# Factors Influencing Quality Accounting Information Systems among Malaysian Private Organizations

Muhamad Khalil Omar*, Shakerin Ismail**, Lee Pei Ying** and Toh Chin Yau**

*Investors evaluate their decisions based on the financial statements, thus they will always concern about the quality of accounting information. However, some users were of the opinion that the financial statements fail to satisfy their information needs. Therefore, this study emphasizes on the factors that will influence the quality of accounting information i.e. organizational structure, organizational culture and internal control system. This study was conducted among 100 accounting information systems users in Malaysia and results indicated that all factors shall predict the quality of accounting information system. The research is beneficial to organizations in implementing a quality accounting information system.*

**JEL Codes:** M40, M41 and M42

## 1. Introduction

Accounting information system is a system that processes and transforms the economic data into accounting information that is relevant and reliable for the users in planning and managing business operations (Romney et al, 2012). From the point view of users, the efficiency and effectiveness of AIS determine the quality of accounting information (Sacer et al, 2006). Previous researches conducted in various countries have shown the outcome of increasing of company's performance, profitability and efficiency of operation with the adoption of a quality AIS (Soudani, 2012). Moreover, the company would lose the opportunity to gain a competitive advantage when they provide poor quality of accounting information that may lead the users to make a wrong judgment (Baltzan, 2012). The accounting irregularities such as manipulated financial statements have raised the concern and knowledge of public on identifying a quality of provided financial information.

For example, Megan Media Holdings Berhad's financial controller had involved in the fraudulent practices by falsifying revenue and misstating the financial position of a company (Norwani et al, 2011). Another example is the collapse of Enron in the year 2001 was the largest corporate bankruptcy in America that had shocked the whole world (Li, 2014). According to Folger (2001), Enron involved in financial criminal activity by hiding huge debts off balance sheet that eventually misled the financial accounts. Meanwhile, Enron executives embezzled the investment funds of investors as well as misrepresented the earnings report that reflected the improper financial conditions to investors. The exposure of accounting irregularities at Enron had caused a heavy loss to the

*Dr. Muhamad Khalil Omar, Faculty of Business and Management, Universiti Teknologi MARA, 42300 Bandar Puncak Alam, Selangor, Malaysia. Email: khalil.omar@salam.uitm.edu.my Telephone: +60332587061
** Shakerin Ismail, Lee Pei Ying and Toh Chin Yau, Faculty of Business and Information Science, UCSI University, 56000 Kuala Lumpur, Malaysia. Email:shakerin@ucsiuniversity.edu.my Telephone: +60391018880

shareholders and investors who depended on the misleading accounting information (Pavel and Encontro, 2012).

Those major financial scandals have raised the criticisms to the accounting profession in the event of the decreasing of users' trust in the faithfulness and accuracy of accounting information (Istrate, 2010). Hence, the users of financial statements should have the fundamental understanding on the quality of accounting information to prevent from misinterpretation that may substantially lead to a wrong decision making. Rapina (2014) has studied the factors influencing the quality of accounting information system among the cooperatives in Indonesia, however, there is a lack of research on this topic were conducted in Malaysia.

Therefore, this study attempted to examine the impacts of organizational structure, organizational culture, and internal control system on the quality of accounting information system in order to pursue a more precise result. This paper contains some relevant literatures related to this study that will be presented next covering quality of AIS and its factors i.e. organizational structure, organizational culture, and internal control system. Then, this paper explains the methodology section that involves applicable research and sampling design, measurements and details for data collection and data analysis i.e. the collected data is tested using SPSS Statistical Software and the multiple regression analysis is used to test and determine the relationship between the independent variables and dependent variable. Next, this paper focuses on the discussion on the outcome of data analysis and finally the conclusion will be made.

## 2. Literature Review

### 2.1 Quality of Accounting Information System

An accounting information system is an integrated system with the components such as hardware, software, procedures, database and network communication (Susanto, 2013). Accounting information system (AIS) is designed to collect the data and process them into useful information for the users of financial information. Sacer and Oluic (2013) cited that the main goal of developing accounting information system is to generate the useful information for business decisions making. Wilkinson (2000) also explained that the AIS processes and transforms the financial data into accounting information that is needed by internal and external users. According to Anthony et al (1994), organizations use AIS for planning, evaluating, and identifying their operational performance and financial conditions. The management of an organization applies the accounting information system as a means to achieve the competitive advantages (Stair and Reynolds, 2011).

Other than that, an accounting information system consists of two main subsystems which are financial accounting information system and management accounting information system (Wilkinson et al, 2000). Kieso et al (2011) explained that financial accounting information system is used to produce accounting and financial information to the interest parties. While, an organization implements the management accounting information system to provide the useful accounting information for internal users for making decisions to manage the particular organization (Hansen and Mowen, 2007). The quality of AIS is expressed as the measurement of its capability in producing the output that meets the information requirement for the decision makers (Post and Anderson, 2003). The quality of accounting information is based on the usefulness of information for the users of financial statements and the perspective of their interest (Penman, 2012). According to Baltzan

(2012), high-quality accounting information is integrated information that has the attributes of accuracy, completeness, consistency, comparability, and timeliness. According to Laudon and Laudon (2008), a quality accounting information can only be generated for decision-making process by implementing a quality accounting information system.

## 2.2 Organizational Structure

According to Turban et al (2003), organizational structure is the main element that should be considered in the development of AIS. Organizational structure is formally defined as an arrangement of divisions or work units within an organization (Schermerhorn, 2011). Meanwhile, according to Anggadini (2013), organizational structure is a framework describes the distribution and coordination of job tasks between the individuals and groups within the organization. Organizational structure compasses the relationship of responsibilities and authority that controls the integration of employees' actions and performance in achieving the goals of the organization (Jones, 2010). Managers involved in organizational design that takes into consideration of few dimensions to develop or improve the structure of the organization (Rapina, 2014). The dimensions of organizational structure used in this study included work specialization, span of control, chain of command, formalization and delegation (Anggadini, 2013).

Kieso et al (2007) stated that the organizational structure plays an important role in determining the successful implementation of AIS. Research from Nagappan et al (2009) showed that organizational structure that involves the interaction between divisions or departments within an organization can influence the effectiveness of AIS. For instance, according to Salehi and Abdipour (2011), it was found that organizational structure can obstruct the application of AIS by companies. Mukherji (2002) have studied that there is an interrelationship between the organizational structure and AIS and dependent on each other for the success of an organization. According to Scott (2011), there is an increasing of complex information systems that are built with the larger hierarchical organizational structure. In Turkey, the organizational structure is founded as one of the barriers for implementing the AIS in the listed companies (Salehi and Abdipour, 2011). As a result, AIS would not be able to run and function properly when there is a lack of support of organizational structure on the development and implementation of AIS (Bouwens and Abernethy, 2000).

## 2.3 Organizational Culture

Leidner and Kayworth (2006) asserted that organizational culture is a crucial factor in the accounting information system. Organizational culture is defined as the norms, values, and beliefs that control the behavior of individuals of a group. According to George and Jones (2012), organizational culture is a set of shared values, assumptions, norms and beliefs which govern the interaction of employees with each other in an organization or with those outside the organization such as suppliers, customers, and others. Organizational culture functions as a mechanism to unite the activities of individuals within an organization who are from various backgrounds (Kreitner and Kinichi, 2003). Moreover, culture is a social knowledge which the employees can learn from others within an organization (Carolina, 2015). The members of an organization can have a consensus cultural understanding through the transfer of knowledge in the form of communication and explicit observation (Colquitt et al, 2011).

According to Kieso et al (2007), it was found that the application of AIS is highly relying on the organizational culture so that the accounting system can run in a proper way. Stair and Reynolds (2011) also state that the organizational culture has an impact on the effectiveness of development of new information system. Additionally, a study by Coles-Kemp (2009) showed that the development of accounting information is influenced by the organizational culture. However, due to different organizational cultures have different criteria in implementing the AIS, it could not show an overall picture of the impacts of organizational culture on the effectiveness of accounting information system. The manager will always remain the old culture in applying new information systems (Susanto, 2013). The results of the research conducted on the listed companies in Iran by Salehi and Abdipour (2011) showed that the organizational culture becomes a barrier for establishing the AIS.

Indeje and Zheng (2010) also declared that the organizational culture is taken into consideration in developing and implementing the AIS as well as has strongly impacted the information system within an organization. According to the research conducted by Young (2013), an individualistic culture resulted in the increasing of accounting errors and the intention of manipulating the earnings for achieving desired results. While the accountants in the collectivist organization are less likely to violate the accounting standards to distort the numbers for smoothing the income. Otherwise, the management in organizations with large power distance has purposefully intervened the financial reporting practice and may override the accounting principles that ultimately lead to material misstatements. Nevertheless, financial statements in small power distance culture would be less likely to be materially misstated (Chan et al, 2003).

## 2.4 Internal Control System

An effective internal control system significantly affects the success of business operations as well as the AIS in generating information with higher reliance for the users (Neogy, 2014). Internal control is the process and policies designed and adopted by the management to achieve the organizational goals and missions (Elder et al, 2010). An effective internal control is essential for an organization to provide relevant and reliable financial report, comply with the applicable laws and regulations as well as ensure an effective and efficient operation of organization (Messier et al, 2006). According to Bodnar and Hoopwod (2010), an internal control system comprises of five key components which include control environment, risk assessment, control activities, information and communication, and monitoring to assist in accomplishing the organizational goals.

The organization has also designed the transaction processing internal control to ensure each components of the internal control system has been successfully applied. A computerized internal control system consists of general control and application control. The main goal of designing an internal control is to monitor and retain the quality of information from errors during the input, process and output activities (O'Brien and Marakas, 2010). The internal control functions as a means to assure that all transactions are recorded accurately at correct accounts in proper accounting periods to prepare financial statements in compliance with accounting principles and legal standards (Millchamp and Taylor, 2008). With the outcome of the research done by Neogy (2014), a sound internal control may help the organization to achieve the attributes of accounting information and also provide the relevant and reliable information to the management for carrying out the business activities effectively. Other than that, the computerized internal

control system increases the accuracy and quality of financial information and also helps management in safeguarding assets such as cash (Jones and Rama, 2003).

The previous study has found that there is a significant relationship exists between internal control and quality of AIS (Fardinal, 2013). In other words, an internal control system is a pre-requisite for producing qualified accounting information (Ivana and Ana, 2013). With the existence of an effective internal control system, the effectiveness and efficiency of AIS can be enhanced through appropriate recording and processing data, safeguarding of assets, and reliability and accuracy of accounting information generated (O'Brien and Marakas, 2010). Furthermore, Guan (2006) explained that the internal control system is important to be implemented in an accounting system to prevent from frauds and reduce the likelihood of errors and material misstatements resulted from the information system. An effective internal control can guarantee the appropriateness of financial reporting as well as enhance the quality of information environment for the financial statement users (Kim et al, 2011). Nonetheless, the establishment of an internal control system may incur a higher cost which would be a heavy burden particularly to small and medium enterprises under the restriction of ownership or franchise. In addition, there are some issues related to the accounting computerized systems such as viruses, hackers, loss of information and power failures (Ahmad, 2012).

There are more accounting errors are detected in a weak internal control system than a strong internal control system (Iceman and Hilson, 2012). Arens (2008) stated that if there is an inappropriate internal control over the AIS, it may result in the distortion of accounting standards with the financial statements. According to the study conducted by Doyle and McVay (2007), it showed that the weakness in internal control leads to low quality of accruals as well as provide additional evidence on the existence of the relationship between an internal control system and quality of accounting information.

## 3. The Methodology and Model

Based on the literature as discussed in the preceding section, the following framework is proposed (Figure 1). The theoretical framework of the study is specially developed for this study. This theoretical framework explained the relationship between the dependent and independent variable of the study.
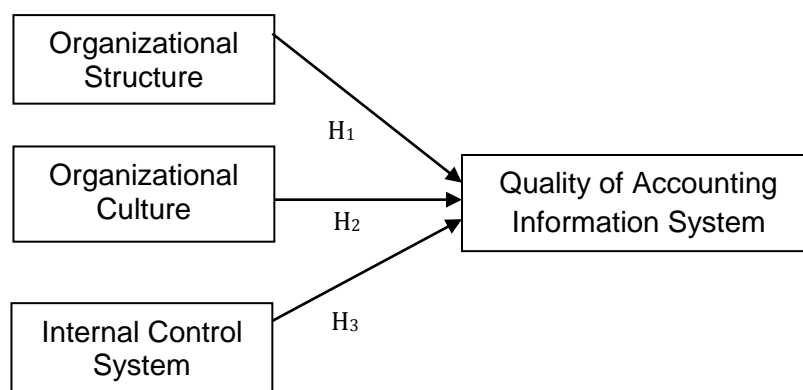


**Figure 1. Research framework.**

Based on Figure 1, the hypotheses of the study are as follows:

$H_1$:    There is a relationship between organizational structure and quality of AIS

$H_2$:    There is a relationship between organizational culture and quality of AIS

H3:    There is a relationship between internal control system and quality of AIS

For this research study, the researcher chose quantitative cross-sectional method using standardized questionnaires for conducting a causal study in order to identify the relationship between organizational structure, organizational culture, internal control system and quality of accounting information system. The research was conducted in several selected locations in Kuala Lumpur, Malaysia, such as Cheras, Damansara, and Kepong. The unit of analysis for this study was the individual employees in several organizations that have involved in implementing the AIS. For the purpose of this study, the researcher chose a non-probability sampling design of convenience sampling. The total of sampling size was 100. The respondents are selected from different levels of management which involved the categories of middle management, operational management and operational personnel based on the criterion of having the knowledge to analyze the factors influencing the effectiveness of AIS.

## 4. The Findings

**Table 1. Demographic Profile of Respondents**

| Demographic Profile | Category | No. Sample N=100 | Percentage % |
|---|---|---|---|
| Gender | Male | 44 | 44.0 |
| | Female | 56 | 56.0 |
| Age | 18 – 25 | 57 | 57.0 |
| | 26 – 40 | 28 | 28.0 |
| | 41 – 60 | 13 | 13.0 |
| | 60 and above | 2 | 2.0 |
| Occupation | Middle Management | 27 | 27.0 |
| | Operational Management | 48 | 48.0 |
| | Operational Personnel | 25 | 25.0 |
| Education | SPM Holder | 14 | 14.0 |
| | Diploma Holder | 18 | 18.0 |
| | Undergraduate | 32 | 32.0 |
| | Postgraduates | 8 | 8.0 |
| | Professional Qualification | 28 | 28.0 |
| Length of Service | Less than 1 year | 19 | 19.0 |
| | 1 – 3 years | 28 | 28.0 |
| | 3 – 5 years | 29 | 29.0 |
| | 5 years and above | 24 | 24.0 |

As per Table 1, the majority of the respondents were female with the percentage of 56% while male respondent's percentages are 44%. Most of the respondents were between 18 to 25 years old with 57%, followed by respondents between 26 to 40 years old with 28%, respondents between 41 to 60 years old with 13%,  and the lowest percentage were respondents of above 60 years old (2%). The majority of respondents were also working in an operational management position (48%) and the rest of 27% were middle management and 25% of them were operation personnel. The majority of respondents' highest education level of respondents was bachelor degree level (32%), followed by professional qualification with 28%, diploma level (18%), SPM/Certificate (14%) and the minority was

having post graduate degree (8%). Most of the respondents were working between 3 to 5 years (29%).

### Table 2. Multiple Regression Analysis

| Model | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|
| | B | Std. Error | Beta | | |
| (Constant) | 1.848 | 2.183 | | .847 | .399 |
| Organizational Structure | .148 | .066 | .200 | 2.248 | .027 |
| Organizational Culture | .183 | .063 | .253 | 2.892 | .005 |
| Internal Control System | .224 | .068 | .277 | 3.312 | .001 |

| | |
|---|---|
| F value | 13.532 |
| Sig | .000 |
| Adjusted $R^2$ | .336 |
| $R^2$ | .363 |

According to Table 2, the model explains that there is approximately 36.3% ($R^2$ = 0.363) of the variance in the quality of accounting information system. Since the F value was significant at p=0.000, therefore the conclusion is that organizational structure, organizational culture, and internal control system have significant influences on the quality of AIS. According to Table 2, the coefficients of each factor that contributed to the predicted scores using the equation of model as below.

$$B4 = 1.848 + 0.148 (B1) + 0.183 (B2) + 0.208 (B3) + 0.224 (B4)$$
Where:
B1 = Organizational Structure
B2 = Organizational Culture
B3 = Internal Control
B4 = Quality of accounting information system

Additionally, significant value (Sig.) describes whether the predictor variables are significantly contributed to the model. Commonly, those significant values less than 0.05 explain that the independent variables have a significant contribution to the dependent variable and vice versa (Pallant, 2009). Based on the results shown in Table 2, the significant values (Sig.) of the independent variables (organizational structure, organizational culture, and internal control system) are less than 0.05. This indicates that all predictor variables in the model have significant impacts on the quality of AIS.

Other than that, the standardized coefficient Beta value is important for the researchers to determine and compare the strength of each predictor variable in affecting the dependent variable. Concisely, the variable with a larger Beta value has a stronger influence from its contribution to the dependent variable. According to Table 2, it is found that the variable of the internal control system (ß = 0.277) is the most effective factor. This is followed by organizational culture (ß = 0.253) and organizational structure (ß = 0.200) is the least

effective factor among the three predictor variables selected in influencing the quality of AIS.

Generally, the coefficient testing that provides the significant values and standardized coefficient Beta values enable the researchers to ascertain the capability of independent variables in contributing to the multiple regression models. Through the statistical analysis results, the researchers would also obtain a better understanding of the significant effect of predictor variables on the quality of accounting information system. The results presented in Table 2, indicate that three independent variables such as organizational structure, organizational culture, and internal control system individually predict the quality of AIS.

For the first factor of organizational structure, the findings indicate that the null hypotheses (Ho) are rejected, thus the alternative hypotheses ($H_1$) is supported. As a result, the significant relationship exists between organizational structure and quality of AIS. This finding is consistent with the study from Turban et al (2003) which explained that organizational structure has an important role in developing the AIS. According to Nagappan et al (2009), it also stated that organizational structure where includes the interaction between divisions or departments within an organization can influence the quality of AIS. Generally, the division of responsibilities in an organization increases the effectiveness of implementing accounting information system.

In addition, the researchers also rejected the null hypotheses (Ho) but accepted the alternative hypotheses ($H_2$) for the second factor of organizational culture, which describes that the organizational culture has a significant relationship with the quality of AIS. This finding is consistent with the study results of Syler (2003) that is a very significant value of the relationship between the predictor variable of organizational culture and the quality of AIS. Meanwhile, Stair and Reynolds (2011) studied that the organizational culture positively affects the development of AIS. Therefore, the reliability of accounting information system would be affected when the employees fail to behave ethically in preparing the financial information.

Other than that, the researchers rejected the last null hypotheses (Ho) and supported the alternative hypotheses ($H_3$) for the factor of internal control system. Based on the summary outcome shown in Table 2, there is a very significant relationship between the internal control system and the quality of AIS as consistent as the result of previous literature (Fardinal, 2013). The internal control system is essential to improve the implementation of AIS by reducing the frauds and errors Guan (2006). Therefore, the researchers suggested that the organizations should maintain an appropriate internal control over the AIS to ensure the compliance with accounting standards in the preparation of financial statement. Without an effective internal control on the accounting system, it would result in unreliable financial information to the users for decision making.

## 5. Conclusions

The research is conducted to identify the four organizational factors influencing the quality of AIS in Kuala Lumpur, Malaysia. The results of Multiple Regression Analysis reveal that there is a significant positive relationship between all the factors and quality of AIS. Based on the findings of data analysis, it can be concluded that all of the targeted respondents do agree with the factors of organizational structure, organizational culture, and internal control system affect the quality of AIS. Additionally, among the three factors, the internal

control system (ß = 0.277) is considered as the most impactful factor towards the quality of AIS. Therefore, the employees should improve the internal control system to prevent from any violation of accounting standards so that increase the efficiency and effectiveness of AIS. Moreover, a strong internal control system also helps to ensure an effective operation within an organization to accomplish the objectives and goals. However, there are some limitations of this study i.e. only four independent variables were included in this study and the age of respondents was mainly below 25 years old thus the results of this study were mainly from younger workers' perspective. In conclusion, the AIS is important for an organization to generate the reliable and useful financial information to the users for making a right economic decision. Hence, the quality of AIS ought to be enhanced through increase commitment to the factors of organizational structure, organizational culture, and internal control system.

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