Accounting Information System Quality’s Effect on Accounting Information Quality

Rapina², Yenni Carolina¹, Joni¹, Ridwan¹
¹ Maranatha Christian University, Indonesia

Abstract

This study aims to examine the extent to which accounting information system quality influences accounting information quality. This study’s demographic consisted of accounting and finance personnel in Indonesia. The purposive sampling strategy was used in this investigation, and the method used is a survey method. Primary data are used, which are processed statistically using SEM Partial Least Square (PLS) questionnaires as the research instrument. The statistical analysis method uses SEM because there may be a causal relationship between the variables, and each variable is not observed. According to the study’s findings, the effectiveness of accountability information systems influences the effectiveness of accountability information. According to the concept, the successful application of accounting information systems helps users make decisions. Additionally, performance will be impacted by the caliber of accounting data.

Keywords Accounting Information Systems, Quality, Accounting Information, Accounting Data, Performance, Financial Statements, Accounting Processes

INTRODUCTION

Dissatisfaction with the relevance and usefulness of financial statements is growing, especially among investors and entrepreneurs. This dissatisfaction is supported via way of means of considerable studies that continually suggest a developing mismatch among capital marketplace signs and economic information, specifically stated earnings, which do not replicate organizational performance (Lev, 2018).

Stakeholders and shareholders in any organization will require the company’s financial statements to make predictions about the size, timing, and uncertainty of future cash flows. Financial statements are also used to determine whether or not the resulting valuations are adequately reflected in the current share price, enabling smart decisions to spend money on or accumulate a company, promoting efficient capital allocation (Sherman & Young, 2016).

The coronavirus pandemic has the capability to noticeably alternate accountants preparing company financial statements, in addition to accountants (Radigan, 2020). Tjoetiar (2020), as the Legal Partner of Grant Thornton Indonesia, conveyed the results of the CFO (chief financial officer) Report 2020 survey by Grant Thornton, showing that the pandemic has forced CFOs to focus more on their role as change agents and strategists to find new ways to utilize automation, outsourcing, and the effectiveness of the finance division in their responsibilities.

One of the phenomena that occurred in Indonesia is that a number of problems were found that could lead to state losses in the 2020 Audit Report on Central Government Financial Statements (Sampurna, 2021). This problem consists of 28 percent of system weaknesses, 29 percent of non-compliance, and 43 percent of inefficiency. Financial statements, together with stability sheets, profits statements, and statements of changes in capital position, present accounting information (Patel, 2015; Sumaryati et al., 2020). An empirical examination performed
by Rapina & Susanto (2017) on banking overall performance in Indonesia suggests that the great of accounting records structures impact the great of accounting records. Napitupulu (2020) conducted a study that was motivated by the Financial Services Authority’s (OJK) guidelines in Indonesia that emphasized the significance of good corporate governance in Rural Banks. The study suggests that in order to establish good corporate governance, it is necessary to implement a reliable Management Accounting Information System (MAIS) that is aided by efficient internal controls and capable managers who can generate high-quality accounting information. Earlier research has indicated that a company's decision to outsource a business process is contingent on the process's characteristics, including the frequency of its performance or the specific assets required. Asatiani et al. (2019) wrote an article highlighting the impact of the characteristics of the accounting process on outsourcing decisions among users of both traditional and cloud-based accounting information systems (AIS). The findings suggest that the intrinsic properties of cloud-based AIS, such as ubiquitous access, scalability, and integration, tend to promote the outsourcing of accounting processes that are performed regularly in producing accounting information.

The purpose of this research is to investigate the influence of the accounting information systems quality on the accounting information quality. This research is expected to have many uses for readers, both for academics and business practitioners. The findings of this study may be useful in resolving issues related to the quality of accounting information systems and the quality of accounting information used. As stated in the background, the problems that can be addressed are several issues identified in the 2020 Audit Report on Central Government Financial Statements that have the potential to result in financial losses for the government.

LITERATURE REVIEW

Organizational quality is defined by Wherry et al. (2016) as excellence, value, conformance to specs, and assembly purchaser expectations. According to Jacko (2012), information quality is a concept that refers to the quality results of information systems when they are informative, important for decision-making, understandable, and equitable to the needs of information users.

In accounting information systems, information quality is available when the system is successful (Jaafreh, 2017). The DeLone and McLean (1992) framework states that the interplay of six primary variables: the quality of the systems, the quality of information, utilization, user satisfaction, the effect on human beings, and the effect on the organization is associated with information system success. The ease of usability of the system is referred to as system quality.

Based on the description above, the quality of accounting information systems is said to be synonymous with the success of information systems and can be viewed as a successful application of information systems to provide quality and useful accounting information for its users.

Information's effectiveness (quality) should be assessed in terms of its intended use in support of decision-making. Alshikhi and Abdullah (2018) say that business decisions are considered good when high-quality information is used in decision-making.

Furthermore, George and Desmidt (2018) provide a statement about valuable information that will be directly related to decision-makers in achieving organizational goals. Valuable information will help organizational members work more effectively and efficiently.

According to expert definitions, information quality is the extent to which information is accurate, consistent, up-to-date, and appropriate to meet user expectations for use in downstream processes such as decision-making and self-determination. The generation of useful information is limited by the AIS environment and the structure of benefits and costs attached to user decisions (Andarwati et al., 2019). According to Cepeda and Monteiro (2021), activities related to the system development life cycle that produces accounting information affect the effectiveness of accounting information systems. This system allows access to accounting data for both internal and external
users. Giving users information is the accounting information system's primary goal (Susanto & Meiryani, 2019).

According to Ganyam and Ivungu (2019), accounting information systems are present in a variety of companies with the intention of disseminating information. The effect of information system quality on organizational culture and accounting information was discovered by Aldegis (2018) in his empirical results on Jordanian industrial public shareholding enterprises. Ratifah and Mulyani (2015) state that without proper implementation, the new accounting system will not be able to provide accurate and relevant information. Decision makers will use the information generated from the accounting information system to make decisions, both technical and non-technical. The accounting information system embodies this change with its manual and computerized functions (Novianty et al., 2018).

An accounting facts machine is a way or device for gathering information in order for project managers or personnel at the control stage of a corporation can make decisions (Nunung and Mulyani, 2015). The impact of the inner management system on the development of the accounting information system and accounting information is defined in different research by Eryana and Fardinal (2017). A study was conducted by Napitupulu (2020), which was motivated by the guidelines of the Financial Services Authority (OJK) in Indonesia, emphasizing the importance of good corporate governance in Rural Banks. It is suggested in the study that the establishment of good corporate governance requires the implementation of a dependable Management Accounting Information System (MAIS), which is supported by efficient internal controls and capable managers capable of producing high-quality accounting information.

In their empirical study, Darma et al. (2018) investigated 270 participants who were users of financial accounting information systems in 76 ministries and institutions. They found that the quality of accounting information was significantly impacted by the accounting information system, as measured by the influence of top management. The researchers collected data using a questionnaire and concluded that the support of top management is crucial in achieving high-quality accounting information systems. Al-Okaily et al. (2020), Abdelraheem et al. (2020), Afiah et al. (2020), Nguyen & Nguyen (2020), and Yanti & Pratiwi (2020) have all conducted additional research on the impact of accounting information system quality on accounting information quality.

From the above theory and some recent research results, it can be inferred that the accounting information systems quality influences the accounting information quality. Based on the previous description, we can create the following frame map:

![Research Framework](image)

**Figure 1. Research Framework**

**RESEARCH METHOD**

The research object refers to an event, phenomenon, or research problem that has been abstracted into a concept or variable (Arikunto, 2019). In line with this definition, the research object in this study is the concept of the quality of accounting information systems and its impact on the quality of accounting information. The idea of accounting information system quality and its impact on the quality of accounting information is the subject of this study. Explanatory and verificative research, often known as causality research, is the research methodology employed in this study. The study aimed to facilitate researchers' comprehension of the impediments to the
adoption of accounting information systems in Indonesian banks by utilizing various techniques. Through the data collected and analyzed using these techniques, researchers can determine the root causes and consequences of these barriers, leading to the formulation of strategies and recommendations for overcoming them and promoting the integration of accounting information systems in the banking industry of Indonesia. Indonesian banks are the population of this study. The sample selection in this study was the accounting and finance section of banks in the country of Indonesia. The sample size used by researchers was 89 respondents. This is based on the statement of Sekaran and Bougie (2013), which states that the general sample size in a study ranges from 30 to 500.

Hartono (2013) states that concept operationalization is explaining the characteristics of objects (properties) into observable elements that cause concepts to be measured and operationalized in research and become parts of objects that show the main characteristics of the object concept. Hartono (2013) also states that the operationalization of variables is divided into notions of concepts, dimensions, and elements.

Table 1. Variable Operational Definition

<table>
<thead>
<tr>
<th>Variable</th>
<th>Operational Definition</th>
<th>Dimension</th>
<th>Indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounting Information System</td>
<td>The quality of AIS is the quality when the AIS is implemented which is represented in the form of the application of AIS software application</td>
<td>Flexible</td>
<td></td>
</tr>
<tr>
<td>Quality</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accounting Information System</td>
<td>The quality of accounting Information is shown in the form of the quality of various kinds of reports related to financial matters generated by the Accounting Information System Application software</td>
<td>Accurate</td>
<td></td>
</tr>
<tr>
<td>Quality</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

...
For data analysis in this study, measurements are made using a Likert scale. According to Sugiyono (2017), the Likert scale is used to degree the attitudes, evaluations, and perceptions of someone or a set of humans approximately social phenomena. Descriptive analysis was used in this study's data analysis to explain the characteristics of the variables under investigation and analysis through structural equation modeling (SEM with PLS estimation) in order to answer the problem formulation and answer the research hypothesis.

This research uses SEM-PLS because the measurement model built involves only a reflective measurement model. In SEM-PLS, there are two submodels, namely the inner model and the external model. An external model refers to the connection among latent variables and their signs or apparent variables (measurement model). There are three types of external models: reflection models, formation models, and MIMIC models.

In this study, the research hypothesis will be tested using Structural Equation Modeling (SEM), where the model parameters are estimated using the Partial Least Square (PLS) method. A statistical analysis method (SEM) is used because there is a causal relationship between the variables, and each variable is not observed. According to Hair et al. (2014:20), the minimum sample size for SEM-PLS can represent a rule of thumb, which is determined in two ways:

1) Ten times more formative indicators were used to measure the structure.
2) Ten times more than the structural paths main to the shape within the structural model.

In this study, the initial sample size was determined to be 100 units of analysis (which, when
collected, will use SEM with the LISREL approach), and the minimum sample size was taken using the rule of thumb. Since not all of the indicators used are formative indicators, the sample size used is ten times the number of structural ways targeting a specific structure of the structural model, namely 10 x 3 = 30 samples.

This study used purposive sampling, a selection technique that uses specific criteria (Sugiyono, 2017). Purposive sampling is a non-probability sampling technique where “the items selected for the sample are selected based on the judgment of the researcher.”

**Figure 2.** The framework with variables involved

**FINDINGS AND DISCUSSION**

Data analysis using Smart-PLS 3 obtained a full model path diagram as follows:

**Figure 3.** Full Model Path Diagram
In this study, all measurement models in the first stage, namely the relationship between indicators and dimensions, are reflective measurement models. Furthermore, it can be seen that the quality of the indicator is shown by the validity and reliability of the indicator and the overall validity and reliability of the indicator with other indicators measuring the dimension.

The validity test uses confirmatory factor analysis. Both convergent and discriminant validity are outputs of this factor analysis. Hair et al. (2014) proposed a method based on cross-loadings of the indicators; it is used to test the discriminant validity, according to the general recommendations that an acceptable external loading value is ≥ 0.7. Convergent validity is assessed by the mean variance extracted. An AVE score ≥ 0.50 indicates that the configuration explains, on average more than half of the variance of the index (Hair et al., 201). The discriminant validity of indicators for each dimension can be seen based on the Fornell-Larcker Criteria in Table III. In this case, the criterion value of the indicators of a dimension must be greater for that dimension than for other dimensions (Hair et al., 2014). Furthermore, it can be seen that all criterion values for each dimension (those on the main diagonal) are indeed greater than the criterion values for other dimensions (outside the main diagonal). Therefore, the indicators of these dimensions have good discriminant validity.

<table>
<thead>
<tr>
<th>Indicator</th>
<th>AISQ</th>
<th>AIQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>AISQ</td>
<td>0.732</td>
<td></td>
</tr>
<tr>
<td>AIQ</td>
<td>0.829</td>
<td>0.771</td>
</tr>
</tbody>
</table>

Source: Data processed 2022
Description: AISQ (Accounting Information System Quality), AIQ (Accounting Information Quality)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Number of items</th>
<th>Average Variance Extracted (AVE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>AISQ</td>
<td>6</td>
<td>0.536</td>
</tr>
<tr>
<td>AIQ</td>
<td>8</td>
<td>0.594</td>
</tr>
</tbody>
</table>

Source: Data processed 2022
Description: AISQ (Accounting Information System Quality), AIQ (Accounting Information Quality)
Table 3 indicates that the AVE cost of every assemble is valid because the AVE cost of the indicator for every variable exceeds the minimum threshold of 0.50 (Hair et al., 2014), which shows that the suggestion of the assemble is greater than half of the explanation, the variance of its indicators either indicates that there are indicators that differ from each other (convergent validity is considered satisfactory).

A reliability test is performed based on the results of the internal consistency reliability test using Cronbach’s alpha and composite reliability coefficient values. The composite reliability rating between 0.70 and 0.90 is deemed adequate by Hair et al. (2014).

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient Composite Reliability</th>
<th>Coefficient Cronbach Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>AISQ</td>
<td>0.868</td>
<td>0.810</td>
</tr>
<tr>
<td>AIQ</td>
<td>0.906</td>
<td>0.900</td>
</tr>
</tbody>
</table>

Source: Data Processed 2022
Description: AISQ (Accounting Information System Quality), AIQ (Accounting Information Quality)

Table 4 shows the reliability of the internal consistency of each construct, as shown by Cronbach’s alpha value, as well as the composite reliability value of each construct, which indicates a value greater than the minimum threshold of 0.7 (Hair et al., 2014). Findings ensure that respondents’ responses are consistent in responding to statements about research variables. Structural model testing is performed using the R-squared value as the basis of measurement (Hair et al., 2014). The following are the test results of the structural model presented in Table 5.

<table>
<thead>
<tr>
<th>Path</th>
<th>Coefficient</th>
<th>t-statistic</th>
<th>p-value (one-tailed)</th>
<th>R²</th>
</tr>
</thead>
<tbody>
<tr>
<td>AISQ→AIQ</td>
<td>0.829</td>
<td>26.585</td>
<td>0.000</td>
<td>0.687</td>
</tr>
</tbody>
</table>

Source: Data processed 2022
Description: AISQ (Accounting Information System Quality), AIQ (Accounting Information Quality)

According to Table 5, AISQ (Accounting Information System Quality) has a 68.7% influence on AIQ (Accounting Information Quality). This R² score suggests that the predictive power is moderate.

Discussion

According to Table 5, it appears that there is a positive path coefficient between the quality of accounting information systems and the quality of accounting information records. Additionally, the p-value is less than 0.01, suggesting that this relationship is statistically significant. This finding supports hypothesis H1, which proposes that the greatness of accounting information systems has a positive effect on the greatness of accounting information. These results align with the conclusions of a previous empirical study conducted by Darma and Sagala (2020), which highlights the significance of information system quality in producing high-quality information. The level of influence that occurs is not optimal because commercial banks are still unable to obtain information from different functional areas, and the accounting information system has not yet fully prepared several applications with interconnected functions.

For example, the credit card and loan departments remain separate, which means that if a customer has commercial credit worth billions of rupiah and wants to apply for a credit card, they must still go through the new customer application process because their identity cannot be seen in the credit card segment. In other words, banking accounting information system applications are
not yet fully integrated with other departments. Harmonious integration has been shown by the accounting information system software currently in use between computer devices, software, communication equipment, operating procedures, data inputs, tasks to be carried out, and the generation of accounting information as needed. The number of customers and customer funds can be seen directly by a branch manager at any time in the accounting information system application they use.

The current activities in the accounting information system application can be seen by a branch manager due to the connection between the application menus used in the teller and customer service departments. Thus, it can be concluded that the integration of information within the accounting information system application is not yet optimal. Accounting information as per the required needs has not been fully produced by the accounting information system software used by managers, supervisors, non-managerial employees, owners, investors, and shareholders, resulting in suboptimal information provision. The accounting information system application provides a branch manager with daily reports showing the branch's current profits, customer funds, and credit disbursed. While the branch manager has the power to evaluate credit applications approved in their area, the decisions made are not visible in the accounting information system application, despite receiving daily reports on the amount of credit disbursed. Until now, the accounting information system software has not been able to fully adjust to variations in both type and quantity of input data and cannot fully produce accounting information based on requests or needs. Due to this limitation, customers who want to exchange currency cannot directly enter the teller queue as the accounting information system application on the teller screen does not allow it.

Instead, they must first meet with customer service to obtain a foreign exchange queue number and currency exchange rates. As a consequence, the accounting information system application has not fully accommodated flexibility as the customer needs to complete a form and queue in the teller area after meeting with customer service to obtain a foreign exchange queue number and currency exchange rates. The accounting information system application has been observed to have excellent security measures when accessed passively. Technological advancements and the need for efficient operations considering the inflow and outflow of bank funds have led to the current data processing tools available in banks.

These tools manage various data processing activities such as selection, calculation, compilation, reporting, and transmission. Hence, complying with Bank Indonesia's regulations, the use of information technology in banks aims to improve the effectiveness and efficiency of data management for banking business activities, ensuring accurate, timely, and confidential information. A relevant bank with a relatively large capacity is required when using an accounting information system application that provides transaction facilities for foreign exchange or current account management. This is because large-capacity banks are involved in foreign exchange and demand deposit payment transactions.

To ensure efficiency, the software should be utilized, and investment costs should add value. The accounting information system software currently in use is not readily available and cannot be accessed from any location or at any time. Some banks still do not possess accounting information system software that allows for 24/7 accessibility. As a result, access to the system must always be available either at the workplace or within the banking premises. Consequently, the accounting information system's accessibility has not been fully optimized. This study's results are in line with the findings of the earlier study: Darma et al. (2018) investigated the quality of accounting information that was significantly impacted by the accounting information system. In his study, Napitupulu (2020) concluded that accounting information is influenced by accounting information systems based on the guidelines of the Financial Services Authority (OJK) in Indonesia.
According to Ganyam and Ivungu (2019), accounting information systems are present in a variety of companies with the intention of disseminating information. The effect of information system quality on organizational culture and accounting information was discovered by Aldegis (2018) in his empirical results on Jordanian industrial public shareholding enterprises. Ratifah and Mulyani (2015) state that without proper implementation, the new accounting system will not be able to provide accurate and relevant information. Decision makers will use the information generated from the accounting information system to make decisions, both technical and non-technical. The accounting information system embodies this change with its manual and computerized functions (Novianty et al., 2018).

CONCLUSIONS

Advances in accounting information systems affect advances in accounting information. With the adoption of integrated, flexible, and easily accessible accounting information systems, the quality of accounting information in commercial banks has increased. Accounting information systems will generate accounting information (Wilkinson et al., 2000). A robust accounting information system provides high-quality accounting information, which is a critical aspect of the system’s success (Hongjiang Xu, 2009). The creation of quality information is constrained by a good accounting information system environment that will be incorporated into user decisions (Bodnar & Hopwood, 2014). For banks to operate continuously, to cut costs, and to become more competitive, IT investment is essential. For the purpose of providing excellent customer service and competing in the banking sector, it is crucial to develop skilled human resources. Additionally, improving network quality makes customer transactions simpler, which boosts business revenue. To facilitate rapid business growth, banks must prioritize ongoing employee training programs that cover areas such as credit analysis, risk management, marketing, and general management. A comprehensive solution comprised of hardware, software, procedures, databases, and communication technology networks should be implemented to meet the needs of users.

LIMITATION & FURTHER RESEARCH

Banking organizations should invest in and continuously improve their accounting information systems to meet the needs of stakeholders and provide accurate accounting information. This includes upgrading technology, providing employee training, and implementing best practices for data management and reporting. Future research should concentrate on replicability and generalizability by using similar research techniques on a variety of units of analysis and samples. Additional factors such as organizational culture, management support, personality characteristics, e-commerce, motivation, commitment, and leadership merit further investigation. It is critical to design an accurate questionnaire that captures operational activities because it ensures a reliable representation of respondents' experiences. To produce reliable and valuable research results, the questionnaire should effectively depict variations between phenomena and facilitate a clear understanding of respondents' experiences.

REFERENCES


