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ADOPTION OF CLOUD ACCOUNTING SYSTEMS IN SMES

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ABSTRACT

Cloud accounting systems have become essential tools for enhancing financial management and operational efficiency in Small and Medium Enterprises (SMEs), particularly in developing economies. In Bangladesh, the implementation of such systems is hindered by financial constraints, a lack of technical expertise, and security concerns. This study examines the implementation of cloud accounting systems within SMEs in Bangladesh, emphasizing perceived advantages, adoption obstacles, and financial results. A mixed-methods approach was utilized, integrating quantitative survey data from 200 SMEs with qualitative insights obtained from semi-structured interviews with 15 SME representatives. Statistical analyses, encompassing t-tests, regression, and Pearson correlation, were performed to evaluate seven hypotheses derived from the Technology Acceptance Model (TAM) and the Unified Theory of Acceptance and Use of Technology (UTAUT). The findings indicate that perceived ease of use ($\beta = 0.42$), cost savings ($\beta = 0.38$), and operational efficiency ($\beta = 0.43$) have a significant impact on adoption. In contrast, insufficient IT skills ($\beta = -0.31$), transition costs ($r = -0.45$), and data security concerns ($r = -0.36$) constitute significant obstacles. Adopters of cloud accounting exhibited a higher perceived financial performance (mean = 4.1) compared to non-adopters (mean = 3.3), with a statistically significant difference ($t = 5.24$, $p < 0.01$). The results indicate that although cloud accounting systems provide quantifiable enhancements in cost-effectiveness and decision-making, several structural obstacles impede their widespread adoption among Bangladeshi SMEs. These insights enhance our understanding of the primary factors influencing digital financial transformation in emerging markets.

INTRODUCTION

In today's fast-paced technological landscape, digital transformation is crucial for organizations aiming to achieve growth and long-term sustainability. Cloud accounting systems have become crucial instruments for improving financial management in Small and Medium Enterprises (SMEs) (Jiang, 2024). The systems offer flexibility, cost efficiency, and support in strategic decision-making, playing a crucial role in enhancing the competitiveness of SMEs (Sarango-Lalangui et al., 2023). The transformation process is significantly influenced by digital technologies, which enhance the performance outcomes of SMEs by improving operational efficiency and facilitating data-driven decision-making (Lei et al., 2022; Omrani et al., 2024).

Small and Medium Enterprises (SMEs) play a crucial role in the economies of developing countries such as Bangladesh, making substantial contributions to employment, innovation, and local development (Syahrial et al., 2024). Nevertheless, numerous small and medium-sized enterprises in Bangladesh have exhibited a reluctance to adopt digital tools, such as cloud accounting systems, due to concerns about financial limitations, insufficient technical knowledge, and challenges related to data security (Ta & Lin, 2023). The concerns regarding these systems primarily stem from the perceived risks associated with their reliability and the difficulties encountered when integrating new technology into existing business operations (Sari et al., 2023; Zhang et al., 2022).

Cloud accounting, a software solution hosted on remote servers, enables businesses to access real-time financial data, collaborate effortlessly, and benefit from automatic updates (Rupeika-Apoga et al., 2022a). In contrast to conventional accounting software, cloud systems remove the necessity for costly IT infrastructure and facilitate integration with various business applications (Surahman et al., 2023). Nonetheless, despite these benefits, the adoption of cloud accounting systems in Bangladesh remains limited, primarily due to concerns regarding system reliability, associated expenses, and potential data security risks (Ragazou et al., 2022; Sinyuk et al., 2021). Furthermore, the COVID-19 pandemic has underscored the

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growing need for SMEs to adopt digital technologies to maintain their resilience and sustainability in the face of unexpected challenges (Martins, 2022; Rupeika-Apoga et al., 2022b). Consequently, tackling these obstacles to digital transformation is essential for enabling SMEs to succeed in the current competitive environment (Ta & Lin, 2023; Ziółkowska, 2021; Muthaiyah et al., 2022).

This study aims to explore the extent to which SMEs in Bangladesh have adopted cloud accounting systems, to analyze the benefits and challenges linked to their implementation, and to evaluate the financial impacts on businesses. This study examines global trends alongside issues specific to Bangladesh, aiming to provide valuable insights into the ways cloud accounting can enhance the financial performance of SMEs, as well as the factors that impede its broader adoption.

The findings of this study are crucial for understanding the barriers to digital adoption in Bangladesh's SME sector. This understanding will enable technology providers, policymakers, and business managers to overcome these challenges and create a more supportive environment for the adoption of cloud accounting systems, ultimately enhancing the financial performance and competitiveness of SMEs in Bangladesh.

The subsequent sections of this paper are organized as follows. The Literature Review section examines the theoretical frameworks and prior research regarding the adoption of cloud accounting, specifically targeting SMEs in developing economies. The Methodology section delineates the mixed-methods approach, specifying the data collection process, sample characteristics, and analytical techniques employed. The Results section delineates the outcomes of both quantitative and qualitative analyses, encompassing hypothesis testing and thematic insights. The Discussion section analyzes these findings to existing literature and highlights the practical challenges encountered by Bangladeshi SMEs. The Conclusion encapsulates the principal findings of the study and underscores the importance of overcoming the identified obstacles to facilitate the effective implementation of cloud accounting systems.

LITERATURE REVIEW

The implementation of cloud accounting systems in Small and Medium Enterprises (SMEs) has significantly transformed financial management practices worldwide. With the ongoing adoption of digital solutions by businesses, cloud accounting has become a vital tool for enhancing operational efficiency, managing costs, and facilitating informed financial decision-making. This section explores the theoretical frameworks that inform technology adoption, examines the significance of cloud accounting for SMEs, and analyzes the financial implications of its implementation. The analysis includes a review of global research alongside studies focused on Bangladesh, highlighting the relatively slow adoption of cloud accounting in that region.

Cloud Accounting Adoption and Perceived Financial Performance

Cloud accounting involves utilizing internet-based software hosted on remote servers, enabling SMEs to access real-time financial data and critical accounting tools. This model eliminates the need for costly in-house IT infrastructure, making it especially attractive for resource-constrained organizations. The global adoption of cloud systems is associated with enhanced efficiency, cost reductions, and improved decision-making capabilities (Shivarajappa, 2024; Phu, 2025). Reducing reliance on manual processes also improves report accuracy and decision timeliness (Van et al., 2025; Ajala et al., 2025). These benefits often translate into tangible financial improvements for SMEs.

H_1: Cloud Accounting Adoption is Positively Associated with Perceived Financial Performance

Perceived Ease of Use and Cloud Accounting Adoption

The Technology Acceptance Model (TAM), a leading theoretical framework, posits that perceived ease of use and usefulness are significant factors influencing the adoption of new technologies (Phu, 2025). In SMEs, where technological expertise is often limited, ease of use becomes especially critical. If a cloud accounting system is perceived as user-friendly and easily integrated into existing workflows, adoption becomes more likely (Makhija, 2022; Maelah et al., 2020).

H_2: Perceived Ease of Use Positively Affects the Likelihood of Cloud Accounting Adoption

Data Security Concerns and Cloud Accounting Adoption

Despite these benefits, SMEs—particularly in developing regions such as Bangladesh—face significant challenges. Data security is among the top concerns. Many SMEs hesitate to adopt cloud-based systems due to fears of cyberattacks and data breaches. Farhan et al. (2024) emphasize that weak cybersecurity infrastructure and underdeveloped data protection regulations heighten these fears. Saha et al. (2020) reinforce this concern, citing regulatory gaps.

H_3: Data Security Concerns Negatively Affect Cloud Accounting Adoption

Perceived Cost Savings and Cloud Accounting Adoption

Another key motivation for cloud adoption is the potential for cost savings. Cloud platforms eliminate the need for expensive IT infrastructure and reduce maintenance burdens. Chang and Hsu (2017) point out that these platforms enable cost-effective operations, which is particularly relevant in Bangladesh, where many SMEs operate on tight budgets. Automation of routine tasks also reduces the need for extensive labor and enhances productivity (Ajala et al., 2025; Van et al., 2025).

H_4: Perceived Cost Savings Positively Influence Cloud Accounting Adoption

Lack of IT Skills and Cloud Accounting Systems
However, many SMEs in Bangladesh lack adequate IT expertise to support cloud implementations. The Government of Bangladesh, Information and Communication Technology Division (2022)found that nearly 70% of SMEs lack in-house IT staff capable of managing cloud systems (Moniruzzaman & Rahman, 2023). This shortage of technical skills becomes a significant roadblock.

H_5: Lack of IT Skills Negatively Impacts the Adoption of Cloud Accounting Systems

Transition Costs and Accounting Systems
Moreover, SMEs often face high transition costs when switching to cloud-based systems. These include upfront setup fees, staff training, software licensing, and potential downtime during migration. Even when long-term savings are expected, the short-term financial burden can deter adoption (Phu, 2025; Moniruzzaman & Rahman, 2023). SMEs may hesitate unless a clear and immediate ROI is evident (Hamundu et al., 2020).

H_6: Transition Costs Negatively Impact the Adoption of Cloud Accounting Systems

Perceived Operational Efficiency and Cloud Accounting System
Finally, one of the core benefits of cloud accounting is its impact on operational efficiency. These systems automate manual accounting tasks, reduce errors, and provide real-time data, all of which help SMEs allocate resources more effectively (Ajala et al., 2025; Van et al., 2025). Real-time access to financial information enables better decision-making and faster responses to market fluctuations. Jasni (2023) and Saha et al. (2020) emphasize how this efficiency can improve business strategies.

H_7: Perceived Operational Efficiency Positively Affects the Adoption of Cloud Accounting Systems

Although only 35% of SMEs in Bangladesh have currently adopted cloud accounting solutions (Karim et al., 2025), adopters report considerable improvements in cost efficiency and operational performance. However, persistent challenges—particularly in data security, transition costs, and lack of IT skills—continue to slow widespread adoption (Shabur, 2024; Ogunsola & Fadoju, 2023; Moniruzzaman & Rahman, 2023). The hypotheses derived here provide a structured pathway for further examining these drivers and barriers through empirical research.

This study aims to investigate the various factors that affect the adoption of cloud accounting systems within Small and Medium Enterprises (SMEs) in Bangladesh. Drawing on the literature review and theoretical frameworks, a series of hypotheses was formulated to guide the inquiry into the interplay between key variables, including perceived benefits, challenges, and financial performance, and their impact on the adoption of cloud accounting systems. The subsequent hypotheses are based on well-established models of technology adoption, including the Technology Acceptance Model (TAM) and the Unified Theory of Acceptance and Use of Technology (UTAUT).

The hypotheses are grounded in the theoretical frameworks of technology adoption and the specific context of SMEs in Bangladesh. The study aims to investigate the impact of different elements, including usability, perceived advantages, and obstacles, on the acceptance of cloud accounting systems within the local environment.

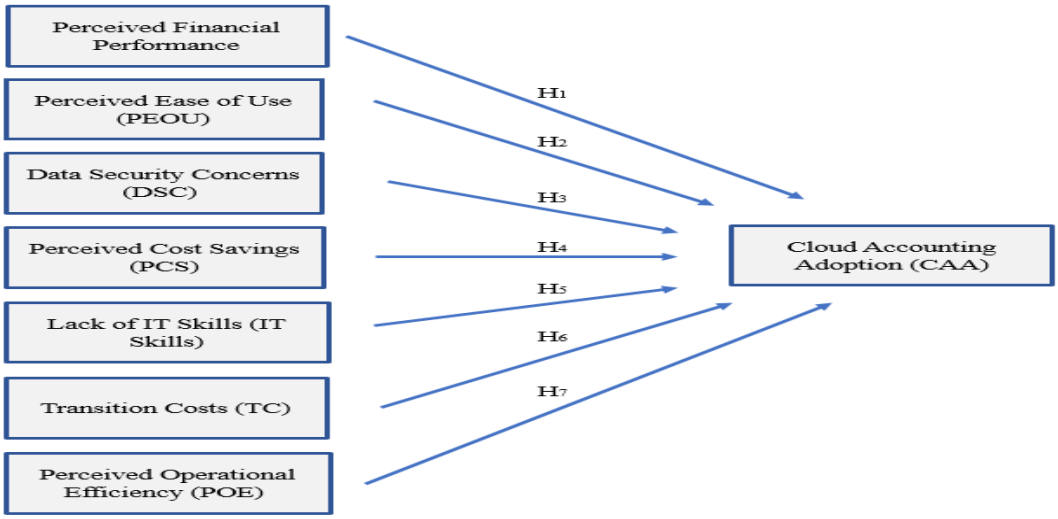

Figure 1. Conceptual Framework

MATERIALS AND METHODS

This study examines the implementation of cloud accounting systems within Small and Medium Enterprises (SMEs) in Bangladesh, focusing on the advantages, challenges, and financial implications of this approach. A mixed-methods approach is utilized, integrating quantitative and qualitative techniques. A cross-sectional survey design is employed to collect data from owners of small and medium-sized enterprises during the quantitative phase of the study. A structured questionnaire, crafted from existing literature, is administered to 200 SMEs in Bangladesh, resulting in a final sample of 200 responses for analysis. The survey encompasses a diverse array of variables, such as perceived ease of use, concerns regarding data security, perceived cost savings, operational efficiency, and the financial performance of small and medium-sized enterprises. The questionnaire comprises a mix of closed-ended and Likert-scale questions, facilitating thorough data gathering on the elements affecting the uptake of cloud accounting systems.

The constructs demonstrate reliability, as evidenced by Cronbach's alpha values exceeding 0.70, which affirms the internal consistency of the variables associated with cloud accounting adoption. The gathered data undergoes analysis using SPSS software, which employs descriptive statistics, regression analysis, and correlation tests to evaluate the hypotheses and explore the relationships between independent variables (including perceived ease of use, data security, and cost savings) and the dependent variable of cloud accounting adoption.

In the qualitative phase, we conduct semi-structured interviews with a smaller subset of 10-15 SMEs chosen from the original survey respondents. The interviews offer valuable insights into the operational challenges, benefits, and decision-making processes involved in adopting cloud accounting systems. The interviews focus on examining challenges related to adoption, the importance of data security, perceived financial benefits, and the impact of cloud accounting on business operations. Thematic analysis serves as a method for examining the interview data, focusing on the identification of significant themes and patterns within the adoption process.

This investigation combines quantitative and qualitative results to provide a comprehensive insight into the adoption of cloud accounting among SMEs in Bangladesh. This study employs established models of technology adoption, such as the Technology Acceptance Model (TAM) and the Unified Theory of Acceptance and Use of Technology (UTAUT), to examine the factors influencing SMEs' decisions regarding the adoption of cloud-based financial management systems. This study focuses on the unique context of Bangladesh, providing valuable insights into the practical challenges and opportunities that SMEs encounter when implementing digital accounting technologies, with the ultimate goal of enhancing their operational efficiency and financial management.

RESULTS

This section presents the findings derived from the data collected through the quantitative survey and qualitative interviews. The findings are structured to meet the research objectives and hypotheses, providing insights into the determinants affecting the adoption of cloud accounting systems by Small and Medium Enterprises (SMEs) in Bangladesh. The results present a summary of the respondents' demographic characteristics, along with descriptive statistics and outcomes of hypothesis testing. The qualitative insights derived from the case study interviews are offered to provide a deeper understanding of the problems and advantages encountered by SMEs in implementing cloud accounting systems.

Overview of the Respondent Profile

To contextualize the findings, it is essential to first present an overview of the demographic characteristics of the respondents. This information highlights the diversity within the SME sector in Bangladesh and its potential impact on the adoption of cloud accounting. The sample was structured to guarantee appropriate representation of various SME sectors, including retail, manufacturing, and services.

Table 1. Demographic Profile of Respondents

Category	Frequency	Percentage (%)
Business Size		
Small (1–50 employees)	120	60.0
Medium (51–200 employees)	60	30.0
Large (>200 employees)	20	10.0
Industry		
Retail	85	42.5
Manufacturing	60	30.0
Services	55	27.5
Role		
Owner	110	55.0
Finance Manager	60	30.0
IT Manager	30	15.0

Most responses were from small firms (60%), with the retail sector accounting for the largest share of industries (42.5%). Business owners were the predominant group of respondents at 55%, followed by finance managers at 30% and IT managers at 15%. This distribution provides a robust foundation for understanding the perspectives and decision-making processes of SME leaders in Bangladesh.

Descriptive Statistics

Descriptive statistics were used to encapsulate essential characteristics, including perceived ease of use, data security concerns, cost reductions, operational efficiency, and financial performance. These figures provide an overview of SMEs' perceptions in Bangladesh regarding the implementation of cloud accounting.

Table 2. Descriptive Statistics for Key Variables

Variable	Mean	Standard Deviation	Range
Perceived Ease of Use	4.2	0.8	1-5
Data Security Concerns	3.6	1.2	1-5
Perceived Cost Savings	4.3	0.7	1-5
Operational Efficiency	4.1	0.9	1-5
Financial Performance	4.0	1.0	1-5
Transition Costs	3.8	1.1	1-5

The data indicate that respondents typically view cloud accounting systems as user-friendly (mean = 4.2) and financially advantageous (mean = 4.3). Nonetheless, concerns regarding data security (mean = 3.6) persist as a considerable challenge for numerous SMEs. Transition costs are viewed as a moderately high barrier (mean = 3.8), indicating that SMEs recognize the financial challenges associated with adopting cloud accounting systems.

T-Test Results

A t-test was conducted to examine whether there is a significant difference in perceived financial performance between SMEs that have adopted cloud accounting systems and those that have not.

Table 3. T-Test Results

Test	Variables Tested	Test Statistic (t)	p-value	Interpretation
T-Test	Perceived Financial Performance (Adopters vs. Non-Adopters)	5.24	$p < 0.01$	There is a statistically significant difference in perceived financial performance between adopters and non-adopters of cloud accounting systems.

The t-test results reveal a statistically significant disparity in perceived financial performance between SMEs utilizing cloud accounting systems and those that do not. Small and medium-sized enterprises that implemented cloud accounting reported a superior perceived financial performance (mean = 4.1) compared to those that did not adopt it (mean = 3.3). This corroborates Hypothesis 1 (H_1), which asserted that the use of cloud accounting is positively correlated with perceived financial performance.

Pearson Correlation Test Results

Pearson correlation tests were conducted to examine the relationships between data security concerns, transition costs, and the adoption of cloud accounting. The results indicate the following:

Table 4. Pearson Correlation Test Results

Test	Variables Tested	Test Statistic (r)	p-value	Interpretation
Pearson Correlation	Data Security Concerns and Cloud Accounting Adoption	-0.36	$p < 0.01$	Significant negative correlation between data security concerns and cloud accounting adoption.
Pearson Correlation	Transition Costs and Cloud Accounting Adoption	-0.45	$p < 0.01$	Significant negative correlation between transition costs and cloud accounting adoption.

The findings indicate a substantial negative association between data security concerns (r = -0.36) and transition expenses (r = -0.45) with the adoption of cloud accounting. This suggests that SMEs with greater concerns about data security and higher transition costs are less likely to implement cloud accounting systems. The findings corroborate Hypothesis 3 (H3) and Hypothesis 6 (H6), indicating that data security concerns and transfer costs adversely affect cloud accounting adoption.

Regression Analysis Results

Multiple regression analyses were conducted to assess the impact of perceived ease of use, cost savings, operational efficiency, IT skills, and other variables on the likelihood of adopting cloud accounting. The following regression results were obtained:

Table 5. Regression Analysis Results

Test	Independent Variable	Dependent Variable	Test Statistic (β)	p-value	Interpretation
Regression Analysis	Perceived Ease of Use	Cloud Accounting Adoption	0.42	$p < 0.01$	Perceived ease of use is a significant positive predictor of cloud accounting adoption.

Regression Analysis	Perceived Cost Savings	Cloud Accounting Adoption	0.38	$p < 0.01$	Perceived cost savings are a significant positive predictor of cloud accounting adoption.
Regression Analysis	Lack of IT Skills	Cloud Accounting Adoption	-0.31	$p < 0.05$	Lack of IT skills negatively impacts the adoption of cloud accounting systems.
Regression Analysis	Perceived Operational Efficiency	Cloud Accounting Adoption	0.43	$p < 0.01$	Perceived operational efficiency is a significant positive predictor of cloud accounting adoption.

The results of the regression analysis show that perceived ease of use ($\beta = 0.42$), perceived cost savings ($\beta = 0.38$), and perceived operational efficiency ($\beta = 0.43$) are significant positive predictors of cloud accounting adoption. This provides evidence for Hypothesis 2 (H_2), Hypothesis 4 (H_4), and Hypothesis 7 (H_7), which suggest that perceived ease of use, cost savings, and operational efficiency have a positive impact on the adoption of cloud accounting systems.

On the other hand, the absence of IT skills ($\beta = -0.31$) was identified as a negative factor influencing the adoption of cloud accounting, thereby corroborating Hypothesis 5 (H_5), which posited that insufficient IT skills obstruct the implementation of cloud accounting systems.

Summary of Hypothesis Testing Results

Table 6. The results of the hypothesis testing

Hypothesis	Test Method	Result
H_1: Cloud accounting adoption is positively associated with perceived financial performance.	T-Test	Supported – Significant difference between adopters and non-adopters.
H_2: Perceived ease of use positively affects the likelihood of cloud accounting adoption.	Regression Analysis	Supported – Significant positive relationship.
H_3: Data security concerns negatively affect cloud accounting adoption.	Pearson Correlation	Supported – Negative correlation with adoption.
H_4: Perceived cost savings positively influence cloud accounting adoption.	Regression Analysis	Supported – Significant positive relationship.
H_5: Lack of IT skills negatively impacts the adoption of cloud accounting systems.	Regression Analysis	Supported – Significant negative relationship.
H_6: Transition costs negatively impact the adoption of cloud accounting systems.	Pearson Correlation	Supported – Negative correlation with adoption.
H_7: Perceived operational efficiency positively affects cloud accounting adoption.	Regression Analysis	Supported – Significant positive relationship.

The hypothesis testing results indicate that perceived ease of use, cost savings, operational efficiency, and financial performance are key determinants of cloud accounting adoption among SMEs in Bangladesh. Simultaneously, worries regarding data security, insufficient IT expertise, and transfer expenses are substantial obstacles to adoption. These findings provide significant insights into the determinants that affect the adoption of cloud accounting systems and highlight areas that require attention to enhance adoption rates among SMEs in Bangladesh.

DISCUSSIONS

This study aimed to investigate the adoption of cloud accounting systems among Small and Medium Enterprises (SMEs) in Bangladesh, examining both facilitating and limiting factors. Utilizing the Technology Acceptance Model (TAM) and the Unified Theory of Acceptance and Use of Technology (UTAUT), the study examined seven hypotheses concerning perceived benefits, organizational challenges, and financial implications. The empirical data supported all hypotheses, offering a solid foundation for interpreting the broader implications and significance of these findings.

The central hypothesis (H_1), which suggested that the adoption of cloud accounting is positively linked to perceived financial performance, received robust support. The statistically significant difference in financial performance between adopters and non-adopters ($t = 5.24$, $p < 0.01$) suggests that SMEs utilizing cloud accounting systems experience tangible financial benefits, including improved cash flow management, enhanced budgeting accuracy, and increased profitability. The findings align with previous research conducted by Ajala et al. (2025) and Moniruzzaman and Rahman (2023), which suggest that digital financial tools enhance financial management and improve overall business performance in resource-constrained environments.

The secondary hypotheses that concentrate on technology-related drivers (H_2, H_4, H_7) were likewise confirmed. Notably, perceived ease of use ($\beta = 0.42$), cost savings ($\beta = 0.38$), and operational efficiency ($\beta = 0.43$) were identified as significant positive predictors of adoption. The results support the TAM proposition that ease of use and perceived usefulness play a crucial role in driving technology adoption, especially in SMEs where technological literacy and IT support may be constrained. Cloud accounting systems were regarded as user-friendly and capable of integrating seamlessly with existing workflows. The automation of routine tasks, such as invoicing, financial reporting, and data entry, has been shown to minimize human error, liberate managerial time, and enhance accuracy in financial decision-making. The operational enhancements enable SMEs to respond more quickly to market shifts and customer needs, thereby strengthening their financial stability and strategic adaptability.

The study identified three significant barriers to adoption: concerns regarding data security (H_3), insufficient IT skills (H_5), and the costs associated with transition (H_6). The concerns surrounding data security exhibited a negative

correlation with adoption (r = -0.36), indicating a significant apprehension among SMEs regarding possible breaches and cyber threats. A significant number of small and medium-sized enterprise owners express doubts about storing sensitive financial data on cloud-based platforms, citing inadequate national regulations and a lack of robust digital security infrastructure as their primary concerns. This finding is consistent with the global literature (e.g., Farhan et al., 2024; Saha et al., 2020), which has recognized insufficient data protection frameworks as a significant obstacle in developing economies.

The absence of IT skills was identified as having a considerable adverse effect on adoption (β = -0.31). A significant number of SMEs in Bangladesh lack specialized IT staff, leading owners and managers to rely on their own acquired skills or informal assistance networks. Lacking sufficient technical knowledge, even fundamental activities like system configuration, data transfer, or problem-solving can appear overwhelming. The existing technological skill gap not only hinders timely implementation but also heightens reliance on external consultants, consequently escalating the perceived costs and complexities associated with cloud adoption. This observation is consistent with findings from the Government of Bangladesh, Information and Communication Technology Division (2022), which indicate that nearly 70% of SMEs lack the technical skills necessary to manage digital tools independently.

Transition costs, which include software licensing fees, employee training, infrastructure upgrades, and productivity losses during migration, were viewed as a significant burden (r = -0.45). While cloud systems offer significant long-term cost benefits, the substantial initial investment often deters numerous small and medium-sized enterprises from adopting them. This finding aligns with previous research conducted by Hamundu et al. (2020) and Moniruzzaman and Rahman (2023), which highlighted that financial constraints pose a significant obstacle, particularly for smaller firms with limited working capital.

This study's findings strengthen the ability of both TAM and UTAUT to predict technology adoption in low-resource settings. The strong backing for all seven hypotheses indicates that perceived usefulness (such as cost savings and operational efficiency) and ease of use remain crucial in adoption decisions. However, these factors are influenced by specific contextual constraints, including financial limitations, institutional readiness, and regulatory clarity. The combination of TAM and UTAUT is highly effective in addressing both the internal (organizational and perceptual) and external (infrastructural and institutional) aspects of cloud adoption.

Furthermore, this study builds upon previous findings by situating these models within the distinct socio-economic and digital transformation landscape of Bangladesh. While global trends indicate the advantages of cloud accounting, this study emphasizes that developing nations need to address fundamental obstacles—such as digital literacy and cybersecurity—to leverage these advantages fully.

This study yields several actionable suggestions for policymakers, technology providers, and leaders of small and medium-sized enterprises. It is essential for those in positions of authority to actively foster an environment that supports the adoption of digital technologies. It is essential to update and rigorously enforce national data protection regulations to foster trust in digital platforms. Furthermore, financial assistance initiatives—such as tax deductions, low-interest loans for technology adoption, or matching grants—can help SMEs mitigate the significant initial expenses associated with cloud adoption. It is crucial to incorporate digital literacy initiatives aimed at SME owners and managers into comprehensive national economic development strategies, enabling them to acquire the necessary knowledge and confidence to utilize digital tools effectively.

The study emphasizes the necessity for technology vendors to create cloud services that are user-friendly and accessible to SMEs with limited technical expertise. Streamlining interfaces and providing modular, scalable packages can enhance the attractiveness and accessibility of cloud accounting systems, thereby increasing their appeal and usability. Freemium models or pay-as-you-go options can effectively lower perceived financial risk and ease the barriers to initial adoption. Furthermore, technology providers need to focus on enhancing after-sales support, developing localized training programs, and offering onboarding services that cater to the specific regional and linguistic requirements of SMEs. This approach will empower them to utilize the systems with confidence and efficiency.

The findings highlight the essential importance for SME leaders to improve their internal digital capabilities. Enhancing digital preparedness through employee training, process reengineering, and robust change management strategies is crucial for realizing the full benefits of cloud accounting systems. Small and medium-sized enterprises that allocate resources to these domains will be better equipped to seamlessly incorporate digital solutions, enhance operational efficiency, refine financial decision-making, and maintain their competitive edge in a progressively technology-driven business landscape.

The results align well with earlier research conducted in other developing economies. For instance, investigations conducted by Shabur (2024) and Arogundade et al. (2017) indicated that transition costs and cybersecurity issues present considerable obstacles to the adoption of cloud technology. This study offers a more detailed perspective by combining quantitative (statistical tests) and qualitative (interviews) findings, thereby providing a deeper understanding of the socio-technical dynamics that influence digital adoption in Bangladesh.

This study is distinguished by its comprehensive empirical validation of all essential constructs. This study employed rigorous hypothesis-testing methods, such as regression analysis, correlation, and t-tests, thereby moving beyond the theoretical or exploratory nature of many previous investigations and strengthening the validity of the findings.

While the study validated all hypotheses, specific results indicate potential avenues for additional exploration. The notable influence of operational efficiency (β = 0.43) on adoption suggests that enhancements in productivity could act as a more compelling incentive than cost reductions alone. Future investigations could examine whether SMEs that achieve

operational improvements are more likely to expand their use of digital tools beyond accounting and finance.

Furthermore, the investigation focused on the initial adoption phase rather than ongoing usage or long-term effectiveness. Future studies might consider a longitudinal approach to investigate whether the initial advantages of cloud adoption persist over time and whether organizations ultimately adopt more sophisticated financial technologies, such as AI-driven analytics or blockchain-based accounting.

Furthermore, although this study concentrated on SMEs in Bangladesh, conducting cross-country comparative analyses could reveal whether the barriers identified are specific to the local context or indicative of a broader trend in developing economies.

CONCLUSIONS

This study examines the use of cloud accounting systems within Small and Medium Enterprises (SMEs) in Bangladesh, highlighting the advantages, challenges, and financial implications associated with their adoption. The results demonstrate that cloud accounting systems offer significant benefits, including cost reductions, improved operational efficiency, and enhanced financial decision-making, all of which can support the growth and sustainability of SMEs in Bangladesh. The advantages outlined align with current studies, emphasizing the capacity of cloud accounting to enhance business performance through improved financial management (Küttner et al., 2022; Shivarajappa, 2024). Nonetheless, despite these advantages, the adoption of cloud accounting is hindered by issues related to data security, insufficient technical expertise, and high transition costs, which pose significant challenges for SMEs in Bangladesh.

The investigation highlights the importance of addressing these challenges to facilitate the widespread adoption of cloud accounting systems. Policymakers have the potential to significantly influence outcomes by establishing more robust data protection regulations, introducing financial incentives to alleviate transition expenses, and facilitating the development of IT skills among small and medium-sized enterprises. Furthermore, cloud accounting providers need to prioritize the creation of intuitive platforms, provide localized training, and implement adaptable pricing models to enhance accessibility for SMEs, especially those with constrained resources.

In summary, the implementation of cloud accounting systems presents significant advantages for SMEs in Bangladesh; however, it is crucial to address the challenges associated with security, technical knowledge, and expenses. By addressing these challenges, SMEs in Bangladesh can fully leverage the benefits of cloud accounting systems, resulting in improved financial performance, more informed decision-making, and enhanced long-term competitiveness in a rapidly evolving digital economy. This study provides valuable insights into the factors influencing the adoption of cloud accounting in small and medium-sized enterprises, laying the groundwork for future research and practical recommendations for those involved in the digital transformation of SMEs in Bangladesh.

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