the modern business environment among companies in Amman stock exchange. Results also revealed that at 0.05 significant levels, there significant positive association between hardware tool of AIS and their applicability within the modern business environment among companies in Amman stock exchange. This confirmed that hardware tool of AIS are applicable within the modern business environment among companies in Amman stock exchange. Lastly, as revealed in this study, there is a positive and significant relationship between the applications of software tool of AIS within the modern business environment among companies in Amman stock exchange. This further

confirmed that Software tool of AIS are applicable within the modern business environment among companies in Amman stock exchange.

Result of this study corroborate result found in previous studies that AIS are useful in the SMEs as companies can use AIS to collect, manage, store, process, report and retrieve financial data to allow business analysts accountants, auditors, chief financial officers, tax agencies, regulators and managers to use it (Trigo, Belfo, & Estebanez, 2014). Wisna (2013) also emphasized that AIS can be used to classify business transactions in two important ways: compliance, and internal management of decision making. According to Richardson, Chang, and Smith (2014), effective AIS can be applied by organization as they allow a high level of automation, completeness, and automatic and systematic processing of financial transactions. An effective AIS system can also allow companies to connect non-financial and financial data for business intelligence purposes which was also apparent in Kwarteng and Aveh (2018). Other benefits of AIS that justify the use and application of AISs in business environment may be summarized as follow (Strauss, Kristandl, & Quinn, 2015):

- Better information for strategic decision-making purposes
- Increased automation because of fewer people (resources) needed and the consistent output
- Faster turnaround times for compliance filing and management reporting, which in turn helps in strategic decision-making
- Flexibility and connectivity, which facilitates greater flexibility in data processing, collection and reporting and the organization's ability to connect non-financial and financial data

4.1 Conclusion and Recommendations

AIS transformed the way accounting tasks are performed and processed. They have enabled companies to centralize their operations making accounting transactions to have a centralized place where transactions are saved and entered. Professionals no longer add up long columns or look for paper journals. These tasks are easily done by computer software, which are error free. Businesses, including SMEs can harness the power of these reasonably priced software and hardware to increase speed, safety and classification. As confirmed in this study, SMEs in Amman stock exchange are applying these AIS hardware and software to their business. In view of these results, the software and hardware components of AIS are applicable within the modern business environment among companies in Amman stock exchange.

In view of this finding, the following are recommended:

- Companies in Amman stock exchange should continue embracing AISs in their business practices to increase their speed of processing tasks, use data entered into the system to compile reports, and make correction easily where necessary.
- Companies in Amman stock exchange should continue embracing AIS software and hardware in their business practices in order to classify it in detail. This way, AIS can be used to accomplish classification process data and quickly generate reports that involve classifications

Companies in Amman stock exchange should abandon the manual accounting systems and adopt the AIS software and hardware for safety purpose. In this way, the chances of losing financial data will be minimized by performing regular system backups. It is worth noting that paper pads often tend to get lost and damaged in the manual accounting systems. However, AIS allows for saving of data over the internet. This information can easily be accessible and be secured in the event a compute is damaged or lost.

References

- Abbasi, M.S., Tarhini, A., Elyas, T. & Shah, F. (2015). Impact of individualism and collectivism over the individual's technology acceptance behaviour: A multi-group analysis between Pakistan and Turkey. *Journal of Enterprise Information Management*, 28(6), 747-768. <https://doi.org/10.1108/JEIM-12-2014-0124>
- Abernethy, M.A. & Lillis, A.M. (1995). The Impact of Manufacturing Flexibility on Management Control System Design. *Accounting, Organizations & Society*, 20(4), 241-258. [https://doi.org/10.1016/0361-3682\(94\)E0014-L](https://doi.org/10.1016/0361-3682(94)E0014-L)
- AI-dmour, AI-Fawaz, K.M., AI-dmour, R. & Allozi, N.M. (2017). Accounting Information System and Its Role on Business Performance: A Theoretical Study. *Journal of Management and Strategy*, 8(4), 79-87. <https://doi.org/10.5430/jms.v8n4p79>

- Ammar, S. (2017). Enterprise systems, business process management and UK-management accounting practices: Cross-sectional case studies. *Qualitative Research in Accounting & Management*, 14(3), 230-281. <https://doi.org/10.1108/QRAM-05-2016-0044>
- Boczko, T. (2007). *Corporate Accounting Information Systems*. Harlow, UK: FT Prentice Hall.
- Chapman, C. S. & Kihn, L. A. (2009). Information system integration, enabling control and performance. *Accounting, organizations and society*, 34(2), 151-169. <https://doi.org/10.1016/j.aos.2008.07.003>
- Choe, J. M. (1996). The relationships among performance of accounting information systems, influence factors, and evolution level of information systems. *Journal of Management Information Systems*, 12(4), 215-239. <https://doi.org/10.1080/07421222.1996.11518107>
- Creswell, J. W. (2013). *Research design: Qualitative, quantitative, and mixed methods approaches*. Sage publications.
- Fakeeh, K. A. (2015). The Practice and Prospects of Accounting Information Systems (AIS). *Practice*, 10(3). <https://doi.org/10.5120/ijais2015451475>
- Fu, M. (2014). Design of Accounting Information System of Modern Enterprises under Informatization Environment. 2nd International Conference on Education Technology and Information System (ICETIS), 254-257
- Gelinas, U. J., Dull, R. B. & Wheeler, P. R. (2015). *Accounting Information Systems*, 10th ed. Stamford, CT: Cengage Learning.
- Ghasemi, M., Shafeiepour, V., Aslani, M. & Barvayeh, E. (2011). The impact of Information Technology (IT) on modern accounting systems. *Procedia Social and Behavioral Sciences*, 28, 112-116. <https://doi.org/10.1016/j.sbspro.2011.11.023>
- Grande, E. U., Estébanez, R. P. & Colomina, C. M. (2011). The impact of Accounting Information Systems (AIS) on performance measures: empirical evidence in Spanish SMEs. *The international journal of digital accounting research*, 11(1577-8517), 25-43. https://doi.org/10.4192/1577-8517-v11_2
- Granlund, M. (2011). Extending AIS research to management accounting and control issues: a research note. *International Journal of Accounting Information Systems*, 12(1), 3-19. <https://doi.org/10.1016/j.accinf.2010.11.001>
- Hall, J. A. (2016). *Accounting Information Systems*, 9th ed. Boston: Cengage Learning.
- Huang, C. (2012). Research on Design of Enterprise Accounting Information Management System- Based on Perspective of Corporate Governance. *Chinese Collective Economy*.
- Hurt, R. L. (2016). *Accounting Information Systems: Basic Concepts and Current Issues*. New York: McGraw-Hill Education.
- Hurt, R. L. (2016). *Accounting Information Systems: Basic Concepts and Current Issues*, 4th ed. New York: McGraw-Hill Education.
- Ismail, N. A. (2009). Factors influencing AIS effectiveness among manufacturing SMEs: Evidence from Malaysia. *The Electronic Journal of Information Systems in Developing Countries*, 38(1), 1-19. <https://doi.org/10.1002/j.1681-4835.2009.tb00273.x>
- Ismail, N. A. & King, M. (2005). Firm performance and AIS alignment in Malaysian SMEs. *International Journal of Accounting Information Systems*, 6(4), 241-259. <https://doi.org/10.1016/j.accinf.2005.09.001>
- Kaluarachchi, G. (2016). Adoption of Accounting Information System Practices by Entrepreneurs in Sri Lanka (with Special Reference to Polonnaruwa District). <https://doi.org/10.1108/MEDAR-01-2018-0264>
- Kwarteng, A. & Aveh, F. (2018). Empirical examination of organizational culture on accounting information system and corporate performance: Evidence from a developing country perspective. *Meditari Accountancy Research*, 26(4), 675-698.
- Li, J. (2012). Research on Design of Internal Control of Enterprise Accounting Information System under ERP Environment. *Business Accounting*, (24).
- Li, S. (2013). Brief Analysis on Enterprise Accounting Information System. *Economic Research Guide*, (35).

- Mauldin, E. G. & Ruchala, L. V. (1999). Towards a meta-theory of accounting information systems. *Accounting, Organizations and Society*, 24(4), 317-331 [https://doi.org/10.1016/S0361-3682\(99\)00006-9](https://doi.org/10.1016/S0361-3682(99)00006-9)
- Meng, F. (2014, August). Design of Accounting Information System of Modern Enterprises under Informatization Environment. In *2014 2nd International Conference on Education Technology and Information System (ICETIS 2014)*. Atlantis Press. <https://doi.org/10.2991/icetis-14.2014.56>
- O'Donnell, E. & David, J. S. (2000). How information systems influence user decisions: a research framework and literature review. *International Journal of Accounting Information Systems*, 1(3), 178-203. [https://doi.org/10.1016/S1467-0895\(00\)00009-9](https://doi.org/10.1016/S1467-0895(00)00009-9)
- Pan, X. (2014). Research on Influencing Factors of Internal Control of Enterprise Accounting Information System. *Management Administrator*, (5).
- Quinn, M. & Kristandl, G. (2014). *Business Information Systems for Accounting Students*. London: Pearson.
- Richardson, V. J., Chang, C. J. & Smith, R. (2014). *Accounting Information Systems*. New York: McGraw-Hill Education.
- Rom, A. & Rohde, C. (2007). Management accounting and integrated information systems: A literature review. *International Journal of Accounting Information Systems*, 8(1), 40-68. <https://doi.org/10.1016/j.accinf.2006.12.003>
- Scavo, F., Newton, B. & Longwell, M. (2012). Choosing between Cloud and hosted ERP, and why it matters. *Computer Economics Report*, 34(8).
- Sisaye, S. & Birnberg, J. G. (2014). Sociological Approaches to Organizational Learning: Applications to Process Innovations in Management Accounting Systems☆ *Advances in Management Accounting*, 1-43. Emerald Group Publishing Limited. https://doi.org/10.1108/S1474-7871_2014_0000023001
- Sori, Z. M. (2009). Accounting information systems (AIS) and knowledge management: a case study. *American Journal of scientific research*, 4(4), 36-44.
- Soudani, S. N. (2012). The usefulness of an accounting information system for effective organizational performance. *International Journal of Economics and Finance*, 4(5), 136-145. <https://doi.org/10.5539/ijef.v4n5p136>
- Stefanou, J. C. (2002, April). Accounting information systems (AIS) development/acquisition approaches by Greek SME. *European Accounting Information System Conference (ECAIS)*.
- Strauss, E., Kristandl, G. & Quinn, M. (2015). The effects of cloud technology on management accounting and decision-making. *CIMA Research Executive Summary Series*, 10(6).
- Toth, Z. (2012). The Current Role of Accounting Information Systems. Club of Economics in Miskolc. *TMP*, 8(1), 91-95
- Trigo, A., Belfo, F. & Estebanez, R. P. (2014). Accounting Information Systems: the challenge of the real-time reporting. *Procedia Technology*, 16, 118-127. <https://doi.org/10.1016/j.protcy.2014.10.075>
- Wisna, N. (2013). The effect of Information Technology on the quality of Accounting Information System and its impact on the quality of accounting information. *Research Journal of Finance and Accounting*, 4(15), 69-75..
- Zhang, Y. (2013). Analysis on Reasons Influencing Internal Control of Enterprise Accounting Information System. *Modern Business*, (29).

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