Impact of Cloud-Based Accounting Information Systems on Decision-Making Quality

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Abstract

This study investigates the factors influencing the adoption of cloud-based Accounting Information Systems (AIS), extending the Unified Theory of Acceptance and Use of Technology (UTAUT) to include new critical factors pertinent to decision-making processes. Employing a quantitative methodology, the research tested hypotheses through questionnaires, which served as the primary instrument for data collection. Data analysis was conducted using structural equation modeling with Smart PLS. The findings indicate that performance expectancy and the utilization of artificial intelligence significantly impact the intention to use cloud-based AIS. Moreover, both the intention to use and the presence of facilitating conditions positively affect actual usage behavior. It was also determined that actual usage behavior has a favorable impact on the quality of decision-making. This research underscores the importance of technology acceptance factors in influencing the effective implementation and utilization of cloud-based AIS, thereby enhancing decision-making quality within organizations.

Keywords: UTAUT extensions, cloud-based accounting, use of artificial intelligence, decision-making quality

Introduction

Cloud-based accounting has become a pivotal innovation in addressing the challenges posed by the digital era and technological advancements (Dai, 2022). This technology enables top management to access and analyze financial data swiftly and efficiently, thereby facilitating more timely and informed decision-making (Christauskas & Miseviciene, 2012). Additionally, the implementation of a robust accounting information system significantly enhances employee performance and supports vital decision-making processes within organizations (Nursyamsu & Munandar, 2022). Cloud-based accounting systems are essential in contemporary business environments, offering rapid access to financial information, aiding informed decision-making, and bolstering security measures.

The adoption of cloud technology allows top management to efficiently analyze data, enabling prompt decision-making. Reliable accounting information systems are crucial as they enhance employee performance and

support essential decision-making processes within organizations. Standards such as ISO 27001 provide guidelines for information security management, ensuring robust data protection against network threats. Implementing cloud-based accounting systems adheres to these standards, thus enhancing secure data handling. For instance, OJK Regulation number 11/POJK.03/2022 in Indonesia specifically focuses on the use of cloud computing, underlining the importance of compliance and security in financial operations.

Artificial intelligence (AI) has evolved significantly over the past decade and is utilized across various industries including finance, services, manufacturing, and more, beyond its initial applications in telecommunications. The term "artificial intelligence" generally refers to the use of computers to perform tasks that typically require human intelligence, demonstrating rapid, direct actions with minimal human intervention (Santy et al., 2021).

According to Pak et al. (2023), performance expectancy is positively correlated with the intention to use technology or information systems. This implies that the greater the performance users anticipate from the technology, the more likely they are to adopt it. However, there are instances where performance expectancy might not directly influence the intention to use, indicating a need for further research in this area.

Enaizan et al. (2020), O. Enaizan et al. (2022), and Raza et al. (2019) have identified that effort expectancy is positively related to the intention to use cloud-based accounting systems. They suggest that ease of use and minimal requirement for intensive effort or instructions enhance users' willingness to adopt the technology. Contrarily, Phan et al. (2020), Sebastian et al. (2022), Chen et al. (2023), Daniali et al. (2022), Al-Okaily et al. (2022) reported differing findings, suggesting that the simplicity of internet services reduces user concerns even when difficulties arise during use.

Bayaga & Du Plessis (2023) noted that social influence is typically considered a positive determinant of usage intention in most technology acceptance frameworks and user behavior studies. However, Arianita et al. (2023) argue that social influence may have a negligible or weak impact on the intention to use when individuals possess a high level of independence or prefer making decisions autonomously, without social inputs.

The rise of artificial intelligence (AI) in information systems, particularly in accounting information systems, has introduced concerns regarding dependency on quality data and systems' limitations in understanding complex contexts, necessitating frequent updates due to continual advancements. Romney & Steinbart (2018) emphasize that research on cognitive computing models, based on AI technology, supports the automation of accounting tasks, which significantly contributes to innovations in report presentation.

Research on the influence of privacy and security on the intention to use accounting information systems presents mixed findings. According to Becirovic et al. (2023), Hermawan (2022), Obiad et al. (2022), Alaklabi & Kang (2022), and Frik & Mittone (2019), privacy and security considerations positively affect the intention to use these systems. Conversely, Nainggolan & Handayani (2023), Sebastian et al. (2022), Al-Okaily et al. (2022), O. Enaizan et al. (2022), and Phan et al. (2020) suggest that privacy and security

do not significantly impact the intention to use accounting information systems, indicating that companies rely on the security measures provided by service providers.

Venkatesh et al. (2003) identified facilitating conditions as generally positive influencers of usage behavior. However, Khan et al. (2023) found that if facilitating conditions do not meet users' specific needs or tasks, they may not be perceived as beneficial, thereby diminishing their effectiveness. This study integrates the Unified Theory of Acceptance and Use of Technology (UTAUT) with the upper echelon theory to thoroughly examine the factors driving the adoption of cloud-based accounting and its influence on decision-making quality. UTAUT provides insights into user acceptance and implementation, while upper echelon theory focuses on the strategic influence of top management, offering a comprehensive view of technological adoption and its organizational impact.

Hung et al. (2023) demonstrated that digital transformation significantly enhances the effectiveness of cloud-based accounting, which in turn improves decision-making quality. This effect is particularly pronounced with strong digital leadership, highlighting its critical role in the context of developing countries such as Vietnam. This insight is especially pertinent for large Vietnamese firms aiming to optimize the synergy between digital transformation and leadership to boost accounting effectiveness, decision-making processes, and overall performance.

Tamilmani et al. (2020) suggest necessary innovations in UTAUT theory to better address new phenomena by modifying research constructs, associations, and the precision of definitions, as well as by reinforcing the theoretical foundations. This study focuses on Cloud-Based Accounting Information Systems Usage and its Impact on Decision-Making Quality, providing a backdrop for the ongoing evolution of theoretical frameworks in information system research.

Research Method

This study encompasses all large and medium-sized companies in Bali Province as its population. The purposive sampling technique was employed to select the sample, with the following criteria: (1) companies employing more than 20 individuals, (2) companies listed in the Central Statistics Agency Directory in 2021, and (3) companies that utilize cloud-based accounting systems in their operations. The geographical distribution of the sampled companies is detailed in Table 1.

Table 1. Sample Geographical Distribution

No	Distribution Area	Amount
1	Jembrana	8 Unit
2	Tabanan	7 Unit
3	Badung	35 Unit
4	Gianyar	21 Unit
5	Klungkung	7 Unit
6	Bangli	3 Unit
7	Karangasem	5 Unit
8	Buleleng	4 Unit
9	Denpasar	36 Unit
	Total	126 Unit

Data for this study were collected via surveys and questionnaires. The questionnaires were distributed directly and via Google Forms to large and medium-sized companies throughout Bali Province. This approach aimed to elucidate the characteristics of the participating respondents, with the organizations serving as the unit of analysis. Prior to the commencement of the main study, the researcher conducted a preliminary observation for one week, utilizing the 2021 directory from the Bali Central Bureau of Statistics. This preliminary phase included verifying the contact details—phone numbers and emails—of the companies listed to confirm respondent eligibility. Of the initial list, 356 companies met the research criteria, while 57 did not confirm their details or were unreachable.

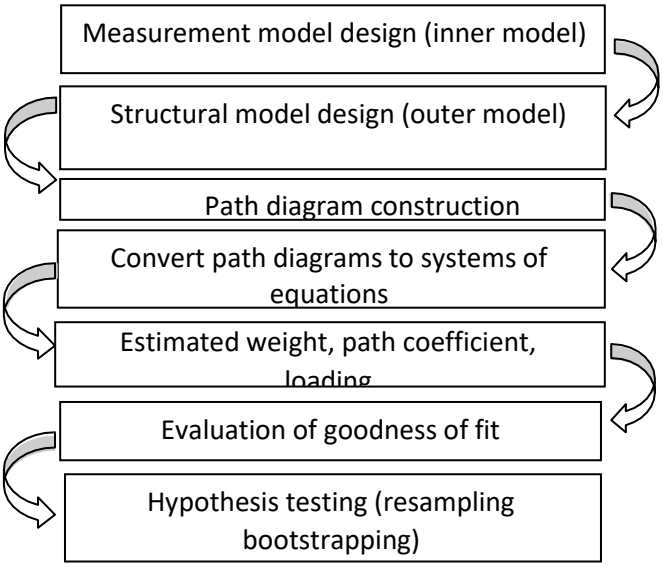

Figure 1. SmartPLS Testing Steps

Moreno (2001) outlines that respondents have the right to ample time to decide on their participation in the study, to make this decision freely without any coercion from the researcher, and to opt out or withdraw from the study at any point. This right extends to any preliminary observations where, if respondents choose not to confirm their participation, there is no set tolerance limit regarding their inclusion.

The next phase of analysis involves determining the quantity and proportion of respondents based on various characteristics. For data analysis, Structural Equation Modeling (SEM) was employed using the SmartPLS software. This method involves constructing a path diagram that is subsequently transformed into a system of equations. This phase includes estimating weights, path coefficients, and loadings, assessing the goodness of fit, and testing the hypothesized relationships. These steps are illustrated in a flow diagram (Figure 1). Appendix 1 presents the operational definition of the research variables.

Result and Discussion

Table 2 presents the description of each variable under investigation. The frequency distribution of respondent responses to statements pertaining to the variables is examined. Five classes with interval calculations were utilized to interpret the respondent evaluations (Umar, 2005).

The average score of variables eliciting an affirmative response (favorable) is interpreted in accordance with the following criteria.

Score 1.00-1.80 = Very Bad
Score 1.81-2.60 = Bad
Score 2.61-3.40 = Undecided
Score 3.41-4.20 = Good
Score 4.21-5.00 = Very Good

Table 2. Descriptive Variable of the Research

Variable	Total Mean	Category
Performance Expectancy	4,38	Very Good
Effort Expectancy	4,15	Good
Social Influence	4,27	Very Good
Use of Artificial Intelligence	4,08	Good
The perception of privacy and security risks	4,10	Good
Facilitating Condition	4,09	Good
Behavioral Intention	4,44	Very Good
Actual Usage Behavior	4,21	Very Good
Decision Making Quality	4,20	Good

Source: Result of SmartPLS data processing.

Table 2 shows respondent assessments. There are five variables in Good category, namely Effort Expectancy, Artificial Intelligence, Perception of Privacy and Security Risks, Facilitating Condition and Decisions-Making Quality, and there are four variables in Very Good category, namely Performance Expectancy, Social Influence, Behavioral Intention to Use and Actual Usage Behavior.

Table 3. Reliability Test

Variable	Cronbach's Alpha	Composite Reliability
Performance Expectancy	0.838	0.891
Effort Expectancy	0.877	0.912
Social Influence	0.941	0.957
Use of Artificial Intelligence	0.836	0.890
The perception of privacy and security risks	0.860	0.890
Facilitating Condition	0.852	0.897
Behavioral Intention	0.928	0.954
Actual Usage Behavior	0.846	0.896
Decision Making Quality	0.933	0.952

Source: Result of SmartPLS data processing.

All research variables have composite reliability values >0.7, and Conbach's alpha is >0.6, as shown in Table 3. Cronbach's alpha and composite reliability criteria have been met for each variable, as demonstrated by these results. Thus, all variables are highly reliable.

Table 4 shows that the loading factor values generated for each indicator are above 0.7, and AVE is above 0.5. Therefore, these indicators are deemed reliable as quantifications of the latent variables in question.

Table 4. Outer Loading

Variable	Indicator	Loading Factor	AVE
Performance Expectancy	X1.1	0.892	0.673
	X1.2	0.826	
	X1.3	0.801	
	X1.4	0.755	
Effort Expectancy	X2.1	0.864	0.723
	X2.2	0.863	
	X2.3	0.793	
	X2.4	0.878	
Social Influence	X3.1	0.941	0.849
	X3.2	0.893	
	X3.3	0.946	
	X3.4	0.904	
Use of Artificial Intelligence	X4.1	0.820	0.670
	X4.2	0.852	
	X4.3	0.801	
	X4.4	0.800	
The perception of privacy and security risks	X5.1	0.835	0.617
	X5.2	0.757	
	X5.3	0.758	
	X5.4	0.816	
	X5.5	0.759	
Facilitating Condition	X6.1	0.854	0.685
	X6.2	0.821	
	X6.3	0.876	
	X6.4	0.755	
Behavioral Intention	M1	0.932	0.874
	M2	0.955	
	M3	0.917	
Actual Usage Behavior	Z1	0.788	0.683
	Z2	0.848	
	Z3	0.800	
	Z4	0.868	
Decision Making Quality	Y1	0.908	0.833
	Y2	0.931	
	Y3	0.950	
	Y4	0.859	

Source: Result of SmartPLS data processing.

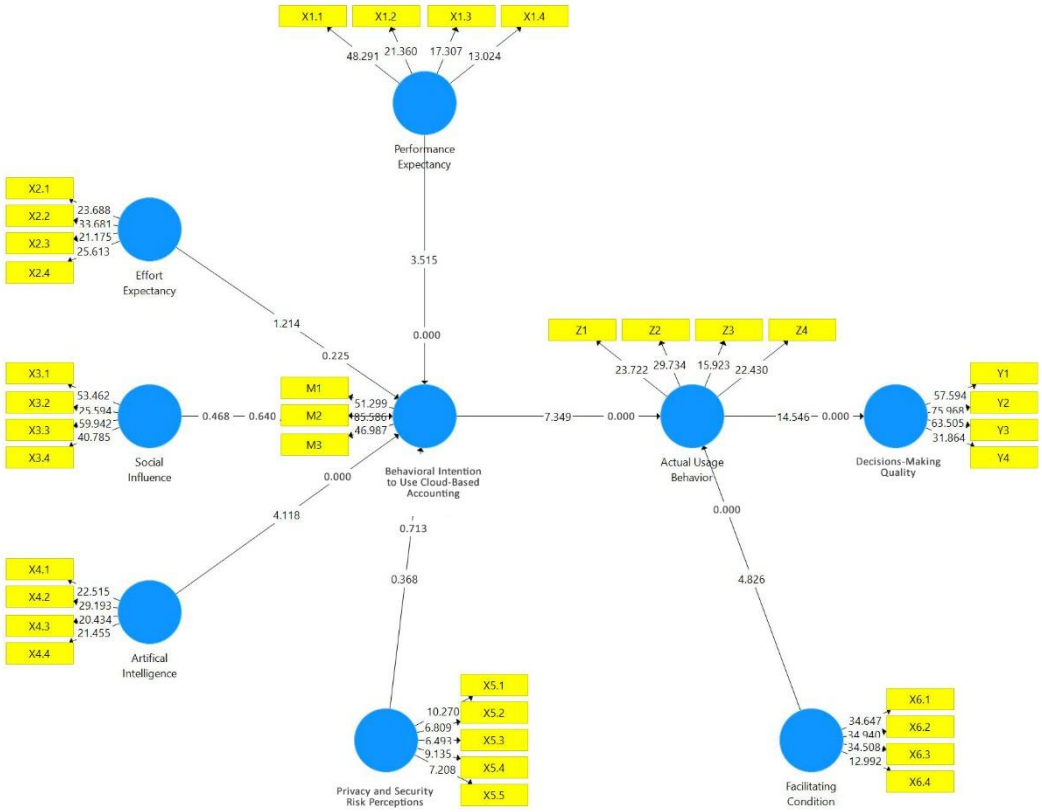

Figure 2. Inner Model Evaluation

The study found that behavioral intention to use cloud-based accounting is not significantly influenced by effort expectancy, social influence, or privacy and security risks. However, performance expectancy has a significant and positive effect on the intention to use, suggesting that managers' perceptions of enhanced performance through cloud-based technology are a strong motivator for adoption. The lack of significant impact from effort expectancy and social influence underscores the complexity of internal organizational factors that influence technological adoption decisions.

These findings offer practical implications for large and medium-sized companies considering the adoption and implementation of cloud-based accounting systems. Performance expectancy and the integration of artificial intelligence significantly influence the intention to use, highlighting the necessity for companies to enhance managerial understanding and confidence in the benefits provided by these technologies. By focusing on initiatives that promote the perceived performance advantages and capabilities of artificial intelligence within cloud-based systems, companies can better position themselves to leverage these technologies effectively.

The hypothesis testing on the relationship between performance expectancy and the intention to use cloud-based accounting systems has confirmed that

performance expectancy significantly influences user intentions. This finding validates the hypothesis and underscores the critical role of performance expectancy in shaping the adoption of cloud-based accounting technologies. Consistent with existing literature, these results affirm that performance expectancy is a pivotal factor in technology adoption, with users more likely to engage with systems that promise enhanced performance outcomes.

Table 5. Hypothesis Test

Hypothesis	Original Sample	t-statistic	p-value	Conclusion
H_1	0.372	3.515	0.000	Supported
H_2	0.145	1.214	0.225	Not Supported
H_3	-0.045	0.468	0.640	Not Supported
H_4	0.376	4.118	0.000	Supported
H_5	-0.042	0.368	0.713	Not Supported
H_6	0.311	4.826	0.000	Supported
H_7	0.520	7.349	0.000	Supported
H_8	0.678	14.546	0.000	Supported

Source: Result of SmartPLS data processing.

These insights offer practical implications for organizations aiming to implement cloud-based accounting systems. To increase user acceptance and adoption rates, it is advisable for organizations to highlight the performance benefits of these systems. Future research should delve into the complex interplay between performance expectancy and actual usage behavior, examining how user experience and system usability influence technology adoption in conjunction with performance expectancy.

The analysis revealed that performance expectancy is the primary predictor of the intention to use information systems, consistent across both mandatory and voluntary contexts. A positive correlation exists between elevated performance expectations and a higher intention to use cloud-based accounting systems, corroborating findings from Amaral & Watu (2021) and Pak et al., (2023). These studies indicate that the greater the performance users anticipate from the technology, the more likely they are to adopt it, driven by the belief that the technology will enhance their performance, simplify tasks, or yield other beneficial outcomes. This relationship suggests that performance expectancy is a key determinant in influencing usage intentions.

Effort expectancy does not significantly influence the intention to use cloud-based accounting systems. This finding suggests that while the perceived ease of use may not directly drive user adoption, it is still an important aspect of the overall user experience and system acceptance. This implies that the decision to adopt cloud-based accounting systems is not predominantly motivated by their ease of use. Therefore, organizations should focus on highlighting the performance benefits of these systems rather than solely emphasizing ease of use to enhance user acceptance and adoption rates. Future research should explore the link between effort expectancy and actual system usage, as well as how perceptions of ease of use may evolve with continued system interaction over time.

Venkatesh et al. (2003) posit that information technology can create a sense of benefit and comfort in using systems, with higher levels of convenience correlating positively with user intentions to adopt. Contrary to this, our study aligns with findings from Al-Okaily et al. (2022), Chen et al. (2023), Daniali et al. (2022), Phan et al. (2020), and Sebastian et al. (2022), which suggest that the ease of using online services is less concerning to users due to their generally user-friendly nature. Instead, users tend to prioritize perceived usefulness over ease of use when deciding to employ online services. To encourage adoption, cloud-based accounting systems should therefore focus on enhancing user-friendly interfaces and emphasizing the system's usefulness.

Furthermore, given that cloud-based accounting is often mandated within organizational settings, its use is required regardless of its perceived ease of use. This necessitates that cloud-based systems be designed to integrate seamlessly into users' daily operations, enhancing their practical utility and fostering user compliance with company mandates.

The hypothesis testing results indicate that social influence does not significantly impact the intention to use cloud-based accounting, leading to the rejection of the hypothesis. This suggests that social influence is not a strong determinant in the decision to adopt cloud-based accounting systems. Future research should further explore the role of social influence in the adoption of technology, specifically within the context of cloud-based accounting. It would be beneficial to examine how social influence interacts with other factors to shape both user intentions and actual usage behaviors.

Social influence is defined as the extent to which individuals perceive that important others advocate for the adoption of a new system (Venkatesh et al., 2003). When encountering new technologies, people often seek validation from their peers. Social influence has traditionally been considered a significant factor influencing behavioral intentions to adopt new information systems (Taylor & Todd 1995). If individuals perceive strong support from their social circles, their intention to use new systems generally increases. However, this influence is not definitive.

Consistent with findings from Wibowo et al., (2019) and Arianita et al. (2023), social influence does not exert a strong pull in all contexts. Particularly, if an individual possesses a high level of independence or prefers to make decisions autonomously, social influence may not significantly affect their intentions to use a new system. In scenarios where individuals encounter unconvincing recommendations or when the social influence emanates from less influential figures in their lives, its impact can be negligible. Furthermore, if individuals face conflicting social cues or if their perceptions of these influences fluctuate frequently, their intentions can become unstable or remain weak.

The hypothesis testing revealed that the use of artificial intelligence (AI) significantly influences the intention to use cloud-based accounting systems, thereby supporting the hypothesis. This finding underscores the pivotal role of AI in shaping users' perceptions and intentions towards adopting cloud-based accounting technologies. AI features enhance the functionality of these systems, personalize user

interactions, and streamline complex processes, contributing to their perceived usefulness and ease of use, which, in turn, positively impacts user intentions.

Organizations involved in developing or implementing cloud-based accounting systems should consider incorporating AI to enhance user experiences and facilitate greater adoption. AI can significantly improve system usability and functionality, leading to increased user satisfaction and uptake.

For future research, it would be beneficial to explore which specific AI features most effectively influence user intentions towards cloud-based accounting systems. Additionally, investigating how user perceptions of AI functionalities in accounting systems evolve over time and their subsequent impact on actual system usage would provide deeper insights.

Artificial intelligence entails programming machines, such as computers, to emulate human intelligence and behaviors (Santy et al., 2021). AI enables computers to execute tasks typically performed by humans. The integration of advanced AI features can make systems more appealing and user-friendly, significantly influencing behavioral intentions to adopt such technologies. AI's ability to enhance system functionalities, personalize user experiences, and simplify complex operations enhances its perceived utility and ease of use, thereby fostering positive user attitudes towards its adoption. This positions AI as a key factor in shaping user behaviors in the realm of cloud-based accounting systems.

The hypothesis testing reveals that perceptions of privacy and security risks do not significantly impact the intention to use cloud-based accounting systems; thus, the hypothesis is rejected. This finding suggests that while privacy and security are important, they may not be seen as major barriers to the adoption of cloud-based accounting technologies. This indicates that users may not perceive these risks as substantial enough to deter their adoption intentions.

Organizations involved in developing or implementing cloud-based accounting systems should still prioritize enhancing privacy and security measures to boost user trust and facilitate broader adoption. Implementing robust security protocols and transparent privacy policies can help mitigate perceived risks and alleviate user concerns. Future research should explore how perceptions of privacy and security risks evolve with continued use of the systems and over time. Additionally, it would be valuable to investigate the effectiveness of various strategies in addressing these concerns and their impact on both user intentions and actual system usage.

Jogiyanto (2016) describes risk as users' perceptions of uncertainty and the potential negative outcomes of an activity. Understanding the risks associated with system use can significantly influence individuals' or groups' intentions to use it. This aligns with findings from Al-Okaily et al. (2022), Handayani (2023), O. Enaizan et al. (2022), Phan et al., (2020), and Sebastian et al. (2022), which suggest that concerns about privacy and security do not heavily influence the intention to use technological systems. This is attributed to the reliance on system providers to maintain privacy through adherence to established security standards. Thus, the balance between protecting and sharing data is often contingent upon users' trust in these third-party providers.

The hypothesis testing on the influence of facilitating conditions on actual usage behavior confirms that facilitating conditions significantly impact the actual usage of cloud-based accounting systems, thereby accepting the hypothesis. Facilitating conditions refer to the degree of support provided by existing technical and organizational infrastructures, which are crucial for technology adoption. This finding highlights the importance of a supportive environment in promoting the integration of cloud-based accounting systems into daily operational activities.

Organizations considering the implementation of cloud-based accounting systems should focus on providing essential technical and organizational support to enhance user adoption. Such support could encompass training programs, technical assistance, and ensuring compatibility with existing systems and workflows to facilitate seamless integration. Future research should delve into the specific elements of facilitating conditions that most profoundly affect actual usage behavior. Additionally, it would be beneficial to examine how various organizational structures and support mechanisms differentially impact technology adoption behaviors.

Facilitating conditions, as outlined by Venkatesh et al. (2003), are critical in technology acceptance models such as TAM and UTAUT. They represent users' perceptions of the adequacy of organizational and technical support available for using technology. This perception significantly influences how individuals incorporate technology into their regular routines. Supporting this, research by Alleyne & Lavin, (2013) and Venkatesh et al. (2003) emphasizes the pivotal role of facilitating conditions in fostering positive attitudes and behaviors towards technology adoption.

The hypothesis testing on the influence of intention to use cloud-based accounting on actual usage behavior confirms that intention significantly impacts actual usage. This finding underlines the critical role of user intentions in driving technology adoption and utilization. It demonstrates that when users possess a strong intention to engage with cloud-based accounting systems, they are more likely to actualize this intent into consistent usage patterns. This corroborates prior studies emphasizing intention as a fundamental predictor of user behavior in technology settings.

To optimize the deployment of cloud-based accounting systems, organizations should prioritize cultivating positive user intentions. This can be achieved through targeted communication, comprehensive training, and robust user engagement initiatives. Enhancing user intentions could significantly boost the successful adoption and effective use of cloud-based accounting technologies. Future research should delve into the variables that shape intentions to use cloud-based accounting and the processes by which these intentions are converted into actual usage behaviors. Investigations might also focus on how these intentions evolve over time and under the influence of ongoing system interaction.

Venkatesh et al. (2003) have illustrated the strong linkage between usage intention and actual behavior in their development of the Technology Acceptance Model (TAM). This model posits that behavioral intentions, shaped by perceptions of a technology's practical benefits and ease of use, are direct precursors to usage behaviors. Positive intentions, therefore, are likely to transition into tangible usage actions, reinforcing the adoption cycle. This perspective is supported by recent studies

by Chen et al. (2023), Raza et al. (2019) and Heryanta (2019), which further validate the critical influence of user intentions on technology utilization within organizational contexts.

The hypothesis testing reveals that actual usage behavior significantly impacts decision-making quality within cloud-based accounting systems, affirming the hypothesis. These findings underscore the critical role of user interactions and experiences with the system in enhancing decision-making outcomes. It is suggested that deeper and more frequent engagement with cloud-based accounting systems enhances decision-making quality. This improvement is attributed to users' increasing familiarity, skills, and knowledge gained through continued use, which fosters more informed and effective decision-making processes.

To maximize the benefits of cloud-based accounting systems, organizations should prioritize initiatives that promote sustained and meaningful user interactions with the system. Efforts could include comprehensive training programs, the implementation of intuitive user interfaces, and continuous feedback mechanisms to encourage ongoing engagement. Future research should investigate the specific pathways through which actual usage behavior affects decision-making quality and explore how varying patterns of use and user experiences influence decision outcomes over time.

In the context of system utilization, actual usage behavior is measured by the frequency and intensity of interactions with the system. Prolonged and frequent use of a technology enhances user satisfaction by improving proficiency and productivity, corroborated by the user's direct experiences with the system. Extended interaction allows users to better understand the system’s capabilities and limitations, directly influencing the quality of decisions made using the system.

Additionally, effective feedback mechanisms within the system can enable users to refine their decision-making strategies based on their experiences, leading to improved outcomes over time. Understanding the dynamic relationship between actual usage behavior and decision-making quality is crucial for optimizing system design and deployment, ensuring that it positively impacts outcomes such as the accuracy and reliability of financial reports.

This perspective is supported by findings from Al-Okaily et al., (2022) and Muliati (2019), which suggest that the quality of decision-making is directly influenced by how frequently and extensively users engage with a system. This relationship underscores the importance of designing cloud-based accounting systems that not only meet user needs but also promote active and prolonged engagement to enhance decision-making capabilities.

Conclusion

Performance Expectancy and Artificial Intelligence significantly impact the behavioral intention to use cloud-based accounting. Conversely, Effort Expectancy, Social Influence, and perceptions of Privacy and Security Risks do not significantly influence behavioral intention toward using cloud-based accounting. Furthermore, facilitating conditions and

behavioral intention to use affect actual usage behavior, which, in turn, significantly improves decision-making quality.

The application of Upper Echelons Theory and the Unified Theory of Acceptance and Use of Technology (UTAUT) offers a robust framework for understanding the dynamics influencing technology adoption at the executive level. These insights enable large and medium-sized industrial firms to make informed strategic decisions regarding the adoption and utilization of cloud-based accounting systems, thereby enhancing performance and decision-making quality at the executive level.

This study encompassed all large and medium-sized companies in Bali Province. Future research could extend to exploring the implementation of cloud-based accounting systems within small enterprises. Additionally, this study did not find support for the effects of Effort Expectancy, Social Influence, and perceptions of Security and Privacy Risks. Future investigations could focus on these variables to provide a more comprehensive explanation of their roles in the adoption of cloud-based accounting systems.

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Appendix

Appendix 1. Operational Definition of Variables

Variable	Description
Performance Expectancy	Following Davis (1989) Performance Expectancy is expectation that the use of the system leads to increase in performance. The indicators in this study are based on those from Davis (1989), Venkatesh et al. (2003), and Al-Okaily et al. (2022), consisting of four indicators: speed, productivity, convenience, and the tangible benefits of cloud-based accounting.
Effort Expectancy	Following Venkatesh et al. (2012), Effort Expectancy is the ease of using a specific technology. The indicators in this study are based on those from Davis (1989), Venkatesh et al. (2003), and Al-Okaily et al. (2022). There are four indicators in this variable: ease of use, lack of burden, clear processes, and good understanding.
Social Influence	Following Rogers (1962), the concept of social influence refers to the role of others in influencing individuals to adopt or reject an innovation or technology. The indicators from Davis (1989), Venkatesh et al. (2003), and Al-Okaily et al. (2022), there are four indicators in this variable: coworker opinion, social norms, trust, and efficiency and access.
Artificial Intelligence	Artificial Intelligence is the implementation of system components that represent complex mechanisms simulating bionic human brains, thereby realizing the processing of related items (Li, 2020). The indicators of this variable are: speed and accuracy of data analysis, efficiency, usability, and understanding of work processes.
The perception of privacy and security risks	The use of the system uses a public cloud paradigm, the company's or organization's data needs to be hosted to a third party. Such a mechanism will pose a risk to privacy and security. The data transition to cloud-based accounting raises concerns about losing control over data and the location of hosted resources (Al-Okaily et al., 2022). The indicators in this study are based on those from Al-Okaily et al. (2022), Kim et al. (2010), and Parasuraman (2000). The indicators consist of five components: system security, document re-examination, personal data control, data openness and transparency, and compliance with privacy regulations.
Facilitating Condition	Following Davis (1989), facilitating conditions is factors that affect the ease of use of technology, including the availability of resources and support needed to adopt and use the technology. The indicators consist of four components: access to devices and infrastructure, availability of information and training, as well as support from superiors and technical support.
Behavioral Intention to Use	Following Davis (1989), behavioral intention to use is the intention to use the system in a sustainable manner. The

	indicators in this study are based on those from Al-Okaily et al. (2022) and Hung et al. (2023). The indicators for this variable are routine use, positive attitude, and understanding of benefits.
Actual Usage Behavior	Following Fishbein & Ajzen (1975), Actual Usage Behavior refers to the actual performance of a specific behavior or action. It is an observable outcome of individual intentions and is influenced by their attitudes and subjective norms. The indicators used in this study are sourced from Ronaghi & Forouharfar (2020), Aldholay et al. (2018), and Delone & Mclean (2016). The indicators for this variable are availability of support and assistance, understanding capability, intention to use, and feedback and self-evaluation.
Decision-Making Quality	Following Simon (1978), the quality of decision-making is the extent to which decisions meet the goals and objectives of decision-makers within the constraints of bounded rationality. The indicators are sourced from the studies by Alalwan et al. (2014) and Ouiddad et al. (2020). The indicators for this variable are correct decision outcomes, accurate decision outcomes, timely decision outcomes, and reliable decision outcomes.

Source: References quoted in this table.