

Factors Affecting Financial Reporting Quality of Commercial Banks: The Mediating Role of Accounting Information System Quality

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Abstract

This study examines the determinants of financial reporting quality in commercial banks, with accounting information system quality serving as a theoretically specified mediating mechanism. To avoid conceptual ambiguity, financial reporting quality is defined as the broader quality of the reporting process and its information outputs, whereas financial statement quality is treated as one observable manifestation of that broader construct. Drawing on the information systems success perspective, the resource-based view, and institutional theory, the study links human competence, organizational control, regulatory compliance, managerial support, and technological application to accounting information system quality and financial reporting quality. The qualitative phase used semi-structured discussions with 30 officers responsible for accounting, internal control, regulatory reporting, and information systems in commercial bank branches to refine the model and questionnaire. The quantitative phase surveyed accountants, controllers, internal auditors, financial officers, and IT staff involved in accounting systems at commercial banks. Of 700 questionnaires distributed, 635 valid responses were retained for structural equation modeling. Reliability, convergent validity, discriminant validity, multicollinearity, common-method diagnostics, structural paths, and indirect effects were assessed. The results support all proposed hypotheses. Accounting staff competence, internal control system, regulatory compliance, top management support, and information technology application positively affect accounting information system quality. Information technology application shows the largest standardized association with accounting information system quality, although coefficient differences are interpreted cautiously because formal pairwise coefficient-comparison tests were not conducted. Accounting information system quality positively affects financial reporting quality, and information technology application also has a direct positive effect. Product-of-coefficients estimates indicate mediated pathways through accounting information system quality, with the strongest indirect pathway from information technology application to financial reporting quality. The findings suggest that commercial banks should improve financial reporting quality by combining digital transformation, accounting information system enhancement, internal control strengthening, staff competence development, managerial commitment, and regulatory compliance.

Keywords: Accounting Information System Quality, Financial Reporting Quality, Commercial Banks, Information Technology, Structural Equation Modeling

1. Introduction

Financial reporting quality has become a critical concern for commercial banks because financial statements provide essential information for managers, investors, regulators, auditors, depositors, and other stakeholders. In the banking sector, financial reports are not only used to evaluate profitability and financial position but also to assess risk exposure, capital adequacy, liquidity, operational efficiency, and compliance with prudential regulations [1]. Therefore, high-quality financial reporting is essential for enhancing transparency, strengthening market discipline, supporting decision-making, and maintaining public confidence in the banking system [2].

In this study, the term financial reporting quality is used deliberately because the dependent variable covers the broader process by which accounting information is generated, processed, controlled, disclosed, and used by stakeholders. Financial statement quality is narrower and refers primarily to the quality of the formal financial statements. Therefore, the title and the model were aligned around financial reporting quality, while financial statements are discussed as the principal output of the reporting process in commercial banks. In emerging markets such as Vietnam, commercial

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banks operate in an increasingly complex environment characterized by digital transformation, intensive regulatory supervision, rapid growth of financial technology, and rising expectations for transparent and timely financial information. The banking industry processes a large volume of daily transactions, most of which are recorded, classified, summarized, and reported through accounting information systems. As a result, the quality of financial reporting depends not only on accounting standards and human expertise but also on the quality of accounting information systems that support data processing, internal control, and financial disclosure.

Prior studies have emphasized the importance of information technology, digital transformation, governance, internal control, and regulatory compliance in improving banking performance, operational efficiency, and financial stability. Research on digital finance and information technology has shown that technological applications can enhance financial development, improve banking efficiency, and support digital transformation in financial institutions [3], [4]. In addition, studies on corporate governance, risk management, and regulatory environment highlight the role of governance mechanisms and compliance requirements in strengthening organizational accountability and reducing operational risks [5]. Although these studies provide important insights into banking, technology, and governance, limited attention has been paid to the mechanisms by which these factors improve financial reporting quality, particularly via accounting information system quality.

Accounting information system quality plays a central role in transforming raw accounting data into reliable, relevant, timely, and understandable financial information. A high-quality accounting information system helps ensure data accuracy, processing efficiency, information security, system integration, and timely reporting [6]. In commercial banks, the accounting information system is closely connected with core banking systems, internal control procedures, regulatory reporting systems, and management information systems. Therefore, weaknesses in the accounting information system may lead to inaccurate data, delayed reporting, poor internal control, and reduced reliability of financial statements. Conversely, an effective accounting information system can enhance the quality of financial information and support the preparation of high-quality financial reports [7].

Despite the growing importance of digitalization in the banking sector, the relationships among accounting staff competence, internal control systems, regulatory compliance, top management support, information technology applications, accounting information system quality, and financial reporting quality remain underexplored in the context of Vietnamese commercial banks. Accounting staff competence is important because qualified accounting personnel are responsible for recognizing, measuring, processing, and reporting financial transactions. The internal control system is also essential because it helps ensure the reliability of accounting data and prevents errors or fraud. Regulatory compliance contributes to financial reporting quality by ensuring that accounting practices comply with applicable legal requirements and accounting standards [8]. Top management support is necessary for allocating resources, promoting system improvement, and encouraging compliance with accounting and reporting procedures. Meanwhile, information technology applications are increasingly important because banking activities are highly dependent on digital platforms and automated accounting processes [9].

The information technology application construct is interpreted in this study as a broad banking-technology capability rather than a single software tool. It includes the use of core banking interfaces, automated accounting modules, electronic transaction processing, data validation, cybersecurity controls, database integration, and regulatory reporting platforms. More specialized constructs such as fintech integration maturity, data governance capability, cybersecurity maturity, and core banking maturity are not modeled separately in order to keep the empirical model parsimonious; however, they are acknowledged as important extensions for future research.

Based on these arguments, this study develops and tests a structural equation model to examine the determinants of financial reporting quality in Vietnamese commercial banks, with accounting information system quality serving as a mediating variable. The model includes five antecedent factors: accounting staff competence, internal control system, regulatory compliance, top management support, and information technology application [4], [10]. Accounting information system quality is proposed as the mediating variable, while financial reporting quality is the dependent variable. In addition, information technology applications are assumed to have a direct effect on financial reporting quality because technological infrastructure can directly improve data processing, reporting speed, system accuracy, and information transparency.

This study makes several contributions to the accounting and banking literature. First, it extends prior research by examining financial reporting quality from the perspective of accounting information system quality rather than focusing only on accounting standards or corporate governance. Second, it provides empirical evidence on the mediating role of accounting information system quality in the relationship between organizational, regulatory, human, and technological factors and financial reporting quality. Third, the study highlights the dual role of information technology application, which affects financial reporting quality both directly and indirectly through the quality of accounting information systems. Fourth, the study contributes to the literature on emerging markets by providing evidence from Vietnamese commercial banks, where digital transformation and regulatory compliance are becoming increasingly important.

Methodologically, this study applies a mixed-methods design. The qualitative phase involved discussions with 30 officers working in financial accounting and reporting at 30 commercial bank branches in Ho Chi Minh City. This phase was used to refine the research model, adjust measurement scales, and ensure the questionnaire's suitability. The quantitative phase was conducted through a survey of accountants, controllers, internal auditors, financial officers, and IT staff involved in accounting systems at Vietnamese commercial banks. A total of 700 questionnaires were distributed, and 635 valid responses were used for structural equation modeling. The empirical results show that all proposed hypotheses are supported, confirming the positive effects of accounting staff competence, the internal control system, regulatory compliance, top management support, and information technology application on the quality of accounting information systems. The findings also confirm that the quality of accounting information systems positively affects financial reporting quality, while the application of information technology has a direct positive effect on financial reporting quality.

2. Theoretical Framework and Hypothesis Development

2.1. Theoretical Foundations

This study is grounded in the information systems success perspective, the resource-based view, and institutional theory to explain the determinants of financial reporting quality in Vietnamese commercial banks. These theoretical foundations are appropriate because financial reporting quality is influenced not only by accounting practices but also by human resources, internal control mechanisms, technological capability, managerial support, and regulatory requirements. The information systems success perspective suggests that the quality of an information system determines the quality of information outputs and user benefits [1], [10]. In the context of commercial banks, the accounting information system processes large volumes of transaction data and transforms them into financial information for reporting, control, and decision-making. Therefore, when the accounting information system is accurate, reliable, timely, secure, and well-integrated, it can improve the relevance, faithful representation, timeliness, and understandability of financial reports. This perspective provides a theoretical basis for the mediating role of accounting information system quality in the relationship between organizational and technological factors and financial reporting quality [11], [12].

The five perspectives stated in the abstract are therefore mapped onto these theories as follows. The human perspective is represented by accounting staff competence and is grounded in the resource-based view. The organizational perspective is represented by the internal control system and reflects organizational routines that protect data reliability. The regulatory perspective is represented by regulatory compliance and is grounded in institutional theory. The managerial perspective is represented by top management support and reflects managerial capability in resource allocation and system governance. The technological perspective is represented by information technology application and is grounded in both the information systems success perspective and the resource-based view. This mapping clarifies why the selected constructs are theoretically connected to the proposed model rather than being merely descriptive variables.

The resource-based view explains how internal resources and capabilities contribute to organizational outcomes. Accounting staff competence, information technology application, internal control system, and top management support can be considered strategic organizational resources. Competent accounting staff enhances the accuracy of accounting recognition, measurement, and reporting [3], [13]. Information technology applications improve data

processing, automation, system integration, and reporting speed. Internal control systems help prevent errors, fraud, and data manipulation, while top management support facilitates resource allocation, system improvement, and a culture of compliance. From this perspective, banks that possess stronger human, technological, and managerial capabilities are more likely to develop high-quality accounting information systems and produce high-quality financial reports [5], [14].

Moreover, institutional theory emphasizes the role of external rules, regulations, standards, and supervisory pressures in shaping organizational practices. Commercial banks are highly regulated institutions and must comply with accounting standards, banking regulations, prudential requirements, and disclosure rules [8], [15]. Regulatory compliance encourages banks to improve accounting procedures, strengthen internal control, and ensure transparency in financial reporting. The banking sector is undergoing digital transformation and increasing regulatory supervision, and compliance pressure plays an important role in enhancing the reliability and comparability of accounting information.

Based on these theoretical perspectives, this study proposes that accounting staff competence, internal control system, regulatory compliance, top management support, and information technology application positively affect accounting information system quality. In turn, the quality of accounting information systems is expected to enhance financial reporting quality [7], [15]. In addition, information technology applications are expected to directly improve financial reporting quality by increasing data accuracy, reporting timeliness, and transparency in commercial banks.

2.2. Accounting Staff Competence and Accounting Information System Quality

Accounting staff competence refers to the knowledge, skills, professional experience, and ethical awareness of employees responsible for recording, processing, controlling, and reporting accounting information. In commercial banks, accounting staff must deal with complex financial transactions, regulatory reporting requirements, digital banking data, and integrated accounting systems [16]. Competent accounting staff can use accounting information systems effectively, detect data errors, adhere to accounting standards, and ensure the accuracy and timeliness of accounting information. From the resource-based view, human competence is an important organizational capability that supports system performance and information quality [8], [17]. When accounting staff have strong professional expertise and technology-related skills, they can improve data input quality, reduce processing errors, enhance system utilization, and contribute to better accounting information system quality, the following hypothesis:

H1: Accounting staff competence has a positive effect on accounting information system quality.

2.3. Internal Control System and Accounting Information System Quality

The internal control system refers to the policies, procedures, and control activities designed to ensure the reliability of accounting information, safeguard assets, prevent fraud, and support regulatory compliance. In commercial banks, internal control is particularly important because banking operations involve numerous financial transactions, high operational risk, and strict supervisory requirements [18], [19]. A strong internal control system can improve the quality of the accounting information system by ensuring that data are properly authorized, accurately recorded, fully processed, and regularly monitored. It also helps reduce errors, detect irregularities, and strengthen the security and integrity of accounting data. From the resource-based view, internal control represents an organizational capability that supports the effective operation of accounting information systems [9], [20]. Therefore, banks with effective internal control mechanisms are more likely to maintain reliable, timely, and accurate accounting information systems. Accordingly, the following hypothesis is proposed:

H2: The internal control system has a positive effect on accounting information system quality.

2.4. Regulatory Compliance and Accounting Information System Quality

Regulatory compliance refers to the extent to which commercial banks comply with accounting standards, banking regulations, prudential requirements, disclosure rules, and other legal obligations. Commercial banks operate in a highly regulated environment, where compliance with financial reporting and supervisory requirements is essential for transparency, accountability, and public trust [21]. Institutional theory suggests that regulatory pressure influences organizational practices and encourages firms to develop formal systems and procedures to meet external expectations.

In the context of accounting information systems, regulatory compliance requires banks to maintain accurate records, standardized reporting processes, proper documentation, and effective data control mechanisms [11], [22]. These requirements can enhance system discipline, improve data consistency, and support reliable accounting information processing. When banks comply with relevant regulations and accounting standards, their accounting information systems are more likely to produce accurate, comparable, and timely information, the following hypothesis:

H3: Regulatory compliance positively affects accounting information system quality.

2.5. Top Management Support and Accounting Information System Quality

Top management support refers to the commitment, involvement, and resource allocation provided by senior managers to improve accounting practices and information systems. In commercial banks, the quality of accounting information systems depends not only on technology but also on managerial decisions regarding investment, training, system upgrades, internal policies, and organizational coordination [23], [24]. When top management actively supports accounting information systems, banks are more likely to allocate sufficient financial, human, and technological resources for system development and maintenance. Management support also encourages employees to comply with system procedures, participate in training, and use accounting systems effectively [15], [25]. From the resource-based view, top management support is an important managerial capability that enables organizations to deploy resources efficiently and improve system performance. Strong managerial commitment can promote system integration, data quality, user acceptance, and continuous improvement. Therefore, this study proposes the following hypothesis:

H4: Top management support positively affects accounting information system quality.

2.6. Information Technology Application and Accounting Information System Quality

Information technology application refers to the extent to which banks use digital technologies, software, databases, automation tools, and integrated systems to support accounting operations and financial reporting. In modern commercial banks, accounting activities are closely connected with core banking systems, electronic transactions, risk management systems, and regulatory reporting platforms [26], [27]. The application of information technology can improve the quality of accounting information systems by enhancing data processing speed, accuracy, security, integration, and accessibility. Automated systems help reduce manual errors, increase reporting timeliness, and strengthen the consistency of accounting data across departments and branches [18], [29]. The information systems success perspective suggests that technological capability directly contributes to system quality and information output quality. In addition, digital transformation in banking requires that accounting systems be flexible, reliable, and capable of handling high transaction volumes [30], [31]. The following hypothesis:

H5: Information technology application positively affects accounting information system quality.

2.7. Accounting Information System Quality and Financial Reporting Quality

Accounting information system quality refers to the degree to which an accounting information system is reliable, accurate, timely, secure, integrated, and useful for accounting and reporting activities. Financial reporting quality reflects the extent to which financial statements provide relevant, faithfully represented, comparable, understandable, and timely information for decision-making [32], [33]. In commercial banks, financial reports are largely generated from accounting information systems that collect, process, summarize, and present financial transaction data. Therefore, the quality of financial reporting depends heavily on the quality of the accounting information system. A high-quality accounting information system can reduce data errors, improve reporting speed, enhance internal control, and ensure the consistency and completeness of financial information [34], [36]. According to the information systems success perspective, better system quality leads to better information quality and improved organizational outcomes. Thus, when accounting information systems operate effectively, banks are more likely to produce reliable and transparent financial reports. Therefore, the following hypothesis is proposed:

H6: Accounting information system quality has a positive effect on financial reporting quality.

2.8. Information Technology Application and Financial Reporting Quality

Information technology applications may also directly influence financial reporting quality beyond their indirect effect through accounting information system quality. In commercial banks, information technology supports the automation of accounting procedures, real-time transaction processing, data validation, system-based controls, and electronic reporting [37], [38]. These technological functions can directly enhance the accuracy, timeliness, completeness, and transparency of financial reports. Advanced information technology also improves data integration across branches, departments, and banking platforms, thereby reducing inconsistencies and delays in financial reporting [39], [40]. From a systems success perspective, technology improves the quality of information outputs by increasing processing efficiency and reducing human error. In addition, digital banking environments require financial reports to be produced quickly and accurately to meet the needs of regulators, managers, investors, and other stakeholders. Therefore, banks with stronger information technology applications are more likely to generate high-quality financial reports. Based on this argument, the following hypothesis is proposed:

H7: Information technology application positively affects financial reporting quality.

The conceptual model provides a comprehensive framework for explaining critical factors influencing the financial reporting quality, as presented in figure 1.

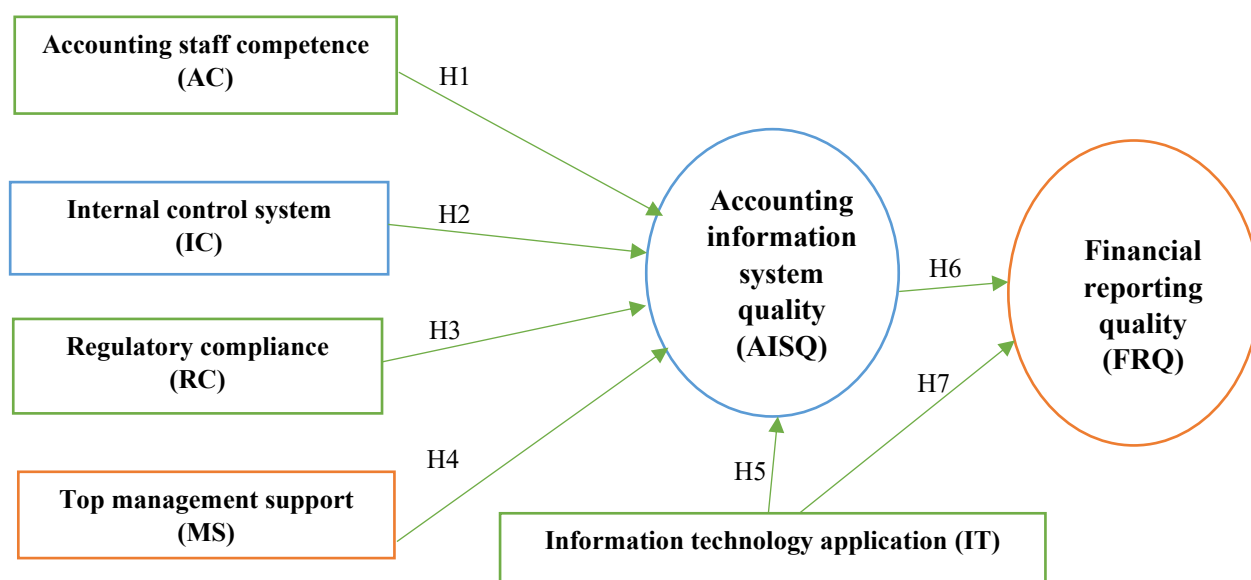


Figure 1. A research model for critical factors influencing the financial reporting quality

Figure 1 illustrates the proposed research model for examining the determinants of financial reporting quality in Vietnamese commercial banks. The model includes five antecedent factors: accounting staff competence (AC), internal control system (IC), regulatory compliance (RC), top management support (MS), and information technology application (IT). Accounting information system quality (AISQ) serves as the mediating variable, while financial reporting quality (FRQ) is the dependent variable. The model proposes that AC, IC, RC, MS, and IT positively influence AISQ. In turn, AISQ is expected to positively affect FRQ. In addition, IT is proposed to have a direct positive effect on FRQ. Accordingly, the model comprises seven hypotheses, namely H1-H7.

3. Research Data and Methodology

This study employed a mixed-methods research design combining qualitative and quantitative approaches. The qualitative phase was conducted to refine the research model, adjust the measurement scales, and ensure the questionnaire's suitability for the context of Vietnamese commercial banks. The quantitative phase was used to test the proposed hypotheses and evaluate the relationships among the constructs in the research model using structural equation modeling. The research model consists of five independent variables, namely accounting staff competence (AC), internal control system (IC), regulatory compliance (RC), top management support (MS), and information technology application (IT). Accounting information system quality (AISQ) is used as the mediating variable, while

financial reporting quality (FRQ) is the dependent variable. In addition, information technology applications are proposed to directly affect the quality of financial reporting, according to seven hypotheses [41].

3.1. Qualitative Phase

The qualitative study was conducted through semi-structured expert discussions with 30 officers working in financial accounting, internal control, regulatory reporting, information technology, and accounting information system operations at 30 branches of commercial banks in Ho Chi Minh City. Participants were selected purposively because they had direct practical knowledge of accounting procedures, financial reporting, internal control, regulatory compliance, and information systems in the banking sector. The discussion protocol focused on four issues: the relevance of each construct to Vietnamese commercial banks, the clarity of the proposed measurement items, the appropriateness of wording for banking respondents, and whether any major contextual factor was missing from the model. Notes from the discussions were reviewed thematically by grouping recurring comments into construct relevance, item wording, banking-specific terminology, and questionnaire clarity. The qualitative feedback led to wording refinements, the clarification of the information technology construct to cover core banking and automated reporting functions, and the confirmation that the proposed constructs were understandable to potential respondents. This procedure strengthened content validity before the quantitative survey was implemented [41].

3.2. Quantitative Phase

The quantitative study was conducted using a structured questionnaire based on prior literature and refined through the qualitative phase. The target respondents included accountants, controllers, internal auditors, financial officers, and IT staff involved in accounting information systems at commercial banks in Vietnam. A purposive and convenience sampling approach was used because the study required respondents with specific knowledge of accounting data processing, internal control, regulatory reporting, and information technology systems. Questionnaires were distributed through professional contacts and bank branches, mainly in Ho Chi Minh City and other major banking locations where commercial-bank operations are concentrated. The participating institutions included different categories of commercial banks; however, individual bank names are not disclosed for confidentiality reasons. A total of 700 questionnaires were distributed. After excluding incomplete and inconsistent responses, 635 valid responses were retained for analysis, yielding a valid response rate of approximately 90.71%. The final sample size satisfies common requirements for structural equation modeling and provides sufficient statistical power to test the proposed hypotheses.

The study used structural equation modeling to assess the measurement model and structural model. First, the measurement model was evaluated using Cronbach's alpha, composite reliability, average variance extracted, variance inflation factor, and the Heterotrait–Monotrait ratio. Cronbach's alpha and composite reliability were used to assess internal consistency reliability. The average variance extracted was used to assess convergent validity. The Heterotrait–Monotrait ratio was used to assess discriminant validity, while VIF was used to examine multicollinearity among constructs. Second, the structural model was tested by estimating path coefficients, standard deviations, p-values, confidence intervals, and hypothesis support. The bootstrapping procedure was applied to evaluate the statistical significance of the proposed relationships. The results were used to determine whether accounting staff competence, internal control system, regulatory compliance, top management support, and information technology application positively affect accounting information system quality, and whether accounting information system quality and information technology application positively affect financial reporting quality. The analysis results confirm that the measurement model meets the requirements for reliability, convergent validity, discriminant validity, and multicollinearity. Therefore, the data are appropriate for testing the proposed structural model [41].

3.3. Measurement Instruments, Scale Format, and Common Method Bias

All constructs were measured using reflective indicators adapted from prior studies on accounting information systems, internal control, regulatory compliance, information technology, management support, and financial reporting quality. The questionnaire used a five-point Likert scale ranging from 1 = strongly disagree to 5 = strongly agree. Items were adapted to fit the banking context by replacing general organizational wording with terms related to commercial-bank accounting, internal control, core banking interfaces, regulatory reporting, and financial-report preparation. The instrument was reviewed during the qualitative phase to improve wording clarity and content validity.

To reduce common method bias, the questionnaire assured respondents of anonymity, emphasized that there were no right or wrong answers, separated predictor and outcome constructs in the questionnaire layout, and used clear construct-specific wording. As a statistical diagnostic, the variance inflation factor values reported in [table 2](#) are all far below the conservative threshold of 3.3, suggesting that common method bias and collinearity are unlikely to dominate the results. Nevertheless, because all data were collected from self-reported questionnaires at one point in time, common method bias cannot be completely ruled out and is acknowledged as a limitation.

[Table 1](#) presents the theoretical thresholds used to assess indicator reliability, internal consistency, convergent validity, and multicollinearity. Outer loading was used to assess the reliability of individual measurement items. Indicators with outer loading values of 0.70 or higher were retained. Items with loading values between 0.40 and 0.70 could be considered for removal if their deletion improved composite reliability or average variance extracted. Indicator reliability was assessed using the squared outer loading, with a desirable threshold of 0.50 or higher. Internal consistency reliability was evaluated using Cronbach's alpha, composite reliability, and rho_A. Cronbach's alpha values of 0.70 or higher indicate acceptable reliability, although values of 0.60 or higher may be acceptable in exploratory studies. Composite reliability values should generally fall between 0.70 and 0.95. Values above 0.95 may indicate redundancy among observed items. Similarly, rho_A values of 0.70 or higher indicate satisfactory construct reliability.

Table 1. Theoretical model evaluation criteria

No.	Criterion	Threshold (Theory)
1	Outer Loading (λ)	≥ 0.70 (retain); 0.40 – 0.70 consider removal if AVE/CR improves
2	Indicator Reliability (λ^2)	≥ 0.50 (desirable)
3	Cronbach's Alpha (α)	≥ 0.70 (exploratory ≥ 0.60 acceptable)
4	Composite Reliability (rho_A and rho_c)	0.70 – 0.96
5	Average Variance Extracted (AVE)	≥ 0.50
6	VIF (Outer)	< 5.0

Convergent validity was assessed using the average variance extracted. An AVE value of 0.50 or higher indicates that a construct explains at least half of the variance of its observed indicators. In addition, multicollinearity was assessed using the variance inflation factor. Outer VIF values below 5.0 indicate that multicollinearity is not a serious problem, while values below 3.3 represent a stricter criterion. Based on these theoretical criteria, the measurement model was evaluated before proceeding to assess discriminant validity and test the structural model.

4. Study Results

4.1. Descriptive Statistics

The descriptive statistics of the respondents are presented in this section. After screening the collected questionnaires, 635 valid responses were retained for the final analysis. The demographic characteristics include gender, marital status, age, and income level. These characteristics provide an overview of the respondent profile and help assess the sample's suitability for examining the quality of accounting information systems and financial reporting in Vietnamese commercial banks. Regarding gender, the sample comprises 269 male respondents (42.4%) and 366 female respondents (57.6%). The proportion of female respondents is higher than that of male respondents, indicating that women represent a relatively large share of employees involved in accounting, finance, internal control, internal audit, and information technology-related accounting activities in commercial banks.

In terms of marital status, 240 respondents are single (37.8% of the sample), while 395 are married (62.2%). This result shows that the majority of respondents are married, suggesting that many participants are relatively stable in their personal and professional lives. This characteristic is consistent with the nature of banking positions that require experience, responsibility, and professional stability. With respect to age, the largest group is respondents aged from 30 to 35 years, with 337 individuals, accounting for 53.1% of the sample. The second-largest group comprises

respondents aged 25 to under 30 years, with 149 individuals, accounting for 23.5%. Respondents over 35 years old account for 15.3%, while those under 25 years old represent only 8.2%. These results indicate that most respondents are between 25 and 35 years old, with the largest share aged 30 to 35. This age structure is appropriate for the study because respondents in this group are likely to have sufficient professional experience to evaluate accounting information systems, internal control practices, regulatory compliance, and financial reporting quality.

Regarding income level, 234 respondents earn more than VND 25 million per month, accounting for 36.9%, while 231 earn between VND 20 million and VND 25 million, accounting for 36.4%. Respondents with income from VND 15 million to under VND 20 million account for 21.7%, and those earning below VND 15 million represent 5.0%. Thus, most respondents have a monthly income of VND 20 million or higher. This indicates that the sample mainly consists of employees with relatively stable income and professional positions in commercial banks.

Overall, the sample's demographic characteristics indicate that the respondents are well-suited to the objectives of this study. Most participants are professionals with relevant working experience and direct involvement in accounting, finance, internal control, internal audit, or information technology systems. Therefore, the sample is considered appropriate for examining the factors affecting the quality of accounting information systems and financial reporting in Vietnamese commercial banks.

4.2. Testing Critical Factors Influencing Financial Reporting Quality

Table 2 presents the model, which includes seven constructs: accounting staff competence (AC), accounting information system quality (AISQ), financial reporting quality (FRQ), internal control system (IC), information technology application (IT), top management support (MS), and regulatory compliance (RC). The descriptive results show that the mean values of the constructs range from 3.134 to 3.405, indicating that respondents generally provided moderate to relatively positive evaluations of the research variables. Accounting information system quality (AISQ) records the highest mean value of 3.405, followed by accounting staff competence (AC) at 3.310 and regulatory compliance (RC) at 3.306. Meanwhile, financial reporting quality (FRQ) has the lowest mean value of 3.134. The standard deviation values range from 0.919 to 0.952, suggesting that the responses are reasonably dispersed and that the dataset contains sufficient variation for further analysis.

Table 2. Reliability and Convergent Validity Analysis

Factors	Number of items	Mean	Standard deviation	Cronbach's alpha	Composite reliability	Average variance extracted	VIF
AC	4	3.310	0.931	0.855	0.879	0.654	1.037
AISQ	3	3.405	0.941	0.859	0.914	0.779	1.259
FRQ	3	3.134	0.951	0.932	0.957	0.880	1.020
IC	4	3.207	0.938	0.885	0.917	0.735	1.038
IT	4	3.241	0.919	0.923	0.945	0.812	1.259
MS	4	3.152	0.947	0.937	0.955	0.842	1.090
RC	4	3.306	0.952	0.933	0.949	0.824	1.018

The reliability results indicate that all constructs achieve satisfactory internal consistency. Cronbach's alpha values range from 0.855 to 0.937, which are higher than the commonly recommended threshold of 0.70. Specifically, the values are 0.855 for AC, 0.859 for AISQ, 0.932 for FRQ, 0.885 for IC, 0.923 for IT, 0.937 for MS, and 0.933 for RC. These results confirm that the observed items consistently measure their respective latent constructs. Composite reliability values also exceed the recommended threshold of 0.70, ranging from 0.879 to 0.957. The highest composite reliability is found for FRQ at 0.957, followed by MS at 0.955, RC at 0.949, IT at 0.945, IC at 0.917, AISQ at 0.914, and AC at 0.879. This further confirms the reliability of the measurement scales used in the study.

Convergent validity was assessed using the average variance extracted (AVE). The AVE values range from 0.654 to 0.880, exceeding the minimum acceptable threshold of 0.50. FRQ has the highest AVE value of 0.880, while AC has the lowest AVE value of 0.654. These findings indicate that each construct explains more than half of the variance of its observed indicators, thereby confirming convergent validity. In addition, multicollinearity was assessed using the variance inflation factor (VIF). The VIF values range from 1.018 to 1.259, which are far below the recommended

threshold of 3.3 or 5.0. Therefore, multicollinearity is not a serious concern in the model. Overall, the results in [table 2](#) demonstrate that the measurement model satisfies the requirements for reliability, convergent validity, and multicollinearity. Thus, the model is appropriate for subsequent assessment of discriminant validity and testing of the structural model ([table 2](#)).

[Table 3](#) presents the HTMT criterion, which is commonly used to determine whether the constructs in a measurement model are empirically distinct from one another. In general, HTMT values below 0.85 indicate that discriminant validity is established, while values below 0.90 are also considered acceptable in many social science studies. As shown in [table 3](#), all HTMT values are lower than the recommended threshold of 0.85. The HTMT values range from 0.039 to 0.607. The highest HTMT value is observed between information technology application (IT) and financial reporting quality (FRQ), at 0.607. Therefore, the measurement model meets the requirements for discriminant validity and is suitable for subsequent structural model analysis.

Table 3. Heterotrait–Monotrait Ratio (HTMT)

Codes	AC	AISQ	FRQ	IC	IT	MS	RC
AC	-						
AISQ	0.114						
FRQ	0.139	0.560					
IC	0.047	0.104	0.040				
IT	0.072	0.505	0.607	0.054			
MS	0.232	0.237	0.159	0.153	0.182		
RC	0.062	0.113	0.078	0.090	0.039	0.109	-

[Table 4](#) presents the findings, indicating that all seven hypotheses are supported, as all path coefficients are positive and statistically significant at the 5% significance level. In addition, all confidence intervals are entirely positive and do not include zero, further confirming the statistical significance of the hypothesized relationships. First, accounting staff competence positively affects accounting information system quality (AC → AISQ), with a path coefficient of 0.135 and a p-value of 0.003. The confidence interval ranges from 0.085 to 0.194. Therefore, H1 is supported. This result indicates that competent accounting staff contribute to improving the quality of accounting information systems in commercial banks. The internal control system positively affects the quality of the accounting information system (IC → AISQ), with a coefficient of 0.150 and a p-value of 0.000. The confidence interval ranges from 0.102 to 0.210. Thus, H2 is supported. This finding suggests that effective internal control mechanisms enhance the reliability and effectiveness of accounting information systems.

Table 4. Structural model results and hypothesis testing

Hypothesis	Relationships	Original sample	Standard deviation	P values	CI 2.5%	CI 97.5%	Supported hypothesis
H1	AC → AISQ	0.135	0.045	0.003	0.085	0.194	Yes
H2	IC → AISQ	0.150	0.035	0.000	0.102	0.210	Yes
H3	RC → AISQ	0.100	0.029	0.001	0.058	0.154	Yes
H4	MS → AISQ	0.171	0.034	0.000	0.110	0.229	Yes
H5	IT → AISQ	0.421	0.037	0.000	0.355	0.483	Yes
H6	AISQ → FRQ	0.314	0.039	0.000	0.245	0.381	Yes
H7	IT → FRQ	0.424	0.043	0.000	0.349	0.497	Yes

In addition, regulatory compliance positively affects accounting information system quality (RC → AISQ), with a coefficient of 0.100 and a p-value of 0.001. The confidence interval ranges from 0.058 to 0.154, supporting H3. This

result implies that compliance with accounting standards, banking regulations, and reporting requirements improves the quality of accounting information systems. Moreover, top management support positively influences accounting information system quality (MS $\rightarrow$ AISQ), with a coefficient of 0.171 and a p-value of 0.000. The confidence interval ranges from 0.110 to 0.229. Therefore, H4 is supported. This indicates that managerial commitment and resource support are important for strengthening accounting information systems.

Besides, information technology application has the strongest positive effect on accounting information system quality (IT $\rightarrow$ AISQ), with a coefficient of 0.421 and a p-value of 0.000. The confidence interval ranges from 0.355 to 0.483. Thus, H5 is supported. This result shows that information technology is the most influential determinant of accounting information system quality among the five antecedent factors. The accounting information system quality has a positive effect on financial reporting quality (AISQ $\rightarrow$ FRQ), with a coefficient of 0.314 and a p-value of 0.000. The confidence interval ranges from 0.245 to 0.381. Therefore, H6 is supported. This finding confirms that a high-quality accounting information system improves the reliability, timeliness, and usefulness of financial reports. Finally, the application of information technology has a direct positive effect on financial reporting quality (IT $\rightarrow$ FRQ), with a coefficient of 0.424 and a p-value of 0.000. The confidence interval ranges from 0.349 to 0.497. Therefore, H7 is supported.

Additional mediation interpretation was conducted by calculating the standardized indirect pathways through accounting information system quality. The product-of-coefficients estimates are AC $\rightarrow$ AISQ $\rightarrow$ FRQ = 0.042, IC $\rightarrow$ AISQ $\rightarrow$ FRQ = 0.047, RC $\rightarrow$ AISQ $\rightarrow$ FRQ = 0.031, MS $\rightarrow$ AISQ $\rightarrow$ FRQ = 0.054, and IT $\rightarrow$ AISQ $\rightarrow$ FRQ = 0.132. These estimates show that accounting information system quality transmits the effects of human, organizational, regulatory, managerial, and technological factors to financial reporting quality, with the largest indirect pathway associated with information technology application. Because the data are cross-sectional, the mediation results should be interpreted as evidence of statistically consistent indirect pathways rather than definitive proof of causal mediation.

Figure 2 illustrates the results of structural model testing for the critical factors influencing financial reporting quality. The model explains 27.2% of the variance in accounting information system quality (AISQ) and 39.9% of the variance in financial reporting quality (FRQ). These R-square values indicate that the proposed model has an acceptable explanatory power in examining the determinants of AISQ and FRQ in Vietnamese commercial banks.

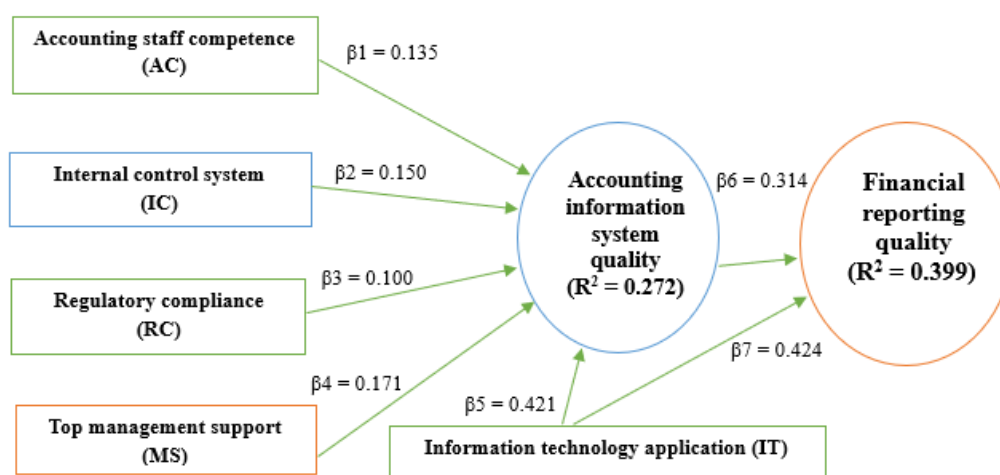


Figure 2. Testing critical factors influencing financial reporting quality

The R-square values should be interpreted cautiously. An R-square of 27.2% for AISQ and 39.9% for FRQ indicates moderate explanatory power for cross-sectional behavioral research, but it also shows that a substantial proportion of variance remains unexplained. This is consistent with the possibility that additional banking-specific variables, such as cybersecurity capability, data governance, audit quality, bank size, ownership structure, digital maturity, and core banking maturity, may further explain accounting information system quality and financial reporting quality. Therefore, the model is useful for identifying significant relationships but should not be interpreted as a complete explanation of financial reporting quality in Vietnamese commercial banks.

The results show that all five antecedent factors positively and significantly affect AISQ. Specifically, information technology application (IT) has the strongest effect on AISQ, with a path coefficient of 0.421 and a p-value of 0.000. This is followed by top management support (MS), with $\beta = 0.171$ and $p = 0.000$; internal control system (IC), with $\beta = 0.150$ and $p = 0.000$; accounting staff competence (AC), with $\beta = 0.135$ and $p = 0.003$; and regulatory compliance (RC), with $\beta = 0.100$ and $p = 0.001$. These findings confirm that technological, managerial, control, human, and regulatory factors play important roles in enhancing the quality of accounting information systems.

In addition, AISQ has a positive and significant effect on FRQ, with a path coefficient of 0.314 and a p-value of 0.000. This result confirms that a high-quality accounting information system improves the reliability, timeliness, accuracy, and usefulness of financial reporting. The model also shows that IT has a direct positive effect on FRQ, with $\beta = 0.424$ and $p = 0.000$. This finding indicates that information technology applications not only improve FRQ indirectly through AISQ but also directly enhance financial reporting quality through automation, data integration, faster processing, and reduced reporting errors.

Overall, [figure 2](#) confirms that all proposed relationships are statistically significant. Among the factors examined, information technology application has the largest observed standardized association with both accounting information system quality and financial reporting quality. This finding highlights the strategic relevance of digital technology and accounting information systems in Vietnamese commercial banks, but it should not be interpreted as definitive evidence of causal dominance because coefficient-comparison and endogeneity tests were not conducted.

4.3. Discussion of Findings

The findings of this study provide empirical evidence on the critical factors influencing financial reporting quality in Vietnamese commercial banks, with accounting information system quality serving as a mediating mechanism. Overall, all seven hypotheses are supported, confirming that accounting staff competence, internal control system, regulatory compliance, top management support, and information technology application positively affect accounting information system quality. In turn, the quality of accounting information systems positively influences financial reporting quality. In addition, information technology applications have a direct positive effect on financial reporting quality.

In the Vietnamese banking context, these results are plausible because commercial banks operate under strong supervisory requirements while also facing rapid digital transformation, increasing electronic transactions, and greater demand for timely regulatory reports. However, the findings should be interpreted with caution. The study identifies statistically significant associations rather than definitive causal effects. In addition, although information technology application has the largest standardized coefficient, the study does not conduct formal statistical tests comparing the differences among coefficients. Therefore, IT should be described as the strongest observed standardized association in this model, not as a conclusively superior determinant in all banking contexts.

(1) The positive effect of accounting staff competence on accounting information system quality indicates that human capability remains an important determinant of system effectiveness [15], [42]. Although banking operations are increasingly digitalized, accounting staff are still responsible for ensuring the accuracy of data entry, classification, verification, and interpretation. Competent accounting personnel can use accounting information systems more effectively, detect errors, comply with reporting procedures, and improve the reliability of accounting data. This result supports the argument that technological systems require qualified users to generate high-quality accounting information.

(2) The internal control system is found to have a positive effect on accounting information system quality. This finding suggests that control procedures, authorization mechanisms, monitoring activities, and error prevention practices contribute to the reliability and integrity of accounting information systems [19], [43]. In the banking sector, where transaction volumes are high and operational risks are significant, internal control helps ensure that accounting data are complete, accurate, and properly processed. Therefore, strong internal control mechanisms are essential to improving the quality of accounting information systems.

(3) Regulatory compliance positively affects accounting information system quality. This result reflects the importance of accounting standards, banking regulations, disclosure requirements, and supervisory rules in shaping accounting

practices [25], [44]. Commercial banks are subject to strict regulatory requirements, and compliance pressures encourage them to standardize accounting processes, maintain proper documentation, and improve reporting discipline. Thus, regulatory compliance supports the development of more reliable and consistent accounting information systems.

(4) Top management support has a positive influence on accounting information system quality. This finding confirms that managerial commitment is necessary for system improvement [26], [44]. Top management plays an important role in providing financial resources, investing in technology, supporting employee training, and promoting a culture of compliance and data quality. Without strong management support, accounting information systems may lack adequate resources, integration, and continuous improvement. Therefore, senior management involvement is a key condition for enhancing the quality of accounting information systems.

(5) Information technology application has the strongest effect on accounting information system quality among the five antecedent factors. This result is consistent with the digital nature of banking operations, in which accounting data are generated and processed by core banking systems, digital platforms, and automated reporting tools [29], [45]. Information technology improves the quality of accounting information systems by increasing processing speed, data accuracy, system integration, security, and accessibility. The strong effect of IT highlights the central role of digital transformation in modern banking accounting systems.

(6) Accounting information system quality positively affects financial reporting quality. This finding confirms that high-quality financial reporting depends heavily on the quality of accounting information systems [31], [45]. When accounting systems are reliable, accurate, timely, and integrated, they provide better information for preparing financial statements. As a result, financial reports become more relevant, faithfully represented, timely, and useful for decision-making. This finding supports the mediating role of accounting information system quality in linking organizational, regulatory, human, and technological factors to financial reporting quality.

(7) Information technology application also has a direct positive effect on financial reporting quality [34], [45]. This result indicates that IT improves financial reporting not only through accounting information system quality but also through direct mechanisms, including automation, real-time data processing, system-based controls, data integration, and faster report generation. In commercial banks, advanced information technology can reduce manual errors, shorten reporting time, improve transparency, and enhance the consistency of financial information across branches and departments.

Overall, the findings emphasize that improving financial reporting quality in Vietnamese commercial banks requires an integrated approach. Banks should not focus solely on accounting standards or individual staff competence; they should also strengthen internal controls, ensure regulatory compliance, enhance management support, and invest in information technology. The application of information technology is especially important in this model because it has both direct and indirect observed associations with financial reporting quality. However, technology investments should be coordinated with governance, control, compliance, staff training, and cybersecurity safeguards.

5. Conclusion and Recommendations

5.1. Conclusion

This study examined the critical factors influencing financial reporting quality in Vietnamese commercial banks, with accounting information system quality serving as a mediating variable. The proposed research model included five antecedent factors: accounting staff competence, internal control system, regulatory compliance, top management support, and information technology application. Accounting information system quality was used as the mediating variable, while financial reporting quality was the dependent variable. In addition, information technology applications were examined as a direct determinant of financial reporting quality. Using data collected from 635 valid responses from accountants, controllers, internal auditors, financial officers, and IT staff involved in accounting systems at commercial banks in Vietnam, the study applied structural equation modeling to test the proposed hypotheses. The measurement model results confirmed satisfactory reliability, convergent validity, discriminant validity, and absence of serious multicollinearity. Therefore, the dataset was appropriate for assessing the structural model. The empirical results showed that all seven hypotheses were supported. Accounting staff competence, internal control system, regulatory compliance, top management support, and information technology application all had positive and

significant effects on the quality of the accounting information system. Among these factors, the application of information technology had the strongest influence on accounting information system quality. The results also confirmed that the quality of accounting information systems positively affected financial reporting quality. Furthermore, information technology applications had a direct positive effect on financial reporting quality. Overall, the findings highlight the central role of accounting information system quality in improving financial reporting quality in Vietnamese commercial banks. The study also emphasizes the strategic importance of information technology application, which enhances financial reporting quality both directly and indirectly through accounting information system quality. These findings contribute to the literature on accounting information systems and financial reporting by providing empirical evidence from the Vietnamese banking sector. The conclusion is intentionally stated in terms of observed standardized associations rather than absolute causal dominance. Because the study is cross-sectional and does not include pairwise coefficient-comparison tests or endogeneity correction, the results should be interpreted as evidence of theoretically grounded relationships that require further confirmation through longitudinal and multi-source research designs.

5.2. Policy Recommendations

Based on the standardized beta coefficients, the policy recommendations are prioritized by the strength of the observed associations in the structural model. However, implementation should also consider feasibility, cost, regulatory constraints, bank size, ownership structure, legacy core-banking systems, cybersecurity capacity, and staff readiness. Therefore, the recommendations below should be interpreted as prioritized directions rather than a one-size-fits-all implementation plan.

(1) Information technology application has the largest observed standardized association with both financial reporting quality ($\beta = 0.424$) and accounting information system quality ($\beta = 0.421$). Commercial banks should therefore treat IT investment as a strategic priority, but implementation should be phased according to budget capacity, legacy-system constraints, cybersecurity readiness, and regulatory approval requirements. Priority actions include upgrading core banking interfaces, integrating accounting information systems with risk management and regulatory reporting platforms, automating accounting data validation, strengthening access controls, and improving data security. Smaller banks may begin with modular upgrades and staff training, while larger banks can pursue broader system integration and real-time reporting capabilities.

(2) Accounting information system quality has a significant positive effect on financial reporting quality ($\beta = 0.314$). Therefore, banks should improve the reliability, timeliness, accuracy, integration, and usefulness of accounting information systems. This can be achieved by standardizing accounting data structures, enhancing system interoperability, applying real-time data validation, and regularly evaluating system performance. A high-quality accounting information system should be considered a core foundation for producing reliable financial reports.

(3) Top management support has the second strongest effect on accounting information system quality among the antecedent factors ($\beta = 0.171$). Senior managers should actively support improvements to the accounting system by allocating sufficient financial resources, approving technology investments, encouraging staff training, and promoting a culture of transparency and compliance. Management commitment is essential for ensuring that accounting information systems are continuously upgraded and effectively used.

(4) The internal control system positively affects accounting information system quality ($\beta = 0.150$). Commercial banks should strengthen internal control procedures for accounting data entry, authorization, reconciliation, monitoring, and system access rights. Effective internal controls can help reduce errors, prevent fraud, enhance data integrity, and improve the reliability of accounting information systems.

(5) Accounting staff competence has a positive effect on accounting information system quality ($\beta = 0.135$). Banks should provide regular training programs for accounting staff, especially in areas such as financial reporting standards, digital accounting systems, data analytics, cybersecurity awareness, and regulatory reporting. Improving staff competence will help employees use accounting information systems more effectively and reduce operational errors.

(6) Regulatory compliance has a positive effect on accounting information system quality ($\beta = 0.100$). Although this factor has the smallest beta coefficient, it remains statistically significant. Therefore, banks should maintain strict

compliance with accounting standards, banking regulations, disclosure requirements, and supervisory guidelines. Compliance departments should coordinate closely with accounting, internal control, and IT departments to ensure that accounting information systems meet regulatory requirements and support transparent financial reporting.

Overall, the results suggest that commercial banks should adopt an integrated improvement strategy, with priority given to the application of information technology and the quality of accounting information systems. Strengthening technology infrastructure, improving system quality, enhancing management support, reinforcing internal control, developing accounting staff competence, and ensuring regulatory compliance will collectively contribute to higher financial reporting quality in Vietnamese commercial banks.

Limitations and future research: Although this study provides important empirical evidence on the factors influencing financial reporting quality in Vietnamese commercial banks, several limitations warrant acknowledgment. First, the study focuses only on commercial banks in Vietnam. Therefore, the findings may not be fully generalizable to other financial institutions such as insurance companies, securities firms, fintech companies, or non-financial enterprises. Future studies could extend the research context to other sectors or conduct comparative studies between banks and other financial institutions. Second, the study uses cross-sectional survey data collected at a single point in time. This approach is appropriate for testing the proposed research model, but it limits the ability to capture changes in accounting information system quality and financial reporting quality over time. Third, the study relies on respondents' perceptions, which may be affected by common method bias despite procedural controls and VIF diagnostics. Future research should combine survey data with secondary data, audit reports, financial statement indicators, regulatory assessment results, or system-performance logs to provide more objective evidence. Fourth, this study examines five antecedent factors, but other variables may also influence financial reporting quality, including organizational culture, audit quality, cybersecurity capability, data governance, artificial intelligence adoption, risk management systems, corporate governance, bank size, ownership structure, and core banking maturity. Fifth, the model may be affected by endogeneity. Information technology application, top management support, accounting information system quality, and financial reporting quality may mutually influence one another, and omitted variables may affect several constructs simultaneously. Future studies should consider longitudinal designs, panel data, instrumental variables, or robustness tests to address potential reverse causality and omitted-variable bias. Finally, future research could examine moderating effects of bank size, ownership structure, digital maturity, regulatory pressure, and organizational culture to provide a deeper understanding of how commercial banks can improve financial reporting quality in the context of digital transformation.

6. Declarations

6.1. Author Contributions

Conceptualization: T.N.T. and H.N.A.; Methodology: T.N.T. and H.N.A.; Software: T.N.T.; Validation: T.N.T. and H.N.A.; Formal Analysis: T.N.T. and H.N.A.; Investigation: T.N.T.; Data Curation: T.N.T.; Writing Original Draft Preparation: T.N.T. and H.N.A.; Writing Review and Editing: T.N.T. and H.N.A.; Visualization: T.N.T.; Supervision: H.N.A. All authors have read and agreed to the published version of the manuscript.

6.2. Data Availability Statement

The data presented in this study are available on request from the corresponding author.

6.3. Funding

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6.4. Institutional Review Board Statement

Not applicable.

6.5. Informed Consent Statement

Not applicable.

6.6. Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have influenced the work reported in this paper.

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