The Role of the Cloud in moderating Management Support for the Quality of Hospitality Accounting Information Systems

Dedy Husrizal Syah1, Azizul Kholis2, Eko Wahyu Nugrahadi3, Taufik Hidayat4, Gaffar Hafiz Sagala5
Universitas Negeri Medan1,2,3,4,5
email: desra@unimed.ac.id1

ABSTRACT

The hotel and tourism industry is essential to Indonesia’s economy (GDP), especially in North Sumatra, which has the fastest tourist area. The Accounting Information System (SIA) in the hotel industry is beneficial in achieving company goals. Cloud-based SIA integration allows hotels to deliver real-time data so management can access information. This study aims to examine the effect of management support on the quality of SIAs moderated by cloud computing. This study uses quantitative methods by distributing questionnaires. The population in this study is the hotel industry in North Sumatra Province. The sampling technique uses purposive sampling with the criteria of all employees in charge of accounting and financial information systems. The collected data was analyzed using Structural Equational Modelling Partial Least Square (SEM-PLS). The findings obtained from this study showed that management support has a significant positive effect on the quality of accounting information systems, then cloud computing also has
a significant positive effect on the quality of accounting information systems, and cloud computing moderates significantly positive relationships between management support and the quality of accounting information systems. The results of this study can be used as recommendations for improving efficiency and accuracy and improving the quality of taking proper business management when an organization implements cloud technology.

*Keywords*: Management Support, AIS, Cloud, Hotel

**INTRODUCTION**

The fundamental role of accounting information systems in organizations is to collect and process accounting data to produce quality accounting information to support the company's internal activities carried out by managers and employees as well as company activities with external parties such as consumers, government suppliers and others (Susanto, 2017). The results of a quality accounting information system are one of the competitive advantages of organizations (Baltzan, 2011). In order to produce quality information, quality information systems are needed that are timely, flexible, efficient and easily accessible. According to Meiryani, (2020), a quality accounting information system is a system that is reliable, efficient, effective, easy to use and easy to learn. Nelson et al., (2005) added that in addition to efficiency, accounting information systems must meet accessibility, timeliness, integration and flexibility.

There is excellent potential for adopting cloud-based accounting information systems in the hospitality industry in Indonesia (Abdillah et al., 2017; Giap et al., 2020). The hotel and tourism industry is essential to the Indonesian economy, contributing 15% to the Gross Domestic Product (GDP) (BI, 2016). Regarding accounting information systems, hotels need reliable and accessible information transmission to gain a competitive advantage. Hotels that can be present online and provide the information needed by consumers, and have online transaction features will have an excellent opportunity to win the market (Wiboonrat, 2014). In situations like this, SIA is essential in providing information that potential customers and management can access to determine future business strategies (Maelah, Al Lami, & Ghassan, 2021). According to research conducted by Al-Sharafi et al., (2017), cloud computing can improve the quality of decision-making by increasing accuracy, timeliness, and integration in presenting accounting information. Cloud-based AIS integration of multiple information sources or business cycles enables hotels to transmit data in real-time, which in turn improves their managerial performance (Belfo & Trigo, 2013; Wiboonrat, 2014).

The growth of the accounting information system in North Sumatra Province is also happening very quickly (Pasaribu, 2017). This happens because the province of North Sumatra is one of the areas with the phenomenon of tourism objects and fast-growing hotel industry, so many companies and hotels in the area need accurate, relevant and timely accounting information to achieve company goals. Therefore, companies and hotels in North Sumatra have also adopted a cloud-based accounting information system that is more effective than manual and traditional systems. Furthermore, because the data and information needed by the hospitality industry are many and varied, the role of accounting information systems is vital in helping achieve the company's goals (Dewita & Hati, 2017).

Christauskas & Miseviciene, (2012) state that an organization that implements cloud computing in its company's accounting information system will receive several benefits, including reduced costs on hardware and software and availability of real-time access anytime and anywhere. The use of cloud computing in accounting information systems can reduce labour and overtime costs due to the ability to access the system from anywhere and anytime (Al-Nsour et al., 2021). In addition, information systems...
that provide real-time services can immediately respond to employees and business partners (Kisielnicki & Markowski, 2021). As the findings of Zhygalova, (2013) stated, companies that implement the cloud experience a higher level of improvement in accounting processes than companies that do not.

Management support is also one of the factors influencing the quality of accounting information systems. According to Ziemba & Oblak, (2013), the low quality of the accounting information system is caused by a lack of management support for the development and use of AIS, which harms its implementation. Therefore, management support is an essential thing in the ongoing thing in the company. Management support for the accounting information system can be seen at all stages, starting from the design, implementation and maintenance (Alabed et al., 2021).

Shirlyani et al., (2018) said that management support can support improving the quality of AIS for a transaction in the accounting cycle that exists in the company. To create an information system that guarantees the production of high-fidelity sounds occurs reliably, management needs support because management provides the resources needed in all processes needed to create and maintain a good quality accounting information system within the company. Management's role in maintaining the performance of the accounting information system is to supervise the accounting information system used by the company and ensure that the existing accounting information system can work properly. Al-shargabi et al., (2021) argue that the more excellent support and commitment given by management will improve the quality of the SIA due to the communication between management in developing and operating the SIA the quality of the SIA. This is also reinforced by some of the findings of Latifah & Abitama, (2021), Senduk et al., (2021) which state that the higher the management support provided in the organization, the better the organizational performance and the resulting accounting information system performance. Likewise, the findings of Hartati et al., (2021) explaining management support with dimensions of monitoring/monitoring the use of accounting information systems can help the company run smoothly regularly.

This research integrates two crucial aspects of the successful implementation of cloud-based information systems, including aspects of innovation and organizational aspects. This research is expected to contribute insights within the scope of the information systems research area, enrich knowledge about the potential of the cloud to optimize accounting information system functions and share knowledge with hotel management about the prospects for cloud innovation in their organizations.

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

In the RBV concept, the focus of attention is the problem of resources. According to Barney et al., (2021), the success of an organization is determined by its resources, which are grouped into three categories: physical, human, and organizational. The RBV concept helps company managers understand why competencies can be considered the best assets for companies and how these assets can be used to improve business performance (Madhani, 2009).

This study also takes an approach through Leadership Theory and Diffusion Innovation Theory. In accounting systems, leadership theory is based on the general premise that management support affects performance. Performance, in this case, is the quality of accounting information systems (Setyaningsih et al., 2021). Furthermore (Laudon & Laudon, 2014) reveals that management can implement information systems with user involvement and support because they have more opportunities to form information systems that suit business priorities and needs and results. Likewise, the Diffusion Innovation Theory expressed by Rogers (Miller, 2015) explains that technology is a form of innovation that will support the improvement of an organization’s performance and allegedly must be
able to support components of the accounting information system. Cloud computing, in this case, is a technology that allows for ubiquitous (anywhere and whenever), convenient, on-demand network access to computing resources (e.g. networks, servers, storage, applications, and services) that can be quickly released or added (Badger et al., 2012).

The success of an accounting information system must be balanced with management support. The more excellent support provided by management will improve the quality of the accounting information system due to the existence of a definite relationship between management support in developing and operating accounting information systems with the quality of accounting information systems. Laudon & Laudon, (2014) stated that management support and control are mechanisms used to address a certain level of risk in any information system. Furthermore, Ragu-Nathan et al., (2004) define management support in information systems as the level of management's understanding of the importance of information system functions and the extent of their involvement in activities related to information systems. Ragu-Nathan et al., (2008) state that management support has 3 (three) indicators, namely: management understands the importance of company information systems, management participates in a company information system project, and company employees have an adequate role in company information systems, business knowledge, and managerial skills.

H1: Management support has a significant positive effect on the quality of accounting information systems.

Implementation of technology adoption in companies should reduce transaction costs due to a lack of trust between business partners (Matias & Hernandez, 2021). External pressure and organizational readiness are significant predictors of technology adoption, including cloud computing. Cloud computing is an information technology service that network/internet-based users can utilize. Wu et al., (2011) stated that cloud computing is a parallel and distributed computing system which consists of several groups of computers connected virtually that are displayed as one or more resources that consumers can use through agreements between customers and service providers. For example, cloud accounting can do mobile accounting with various transactions; payment authorization; financial data entry; and preparation of financial reports; in other words can do these tasks anywhere without having to be in the office. This mobility opportunity will provide users with the benefits of timely information sharing, increasing the speed of management decision-making (Maelah et al., 2021). Zhygalova, (2013) shows that companies using cloud outsourcing show a higher level of improvement in their accounting processes than non-cloud users.

H2: Cloud computing has a significant positive effect on the quality of accounting information systems

Cloud computing helps businesses use applications without installing or building infrastructure, hardware, or software because cloud service providers have provided all of this for a fee (Arfan & Somantri, 2018). Management can quickly carry out the decision-making process when financial information is provided with all the timeliness and speed through sharing and receiving information in the cloud. Furthermore, management can control data through a cloud-based accounting information system, facilitating centralized data collection based on big data (He, 2021). Furthermore, Sekar & Maniatis, (2011) show that cloud computing allows users to reduce operating costs and capital expenditures because of the infrastructure provided to them. In this context, cloud computing can facilitate the dematerialization of production processes and the presentation of business information and maintain the security of that information (Moudud-Ul-Huq et al., 2020). Managerial support is critical to the effectiveness of information systems in companies, and barriers to e-business acceptance in some organizations are external influences and lack of skills, and policies aimed at encouraging the adoption of technologies such as the cloud (Effendi et al., 2020).

H3: Cloud computing moderates positively significant relationship between management support and accounting information system quality
RESEARCH METHOD

The research method applied in this study is quantitative in cases where a questionnaire is utilized as the data collection method. Submission of the questionnaire was carried out online by sending a link to the questionnaire via email and also through social media. The scale that will be used in the questionnaire from this study is to use 5 Likert scale; according to Sugiono, (2015) to measure a person’s attitude/perception about an attitude object, it is recommended to use a Likert scale. The measurement items in the questionnaire were adopted from several previous studies. For example, measurement items for the quality of accounting information systems are adopted from DeLone & McLean, (2003); Ghobakhloo & Tang, (2015), while the measurement items for management support are adopted from Fuglseth & Sørebø, (2014); Ragu-Nathan et al., (2008), as well as measurement items for cloud computing adopted from Khaliq et al., (2021); Khayer, Bao, et al., (2020); (Asatiani et al., 2019). The collected data will be tabulated and analyzed using Variance Based-Structural Equational Modeling (Hair et al., 2014).

The population in this study are all hotel employees in the province of North Sumatra who have implemented cloud. In contrast, the sampling technique uses purposive sampling by applying the slovin formula because the total population is more than 100 people (Mweshi & Sakyi, 2020). So based on the criteria, the respondents who were used as samples in this study were employees who had positions or were in charge of the information system and accounting/finance section, namely 350 respondents.

RESULT AND DISCUSSION

Based on the identity data of the respondents obtained from the results of the questionnaire, the demographics of respondents were male as many as 194 respondents (56%) and women as many as 153 respondents (44%), while the age category 20-30 years amounted to 137 respondents (39%), ages 31-40 totalled 190 respondents (55%), aged 41-50 totalled 20 respondents (6%), then the category of respondents who had experience/work experience range of 0-2 years was 228 respondents (66%), range of 3-4 years was 111 respondents (32%) and a range of 5 years and over as many as 8 respondents (2%).

![Figure 1. Reliability and Validity test results](image-url)
Based on Figure 1, the Reliability and Validity test results above show that the loading factor is above 0.5. This indicates that the indicators used in this study have passed the validity test threshold so that they are declared valid (have met convergent validity). Furthermore, the reliability test in this study is strengthened by the results of Cronbach’s alpha and also the composite reliability, which follows the output results on smartPLS as follows:

Table 1. Construct Reliability and Validity

<table>
<thead>
<tr>
<th></th>
<th>Cronbach’s Alpha</th>
<th>rho_A</th>
<th>Composite Reliability</th>
<th>Average Variance Extracted (AVE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CC</td>
<td>0.936</td>
<td>0.94</td>
<td>0.946</td>
<td>0.636</td>
</tr>
<tr>
<td>DM</td>
<td>0.859</td>
<td>0.864</td>
<td>0.915</td>
<td>0.782</td>
</tr>
<tr>
<td>KSIA</td>
<td>0.961</td>
<td>0.961</td>
<td>0.967</td>
<td>0.785</td>
</tr>
<tr>
<td>ModDM_CC_KSIA</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

*Source: Primary Data Processed (2023)*

Based on table 1. Construct Reliability and Validity above, and it is known that the value of Cronbach’s alpha and composite reliability values for cloud computing variables, management support and quality of accounting information systems obtain values above 0.7 so that the research dimensions are declared reliable.

Table 2. Path Coefficient

|            | Original Sample (O) | Sample Mean (M) | Standard Deviation (STDEV) | T Statistics (|O/STDEV|) | P Values |
|------------|---------------------|-----------------|-----------------------------|------------------------|----------|
| CC -> KSIA | 0.895               | 0.888           | 0.069                       | 12.924                 | 0.000    |
| DM -> KSIA | 0.387               | 0.386           | 0.068                       | 5.705                  | 0.000    |
| ModDM_CC_KSIA | 0.456           | 0.447           | 0.076                       | 6.015                  | 0.000    |

*Source: Primary Data Processed (2023)*

Based on the results of the data processing listed in table 2 Path Coefficient above, it can be concluded as follows; the influence of management support on the quality of accounting information systems produces an original sample of 0.387, with T-Statistic = 5.705 (> 1.96) and P Values = 0.000 (< 0.05). This proves that the effect of management support on the quality of accounting information systems is significantly positive. At the same time, the cloud computing variable on the quality of accounting information systems produces an original sample of 0.895, with T-Statistics = 12.924 (> 1.96) and P Values = 0.000 (< 0.05). This proves that the effect of cloud computing on the quality of accounting information systems is significant. Finally, cloud computing moderation of the effect of management support on the quality of accounting information systems produces an original sample of 0.456, with T-Statistics = 6.015 > 1.96 and P Values = 0.000 (< 0.05). This means that cloud computing’s moderation of the effect of management support on the quality of accounting information systems is significant.

**The Influence of Management Support on Quality of Accounting Information Systems**

The results of this study indicate that support from management has a significant positive effect on the quality of accounting information systems. The linkage of management support to the quality of accounting information systems can be interpreted when developing accounting information systems. First, management support is crucial because system development is an integrated part of company planning. The system developed should follow company plans and thus will encourage the achievement of company goals. Second, management support impacts direct and maintains human behaviour shown by directors, presidents, division heads, and so on in organizations (Altıok, 2011). The form of assistance leaders can be leadership support to subordinates, training, and provision of infrastructure. In general, the things that are the focus of development in the hotel business are services that are directly aimed at consumers, such as room service, restaurants, spas, and fitness centres. Third, maximum support from management impacts the performance of a company’s accounting information system.
management actions have a significant impact on the organization. Subordinates and executives make top management the standard of their organizational behaviour (Andriyani & Triyanto, 2022). The support provided by management to accounting information systems is an essential factor in achieving the quality of accounting information systems (Lee et al., 2016). Fourth, management support influences socializing information system development, allowing users to participate in system development and affecting user satisfaction (Jiang et al., 2012). These findings are consistent with research conducted by (Ragu-Nathan et al., 2004), Ahmed & Azmi, (2016); Sultan, (2015), Indrayani, (2022); Puspitawati & Wisdayanti, (2020), which states that management support has a significant effect on the quality of accounting information systems.

The Influence of Cloud Computing on Quality of Accounting Information Systems

The results of this study conclude that cloud computing significantly influences the quality of accounting information systems. That evidences this if a company uses cloud computing, an accounting information system in the company will be well structured and organized, with cloud computing providing many benefits for accounting information system users. Zhgalova, (2013) shows that companies using the cloud show a higher level of improvement in their accounting processes than non-cloud users. Management can control data through a cloud-based accounting information system, facilitating centralized data collection based on big data (He, 2021). The results of this study align with Rath et al., (2021), namely the demands of implementing cloud computing in business organizations in their information systems, requiring users to be more professional and competent. With the development of companies that have become larger, the implementation of the old business system is not flexible enough to adapt to possible changes and irregularities between business and information systems within the company’s organization Rath et al., (2021).

Cloud Computing Moderation of the Influence of Management Support on the Quality of Accounting Information Systems

This study resulted in that cloud computing moderates the management support variable for the quality of accounting information systems. This is evidenced by the better management support in implementing cloud computing in a company, the better the quality of accounting information systems produced by a company. The interpretation of the moderating effect in testing the hypothesis explains that the moderating effect caused by cloud computing variables on the relationship between management support and the quality of accounting information systems is high, with an F-Square value of 0.392. According to (Hair et al., 2013) the range of interpretation values for the moderating effect of a study is above 0.025, which means it has a high level. Managers can access data remotely from any device when a hospitality business uses cloud computing. This allows them to oversee the accounting process more closely, ensuring accurate and up-to-date information is used. In addition, a manager can provide guidance and support to staff/employees who use cloud computing-based accounting systems, helping them understand the system better and effectively use it for the organization’s benefit. This also makes it easier for managers to manage their systems and collaborate with their employees. In addition, cloud computing makes it easier for managers to back up their data and access it quickly in case of an emergency or unexpected outage (Chang, 2015). This helps minimize the risk of data loss and potential downtime and provides a reliable source of data backup in an emergency ((Whaiduzzaman et al., 2014).

CONCLUSIONS

Based on the results of the research that has been done, it can be concluded that management support has a significant positive effect on the quality of accounting information systems, which reflects that maximum support from management has an impact on the performance of accounting information systems in an organization, then cloud computing also has a significant positive effect on the quality of information systems accounting, and finally cloud computing also significantly strengthens the moderation of management support for the quality of accounting information systems. This means that the better the management support in implementing cloud computing in a company, the better the
quality of the accounting information system produced by a company. Therefore, the involvement of cloud computing can help produce good quality accounting information systems as well as management support that controls and protects a company in using cloud computing so that it can produce accurate, precise and informative information. Therefore, this study contributes to increased efficiency and accuracy and improves the quality of making the right business decisions when an organization implements cloud technology. Furthermore, this study will explore future variations and innovations in the hospitality industry in other regions.

REFERENCES


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