The Role of Cloud Computing on Accounting Information System Quality: A Study in Hotel Industry

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Abstract **– The hotel industry is a significant sector for Indonesian economic growth. Nowadays, cloud computing is bringing much potential for hotels to increase their competitive advantage, specifically in facilitating Information Systems (IS). However, we found still limited study that investigates cloud-based IS in accounting functions. Therefore, this study aims to analyze 1) the impact of the human aspect in determining cloud performance, 2) the impact of cloud performance on the relative advantage and compatibility of cloud-based Accounting Information Systems (AIS) in the hotel industry, and 3) the impact of its relative advantage and compatibility on cloud-based AIS quality. Using purposive sampling, the data was collected from accounting and/or information manager hotels in North Sumatra, Indonesia. The collected data were analyzed using variance-based Structural Equation Modeling (SEM). We found that human, cloud performance, and technology adaptability are the critical antecedents of cloud-based AIS quality in the hotel industry. Hotel leaders should consider user computer-self efficacy and cloud-AIS alignment design while developing and integrating cloud-based AIS into their general system.**

Keywords **– Cloud, self-efficacy, accounting, information systems.**

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1. Introduction

The fundamental role of an accounting information system (AIS) in an organization is to collect and process accounting data to produce credible accounting information. This information supports the company's strategic decision-making by top management and subordinates and communicates firm performance to external parties, consumers, the government, and other stakeholders [1]. Business dynamics that are increasingly fluctuating and fast-changing require companies to be able to produce information quickly and on-demand, or in other languages, business researchers call it real-time information [2]. Real-time information generated by AIS provides various advantages compared to periodic reporting commonly carried out by traditional accounting practices [2]. Real-time accounting information can empower managers or users of financial information to make immediate, dynamic, and strategic economic decisions [2], [3], [4]. Those values happen because decision-makers have flexibility in time, place, and devices for accessing accounting information [5], [6], [7]. The flexibility and credibility of AIS in delivering accounting information help managers to produce significant decision-making and, in turn, help companies achieve their competitive advantage [8].

Interestingly, the need for real-time accounting information is answered by cloud-based frameworks [7]. AIS implementation in companies has shifted to a cloud computing platform because it allows companies to manage accounting data reliably, safely, and efficiently [9]. In contrast to server-based AIS, which still has the risk of data loss due to hardware damage, natural disasters, and limited storage space, cloud computing provides better flexibility with risks transferred to cloud service providers and without hardware maintenance [10], [11], [12]. Additionally, companies still have the flexibility to customize AIS designs that operate on the cloud according to their needs. These advantages are, of course, able to improve AIS performance in presenting financial information that is credible, on-demand, and easy to access [11].

In Indonesia, the hospitality industry is an industry that has great potential to adopt cloud-based AIS [13]. At the same time, hotels and other tourism industries have an essential role in the economy by contributing 15% to Indonesia's Gross Domestic Product (GDP). Regarding AIS, hotels require reliable and accessible information transmission to gain a competitive advantage over their competitors. Hotels that can be present online by presenting the information needed by consumers and have online transaction features will have a great chance of winning the market [15]. Under these conditions, AIS plays a vital role in facilitating the availability of information both for prospective customers and management to determine future business strategies [4]. Maelah et al. [4] found that cloud computing improves the quality of decision-making due to accuracy, timeliness, and integration in presenting accounting information. Integrating cloud-based AIS from various information sources or business cycles allows hotels to deliver real-time data, which, in turn, improves their managerial performance [2], [15], [16].

However, in shifting from the previous AIS to the innovative AIS based on the cloud, the user interface will indeed be changing, and end-users will have to learn again about the new information systems. After that, the success of AIS migration toward a cloud-based system must be measured by its performance during business operations. Regarding this concern, Schneider and Suniyaev [26] argue that research on cloud computing is dominated by the technological view of its determinants and implementation, while human, economic, and psychological aspects are still rare to analyze. Previous research argues that the successful implementation of new IS innovation should be supported by the managerial aspects, organizational structure, interdependencies of business process, and decision-making alternatives embedded in the characteristics of the company [17], [18], [19]. Therefore, this study aims to analyze 1) the impact of the human aspect in determining cloud performance, 2) the impact of cloud performance on the relative advantage and compatibility of cloud-based AIS in the hotel industry, and 3) the impact of its relative advantage and compatibility on cloud-based AIS quality.

This study integrates three crucial aspects of the successful implementation of new IS in the company into a single analysis model, including human, technological, and organizational aspects. The human aspect is represented by computer-self efficacy, the popular construct to measure the human ability to adopt a new computer technology [20]. It is the crucial and critical determinant before a company decides to invest in new technology to make sure that the It investment will work the managerial expectation [21], [22], [23].

Furthermore, the organizational aspects were measured by the relative advantage and compatibility. Those variables represent to what extent the technological innovation is appropriate for the specific business operation [24]. The appropriateness is related to aligning the IT investment with the work structure [19], [18]. In this case, cloud computing is implemented for the AIS function, which has specific work characteristics in hotel industries. Therefore, the relative advantage and compatibility of cloud computing invested should be addressed in AIS function in the hotel industry [16], [24], [26]. Finally, AIS cannot separate from the information aspects, mainly financial information and systems aspects, which facilitate the business to deliver its information to users and users accessing the data from the business process. Therefore, to address IS aspects, this study analyzes AIS performance using two dimensions that is information and systems quality. Both dimensions are the critical construct to measure IS success based on end-user perspectives [21], [27], [28].

The current study is expected to deliver two insights into the IS research area. Firstly, the result of this study would enrich the insight regarding the potentiality of cloud computing platforms for optimization of AIS function, which is still rare to study. And secondly, delivering this knowledge to hotel owners as it has the prospect of investing in making the hotel industry grow faster and have more impact on the country's GDP. The theoretical framework is delivered in the next section, followed by the research method, data analysis, discussion, and conclusion.

2. Literature Review

Resource-Based View (RBV)

Referring to the Resource-Based View (RBV), business entities need unique and valuable resources and the ability to generate organizational-specific capabilities when dealing with competition [29], [30], [31]. Ownership of unique and heterogeneous resources and the ability to manage them will help companies create value which in turn helps them win the competition [32], [33], [34]. These heterogeneous resources consist of physical, human, and organizational resources [29]. This view also seems relevant in explaining the phenomenon of implementing cloud computing in hotel's AIS. The RBV concept holds that IS resources will not be able to help companies achieve sustainable competitive advantage without human resources who have technical expertise in using the IS. Business entities will better understand IT utilization if they consider IT-related competencies in creating business value [35], [36], [37].

Thus, the RBV concept helps researchers and business practitioners understand how human competence should be considered as company's greatest asset. Business entities need to manage it to optimize the IT innovations and its application in their business [38]. At the same time, these IT innovations must also match the characteristics and relative needs of the organization so that the investment would create value [29], [39]. Therefore, in this study, we used the RBV framework in investigating the role of Cloud Computing in producing AIS performance by considering human aspects, IT aspects, and IT compatibility to creating AIS quality. In general, the figure of the framework is observable in Figure 1.

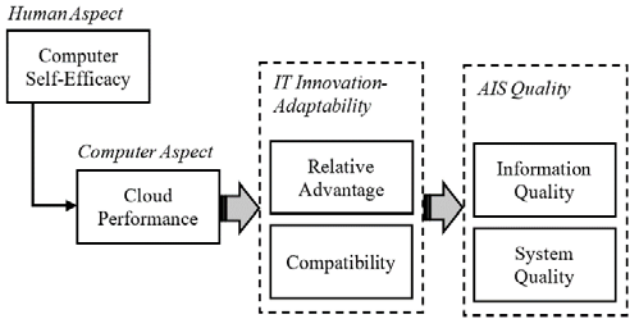

Figure 1. Research Framework

Human and IT Aspect on IT-Adoption

In RBV, human competence is essential in exploiting unique or new IT resources such as cloud computing [39]. When a company decides to carry out IS innovation, the competence of its employees must be the primary concern [40]. The development of IS requires specific knowledge and skills from users to use the new IS optimally [41]. Various studies have used multiple attributes or variables in measuring employee competence, such as computer-self efficacy, computer experience, digital literacy, digital readiness, and self-agility [20], [39], [42], [43]. However, in this study, we used a computer self-efficacy construct to measure employee competencies representing human resources in business entities. We use CSE because it has been used majorly and effectively in measuring adoption behavior in new IT [44].

The concept of self-efficacy was first developed by a developmental psychologist, Bandura [45], [46] who explained that humans have beliefs about their ability to do a task or face a challenge. Self-efficacy relates to a person's willingness and ability to learn new things that make him adapt to new challenges at work and everyday life [45], [46]. In IT development and innovation, self-efficacy is widely used by researchers to analyze how end-users respond to acceptance or rejection in dealing with technological changes in the form of computers, software, and the internet [20], [47], [48], [49].

Differences in the level of employee computer self-efficacy (CSE) in adapting to the new IS indicate differences in the diffusion or absorption of the IS innovation in the company's productive tasks [50], [51]. Individuals with high CSE tend to learn to use the new IS and try to adopt it to help them do their productive work [44], [52].

In the context of AIS innovation based on Cloud Computing, database management, accessibility, and user interfaces may change. This condition results in end-users dealing with different work patterns. They must adapt quickly and produce the same or even better productivity. End-users who have self-efficacy should be able to learn new ways of working to adapt to the new AIS efficiently and quickly. Thus, instead of rejecting innovation in AIS, the end-user will choose to master it to maintain its performance. Due to the end-user being able to operationalize it well, the new AIS will also perform well. Thus, we formulated the following hypothesis:

H1: Computer self-efficacy has positive impact on cloud performance.

The IT used to run the AIS application must have generally accepted standards to make it easier when computer technology is connected with other IS [53]. In line with that, Bocij et al. [54] suggested that interoperability is a general term used to describe how easily different technological components can be integrated. These views are related to compatibility [24]. Internal AIS, a sub-system of management information systems (MIS), will be installed and integrated with other systems [6]. At the same time, the AIS will support a particular job in distributing accounting information. Thus, in line with the RBV, the new AIS must have good compatibility to match the firm's specific needs [29], [31]. Previous researchers have examined differences in the design and setting of IT innovations to achieve individual performance in companies [55], [56]. This means specific needs such as AIS require particular designs and settings from the IT infrastructure that supports the company’s purposes. This view aligns with the relative advantage conception [24].

Moore & Benbasat [24] argue that IT innovation can only run with adjustments to the company's specific needs, including compatibility and relative advantage. Interestingly, the flexibility provided by cloud computing makes it possible to customize the IS to suit the particular needs of AIS [6], [7], [12]. With competence in managing cloud-based AIS, the cloud can work according to the organization's specific needs in presenting accounting information and integrating it with other IS. This capability will increase the company's advantage in delivering accounting information in real-time, flexible (anywhere with a mobile device), capable and safe [6], [7].

Thus, a properly managed cloud that performs well will produce AIS compatible with existing IS and company-specific needs and simultaneously increase its relative advantage in presenting and distributing accounting information. Thus, the researcher formulated the following hypothesis:

H2a: Cloud performance has positive impact on AIS relative advantage.
H2b: Cloud performance has positive impact on AIS compatibility.

IS-Innovation and AIS Performance

Accounting data contains business information attached to various aspects of the company, such as sales, raw materials, labor, and overhead. Therefore, the AIS that cannot facilitate presenting and managing business information will lose its significance in company performance [6]. In companies that operate widely, AIS requires an IS that can collect, classify, analyze, and present business information in parallel, integrated, and continuously connected devices [6]. In this context, cloud accounting can facilitate the dematerialization of production processes and the presentation of business information and maintain the security of that information [7]. AIS transformation to cloud-based IS could be a fundamental driver for making accounting information more than just an administration standard but reaching opportunities to create value, new plans, new investments, and new strategies on the internet [7], [57]. Interestingly, these cloud-based AIS devices can be integrated with existing IS, enabling companies to build network-oriented systems [6].

The adaptability of IS innovations in their applications must be measured to align them with productive tasks in the firm [24]. Likewise, cloud-based IS that is applied to the accounting system function. Moore and Benbasat [24] found that relative advantage and compatibility tend to merge into one factor. However, Moore and Benbasat [24] also argued that the two constructs are conceptually different even though they are closely related. End-users feel they have a relative advantage if they think the new IS is compatible with their work. In the current study, we used relative advantage and compatibility as two different constructs. From an AIS perspective, relative advantage refers to the extent to which cloud-based AIS can optimize the performance of business information users in terms of time efficiency, work quality, control, and productivity [24]. Meanwhile, compatibility refers to what extent the cloud-based AIS is suitable or appropriate for the characteristics or task functions of the management accountant (See: Moore & Benbasat, 1991).

Furthermore, IS adaptability must be tested for its impact on producing AIS performance. AIS performance in this study was measured using the information system success construct developed by DeLone and MacLane (1992, 2002), namely information quality and system quality. This construct is relevant for measuring the user satisfaction level of an IS use [58]. User satisfaction is a critical perspective that proxies companies' benefits from adopting new technologies such as cloud computing [59], [60]. In the context of cloud-based AIS, information quality reflects AIS's ability to produce accurate, complete, relevant, consistent, updated, and according to needs [60]. The poor quality of the information produced by AIS will result in a deficiency in IS that is contrary to the characteristics of cloud computing [60]. At the same time, the poor quality of business information will impact the less appropriate and late business decision-making [6], [7]. However, according to the characteristics of cloud computing, the adaptability of cloud-based AIS should produce good quality information and improve the efficiency of using AIS in business decision-making.The ability of AIS to create relevant and accurate information depends on the compatibility between the provided information and the specific task that the management accountant does with the related AIS. Furthermore, the relative advantage of AIS to integrate the general IS and its usefulness in collecting, calculating, and distributing information efficiently is the crucial factor of information quality. Thus the researcher formulated the following hypothesis:

H3a: Cloud-based AIS relative advantage has positive impact on information quality.
H3b: Cloud-based AIS compatibility has positive impact on information quality.

Furthermore, system quality reflects the extent to which AIS has computing capacity, speed of processing information, cloud provider infrastructure capacity, usability, and compatibility of the cloud services provided [60], [61]. If cloud-based AIS users find the system helpful, comfortable, reliable, and easy to use for their tasks, they will feel that the IS is performing well [60]. This perception arises from the relevance of the information presented by AIS to the work needs and the usefulness of this information in improving end-user performance [21]. Wu and Chiu [39] found that technological factors play an essential role in technology adoption at the intra-organizational and inter-organizational levels. Wu and Chiu [39] found that the constructs of relative advantage, compatibility, and complexity have an essential role in determining whether IT innovation is to get better performance.

A cloud-based AIS that can help end-users improve their work efficiency tends to help produce AIS performance so that end-users can perceive that an AIS is of high quality. Furthermore, the integration of cloud-based AIS into existing information systems and accommodating the work needs of management accountants will be able to generate support for the successful performance of the AIS. Therefore, the researcher formulated the following hypothesis:

H4a: Cloud-based AIS relative advantage has positive impact on system quality.
H4b: Cloud-based AIS compatibility has positive impact on system quality.

3. Research Method

The data were collected by survey method using a questionnaire. The questionnaire was used to collect responses from samples with a 5-Likert scale. The questionnaire items used to collect data were adapted from previous studies. Items for computer self-efficacy variables were adapted from Compeau and Higgins [20], cloud performance from Asatiani et al. [12], IT innovation adaptability from Moore & Benbasat [24], and AIS quality from DeLone and McLane [27], [28]. These items are translated and adapted according to the context and research objectives. After adaptation, we conducted face validity by involving three experts (academicians) in business information systems [62], [63]. Questionnaires are used to collect data after obtaining improvements according to expert recommendations (expert judgment).

The subject of this research is the hotel industry with organizational analysis level. The hotel criteria that are sampled are hotels that are already using cloud-based AIS. Targeted respondents are subordinates who interact directly with the AIS and have business decision-making roles, including accounting managers, information managers, or finance managers. This study used a purposive sampling technique. Determination of the sample criteria, as explained earlier, is intended so that the responses obtained come from people who have the capacity and are directly related to the use of AIS. We strive to ensure that the responses we receive reflect the usefulness of the AIS features and their use in making business decisions objectively.

We use enumerators in collecting data. Enumerators are asked to visit the targeted hotels and communicate directly with the targeted respondents. The hotels that were sampled were hotels operating in North Sumatra, Indonesia. Furthermore, questionnaires were submitted, and targeted respondents were given one week to complete the questionnaire.

Filling out the questionnaire is not mandatory. Thus, at the time of retrieval, not all questionnaires were filled in completely. Of the 500 questionnaires distributed, 347 questionnaires were filled out. The sample demographics can be reviewed in Table 1. The collected data were tabulated and analyzed using variance-based Structural Equation Modeling (SEM) [64], [25]. Data analysis is separated into two stages, that is outer model and the inner model analysis [64], [25].

4. Results

Demography of Sample

Based on Table 1, it can be observed that 59% (n=203) of the respondents were male, while the other 41% (n=144) were female. This composition can be categorized as balanced between genders. Furthermore, the sample consists of four-star levels, namely: two, three, four, and five stars. The largest sample was 4-star hotels with a sample composition of 43% (n=149), followed by 3-star hotels with 30% (n=103) of the sample, five-star hotels with 22% (n=75) of the sample, and two-star hotels with 6% (n=20) of the sample. Data representation of all-star levels in the hospitality industry is good at this data. This indicates that the data has potential generalizability from the trustworthiness of its sample.

Table 1. Demography of sample

No.	Variable		n	%
1	Gender			
		Female	144	41%
		Male	203	59%
			347	100%
2	Star			
		Five	75	22%
		Four	149	43%
		Three	103	30%
		Two	20	6%
			347	100%

Descriptive Statistics

The results of the descriptive statistical test can be observed in Table 2. Descriptive statistics in this study review the mean and standard deviation of the data for each variable. Based on the results of the descriptive statistics, all variables have an average above > 4.0. This figure indicates that respondents have very positive perceptions of all the variables measured, namely: computer self-efficacy, cloud performance, relative advantage, compatibility, information quality, and system quality. Furthermore, the standard deviation of each variable is reasonable, with a standard deviation that is around one.

Information quality has the highest standard deviation, while computer self-efficacy has the lowest standard deviation. However, all variables are in a good range of data variation.

Table 2. Descriptive statistics

No.	Variable	n	avg	st.dev
1.	Computer Self-Efficacy	347	4,483	0,776
2.	Cloud Performance	347	4,472	0,763
3.	Relative Advantage	347	4,509	0,814
4.	Compatibility	347	4,479	0,969
5.	Information Quality	347	4,394	1,007
6.	System Quality	347	4,378	0,995

Analysis of Outer Model

The first stage of SEM-PLS is analyzing the measurement model or outer model. This stage tests the validity of the construct, which will later be used to test hypotheses [64], [25]. Before being used to test hypotheses, constructs must meet three validation criteria, including: convergent validity, discriminant validity, and reliability [64], [25]. This study analyzed convergent validity by observing the loading factor and average variance extracted (AVE) values. The accepted criteria for loading factor are above >0.6, while AVE is above >0.5 [25]. The confirmatory factor analysis (CFA) results, which produce a loading factor, can be observed in Appendix 1, while the AVE value can be reviewed in Appendix 2. From the results of the CFA, several items have a loading factor below <0.6, namely: C1 and C3 on compatibility construct; RA2 and RA4 on relative advantage constructs; CP2, CP4, and CP6 on cloud performance constructs; CSE1, CSE3, CSE4, CSE5, CSE7, and CSE8 on computer self-efficacy constructs; IQ2 on the construct of information quality; and the SQ1 and SQ5 constructs in the system quality construct. Items not meeting these criteria are dropped from data analysis and retested on the outer model. After retesting, all items have a loading factor above 0.6, as shown in Appendix 1 below. Furthermore, the AVE value in each construct was also found to have a value above > 0.5. Thus the outer model in the construct of this study has met convergent validity.

Discriminant validity in this study was tested using the Fornell & Larcker criterion [14] and the heterotrait-monotrait ratio of correlations (HTMT). Observation with the Fornell & Larcker criterion was carried out by observing the AVE root value inputted into the diagonal correlation matrix in Appendix 2.

The construct meets discriminant validity if the AVE root number is greater than the correlation coefficient number at off-diagonal. Then the HTMT criteria in constructs that meet convergent validity are below <1 [64]. The results of observations on the Fornell & Larcker criterion in Appendix 2 show that the constructs in this study have met discriminant validity because the AVE root number on the diagonal of the correlation matrix is overall greater than the correlation coefficient on the off-diagonal. Furthermore, in Appendix 3, the HTMT matrix of the relationship between constructs is quite good, except for the constructs of information quality and system quality. These two constructs are indeed in the same construct group, namely AIS performance. However, conceptually these two constructs assess different variations in the quality of AIS. Furthermore, according to the Fornell & Larcker criteria, these two constructs meet the requirements. So the researcher kept one of the constructs from the data analysis. At this stage, we consider all constructs to meet discriminant validity.

Finally, the reliability test in this study was done by observing Cronbach's alpha (CA) and composite reliability (CR) result of the outer model [64]. According to the CA result in Appendix 2, several constructs do not meet the criteria as the minimum number of CA should be 0,7 [64]. However, based on the CR number, all of the constructs have met the criteria where all of the constructs have a CR number above >0.7. Therefore, according to the CR result, all research variables have fulfilled construct reliability.

Inner Model

After the measurement model is declared valid, the construct can be used to test the hypothesis [64], [25]. This hypothesis-testing phase is carried out by testing a structural model called the inner model. Tests on the inner model are carried out by observing the path coefficient, t-stat, and p-value. The path coefficient is declared significant if it has a t-stat value greater than 1.96 and a p-value below <0.05 (α. 5%). The analysis results on the inner model can be observed in Table 3. The results of data analysis show that computer self-efficacy has a significantly positive effect on cloud performance with a correlation coefficient of 0.651, t-stat 9.719 (>1.96), and p-value 0.000 (<0.05). Thus H1 is supported. Based on these findings, it can be seen that the more management accountants, information managers, or financial managers have self-efficacy in using cloud-based AIS, the more they can feel that the cloud computing used in operationalizing the AIS has good performance.

Table 3. Result of inner model

H	Path	Coef.	t-stat	p-value	Result
H1	Computer Self-Efficacy → Cloud Performance	0,651	9,719	0,000	Supported
H2a	Cloud Performance → Compatibility	0,299	3,279	0,001	Supported
H2b	Cloud Performance → Relative Advantage	0,368	4,009	0,000	Supported
H3a	Relative Advantage → Information Quality	0,182	2,066	0,039	Supported
H3b	Compatibility → Information Quality	0,328	3,498	0,000	Supported
H4a	Relative Advantage → System Quality	0,224	2,607	0,009	Supported
H4b	Compatibility → System Quality	0,298	3,223	0,001	Supported

Furthermore, cloud performance was also found to have a significant positive effect on compatibility and relative advantage with a correlation coefficient of 0.299 and 0.368, t-stat 3.279 (> 1.96) and 4.009 (> 1.96), and a p-value of 0.001 (<0 .05) and 0.000 (<0.05). Then H2a and H2b are supported. Based on these findings, cloud computing with good performance will be able to produce AIS that is compatible with the work needs of management accountants, information managers, or financial managers. At the same time, cloud computing that performs well will produce AIS that can increase the effectiveness and efficiency of management accountants, information managers, or finance managers in making business decisions.

The relative advantage was found to have a significant positive effect on information quality with a path coefficient of 0.182, a t-stat of 2.066 (>1.96), and a p-value of 0.039 (<0.05). As for relative advantage, compatibility was also found to have a significant positive effect on information quality with a path coefficient of 0.328, a t-stat of 3.498 (>1.96), and a p-value of 0.000 (<0.05). These findings indicate that H3a and H3b are supported. A cloud-based AIS that is capable of producing timely, controllable, manageable, flexible, and accessible information anywhere will improve the quality of the information presented by the AIS. In line with that, a cloud-based AIS that is designed in such a way as to match the characteristics of the tasks, functions, and information required by the end-user job specifications (such as: management accountant, information manager, or financial manager) will produce quality information in the eyes of the end-users. According to this study, compatibility is a more critical antecedent for information quality than relative advantage.

Finally, relative advantage and compatibility were found to have a significantly positive effect on system quality. Relative advantage has a path coefficient of 0.224, a t-stat of 2.607 (>1.96), and a p-value of 0.009 (<0.05). Meanwhile, compatibility has a path coefficient of 0.298, a t-stat of 3.223 (>1.96), and a p-value of 0.001 (<0.05). Hence H4a and H4b are supported.

Based on these findings, it can be understood that a cloud-based AIS that can be designed according to the work needs of end-users in managing business data and can be operated efficiently, quickly, updated, and flexibly will form an assessment in the end-user that the new AIS has a quality system.

5. Discussion

This study found that the computer self-efficacy of users, such as accounting managers, information managers, and financial managers, play a vital role in the performance of the cloud used as an AIS platform. The advantages of flexible cloud-based AIS must be balanced with the capabilities of human resources [11]. The subordinate's ability to adapt to cloud-based AIS and manage it according to their work needs is a crucial variable for cloud computing performance. Suppose the accounting manager or information manager does not have sufficient computer capabilities; they will not be able to experience the performance of the cloud in presenting the new AIS. Those circumstances will result in non-optimal cloud performance. This finding is consistent with the findings of previous studies such as Compeau & Higgins [20], Agarwal et al. [47], Eastin & LaRose [48], and Hsu & Chiu [49] who argued that computer self-efficacy is a critical variable in the successful adoption of new IT. At the same time, these findings also align with the RBV conception, which suggests that human competence is critical for companies to utilize their unique resources to achieve competitive advantage [39].

Furthermore, this study found that cloud performance positively affects the compatibility and relative advantage of the AIS it provides. The design flexibility promised by the cloud should be an advantage and operationalized in performance [7], [56]. The performance of cloud computing enabled to facilitate AIS is ideally intended to make it easier for users to access real-time accounting data anywhere and anytime to be processed into business information in strategic decision-making. At the same time, cloud computing can facilitate AIS in producing compatible information while helping its users' performance become more efficient and effective.

These findings not only support the potentiality of cloud computing in delivering AIS services [6], [7], [12] but also the conception of IS innovation, which must pay attention to IS adaptability to the company's general systems and existing tasks and its employees [39], [55], [56].

Both relative advantage and compatibility were found to play a significant role in the quality of cloud-based AIS information. Information quality is an important indicator of IS success [27], [28]. The suitability of the information presented by cloud-based AIS with business information needs will immediately help subordinate performance in making business decisions. The dependence of subordinates on business information makes AIS a crucial tool in their continuous performance. Thus, the reliability of cloud-based AIS in presenting compatible information that helps their performance efficiency will shape the perception that the quality of information from the AIS is good [59], [60]. This research enriches the findings of previous research as well as bridges the application of the concept of IS adaptability to the success of AIS innovation [12], [28], [31].

In line with information quality, system quality is also positively affected by relative advantage and compatibility. Of course, the suitability of the information and efficiency presented in managing accounting information obtained by subordinates when working with cloud-based AIS will shape the perception that the system is quality. The ease that subordinates get in accessing relevant information and managing it according to decision-making needs undoubtedly results in the perception that IS helps their work instead of irritation, constraints, and difficulties in accessing information. This finding is in line with Khayer et al. [60] and Wu and Chiu [39] regarding technological factors that play an essential role in the success of IS innovation. This finding also strengthens the conception of IT adaptability in the acceptability of IS innovations [24]. Thus, AIS innovation by implementing cloud computing must aim to increase AIS compatibility and improve the work efficiency of related subordinates. Overall, these innovations impact the growth of an organization's competitive advantage.

6. Conclusion

This study aims to analyze 1) the impact of the human aspect in determining cloud performance, 2) the impact of cloud performance on the relative advantage and compatibility of cloud-based AIS in the hotel industry, and 3) the impact of its relative advantage and compatibility on cloud-based AIS quality.

This study found that 1) the human aspect proxied by computer self-efficacy has a positive effect on cloud performance; 2) cloud performance has a positive impact on the cloud-based AIS relative advantage and compatibility of the hotel industry; and 3) the relative advantage and compatibility of cloud-based AIS has positive impact on its quality. These findings have several implications, recommendations, and limitations which are explained in further paragraphs.

According to the findings, the hotel's general manager or top management should consider their subordinates' computer self-efficacy before deciding to invest in technology on their AIS, like cloud computing. If they have no compatible capability, then the hotel's top management should consider giving appropriate training during the development and installation of cloud-based AIS so that the related sub-ordinate is ready to use the new AIS appropriately when the installation is finished. The suitability between computer-self efficacy and competency requirements for managing cloud-based AIS is the key for cloud computing applications in corporate AIS to work optimally.

Furthermore, management must pay attention to the cloud computing design in accordance with how AIS works and the information needs needed by related sub-ordinates, such as the hotel's management accountant, information manager, and financial manager. Cloud computing designs tailored to the specific needs of related subordinates will help AIS innovation achieve compatibility and relative advantage. The compatibility of cloud computing with the way AIS works and its users and its compatibility with enterprise systems, in general, is the key to the success of computer-based AIS. In this case, cloud-based AIS developers must involve related subordinates in designing the system and its user interface and adapting it to the characteristics of the hotel business. End-user involvement is essential throughout the process of developing AIS and its installation into the company's common system so that its development would address the relative advantage and compatibility of existing AIS.

Finally, AIS innovation from old devices to new devices must be oriented towards the success of AIS in increasing the company's competitive advantage. Critical indicators of AIS success are information quality and system quality. Information related to the content presented to produce the right business decisions. Meanwhile, system quality is related to the minimum irritation and reliability of the system in presenting information anytime and anywhere. Escalating the reliability of AIS in producing accurate information should be the main target of cloud-based AIS innovation.

With greater accessibility and accuracy of business information, management can make critical decisions at the right time, thereby winning its competitive

advantage. Thus, management must establish the proper orientation before deciding on an AIS innovation. The direction of cloud-based innovation must be clear and measurable to prevent wasted investments.

This study has limitations from the sample variation, which only represents a sample in one province in Indonesia. Even though some of the samples are hotels with national and even international networks, expanding sample variations in further research will produce analysis results with better external validity. Furthermore, this research is survey research that has yet to be able to explore the specific phenomena of AIS innovation success in the hotel industry. Further research that uses qualitative methods with exploratory techniques will produce richer information in capturing best practices which may generate more insight for knowledge and practice in accounting information systems and management information systems.

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Appendix 1. Cross-Loading Factor

	Cloud Performance	Compatibility	Computer Self-Efficacy	Information Quality	Relative Advantage	System Quality
C2	0,3043	**0,8899**	0,3077	0,3940	0,5919	0,4070
C4	0,2107	**0,8522**	0,3977	0,3777	0,5059	0,3575
CP1	**0,8260**	0,2491	0,5460	0,2486	0,2256	0,1848
CP3	**0,8025**	0,2454	0,5533	0,3030	0,3929	0,2491
CP5	**0,7657**	0,2191	0,4487	0,0668	0,2455	0,0288
CSE2	0,4146	0,2868	**0,7433**	0,0853	0,2021	0,1696
CSE6	0,5845	0,3429	**0,7856**	0,2451	0,2847	0,1441
CSE9	0,4331	0,2173	**0,7304**	0,1686	0,0829	0,1453
CSE10	0,5347	0,3166	**0,7145**	0,1297	0,1596	0,0830
CSE11	0,3983	0,3082	**0,7390**	0,1515	0,0884	0,1385
IQ1	0,1909	0,4212	0,1704	**0,8494**	0,3823	0,5617
IQ3	0,1746	0,3391	0,1960	**0,7401**	0,2232	0,4129
IQ4	0,2891	0,1875	0,1180	**0,6568**	0,2483	0,5362
RA1	0,2700	0,6440	0,1913	0,3503	**0,8086**	0,3538
RA2	0,1483	0,4845	0,1620	0,2396	**0,7356**	0,2606
RA5	0,3716	0,4525	0,1765	0,2572	**0,7708**	0,3651
RA6	0,2916	0,3408	0,1718	0,3294	**0,7319**	0,2594
SQ2	0,1148	0,2722	0,1634	0,4728	0,2040	**0,6390**
SQ3	0,1796	0,3923	0,1327	0,5232	0,3788	**0,8432**
SQ4	0,1700	0,3415	0,1343	0,5377	0,3447	**0,8153**

Appendix 2. Discriminant Validity and Reliability

No.	Construct	CA	CR	AVE	CP	Comp	CSE	IQ	RA	SQ
1.	CP	0,717	0,841	0,638	0,799					
2.	Comp	0,683	0,863	0,759	0,299	0,871				
3.	CSE	0,799	0,860	0,552	0,651	0,401	0,743			
4.	IC	0,630	0,795	0,567	0,270	0,443	0,217	0,753		
5.	RA	0,762	0,847	0,581	0,368	0,633	0,231	0,389	0,762	
6.	SQ	0,658	0,813	0,595	0,205	0,440	0,180	0,659	0,413	0,771

Appendix 3. HTMT

No.	Construct	CP	Comp	CSE	IQ	RA
1.	Comp	0,4200				
2.	CSE	0,8314	0,5401			
3.	IQ	0,4168	0,6337	0,2938		
4.	RA	0,4685	0,8681	0,2795	0,5322	
5.	SQ	0,2818	0,6461	0,2831	1,0425	0,5558