

# IMPACT OF QUALITY AND MANAGEMENT IN ACCOUNTING INFORMATION SYSTEMS ON DECISION-MAKING FOR SMES ENTERPRISES

Hasan Talib Hashim, Southern Technical University

## ABSTRACT

*Information as a factor in the existence of organizations is revealed in the insight and prolongation of practical advantages. However, managing information with sound and virtuous quality has become necessary. This paper investigates the influence of management and information quality in accounting information systems (AIS) for small and medium enterprises (SMEs) for decision-making and their use/usefulness by users. A questionnaire was sent to companies listed on the Iraq Stock Exchange. Random sampling was primarily conducted by selection. There were 336 survey questionnaires distributed, but 316 correct answers were used in the review process, resulting in a response rate of 0.94 percent. An analytical and deductive description based on PASW's Vision 18 statistical software was developed to verify the hypotheses.*

*According to the results, the quality of information affects decision-making and the use and utility of accounting information. However, it is imperative to note that information management only affects the ability to make better and more informed decisions. This requirement arises since these results are based on examining small and medium-sized companies and, therefore, can only be generalized to a few companies and establishments of this style.*

**Keywords:** Accounting Information Systems, Information Management, Information Quality, Decision-Making.

## INTRODUCTION

Information Systems (IS) are currently used by organizations to stay ahead of their competitors; however, their success is determined by more than how they manage their material resources. According to Alvin Toffler, the third base in industrialization will be based on integrating information. However, the perception of data as a resource is a prickly issue. Thus, information management regulates progress towards a specific objective state or goal (Shagari et al., 2017). As a result, organizations can gain critical competitive advantages and improve their performance by leveraging information, regardless of its technology. Consequently, the way forward for administrators is to develop technologies and tools that allow public administration to create and direct the use of data, taking into account that users make decisions based on the information provided by the Information System. Thus, the correct development of the organization depends on an adequate flow of information between it and its context and between the various units that compose it because the organization is more competitive when it takes advantage of the information it receives from the environment. A company's information system is an integral part of its operation. Therefore, companies must take advantage of all the daily data to make better decisions and evaluate whether all the information systems processes benefit the organization. With the above, research questions stand out:

1. What information resources can SMEs use to make better and more informed decisions?
2. Why should AIS be presented to its users in a helpful way rather than simply market-driven?

3. What are the benefits of quality control in AIS to improve decision-making?

This study aims to assess the degree of management influence and the quality of AIS used by small and medium-sized businesses to make better decisions and utilize/use these systems by their users. The methodology section provides insight into the relationship between independent and dependent variables. However, the study should have considered basic structures such as (user satisfaction, participation of managers and users, quality of the system, and services). In addition, because it provides only a temporary picture of users' use and implementation of these systems, it fails to suggest how decisions are made and how an AIS would be more beneficial.

## LITERATURE REVIEW

### Decision Making (DM)

This concept defines choosing a course of action from among the alternatives. The decision must be related to other activities (Sistem & Negoro, 2011). In other words, rationally, the generation, evaluation, and selection of solutions (Shagari et al., 2017). AIS covers the full range of decision-making processes and activities (Hasan et al., 2019) in and of themselves; their philosophy complicates themselves in this way. Other researchers, such as Napitupulu (2020), argue that the potential influence of Information Technology (IT) on decision-making at all heights has been apprehended by information systems (IS) practitioners while the beginning of the information age, as the world, is moving towards openness and globalization. In markets, the need for access to dependable, easy, and timely information will be critical to effective decision-making (Athambawa et al., 2018). Managers must control whether information systems assist in achieving decision-making objectives.

Decision-making is one of the most critical roles of executives and users, especially when this process is in multidimensional. The importance of the decision lies in its impact on the company (De Abreu E Silva & Bazrafshan, 2013). Furthermore, the quality of the information allows the decision-maker to justify the basis for decisions, arguing that the data used is timely, accurate, and reliable. However, estimating benefits for systems that assist in making decisions or providing a service to the user is more complex. There are few examples of such attempts, although decision quality is closely related to actual user participation.

In many organizations, decision-making responsibilities have been decentralized to allow greater control, power, and autonomy for workers (Balfanz et al., 2004), considering that the effort is successful if directed (Feng, 2021).

It was shifting decision response patterns (e.g., different decisions, different decision-making actions, different use of information, or information not before).

1. Strong understanding of decision position and the concepts used.
2. Operational advantages such as high profitability.
3. Increased confidence and less time to make a specific decision.

Suppose users are considered to make decisions based on the quality of information obtained from the I.S. and the urgency of making quick decisions in all productive sectors (Arya Bayu Wicaksana et al., 2021). In that case, many organizations still need to modernize their computer systems, whether in terms of hardware, software, and persistence with outdated software created in the 1980s or designs that just do not fit their actual needs.

### Use and Utility of AIS (UIS)

The accounting information system comprises data and accounting processing procedures that generate information used to create courses of action by the organization, always considering its usefulness. Therefore, it is crucial to use an accounting information system (AIS) and determine its effectiveness (Almaliki et al., 2018). However, more is needed if it is stated that the use will bring more substantial benefits without considering its nature. Meanwhile, the usage variable refers to the user's decision-making process based on information generated by the system. Therefore, effectiveness is measured in terms of user satisfaction and the quality of decisions made using the information provided by the accounting information system (AIS) (Yalagandula & Dahlin, 2004, Kiker et al., 2005).

Accounting Information System (AIS) whitethorn is used. However, practice is a central variable in the (IS) study, defined and conceptualized as the number of times the (IS) is utilized. The corporation has been ineffective by paying for a system that does not meet its business goals. The result was that he made a poor investment. In conclusion, they argue that its use is inevitable when developers and users are aligned with sound system design, although they claim it is complicated. Social and political aspects matter (Aguirre et al., 2020; De Groot et al., 2012; Araújo et al., 2006; Carolina et al., 2020).

Using an Accounting Information System (AIS) reflects expectations of net benefits, providing a behavioral consequence for the system's success (Bossuet et al., 2013). Testing the system will differ from actual use and operation (Trainor et al., 2014). The use (or lack of use) of the AIS will be reproduced if the user considers the data unreliable and inaccurate (Felski et al., 2015). However, when satisfaction affects the use at a high level, it builds improved requirements on the system. In addition to the above, people with more involvement have an advanced average (IS) usage. Indecisive future use of the system depends mainly on past usage or, more precisely, on general satisfaction (Timmis et al., 2010; Mittelstadt, 2019). Allen et al. (2015) use this variable to measure system success in identifying technology benefits. It cannot, however, measure success in isolation.

A positive experience with us leads to customer satisfaction in the causal sense, but use may precede satisfaction in the process. It has also been shown that user satisfaction can lead to increased intent to use and use itself (Lynch & Gomaa, 2003). Flammer & Bansal (2017) indicate that the most common methods for measuring usage are as follows:

1. Self-measurement, self-reporting, and self-evaluation
2. Measuring objectively using a computer log.

Additionally, studies published in the social sciences indicate that subjective measures are inconclusive or have good indicators. To diagnose the use of information systems in an organizational context, the proposed analyzing (Fitriati et al., 2020):

1. Usage: frequency and type of use.
2. Skills: operational, development, maintenance.
3. Concepts, software, organizational policies, potential information systems, and current applications.
4. Developing skills and knowledge, responsibilities for information systems.
5. Personal knowledge, behavior, group dynamics, goals, and goal management.

However, there are two possible reasons for the systems not being used, which are as follows:

1. Implementation (employees must ensure that the system is used) and
2. Usefulness of the software (easy to use).

Furthermore, many systems are not intended for implementation to improve individual and organizational performance. Knowing why individuals use (IS) (Harati-Mokhtari et al., 2007) is essential. According to Lamb et al. (2000), those who spend extended periods in front of a computer do not perceive it to contribute positively to their

operations, similar to those who found insignificant relationship between system use and user performance.

### **Information Management (IM)**

Managers coordinate and supervise the work activities of others so that they are carried out efficiently and effectively (Anh Hien et al., 2020). In turn, AIS performs the tasks essential to any company's primary activity. Information management (IM) is the production, control, storage, retrieval, and distribution of external and internal information economically and efficiently. Enhance the performance of an organization (Ejimabo, 2015).

Information technology is used by most companies today to process information accurately and promptly. Accounting generates many data: accounting records, financial statements, entries, and exits, but how do you utilize them? Until it is removed or lost, its effect (data and accounting information) is continuously hidden (Oppenheim et al., 2004); the information makes sense only when accessed. Using accounting information through technology has positively affected performance (Guo et al., 2020). Data can be provided when customers find a high-quality, helpful product (Barasa et al., 2017).

The emergence of information as a factor of production and an engine of development have become evident in society, which means that the value of information technology largely depends on the types of data used. As artificial intelligence converges data and information in many companies, it has increased the use of information technology to store and retrieve documents and codified knowledge elements to enable the management and exchange of tacit and explicit knowledge (Lillrank, 2003). It is essential to provide information to users to facilitate the exchange of data with the value chain (Scholten & Scholten, 2012; Jeske & Zhang, 2005).

Information utility is an erudite factor representing various information quality magnitudes (Molla & Licker, 2001). The idea can help Supportive end-users satisfy their requirements and needs; it is also related to understanding the usefulness of information (Shin, 2003). The degree to which a system can help a user perform better is related to the degree to which decent information leads to good decisions (Gigerenzer & Gaissmaier, 2011; Prah et al., 2015).

Therefore, the information manager must take into account the functions of management or be responsible for processing information. As a result, one must check that the organizational structure matches the company's mission and vision. Meanwhile, corporate strategies are compatible with technology and information processing.

A sound information management system controls the flow of information and evaluates, measures, and audits the systems that process it. In this course, the general manager will gain skills in management and accounting that will enable him to direct the use of information. In the same way, data is required. As a result of this research, the following hypotheses were identified:

*H<sub>1</sub>: AIS's information management has a positive influence on the user decision-making process.*

*H<sub>2</sub>: AIS's information management positively impacts the user experience and the use and utility of AIS.*

### **Information Quality (IQ)**

TQM systems were implemented in many companies in the 1990s to increase competitiveness and meet customer expectations. Due to market liberalization, new technologies, increased competition, and significant cost reductions.

Quality assurance, however, remains primarily a production issue. Quality becomes a strategic factor when it is identified as a factor. Planning, designing, setting goals, teaching, and implementing continuous improvement is no longer an inspection activity. Strategic quality management is a source of competitive advantage requiring team effort from all departments (Barcaccia et al., 2020).

A recent corruption scandal in some companies has led to a critical examination of accounting data, especially financial data (Gigerenzer & Gaissmaier, 2011).

Furthermore, these newer researchers believe that the reliability of AIS data involves assessing the structure of internal control rather than its design. Deming, Ishikawa, Juran, Crosby, and others are used to improve quality. In addition, they are currently used in information management, specifically for producing quality reports (Riege, 2005).

Therefore, Information Quality refers to the actuality, precision, sensible, completeness, dependability, applicability, and accuracy of IT data production (Napitupulu, 2020). Additionally, this can be achieved by presenting the product or service to the user in a distinctive way. Many organizations provide large amounts of computer-based information, but only some manage it effectively. Computer-based details must also be updated (Guo et al., 2020).

Data and information produced by the AIS and used for planning, analyzing, managing, directing, and controlling business processes have become increasingly critical. The lack of formal, conceptual definitions and decision rules makes developing practical systems for evaluating data reliability difficult. IM is an objective issue that no organization can ignore or avoid because its adoption is essential in modern times. It is suitable for use without universal acceptance and is challenging to control.

For organizations, international cooperation is therefore crucial. Despite long periods of research and practice, the field needs comprehensive methodologies for its assessment and development. Consequently, there needs to be a systematic proposal, and a critical evaluation of how organizations develop their products is essential. According to managers, information technology has yet to improve the quality of internal or external information.

Users are conscious in an information-rich environment, much more than before. For public or private sector organizations that live in a competitive environment, the quality of information is a means of survival and the generation of competitive advantage, considering what Teo and (Hasan Al jasimee et al., 2019) found to be associated with Positively correlated with work, managerial satisfaction, and organizational influence. From this, the last two hypotheses emerge from this research:

*H<sub>3</sub>: Information quality influences the decision-making process of AIS users.*

*H<sub>4</sub>: Information quality positively impacts the use and utility of AIS.*

## METHODOLOGY

This study evaluates the impact of information management IM and quality information QI of AIS on SMEs' decision-making and their use and utility. The process to achieve it began with a state-of-the-art review of independent variables (information management and information quality) and dependent variables (decision making and use/utility). Then, established on the publications review, the research model was built (Figure 1). Finally, the variables are operationalized as follows:

1. Independent variables: Information management (due importance of the application, strategic application of information, process improvement), information quality (accurate, timely, complete, consistent).

2. Dependent variables: The decision making (relevant, quality, evaluation of alternatives, speed) and use/utility (reports convenient for optimal use, performance improvement, increased effectiveness, helpful information).

Before continuing, it must be made clear that the variables analyzed in the literature review do not allow a clear definition of the relationships proposed in this research. Because they come from more than a simple theory of administration and quality of information with performance constructs; in this case, decision making and use/utility.

For data collection, a questionnaire was designed, which was reviewed by professionals in the area. After being validated by academics and experts, the next step was to carry out a pilot study, which helped establish the validity of the items and the content, in other words, the application of the pretest of the instrument to improve it, requesting feedback on possible errors. The main contribution was eliminating items that needed more reliability. The result was the determination of four items for information quality, decision making, and use/utility, in addition to three for the information administration variable. The final total of items was 78; all were evaluated on a 5-point Likert scale (Strongly disagree, strongly agree).

After the questionnaire was evaluated, a commercial package was used to collect data from respondents (AIS specialists). All items were measured consciously. A questionnaire was distributed to respondents from companies 56 listed on the Iraq Stock Exchange. A sampling method was used as the primary method of random sampling. Consequently, there were 336 survey questionnaires distributed, but 316 correct answers were used in the review process, resulting in an 0,94 percent response rate.

Based on the information obtained, the general description and inferential analytics are derived through regression analysis with PASW Statistics version 18 to test the designed hypotheses. Finally, the deductions were developed based on the preceding analyses. Likewise, the minimum values accepted for item reliability will be Cronbach's Alpha equal to or greater than 0.7 (Hasan Al jasimee et al., 2019).  $R^2$  indicates the alteration clarified by the variable within the model. According to (Sistem & Negoro, 2011), which should be  $>0.1$  because smaller values, even though they are significant, provide little information, and  $R$  represents the association between the variables and is considered significant. They should reach at least a value of 0.2 and ideally be above 0.3. The Significance (Sig.) should be  $<0.05$ .

## RESULTS AND DISCUSSION

### Demographic Characteristics of EFA

Table 1 shows that most respondents are between the ages of 26-30 years, and the lower range is between 31-35 years, followed by the lowest percentage of 31-35 years. It also illustrates that a large percentage of respondents (48%) hold a bachelor's degree, followed by respondents with a diploma degree (26%). On the other hand, the lower percentage of respondents holds a PhD (6%). Therefore, AIS users possess the necessary knowledge to manage IT operations. Additionally, (67%) work with the AIS, aspect system programmers should consider, and most importantly, be involved in the evolution and design of the system. Additionally, the software can provide ideas or aspects that have yet to be considered.

AIS management employees worked for the company for 1 to 5 years (35%), and accounting employees have a high turnover (30%). Furthermore, the number of hours an individual user devotes to using AIS ranges from 11 to 20 hours per week (37%); that is, they devote enough time to using this technology.

<b>Respondents</b>		<b>Frequency</b>	<b>Valid</b>	<b>Cumulative</b>
<b>Age</b>	20-25	28	28.0	28.0
	26-30	38	38.0	66.0
	31-35	10	10.0	76.0
	Over 35	24	24.0	100.0
Total N		100	100.0	
<b>Education</b>	Diploma degree	26	26.0	26.0
	Bachelor degree	48	48.0	94.0
	Professional Certificate	12	12.0	86.0
	Master's degree	8	8.0	74.0
	PhD degree	6	6.0	100.0
Total N		100	100.0	
<b>Experience</b>	1-5 years	35	35.0	20.0
	6-10 year	25	25.0	37.0
	11-20 year	20	20.0	57.0
	More than 15 year	20	20.0	92.0
	Total N		100	100.0
<b>Position</b>	Accounts Manager	25	25.0	25.0
	Accountant	30	30.0	60.0
	Internal control	25	25.0	85.0
	Control manager	20	20.0	100.0
	Total N		100	100.0

### Descriptive Statistics of EFA

To determine the impact of accounting information systems (AIS) factors on decision making (DM), we employ a five-dimensional Likert scale. The study sample items were also described using several statistical indicators, including mean and standard deviation. Table 2 summarizes the findings.

<b>Items</b>	<b>N</b>	<b>Mean</b>	<b>Std. Dev</b>	<b>items</b>	<b>N</b>	<b>Mean</b>	<b>Std. Dev</b>
DM1	100	3.02	1.045	QI1	100	3.30	1.055
DM2	100	3.19	1.300	QI2	100	3.39	1.072
DM3	100	3.15	1.360	QI3	100	3.38	1.033
DM4	100	3.17	1.360	QI4	100	3.13	1.051
DM5	100	3.02	1.300	QI5	100	3.25	1.123
DM6	100	3.09	1.210	QI6	100	3.33	1.138
DM7	100	3.05	1.320	QI7	100	3.15	1.067
DM8	100	3.03	1.330	QI8	100	3.26	.939
DM9	100	3.15	1.320	QI9	100	3.45	1.036
DM10	100	3.13	1.420	QI10	100	3.65	1.048
UIS1	100	3.30	1.101	IM1	100	3.10	1.025
UIS2	100	3.22	1.000	IM2	100	2.92	1.054
UIS3	100	3.21	1.073	IM3	100	3.33	1.116
UIS4	100	3.39	1.087	IM4	100	3.12	1.076
UIS5	100	3.38	1.000	IM5	100	3.22	1.069
UIS6	100	3.33	1.129	IM6	100	3.04	1.180
UIS7	100	3.32	1.110	IM7	100	3.10	1.087
UIS8	100	3.16	1.190	IM8	100	3.14	1.070
UIS9	100	3.32	1.068	IM9	100	3.05	1.086
UIS10	100	3.33	1.064	IM10	100	3.04	1.118

**Note:** DM=Decision making, UIS= use and utility of AIS, QI=Quality information, and IM = Information management

According to the results of the descriptive statistics, all items had a mean above three, indicating agreement. Additionally, the standard deviation ranged from 0.858 to 1.359, which is acceptable. As a result, the descriptive statistics do not reveal anything unusual.

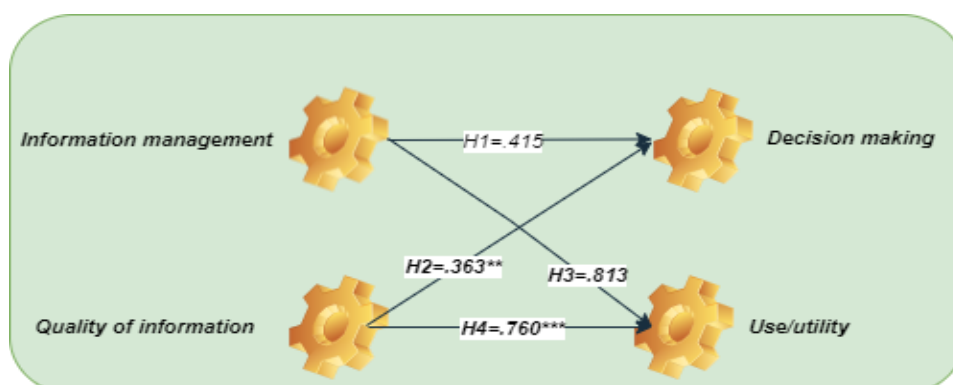
For inferential analysis, the reliability results are shown in Table 1, where it can be seen that all variables exceed the recommended minimum of 0.7, and the questionnaire overall comes to 0.954.

Variables	Cronbach's Alpha
Information management	0.717
Information quality	0.938
Decision making	0.929
Use/utility	0.910

Table 3 shows the relationship obtained in each of the hypotheses, the explained variance ( $R^2$ ), and the level of Significance or confidence.  $R^2$  indicates convergent validity, i.e., if the items measure the same thing when explaining how much variance a variable captures from its indices, confirmed by t Student or level of Significance (Sig).

Hypothesis	R	$R^2$	Sig.	Decision
H <sub>1</sub> . AIS's information management has a positive influence on the user decision-making process.	0.415	0.178	0.081	Rejected
H <sub>2</sub> . AIS's information management positively impacts the user experience and the use and utility of AIS.	0.563	0.318	0.001	Supported
H <sub>3</sub> . Information quality influences the decision-making process of AIS users.	0.818	0.673	0.000	Supported
H <sub>4</sub> . Information quality positively impacts the use and utility of AIS.	0.760	0.580	0.000	Supported

Then, in Figure 1, the evaluated search model is detailed graphically. The significance level is specified (\* = 0.05 = 95%, \*\* = 0.01 = 99% and \*\*\* = 0.001 = 999%).



**FIGURE 1**  
**EVALUATED RESEARCH MODEL**



## HYPOTHESIS EVALUATION

Table 4 and figure 1 show the results of the regression analysis. The first hypothesis theorizes; that AIS's information management positively influences user decision-making. However, according to the participants' opinion of the study sample, Table 4 and fig 1 indicate that AIS's information management has an insignificant impact on user decision-making. Therefore, its values of  $R = 0.415$ ,  $R^2 = 0.178$ , and Significance = 0.081 meet only two accepted criteria ( $R$  and  $R^2$ ) since it is suggested that information management allows users of accounting information to make more and better decisions.

Because good information management only allows for more decisions than is necessary or how it is generated through the system, this is ignored. As a result, we reject the first hypothesis. The second hypothesis proposes that AIS's information management positively impacts the user experience and the use and utility of AIS. According to Table 4 and figure 1, AIS's information management impacts the user experience and the use and utility of AIS. Based on  $R = 0.563$ ,  $R^2 = 0.318$ , and Significance = 0.001, it can be concluded that information management is essential because it will generate valuable information reports while improving performance and increasing efficiency. Therefore, the second hypothesis can be supported.

The third hypothesis suggests that Information quality influences the decision-making process of AIS users. Information quality has a statistically significant impact on the decision-making process of AIS users. As shown in Table 4 and Figure 1. The value of  $R = 0.818$ ,  $R^2 = 0.673$ , and significance = 0.000; It is accepted that the quality of information enhances the positive impact on users with more relevant and faster information, which helps to evaluate alternatives to make better decisions. Therefore, the third hypothesis was accepted.

The fourth hypothesis suggests that Information quality positively impacts the use and utility of AIS. Information quality statistically affects the use and utility of AIS, as shown in Table 4 and figure 1. With a value of  $R = 0.760$ ,  $R^2 = 0.580$ , and Significance = 0.000, it is accepted that the quality of information influences the optimal use of reports, improving performance and effectiveness by providing helpful information. Therefore, the fourth hypothesis was accepted.

## CONCLUSIONS

This investigation aimed to determine the degree of influence of management and information quality in accounting information systems used by small and medium-sized companies, which helps them make decisions and better use / utility of users.

Information management plays a significant role. In recent years companies have seen that obtaining good information is more critical than it was in the past, so they have been given the task of studying technologies for proper use and management, and with the help of technology. As a result, users benefit more and better from the information generated in the reports and increase the effectiveness of users at work.

Likewise, the quality of the information provides users with valuable, fast, and reliable data, allowing them to evaluate more safely available alternatives for optimal use. All this helps them make decision-making more efficient with fast and helpful information and improve its use and effectiveness.

On the other hand, the assumption that information management allows I.Q. Users to obtain more relevant information that allows them to evaluate alternatives and make more, better, and faster decisions are ignored; That is, adequate information management needs to

be implemented in favor of making decisions that affect the harmonious development of the organization.

Finally, it has been noted that small and medium-sized companies have given some importance to information management in recent years. However, as it turns out, they have yet to learn to take advantage of it to achieve strategic management. It can be said that they respond only to market needs, but their use and application need to be more systematic. Therefore, as future lines of research, there are two aspects:

1. SMEs must rethink their business operations in terms of information management, and
2. Analyze why information management does not help in organizational decision-making.

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