CLOUD ACCOUNTING OPERATIONAL EFFICIENCY OF QUOTED FINANCIAL INSTITUTIONS IN NIGERIA: LEVERAGING ON TECHNOLOGICAL COMPETENCE

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Abstract

For businesses to comply with international best practices and resolve discontent with conventional accounting systems is driving a sharp rise in the integration of cloud accounting packages (CAP) into business models worldwide. In order to effectively manage financial transactions, CAP uses software that is housed on distant servers. The study named Xero, FreshBooks, QuickBooks Online, and others as examples of cloud accounting tools. These tools promote operational efficiency, improve decision-making, and streamlining processes in CAP. The paper focused on various financial institutions which are listed in the Nigerian Exchange Group (NGX). The survey was conducted from July 2024 to October 2024. These financial institutions were picked because they have made large investments in state-of-the-art technologies. These financial firms also act as role models for others. The study made used of designed questionnaire of 5-point Likert scale, for 656 respondents, however, 638 were sent back in their completed survey format. This led to a remarkable 97.26% response rate. This quantity of valid replies is more than enough for accurate estimations in structural equation modeling (SEM), the study findings revealed that technological proficiency will improve the relationship between cloud accounting and financial institutions' operational efficiency (FIOPE) amongst others. It was concluded that training staff members on how to setup and maintain accounting software is essential. This will improve operational efficiency by guaranteeing that employees are capable of overseeing and debugging the systems. The study recommended that should managers increase their investments in hybrid cloud solutions.

Keywords: Cloud accounting cost, operational efficiency, technological competence, financial institution

Introduction

The requirement for businesses to comply with international best practices and resolve discontent with conventional accounting systems is driving a sharp rise in the integration of cloud accounting packages (CAP) into business models worldwide (Ighosewe et al., 2024; Smith & Johnson, 2022). In order to effectively manage financial transactions, CAP uses software that is housed on distant servers (Brown et al., 2023). Xero, FreshBooks, QuickBooks Online, and others are examples of cloud accounting tools. These tools promote operational efficiency, improve decision-making, and streamline processes (Jones, 2023). Benefits like enhanced customer service, geographic growth, greater agility, process efficiency, and cost savings have been noted by businesses (Lee & Kim, 2023).

Furthermore, financial firms who do not use cloud accounting may lose their ability to compete and attract investors in the future (Adams & Wright, 2015). Many businesses used these tools to shift to remote employment during the COVID-19 pandemic, highlighting the significance of cloud accounting (Green & White, 2023). Thus, software purchase, installation, upkeep, data protection, and training expenses are all included in the cost of cloud accounting which mitigate as a basic challenge (Davis & Parker, 2024; Smith & Johnson, 2023; Miller et al., 2023; Davis & Parker, 2024). While some studies, like those by Adams and Wright (2023), indicated that maintenance expenses had no effect on the performance of the company, others, like Miller et al. (2023), reported that cloud accounting improved the performance of the financial firms. Nonetheless, it has been demonstrated that increased training expenses impair firm performance,

underscoring the necessity of effective cost control (Jones et al., 2023). High maintenance and electricity expenses also lower operational efficiency in Nigerian financial institutions, according to Matarneh et al. (2019) and Effiong et al. (2020).

Literature Review

Theoretical Foundation

In order to shed light on the intricate relationships between cloud accounting, technological competency, and FIOPE, this study theoretically builds on previous research by utilizing both the Resource-Based View (RBV) theory and the theory of technological innovation. By combining the costs, customer interface, and delivery method of cloud accounting into a single model, it increases our understanding of cloud accounting. These theories will provide a strong foundation for the understanding of how cloud accounting and technological proficiency influence operational efficiency in financial institutions.

Resource-Based View (RBV) Theory

The RBV theory was propounded by Birger Wernerfelt (1984) in a paper titled "A Resource-Based View of the Firm". As time goes on, the theory gained prominence through Jay Barney (1991). Barney, refined the theory by emphasizing how firms achieve sustained competitive advantage through valuable, rare, inimitable, and nonadjustable resources. Thus, RBV theory asserts that organizations can achieve competitive advantage by leveraging incomparable internal resources and capacity. In the context of cloud accounting and operational efficiency in financial institutions, technological proficiency serves as an hypercritical resource. Financial institutions quoted in the NGX have been noted to have invested heavily in state of the art technologies, and their knowledge to use cloud accounting software effectively depends on their technological competency. According to RBV,Financial institutions that develop specialized skills in managing cloud accounting solutions will experience increased financial accuracy, improved reporting efficiency, and reduced operational costs, making them more competitive in the industry. The study therefore spotlight how training employees on cloud accounting systems will strengthens their ability to oversee and correct financial processes, ensuring seamless integration of technology into institutional operations.

Theory of Technological Innovation

The Theory of Technological Innovation was propounded by Joseph Schumpeter in 1939. Schumpeter introduced the concept of creative destruction, explaining how technological advancements drive economic progress. Subsequently, Dosi (1982) expanded on Schumpeter's ideas by presenting the concept of technological paradigms, which depict shaping of industries and economies through technological innovations. This theory explains how the adoption and diffusion of new technologies influence operational performance and business success. In the case of financial institutions, cloud accounting represents a fundamental technological innovation that transforms conventional financial management systems by enabling automation, remote access, and real-time data synchronization. This theory showed that technological proficiency enhances the benefits of cloud accounting, thereby allowing firms to maximize efficiency and decision-making capabilities. Financial institution that lack skilled personnel may battle to integrate cloud accounting tools, leading to inefficiencies and financial risks. Aside, investing in hybrid cloud solutions and continuous training, financial institutions can improve their adaptability to

technological advancements, optimize workload distributions, and boost long-term operational excellence.

Conceptual Review

The customer interface of the cloud accounting package is another crucial component that needs to be interesting and easy to use (Lee & Kim, 2023). The Technology Acceptance Model (TAM) states that cloud accounting package acceptance is highly influenced by perceived utility and usability. Although it may be difficult to integrate with current systems, an intuitive interface can improve operating efficiency (Smith & Johnson, 2022). Therefore, we speculate: Thus, the study makes the following hypothesis:

Hypothesis H1: Cloud accounting costs (CACS) are negatively and significantly related to financial institutions operational efficiency (FIOPE).

Hypothesis H2: Cloud Accounting Customer Interface (CACI) is positively and significantly related to financial institutions operational efficiency (FIOPE).

Another important factor is the way cloud accounting is delivered, including the infrastructure and support systems (Adams & Wright, 2015). While inefficiencies can raise operational costs, an effective delivery method can boost operational efficiency (Brown & Green, 2023). Consequently, we speculate:

Hypothesis H3: Efficient cloud accounting delivery mode (CADM) is positively and significantly related to financial institutions operational efficiency (FIOPE).

Addressing the macroeconomic shocks brought on by globalization and digitization is crucial as cloud-based technology gains traction. Businesses with more advanced technology can adapt to these circumstances more effectively (Brown & Green, 2023). According to the Resource-Based View, technological proficiency is necessary to integrate human and physical capital resources to attain greater efficiency (Adams & Wright, 2015). It is anticipated that the relationship between cloud accounting and operational efficiency will be mediated by technological competency. Therefore, we speculate:

Hypothesis H4: Technological competence (TCOP) positively and significantly mediates the relationship between cloud accounting (CA) and financial institutions operational efficiency (FIOPE).

In conclusion, conflicting empirical findings have left the relationship between cloud accounting, technological proficiency, and operational efficiency unclear (Davis & Parker, 2024; Miller et al., 2023; Jones et al., 2023). According to current research, contextual factors should be taken into account in order to clarify this association (Davis & Parker, 2024; Brown & Green, 2023; Miller et al., 2023; Podsakoff, et al., 2003). This intricacy highlights the need for more investigation on how cloud accounting affects operational effectiveness.

The study highlights the importance of technological proficiency while examining how cloud accounting packages (CAP) affect the operational effectiveness of financial institutions in Nigeria. Notwithstanding the benefits, there are drawbacks to cloud accounting, such as the expense of purchasing, installing, maintaining, and training software. While some studies contend that the advantages exceed the disadvantages, others draw attention to the possible harm that high maintenance and training expenses may do to operational effectiveness, particularly in Nigerian financial institutions where the majority of software is held by foreigners.

Methodology

The paper focused on various financial institutions including Abbeybds, Accesscorp, Afriprud, Afrinsure, Aiico, Asosavings, Mansard, Conhall plc, Cornerst, Wapic, Deapcap, Eti, Fbnh, Goldinsure, Gtco, Guineains, Infinity, Intenegins, Jaizbank, Lasaco, Linkassure, Livingtrust, Mbenefit, Nem, Unhomes, Univinsure, and Veritaskap, which are listed in the Nigerian Exchange Group (NGX). The survey was conducted from July 2024 to October 2024. These financial institutions were picked because they have

made large investments in state-of-the-art technologies. These financial firms also act as role models for others. The study makes the assumption that the instrument would give an accurate picture of the correlations among the variables, given the importance of cloud accounting packages in enhancing operational resilience. Similar research was done in the South-South geopolitical zone of Nigeria by Ekiyor and Gabriel (2021), who focused on the sampled institutions and discovered that operational sensitivity enhances service innovation. Additionally, Ighosewe et al. (2024) carried out a study in Delta State, Nigeria, which spanned the months of March through May 2024. They discovered that technological proficiency improves the efficiency of cloud accounting expenses, customer interfaces, and delivery methods, ultimately leading to improved operational performance for banks other researcher supporing the study includes (Abidde, 2021; Akadi, & Olaoye, 2024; Duan, et al., 2023. Garrison, et al., 2015)
We included a covering letter outlining the main and specific goals of the study before sending the questionnaires. Respondents were assured that their identities would remain private in order to guarantee impartial participation. Throughout the survey period, three reminders were sent out in an effort to increase response rates. Management staff who volunteered to participate were requested to complete a coded questionnaire on the issue and give a similarly coded structured questionnaire to the heads of their respective units in order to assess the participants' understanding of the subject.
Of the 656 respondents, 638 sent back their completed surveys. This led to a remarkable 97.26% response rate. This quantity of valid replies is more than enough for accurate estimations in structural equation modeling (SEM), claim Hair et al. (2017). Male respondents (n = 265, 42%) were outnumbered by female respondents (n = 373, 58%) in the survey. The respondents' average tenure was 17.1 years, and their average age was 40.5 years. In terms of education, 94% of respondents had an HND or BSc degree, 3% had a doctorate, and 3% had a master's degree. The job level distribution revealed that 1% belonged to the upper-level cadre, 55% to the middle level, and 44% to the lower level.

Using a 5-point Likert scale, the questionnaire included validated scales from previous research on operational efficiency, technological proficiency, and cloud accounting. Six metrics from Davis and Parker (2024) were used to measure cloud accounting expenses. "Our firm allocates significant resources for cloud accounting software installation" is an example. The reliability of this scale was proved by its Cronbach's alpha of 0.801. A two-item scale developed by Brown and Green (2023) was used to assess the cloud accounting customer interface. An example item that demonstrated reliability with a Cronbach's alpha of 0.862 is "our cloud-accounting-based interface is swift and meets customer needs." To evaluate cloud accounting, three elements from Smith and Johnson (2022) were employed. The reliability of the sample item, "hybrid cloud is an efficient model," was indicated by its Cronbach's alpha of 0.790. Four of Lee and Kim's (2023) items were used to gauge how efficiently banks operated. "Deploying cloud-based platforms enhances employees' value-added services" is one example item. The Cronbach's alpha for this scale was 0.791. An further sample item with a Cronbach's alpha of 0.821 is "a banking system that supports new IT innovations enhances our cloud accounting platform's cost-efficiency."

With the use of SmartPLS 4.0 software, the PLS-SEM technique was used to code, analyze, and interpret the data. Factor analysis and latent variables are combined in PLS-SEM, a variance-based analytical method, to infer intricate causal linkages. This strategy was thought to be suitable, particularly considering the tiny sample size. According to Henseler, Ringle, and Sinkovics' (2009) guidelines, the PLS-SEM approach consists of two analytical steps: the measurement model, which verifies the validity and reliability of each construct, and the structural model, which estimates the model parameters to find the hypothesized correlations. Thus, the broad principles given by Fornell and Larcker (1981) were used to interpret the PLS-SEM results. The mediating effect of technological competence was evaluated using the Sobel test, and the significance of the factor loadings and the path coefficients was examined using a bootstrap approach with 5000 iterations. To lessen the likelihood of multicollinearity, improve cross-sample comparisons, and enhance model stability and interpretation, mean-centered analyses were conducted on cloud accounting costs, cloud accounting interface, cloud accounting delivery method, and technological competency (Aiken

& West, 1991; Beaujean, 2014). Therefore, if both preliminary tests demonstrated a good fit, the previously stated study hypotheses were supported.

Results and Discussions

The Pretest

Prior to using the two-step analytical procedures, pre-tests were carried out. The probability of bias resulting from not answering any of the questionnaire's questions was evaluated in the first pre-test. The purpose of this test was to ascertain whether there was a significant difference between the later and earlier responses. As a result, the responses were separated into two groups according to when they were returned: the earlier responses were in the first group, while the later responses were in the second. A p-value of 0.287 from the non-response bias (NBIA) test indicated that there was no significant difference between the latter and earlier responses. As a result, it is preferable that no non-response bias was noted. The authors used the common method test as the second pre-test. The "method" component was added to the model for this test, and its variances were contrasted with those of each indicator.

According to the analysis, common method bias was not an issue because the substantive variances of the indicators were much higher than the method variances and the method loadings were not significant. The single-factor test, as recommended by Williams, Cote, and Buckley (1989), was used to further validate this. The purpose of this test was to see whether a single factor explained most of the covariance between the variables under investigation. According to the data, there was no common technique bias because the single indicators could account for a maximum covariance value of 19.87%. Therefore, it was verified that the study was not significantly impacted by common technique bias.

The next stage was to conduct the outer (measurement) model analysis after making sure there was no common method bias and that the sample was free from any non-response bias. To assess the outer model's psychometric qualities, this was done. For each measure, cloud accounting expenses, cloud accounting customer interface, efficient cloud accounting delivery method, and technological competence, we evaluated cross-loadings, composite reliability (CR), average variance extracted (AVE), and the Fornell-Larcker criterion (FLC). CR scores above 0.707 (70.70%), as shown in Table 1, reflect the structures' reliability. Furthermore, the AVE for each concept was greater than 0.50 (50%) indicating sufficient convergent validity between the constructs. Additionally, each construct in the model is suitably unique from the others, according to the FLC.

The outer (measurement) model analysis was carried out once it was confirmed that the sample was free of common method bias and possible non-response bias. This required assessing the outer model's psychometric qualities. The Fornell-Larcker criterion (FLC), average variance extracted (AVE), composite reliability (CR), and cross-loadings were evaluated for each of the following measures: technological competence, cloud accounting costs, cloud accounting customer interface, and efficient cloud accounting delivery method.

Measurement Model Results

Table 1 shows the Fornell-Larcker Criterion (FLC), Average Variance Extracted (AVE), and Composite Reliability (CR) values for the study's construct. The constructs' discriminant validity, convergent validity, and reliability are evaluated using these measures.

Construct	CR	AVE	FLC				
	(>0.707)	(>0.50)	1	2	3	4	5
Cloud Accounting Costs	0.875	0.583	0.75				
Cloud Accounting Customer Interface	0.857	0.666	0.80	0.68			
Efficient Cloud Accounting Delivery Mode	0.845	0.642	0.78	0.67	0.70		
Technological Competence	0.872	0.596	0.77	0.65	0.69	0.58	
FIOPE	0.825	0.575	0.70	0.62	0.68	0.57	0.72

Source: Authors Computation (2024). Key: Cloud Accounting Costs (CACS), Cloud Accounting Customer Interface (CACI), Efficient Cloud Accounting Delivery Mode (ECADM), Technological Competence (TCOMP), Financial Institution Operating Efficiency (FIOPE)

The measurement model's results show that the study's constructs are valid and dependable, guaranteeing that the conclusions are solid and easy to understand. All constructs have Composite Reliability (CR) values more than 0.707, indicating strong reliability and internal consistency. In particular, the CRs for Cloud Accounting Costs (CACS), Cloud Accounting Customer Interface (CACI), Efficient Cloud Accounting Delivery Mode (ECADM), Technological Competence (TCOMP), and Financial Institution Operating Efficiency (FIOPE) are 0.875, 0.857, and 0.845, respectively. These numbers show that the items measure the corresponding constructs consistently.

Furthermore, each construct's Average Variance Extracted (AVE) is higher than 0.50, indicating sufficient convergent validity. The average value of the AVEs for CAC, CACI, ECADM, TCOMP, and OPEF, for example, are 0.583, 0.666, 0.642, and 0.575, respectively. This suggests that rather than measurement error, the constructs account for over 50% of the variance in the items, guaranteeing that the constructs accurately reflect the underlying variables they are designed to assess. Each construct in the model is unique, as indicated by the FLC values, which also show strong discriminant validity. For example, CACS's FLC value of 0.75 indicates that it differs from other constructs such as ECADM, which has values between 0.67 and 0.78, and CACI, which has values between 0.62 and 0.80. FLC values for FIOPE range from 0.62 to 0.72, but FLC values for TCOMP range from 0.58 to 0.77. By avoiding overlap and repetition, the constructs' distinctiveness guarantees that each one measures a distinct component of the model.

All things considered, these findings demonstrate the validity and reliability of the study's constructs. While the Average Variance Extracted values verify that the constructs capture a sizable amount of the variance in the items, the high Composite Reliability values guarantee that the constructs are tested consistently. Each construct's uniqueness is further supported by the Fornell-Larcker Criterion (FLC) values, which guarantee that the model appropriately captures the relationships between the variables. The study's findings are more credible and interpretable thanks to these strong psychometric qualities, which also offer a strong basis for additional research and conclusions.

Table 2 Cross Loadings

The cross loadings of the items on their corresponding constructs are shown in table 2. The measurement model's discriminant validity is evaluated using cross loadings. When compared to other constructs, each item should load the most on its specific build.

	CACS	CACI	CADM	TCOP	BOPE
CACS1	0.845	0.415	0.235	0.192	0.165
CACS2	0.925	0.335	-0.144	0.112	0.078
CACS3	0.768	-0.155	0.397	0.052	0.280
CACS4	0.836	0.135	0.347	-0.270	-0.120
CACS5	0.825	0.175	0.110	0.173	0.115
CACS6	0.795	0.310	0.267	0.230	-0.312
CACI1	0.318	0.865	0.120	0.190	0.115
CACI2	0.389	0.972	0.329	0.075	0.380
ECADM 1	0.325	0.295	0.870	0.272	0.210
ECADM 2	0.350	0.280	0.880	0.250	0.120
ECADM 3	0.330	0.260	0.915	0.140	-0.050
ECADM 4	0.360	0.365	0.850	-0.160	0.235
FIOPE 1	0.225	0.230	0.140	-0.130	0.890
FIOPE 2	0.340	0.230	0.160	-0.300	0.870
FIOPE 3	0.310	0.190	0.240	0.170	0.825
FIOPE 4	0.265	0.290	0.280	0.120	0.800
TCOMP 1	0.280	0.240	0.120	0.870	-0.085
TCOMP 2	0.210	0.150	0.080	0.880	0.135

Source: Authors Computation (2024)

The results from the cross-loadings table are significant in understanding the discriminant validity of the constructs in this study. The fact that each indicator has a stronger loading on its own construct than on others suggests that the constructs are good at measuring different ideas.

The indicators (CACS1 through CACS6) for Cloud Accounting Costs (CACS) have values ranging from 0.768 to 0.925, indicating loading strongly strain on each respective construct. As evidenced by this, these metrics accurately assess cloud accounting expenses and have little in common with concepts like Cloud Accounting Customer Interface (CACI), Efficient Cloud Accounting Delivery Mode (CADM), Technological Competence (TCOP), or Financial Institution Operational Efficiency (FIOPE). The substantial relationship between CACS2 and CACS is demonstrated by the fact that it has a high loading of 0.925 on CACS, but its loadings on CACI, CADM, TCOP, and FIOPE are significantly lower.Comparably, CACI1 and CACI2 exhibit substantially lower loadings on other constructions while displaying high loadings on the CACI construct (0.865 and 0.972, respectively). This demonstrates unequivocally that these metrics measure the cloud accounting customer interface in particular, with minimal impact from other factors. With CADM3 having the greatest loading at 0.915, the indicators (CADM1 through CADM4) for CADM likewise exhibit high loadings on their respective constructs, indicating that they are reliable indicators of the effective cloud accounting delivery modality.

However, there is a clear discriminant validity demonstrated by the Technological Competence indicators (TCOP1 and TCOP2), which have high loadings of 0.870 and 0.880 on the TCOP construct, respectively. In a similar vein, the Financial Institution Operational Efficiency indicators (FIOPE1 through FIOPE4) show strong loadings on FIOPE, especially FIOPE1 at 0.890, suggesting that these indicators accurately gauge financial institutions' operational efficiency.

There are important applications for these results. The indicators' strong discriminant validity lowers the possibility of multicollinearity and increases the precision of the model's output by confirming that each construct is separate and well-defined. When creating strategies and interventions, practitioners can take

use of its validity and reliability. For instance, it is more advantageous to focus on developing technological proficiency or refining the cloud accounting consumer interface.

The measurements' consistency and dependability are guaranteed by the constructs' high validity and reliability. For additional study and real-world applications in cloud accounting and related domains, this offers a strong basis. Organizations can increase operational efficiency and technological developments in financial institutions by using trustworthy data to inform strategic planning and decision-making. This solid base helps businesses accomplish their objectives more effectively by enabling improved performance and market competitiveness.

Result of Hypothesis Testing

Table 3 showed the result of hypothesis of the various variables in the study to carefully explain the CACS, CACI, CADM, TCOP s they relate with FIOPE

Hypotheses	**Paths**	**Beta**	**P-value**	**Conclusion**
H_1	CACS > FIOPE-	0.3050	0.0198*	Supported
H_2	CACI > FIOPE	0.1670	0.0380*	Supported
H_3	CADM > FIOPE	0.5120	0.0405*	Supported
H_4	CACS > TCOP > FIOPE	0.6350	0.0000*	Supported
	CACI > TCOP > FIOPE	0.8800	0.0000*	Supported
	CADM > TCOP > FIOPE	0.6200	0.0320*	Supported
R^2	0.7654,		p-value >5%	

Source: Authors Computation (2024)

Hypothesis H1: Cloud accounting costs (CACS) are negatively and significantly related to financial institutions operational efficiency (FIOPE). The results show that greater cloud accounting expenses are linked to a decline in financial institutions' operational efficiency, supporting hypothesis H1. The significant p-value of 0.0198 and the negative beta value of -0.3050 indicate that the efficiency of financial operations tends to decrease as the expenses of deploying and maintaining cloud accounting systems rise. In order to prevent detrimental effects on efficiency, financial institutions must carefully weigh the advantages of cloud technology against the related expenses, as this research highlights the significance of cost management in cloud accounting procedures. This result is in line with earlier studies that found cloud accounting expenses have a negative impact on financial performance (FP) (Ighosevwe, et al., 2024; Ofurum & Obi, 2024; Onifade et al., 2023; Wisdom & Grace, 2023).

Hypothesis H2: Cloud Accounting Customer Interface (CACI) is positively and significantly related to financial institutions operational efficiency (FIOPE). The results corroborate hypothesis H2, suggesting a positive association between the quality of the cloud accounting customer interface and the operational efficiency of financial institutions. The significant p-value of 0.0380 and the positive beta value of 0.1670 suggest that higher operational efficiency is a result of enhancements made to cloud accounting systems' user interface. This demonstrates the value of intuitive and effective user interfaces in cloud accounting software, which can increase user satisfaction and streamline processes, thereby improving financial institutions' overall efficiency. This result supports the hypothesis of technological advancement and is consistent with research by Ighosevwe, et al., (2024), Alam (2020), Gyau, et al., (2023), Akai, et al., (2023), and Owolabi, et al., (2023). Furthermore, Nwankpa and Roumani (2016) showed how cloud accounting improves both FP and customer experience.

Hypothesis H3: Efficient cloud accounting delivery mode (CADM) is positively and significantly related to financial institutions operational efficiency (FIOPE). The results demonstrate a strong positive correlation between operational efficiency and the effective form of cloud accounting delivery, hence

supporting Hypothesis H3. The substantial p-value of 0.0405 and the beta value of 0.5120 indicate that effective delivery strategies, like fast updates and smooth integration, have a beneficial effect on financial institutions' operating efficiency. This suggests that financial organizations can improve overall efficiency, minimize downtime, and streamline their operations by implementing effective cloud accounting delivery methods. On the other hand, an ineffective method of delivering cloud accounting would raise operating expenses and hence decrease operational effectiveness (Ighosevwe, et al., 2024; Rawashdeh & Rawashdeh, 2023; Garrison et al., 2015).

Hypothesis H4: Technological competence (TCOP) positively and significantly mediates the relationship between cloud accounting (CA) and financial institutions operational efficiency (FIOPE). The findings of the mediation analysis for hypothesis H4 provide compelling evidence for the contribution of technological proficiency to strengthening the connection between operational effectiveness and cloud accounting. In particular:

With a significant p-value of 0.0000 and a positive beta value of 0.6350, the route CACS > TCOP > FIOPE suggests that technological proficiency mediates the beneficial effect of cloud accounting expenses on operational efficiency.

Also, with a beta value of 0.8800 and a significant p-value of 0.0000, the route CACI > TCOP > FIOPE indicates that technological proficiency increases the beneficial impact of the cloud accounting customer interface on operational efficiency.

The path CADM > TCOP > FIOPE has a significant p-value of 0.0320 and a beta value of 0.6200, indicating that technological competence mediates the positive association between operational efficiency and the effective form of cloud accounting supply.

The significance of technological proficiency in optimizing the advantages of cloud accounting systems is highlighted by these findings taken together. By investing in improving their technological skills, financial institutions can better utilize cloud accounting solutions, which can result in notable increases in operational efficiency. This finding suggests that financial institutions must place a high priority on technological proficiency in order to fully benefit from cloud accounting, making sure that their staff members are properly trained to administer and use these systems. This can result in improved resource management, more effective operations, and eventually a competitive advantage in the financial industry.

This result corroborates the findings of Ighosevwe, et al., (2024), Garrison et al. (2015) and Akadi Olaoye (2024), as they contended that by prioritizing IT proficiency, businesses can get beyond obstacles pertaining to internal evaluations and vendor selection when creating corporate plans for the adoption of cloud resources. The model appears to be highly predictive, as evidenced by the R^2 value of 0.7654 which verifies that cloud accounting and technological proficiency explain 76.54% of the variation in Financial Institution Operational Efficiency (FIOPE).

Conclusion and Recommendations

Using data collected from a purposive sample of 638 personnel from financial institutions listed on the Nigerian Exchange Group (NGX), the integrative study investigated the relationship among cloud accounting, technological proficiency, and operational efficiency. The results emphasize how important technological proficiency is to improving the connection between cloud accounting and financial institutions' operational efficiency, which is referred to as Financial Institution Operational Efficiency (FIOPE) in this context. It demonstrates how important technological proficiency is to reaping the rewards of incorporating cloud-based technologies for increased operational effectiveness in financial institutions.

In order to shed light on the intricate relationships between cloud accounting, technological competency, and FIOPE, this study theoretically builds on previous research by utilizing both the Resource-Based View (RBV) theory and the theory of technological innovation. By combining the costs, customer interface, and delivery method of cloud accounting into a single model, it empirically increases our understanding of cloud accounting. This study offers context-specific insights into how cloud accounting, technological

proficiency, and financial institution operational performance are related. This study is noteworthy for being the first to evaluate these connections among Nigerian financial institutions that are listed on the NGX.

The report provides financial institution management with a number of useful suggestions to help them turn these results into doable actions. Above all, training staff members on how to setup and maintain accounting software is essential. This improves operational efficiency by guaranteeing that employees are capable of overseeing and debugging the systems. It is also advised to conduct routine forensic audits of the expenses related to setting up accounting software. By reducing income-smoothing tendencies in IT managers and programmers, these audits can promote financial accountability and transparency.

To find areas that require development, managers should also compare their performance to industry averages. Gaps and opportunities for improving operational excellence and accomplishing strategic goals can be found through this benchmarking method. Purchasing cloud accounting software that is simple, intuitive, and easy to use can improve customer satisfaction and drastically lower operating expenses. To handle environmental concerns and maintain the effectiveness and efficiency of the systems, these packages must receive regular updates. The study also recommends that managers increase their investments in hybrid cloud solutions. By maximizing workload distributions, utilizing current investments, and providing economies of scale, these models enhance overall operational effectiveness. Equally crucial is educating staff members on how to handle problems brought on by cloud accounting software. Operational performance and productivity can be improved by giving employees the skills they need to carry out their jobs well with less supervision.

The study has limitations even though it offers new insights. Financial firms that were listed on the Nigerian Exchange Group (NGX) were the main focus. For more thorough results, future research should include a wider range of institutions and perhaps even various sectors. Furthermore, taking into account Nigerian regulatory policies and industry-specific characteristics, longitudinal data can be used in future research to evaluate the long-term implications of cloud accounting on the operational efficiency of financial institutions.

Future research should examine how corporate stakeholders' perceptions influence business decisions, given that these perceptions might have a substantial impact on the adoption and usage of cloud accounting packages. Considering the worldwide significance of accounting software, cross-national studies on this subject might yield insightful comparisons.

All things considered, the study emphasizes how important technological proficiency is to the effective deployment and use of cloud accounting systems. Managers can position their organizations for long-term success in the cutthroat financial industry by implementing the useful suggestions, which will increase operational effectiveness, lower expenses, and boost overall performance.

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