

Effect of Cloud Accounting on Financial Information Quality of Selected Firms in Nigeria

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Abstract:

Accounting techniques have evolved over the years due to the advancement in technology. New and smarter ways of accounting practices are discovered, of which one of the most recent discovery is the cloud accounting. This study examined the effect of cloud accounting on financial information quality of selected firms in Nigeria. Cross-sectional survey research design was employed for this study, targeted population of this study is heterogeneous as it covers professional accountants, auditors and information technology experts across various fields. This study therefore used the assumptions of Taro Yamane (1967) to adopt the population of 400 respondents for the purpose of this study. The study covers Lagos state metropolis because it's highly dominated with commercial activities and host the head office of most companies in Nigeria. Data was obtained from primary sources through the administration of a well-structured questionnaire to the respondents. The reliability and validity of the research instrument was tested using the Crombach's Alpha test and content validity test respectively. Data collected were analysed using descriptive and Ordinary Least Square (OLS) regression. The three hypotheses raised for the study were accepted with a high and positive relationship indicating that cloud accounting technique is able to positively and significantly influence data storage(? = 0.828, P = .001 < .05), data efficiency(? = 0.647, P = .000 < .05) and data mining(? = 0.809, P = .001 < .05). Findings of the study from the statistics revealed that cloud accounting techniques played a significant role in enhancing efficiency of financial information quality, the study recommended that firms should be encouraged to invest more in automated accounting and effectively train their accounts staff for better efficiency in financial and other accounting functional reporting.

KEYWORDS: Cloud Accounting, Data Storage, Data Efficiency, Data Mining, Financial information Quality.

JEL Classification Code: M41, 031, 033, 035.

Introduction:

In the commercial world of today, accounting procedures have advanced quickly. The development of cloud accounting and the expansion of technology have given the accounting system greater power than it previously had (Dianasmith, 2017). Globally, the requirement for providing high-quality financial information has attracted a lot of attention. The manner that business and accounting are conducted in various industries cannot be confined to a desktop computer or office server given the development of online business transactions. The world of business is being transformed by cloud accounting, which is redefining how accounting apps are used. Instead of storing data traditionally in the central processing unit of computers where it could be destroyed, the development of cloud accounting has made it possible for practically all data and full financial transactions to be stored from anywhere.

According to Ali and Thakur (2017), businesses may share financial data in a timely manner and

accountants could speak directly with clients, suppliers, and other parties without being constrained by time or geography. Through the cloud accounting service platform, managers inside the company may instantly query the financial business data of subsidiaries, benefiting the improvement of corporate management efficiency and financial monitoring efficiency. All of them will contribute to improving the financial information's reliability.

In Nigeria and other emerging and developed nations, studies have been submitted on the impact of cloud accounting on the quality of financial information. According to Al-zoubi (2017), the large company framework has made use of cloud accounting as a location for the completion of duties and communications between agents or clients. This result was corroborated by research done by Gupta and Gaur (2018), Tahmina (2017), Haslinda *et al.* (2017), Perri and Muça (2015), among others, that were identical to their own. Because of the infrastructure that is made available to users, Sekar and Maniatis (2011) demonstrate how cloud computing enables users to save operating costs and capital expenditures. Additionally, Ebenezer *et al.* (2014) demonstrate how cloud accounting can be successfully used for accounting needs.

The lack of security for financial data in the cloud, according to Rao *et al.* (2018), is one of the drawbacks of employing cloud accounting. Professional hackers are capable of infiltrating sensitive data stored in the cloud by businesses, modifying and corrupting such data. Although cloud accounting has several advantages for businesses, it appears that many accountants are unaware of these advantages and are not incorporating them into their everyday work.

In recent years, corporate businesses have embraced the new paradigm of cloud accounting to close the gap between it and traditional accounting systems. Businesses are generally influenced by the internet's immense potential, the digitization of business, the implications of data storage, and the increasing importance placed on data mining and data efficiency as they relate to this technology. Businesses that adopt this cutting-edge technology may benefit from easier accessibility, lower costs for computer components and labor, more accurate and precise reports, improved communication, and other things.

Cloud accounting has been the subject of a sizable body of literature, though it is primarily exploratory. In their review of the idea of cloud computing, Armbrust *et al.* (2009) noted that the development of the Cloud in more recent years has largely been made possible by the construction and operation of extremely large scale datacenters for commodity computers. A methodology for cloud service deployment was introduced according to Ruiz-Agundez *et al.* (2012). In an effort to identify the best procedures for implementing cloud computing within an organization, Kinkela (2012) examined the dangers of cloud computing.

Although many academics have demonstrated that this approach has successfully overcome the limitations of the conventional accounting system and openly highlighted its many advantages, its effect on corporate stakeholders has traditionally been overlooked. In order to adjust the information system's center of gravity to a new paradigm, data processing and storage in the cloud, it is now essential for management of enterprises to replace old financial accounting information systems in line with the demands of the 21st century new information technologies. Given the foregoing, the study's main purpose is to empirically explore the impact of cloud accounting on the quality of the financial information provided by a sample of Nigerian businesses. Data mining, data efficiency, and data storage are used as sub-components of this investigation.

The study's findings will contribute to the body of knowledge on cloud accounting in emerging and developing economies. It will also be beneficial for accountants to increase their understanding of these topics, and it will help cloud accounting developers create modifications that are pertinent to the needs of accountants. This paper's key thesis is that businesses must embrace this current technological trend in order to acquire the right advances that will help them improve the quality of their financial reports and further examine the elements that influence innovative choices.

In addition to the introduction, this study is divided into four other sections: the second section reviews relevant and existing literature; the third section discusses methods; the fourth section features data analysis and interpretation of results; and the fifth section, which is the concluding section, states conclusions and recommendations.

Literature Review and Hypotheses Development

- **Conceptual Review**
- **Cloud Accounting**

According to Mishra and Mohanty (2017), cloud accounting is online accounting that functions like a computer program on users' computers but provides services over the Internet and permits access from remote servers. Additionally, Christauskas and Miseviciene (2012) described a cloud-based accounting system as a way to manage business accounts entirely online and attained as a service, on-demand, acting similar to accounting software installed on users' computers, but performed on servers and accessible by users through their web browsers. Cloud Accounting, according to Rao *et al.* (2018), comprises using cloud-based software through any device with a web connection.

Cloud accounting entails using the internet to access accounting software and data. The software and data are stored on distant servers, frequently provided by a third party, and are accessed by end users using web browsers or mobile applications. Access to accounting software and data via the internet is known as cloud accounting. The data is kept on a remote server, and the program is offered by subscription. This is distinct from a conventional accounting system, which entails the acquisition of software and installation on a desktop or a local server. Instead of controlling access by the actual location of the data files, user login access to the cloud accounting applications and data is. This eliminates the need to physically move data from one computer site to another, making data sharing simpler.

Modern technology, specifically cloud-based technology, has made it possible to connect account specialists from all over the world in incredibly imaginative ways. The use of cloud accounting has been recognized as an efficient method of carrying out tasks (Dimitriu & Matei, 2014). Additionally, it has decreased the use of outdated internal IT infrastructure, which has reduced administrative setup and maintenance costs (Ebenezer *et al.*, 2014). According to Dimitriu & Matei (2015), accountants and individuals can access data from anywhere in the world as long as there is an internet connection by using cloud software. With the introduction of cloud accounting, issues with socialization, quick technological advancement, the growth of enormous statistics, and the widespread use of internet-based and global applications were all resolved along with the insignificant weaknesses and negative effects of manual information processing and storage.

The benefit of quick information exchange and faster decision-making would be provided to accountants by this mobility option. Furthermore, there is no need to invest in infrastructure or pay for its upkeep because financial data can be held at a significantly lower cost. Decision-making is facilitated throughout the entire business when financial information is sent with complete timeliness and speed via information exchange and receipt on the cloud. Due to the fact that all data is saved and transactions are carried out in the cloud in real-time, businesses can continue to operate with just a laptop and a modem or a smartphone.

Accounting professionals would gain from this mobility potential by being able to exchange timely information, which would speed up decision-making. Furthermore, there is no need to invest in infrastructure or pay for its upkeep in order to retain financial data at a significantly lower cost.

Decision-making is improved throughout the entire business when financial information is sent with complete timeliness and speed via information exchange and receipt on the cloud. Just a laptop with a modem or a smartphone may still run a business since all data is saved and transactions are completed in the

cloud in real-time.

Financial Information Quality

According to Verdi (2006), the accuracy with which financial reports convey information about a company's operations, particularly its cash flows, in order to inform equity investors. According to some academics, the degree to which the financial statements convey accurate information about the underlying performance and financial position (Tang *et al.* 2008). Additionally, it was described by Kilgore and Bennie (2014) as the level of assurance the auditor offers to those who will be using the financial statements as well as the likelihood that the financial statements will be free of errors and significant irregularities (Wyslocka & Jelonek, 2015). However, Jonas and Blanchet (2000) offer a generally acknowledged definition, stating that the quality of financial information is complete and transparent financial information that is not intended to deceive users.

Financial reporting quality refers to how accurately and truthfully a financial statement informs us about the state and performance of an organization's finances (Tang *et al.*, 2008). Therefore, in order for a financial statement to be deemed to have high quality qualities, it should, as is expected, contain accurate information about the company's financial situation, operations, and cash flow creation.

Numerous financial and accounting researchers have confirmed the advantages and importance of high-quality financial reporting (Chan-Jane and Chae-Jung, 2015; Jaballah *et al.*, 2014), but they have also warned that poor quality financial reporting may have a detrimental effect on business performance and financial decisions. In other words, managers' willingness to participate in ineffective activities may be influenced by the quality of financial reporting. To avoid investment inefficiency, for instance, better contracts may be made possible by the quality of the financial reporting. Additionally, it may improve investors' capacity for decision-making. High-quality financial reporting is therefore anticipated to result in a decrease in unnecessary and wasteful investments (Biddle *et al.*, 2009).

Financial reports must adhere to certain qualitative standards in order to be of high quality and serve their intended function. Both the IASB and FASB boards come to the same conclusion in their conceptual frameworks that high quality is achieved by adhering to the objective and qualitative characteristics of financial reporting information. The qualitative characteristics are the attributes that make the financial information useful and are distinguished as fundamental or enhancing, depending on how they affect the usability of the information. Relevance and accurate portrayal are basic qualitative qualities:

These attributes are combined with other qualifying characteristics including comparability, timeliness, verifiability, and understandability to produce high-quality financial statements. The information in the financial report must also be reliable in order to be useful for making judgments. Information is deemed reliable when it can be independently checked, there are no obvious biases or omissions, and it correctly represents the subject (Cheung *et al.*, 2010). According to the faithful representation principle, financial statements should accurately and honestly reflect all economic occurrences.

Cloud Accounting and Data Storage

Ace Cloud (2018) claims that cloud accounting is an integrated, yet transportable accounting system that uses financial data from a server with the help of suitable accounting software over an internet connection in an electronic device. According to Shah *et al.* (2011), traditional accounting systems are unable to meet the

Ace Cloud (2018) claims that cloud accounting is an integrated, yet transportable accounting system that uses financial data from a server with the help of suitable accounting software over an internet connection in an electronic device. According to Shah *et al.* (2011), traditional accounting systems are unable to meet the demands of modern accounting since they need a lot of manual data entry, whereas cloud-based accounting significantly reduces the amount of time that accountants must spend performing these duties. File sharing across the company network to numerous different computers, tablets, laptops, and the like is ensured by cloud accounting. Even when the accountant is not immediately available, files can still be retrieved. The degree of access that people have to your data can also be controlled, and it also enables the

Government laws, concerns about data security, and a lack of infrastructure all hinder the development of cloud accounting in Nigeria. Despite much effort, the resistance to adopting this new technical trend has been progressively waning in the majority of Nigeria's business circles. According to Ogunjobi (2015), the resistance comes from their unwillingness to let a third party manage their technological assets. Cloud computing has had a significant impact on the Nigerian banking industry with the adoption of the Nigerian Uniform Bank Account Number (NUBAN). In order to lower operational expenses and increase banks' profitability, Iwuchukwu (2017) noted that infrastructure and software costs are no longer solely carried by individual banks but are instead shared by all banks. The MDX collaboration, according to Udofia (2015), was another significant development in cloud computing. The collaboration was based on Microsoft Azure's enterprise-grade infrastructure, which is adaptable, generally available, and completely ensures the privacy of the business's accounting environment on a pay-as-you-go basis.

The challenge of handling big data in terms of how this data might offer value to individuals is currently being tackled by IT businesses and international data outfits. So it's reasonable to conclude that the cloud has given people and organizations alike access to a vast array of opportunities. Companies can gain from safe data storage by putting their data on the cloud. The importance of backing up crucial papers to a separate hard drive cannot be overstated. If a natural calamity, like a fire, prevents you from accessing your physical location, your documents will still be safely stored in the cloud. Recent years have seen a tremendous increase in the capability of cloud architecture. The fact that the cloud can be used securely and dependably is evidence of such power.

• Cloud Accounting and Data Efficiency

Making data easy to use, manage, and access is the process of increasing data efficiency, according to Rao *et al.* (2017). Although configuration and setup, or organizing data in a way that makes it simpler to identify and access, are primarily configuration and setup concerns. By storing the most frequently accessed data on expensive, high-power storage devices, data efficiency tries to make it simpler to retrieve while moving older archive material to slower, less expensive alternatives. By doing this, network users can obtain crucial information more quickly without putting a strain on the resources and budget of the company.

Updating accounting data is a difficulty that traditional accounting systems frequently face. If a figure needs to be changed, the change must be manually entered in every place where the figure was used, such as ledgers, forms, and so forth. When fresh data is input and when needed, cloud accounting populates each location. Saving time, money, and energy with cloud accounting. Since the yearly or monthly subscription covers the cost of updating, users would not need to purchase and install updates as accounting techniques and tax laws change. This process will improve the quality of financial information in the financial statement, which will in turn boost investors' confidence.

The greatest way to deliver a reliable and long-lasting online data solution to the target market is through cloud accounting technology. Due to the high cost of maintenance, it is necessary to outsource these services to save capital and operating costs. Similar to this, the Nigerian Airspace Management Agency (NAMA) reportedly adopted Windows Server 2012, which enabled a number of functions and reduced

costs. A good example would be the partnership of CISCO, NetApp, and Microsoft to offer reliable cloud services to its customers and users. The Central Bank of Nigeria (C.B.N.) and the country's top eight (8) banks both use NetApp.

• Cloud Accounting and Data Mining

According to Gandy (2019), data mining is a technique that involves finding patterns, correlations, and anomalies among the vast amount of data sets in order to make predictions about the future. According to Ping (2021), the process of mining or extracting knowledge from big volumes of data entails finding significant patterns in large databases. Meiryani *et al.* (2021), in a similar vein but within the context of computer science, conceptualize data mining as a semi-automatic or automatic technical process that entails analyzing sizable volumes of dispersed data in order to turn it into knowledge and make sense of it through the discovery of useful and interesting relationships and patterns.

The quality of financial information can be supported by data mining in a number of ways. Wu (2021) cites an example in which financial statement data can be accessed using data mining techniques. Because of the growing digital data collection, which led to an increase in the amount of data kept in databases, data warehouses, and other types of data repositories, the need for data mining to improve the quality of financial information has grown (Wang, 2021).

According to Zoto (2014), data mining technologies can be used to extract important information that may be concealed in the massive amount of data since they can help to mitigate both information-poor and data-rich situations. These statistics may be helpful in improving the quality of financial information. Min (2021) asserted in a different study that the rise of accounting-relevant data is a result of enterprises' desire for accurate financial information. As a result, data analysis for accounting purposes has become more difficult.

Although basic data analysis can be performed using straightforward tools like reporting, queries, spreadsheets, and database systems, it is better to use specific tools related to data mining for this purpose. Knowing the fundamentals of information technology and the statistics tools made available by data mining may assist accountants predict future financial problems and provide explanations for accounting events.

Theoretical Review

The research study is anchored on Agency theory which was propounded by Jensen and Meckling (1976). The theory of agency offers suggestions for improving the effectiveness of information management between principals and agents. The principle appoints the agent to carry out a task on his behalf, giving up some of his decision-making authority in the process. Agency theory is undercut by three major groups of assumptions. Each participant is risk averse, bounded rational, and acts in their own self-interest. Despite the appearance of cooperative behavior on both parties' parts, their unique risk functions have different goals and attitudes. The agent is less risk-averse than the principal in a straightforward agency model. Furthermore, the principle is concerned with long-term economic performance, whereas the agent is only interested in the immediate financial gain.

Conflicts of interest may arise as a result of the uneven distribution of information. When picking an agent or when the agent is working for the principal, the principle cannot completely check the agent's talents and abilities because the agent typically knows more information about his or her actions and intentions than the principal has. Agency costs are expenses associated to potential conflicts of interest that can arise. A commodity that can be bought is information. This suggests that, in theory, the principal may spend money on official information systems to keep an eye on the conduct of the agent. The principal has the option to contract on outcome or on behavior, i.e., by investing in information systems that show the principal the agent's behavior. It may be argued that the principal places more trust in the agent if there are no monitoring systems in place. Regarding the cloud context, trust is described as information regarding a provider's

security that is obtained through accumulating information about a system.

This theory has been successfully applied in a variety of industries, including marketing, banking, insurance, social work, public health, agriculture, and communication. The majority of accountants in the accounting field are aware that performing accounting tasks in the cloud has a number of advantages. Users of cloud accounting software are initially motivated to switch from their traditional method of performing accounting tasks to the cloud because of the cloud's alleged usefulness. As their clients may be more fully integrated into the accounting process and will also aid in reducing the problem of information asymmetry, accounting agents feel that using cloud accounting can improve the output quality of the information generated throughout the accounting process.

Empirical Review

Literature abounds on matters of cloud Accounting and Financial information quality. The influence of cloud accounting and how to improve the caliber of financial information reporting were topics covered in the research studied. Several of these studies, however, were based on contextual analysis. For instance, Sumini *et al.* (2021) did a study in Indonesia titled Cloud Accounting: The Development of Accounting Information System in Industry 4.0. The article concentrated on the requirements of cloud accounting and the level of development of the accounting information system in Indonesia's Industry 4.0. The study's research methodology was qualitative analysis. The opinions of accounting business providers, practitioners, and accountants were gathered through interviews, questionnaires, and focus group discussions. 90% of respondents agreed, according to the findings, that Industry 4.0's more digitalized accounting systems represent an evolution of the accounting information system.

A study on the impact of cloud accounting on SMEs' financial reporting quality in Nigeria was conducted by Ogunsola (2021). The impact of cloud accounting on the capabilities of SMEs' financial reporting was assessed in this study. Financial reports, publicly available journals, papers, and gazettes were all used as secondary sources of data creation. All study variables were reviewed, and the data was examined by looking at various data from relevant fields. The population of the study consists of more than 50 million SMEs that are registered with the Small and Medium Enterprise Development Agency of Nigeria (SMEDAN). Over a period of five years, SMEs that are cloud accounting compliant were chosen using a purposeful sample technique. Findings indicated that there is a requirement for

The Overview of Cloud Accounting in Nigeria was the subject of research by Egiyi *et al.* (2020). In the study, a qualitative research design was used to examine how cloud accounting has changed in Nigeria and its significance for accounting procedures. Findings showed that the inefficiency of conventional accounting techniques led to the adoption of cloud accounting. According to the needs of the twenty-first century,

The prospects and difficulties of implementing cloud accounting in Bangladesh were the subject of a study by SAHA *et al.* (2020). The study's goals were to comprehend cloud accounting's meaning, as well as to look into whether it would improve organizational performance and what obstacles would need to be overcome for a nation like Bangladesh to adopt it. 300 respondents from the accounting field—accountants, accounting graduates from various colleges, teachers, and bankers—were chosen for the primary data collection. KMO and Bartlett's test was used to determine the reliability and validity of the sample size and data, and the results showed to be valid and reliable for the study. Regression analysis was used to determine the beneficial effects of cloud accounting on organizational performance and the negative effects of cloud accounting on the organization's current accounting system. Regression analysis results confirmed the study's alternative hypotheses, which claimed that cloud accounting might enhance organizational performance.

A Study on Challenges in Adoption of Cloud-Based Accounting in CA Firms in Bangalore was undertaken by Deeksha and Rakesh (2019). The goal of this study is to comprehend the obstacles to cloud-based

accounting adoption, particularly in Bangalore's single proprietary CA businesses. Due to their involvement in consulting projects for their client companies, the target respondents were chartered accountants. The information was gathered from chartered accountants in Bangalore. A questionnaire that was created using a Likert scale to gather primary data on the many variables associated to the potential barriers preventing the adoption of cloud-based accounting. A poll was conducted among 317 chartered accountants in Bangalore, which had a population of 1,078,039. Regression analysis and ANOVA were both used to analyze the data. According to Chartered accountants, the findings showed the main obstacles to the adoption of cloud-based accounting.

A study on cloud accounting from the standpoint of Sri Lankan accounting professionals was also conducted by Livera in 2019. The research methodology adopted was positivistic in nature. The study's population and sample size were composed of 150 business-related accountants from Sri Lanka. The selection of the sample was made at random. From the general population, a sample of accounting professionals was chosen, totaling 100 respondents. A descriptive statistics tool was used to evaluate the data. According to the results, 48.9% of respondents said they currently do not use a cloud computing system. Cloud accounting is used by 24.8% of respondents several times per day, while 10.9% said they use it several times each week (mean value of 2.86).

Mugenyeni (2018) explored on the reception of Cloud Computing Services by Commercial Banks in Uganda for Sustainable Development. The analysis discovered that over the previous 20 years, business banks in Uganda have been steadily growing in terms of the number of branches, their sizes, and their operating activities. High operational costs associated with the purchase and maintenance of IT infrastructure have been brought on by this expansion, which has also necessitated larger rooms to accommodate them. Helpless information storage and the board are also frequently present. Results showed that, when adopted, cloud computing offers the greatest and most cutting-edge solution for solving the problems identified in business banks in this study.

Haslinda *et al.* (2017) researched Cloud Computing Adoption in Organizations. The review of prior material on distributed computing has been done in order to identify its key components and how they were operationalized. The three settings—innovation, association, and condition—recommended by the Technology Organization-Environment (TOE) approach are used by the scientists to order the factors affecting distributed computing reception. The results of the analysis showed that these factors have different effects on different research, and that many of these investigations have operationalized the adoption of distributed computing or the double factor rather than actually using the innovation.

Yau-Yeung (2017) conducted a study on An Exploration of Risks in Using Cloud Accounting Information Systems in Australia. The research study used a multi-theoretical approach, specifically transaction cost economics (TCE) and Technology-Organisation Environment (TOE) framework to explore user experience of risks in cloud accounting and user perceptions of possible measures to mitigate those risks. Findings demonstrate that, due to the sensitivity and particular purpose of financial data and information in cloud accounting, it not only entails risks similar to those associated with general cloud computing services (such as email and file sharing), but also introduces risks of a stronger magnitude in a number of areas. These include regulatory compliance, data ownership and location, and the reliability of financial statements.

Livera (2017) carried out a study on Cloud Based Accounting: The Perspective of Accounting Professionals of Sri Lanka did a hypothetical audit of cloud bookkeeping. One of the major IT developments in the last ten years, according to the analysis, has been the creation of accounting software that uses cloud technology. This has enhanced accounting as a whole. Similar to how other business divisions have adapted to distribute computing systems, bookkeeping has done so as well. This enables it to provide partners with crucial and precise data as well as a continuous assessment of the company's performance. Although cloud bookkeeping is becoming more and more popular over time, many business owners and professionals are

unsure of what it is, what its benefits are, or how it will affect bookkeeping in the future.

Al-zoubi (2017) examined the Effect of Cloud Computing on Elements of Accounting Information System, The examination recognizes the effect of Cloud Computing on the Elements of the Accounting Information System spoke to by: Establishment “Bookkeeping Entity.”, Financial Operations, Documents, Accounting Books, Financial Reporting, Users, Procedures, Software, and Physical Devices. The examination gathered past writing on distributed computing and data innovation and studies their effect on bookkeeping data frameworks. The examination discovered that Cloud accounting lead to Reducing the size of the venture as far as the structure and the workplaces since they permit property anyplace without the executives’ responsibility to a particular area, improving operational execution as far as encouraging the finishing of activities and exact bookkeeping tasks.

Van den Bergh (2016) conducted research on how accounting businesses in Cape Town perceived and were aware of cloud computing technology. The study’s objective was to ascertain how Cape Town accounting businesses felt and were aware of cloud computing technologies. The results of the poll, which used a survey research approach, showed that corporate managers and accountants are significantly aware of CAS. Regarding how they view CAS, small and medium-sized businesses have different perspectives in several ways.

Onyali *et al.* (2016) conducted a study on The Use of Cloud Computing and Accounting Packages for Corporate Business Transactions in Nigeria: An Explorative Study. The broad objective was examining the perception of corporate stakeholders on the use of cloud concept as an accounting system for corporate firms in a developing economy. Descriptive statistics, Kolmogorov-Smirnov (K-S), One Sample t-test was used in analyzing the primary data. Using a sample of 100 respondents, comprising of accounting academics who fall within the category of investors, chartered accountants and customers drawn from across Anambra state in southeastern Nigeria, The results of the data analysis showed that the use of cloud computing packages by corporate firms is a welcomed development in Nigeria,

Xinding (2015) carried out a study on The Adoption of Cloud accounting For Small and Medium Accounting Firms in Canterbury. The objective of the study was to explore the factors that led to the rapid growth of cloud accounting specifically in the accounting industry, and to explore the roles that cloud computing played within the accounting firms. The study was carried out using the multiple case study design, and semi-structured interviews were used as the primary method of data collection. The methodology was selected due to its effectiveness in addressing the research questions and gaps in literature. The results from the findings indicated a strong distinction in the adoption pattern between cloud-based software for clients’ use and for accounting firm’s own use. While all of the six firms are offering some form of cloud-based accounting software to their clients, only two firms have implemented their practice management over the cloud.

The survey conducted by Strauss *et al.* (2015) in United Kingdom reveals that 25% of the respondents use cloud technology for business systems and because of this proves that cloud technology has spread and assisted finance and management accounting operation. Their survey shown a pattern with non-finance systems being the frequently use of cloud technology with the breakdown of 31% from CRM, 19% of financial accounting and 59% of other business processes. Just under half or 49 percent of respondents said they are “still on the fence” or have no intention, to adopt the technology.

Perri and Muça (2015) completed an investigation on the job of distributed computing in bookkeeping enterprises in Albania. The investigation sees distributed computing as an innovation dependent on the web which encourages the administration and conveyance of registering administrations through the system is by all accounts the perfect reaction that addresses issues of bookkeeping firms as far as gathering, putting away, handling and detailing data. The specialists feature the impacts of this innovation in bookkeeping data frameworks and monetary execution having in center organizations that work in Albania. The examination

discover that despite the fact that the degree of data about distributed computing is impressive, the wellsprings of data are not as much from business foundation but instead from scholarly sources and individual investigations.

Gap in literature

According to a survey of cloud accounting literature and pertinent empirical research, the following gaps were found: First and foremost, there hasn't been much research done on the commercial side of cloud accounting; instead, it's been more conceptual and exploratory. There is not a reliable body of evidence that can be safely inferred from the body of literature currently available. Another significant gap is the paucity of research in the accounting field. The accounting business is expected to grow significantly more quickly than other industries in terms of cloud accounting. The causes, however, are poorly understood because there have been few investigations on the cloud phenomenon in accounting organizations. The following null hypotheses were developed in accordance with the precise aims.

Hypotheses:

H₀₁: Cloud Accounting does not have a significant effect on data storage of financial information quality in selected firms in Nigeria

H₀₂: Cloud Accounting does not have a significant effect on Data efficiency of financial information quality in selected firms in Nigeria.

H₀₃: Cloud Accounting does not have a significant effect on Data mining of financial information quality in selected firms in Nigeria.

Data and Methods

The Cross-sectional survey research design was employed for this study. The targeted population of this is heterogeneous as it covers professional accountants, auditors and information technology experts across various fields. This study therefore used the assumptions of Taro Yamane (1967) to adopt the population of 400 respondents for the purpose of this study. The study covers Lagos state metropolis because it is highly dominated with commercial activities and host the head office of most companies in Nigeria. Data was obtained from primary sources through the administration of a well-structured questionnaire to the respondents. The reliability and validity of the research instrument was tested using the Cronbach's Alpha test and content validity test respectively. Data collected were analysed using descriptive and Ordinary Least Square (OLS) regression.

Reliability Test

Cronbach's Alpha was used to test the reliability of the research instrument. The reliability result was 0.875 which reflected a high level of consistency. A Cronbach's Alpha of 0.70 and above is acceptable according to the existing literature. Therefore, this study adopts 0.70 as the minimum of Cronbach's Alpha. Since all the study variables have the Cronbach's Alpha that is higher than 0.70, they are all reliable.

Reliability Statistics	
Cronbach's Alpha	N of Items
0.875	28

Source: Researcher's computation (2022)

Data Analysis and Discussion of Findings

Descriptive Statistics

Tables 2a, 2b and 2c below showed mean and standard deviation of questionnaire items as according to study variables (CA, DS, DE and DM); as it appeared through descriptive analysis, all items of questionnaire scored at least mean of scale higher than 3.00 which was seen as positive from a statistical point of view. The same process took place on study variables in general where mean and standard deviation were calculated. All variables scored higher than mean of scale 3.00 which was statistically positive. The data presented further implies that majority of the accountants believed that the metrics of Financial information quality (Data storage, Data efficiency, Data mining) will influence changes in financial information quality through cloud accounting.

Table 2. Mean and standard deviation of Independent Variable (cloud accounting)

	N	Range	Minimum	Maximum	Mean	Std. Deviation	Variance	Skewness	Kurtosis
CA	400	1.83	3.17	5.00	4.3417	.38099	.145	-.488	.127
CADS	400	1.88	3.13	5.00	4.1819	.44396	.197	-.059	-.702
Valid N (listwise)	400								

Source: Researcher's computations (2022)

	N	Range	Minimum	Maximum	Mean	Std. Deviation	Variance	Skewness	Kurtosis		
									Std. Error	Statistic	Std. Error
CA	400	1.83	3.17	5.00	4.3417	.38099	.145	-.488	.122	.127	.243
CADE	400	1.75	3.25	5.00	4.2363	.36150	.131	-.052	.122	-.039	.243
Valid N (listwise)	400										

Researcher's computations (2022)

	N	Range	Minimum	Maximum	Mean	Std. Deviation	Variance	Skewness	Kurtosis		
									Std. Error	Statistic	Std. Error
CA	400	1.83	3.17	5.00	4.3417	.38099	.145	-.488	.122	.127	.243
CADM	400	2.50	2.50	5.00	4.3246	.50876	.259	-.911	.122	1.588	.243
Valid N (listwise)	400										

Source: Researcher's Computations (2022)

4.2 Hypotheses Testing

H₀₁: Cloud Accounting does not have a significant effect on Data storage of financial information quality of selected firms in Nigeria.

From the tables 3A, 3B and 3C below, Linear regression was used to analyse the hypothesis and t value = 3.284 was significant at 0.05 ($\alpha = 0.828$, $P = .001 < .05$) this shows that the null hypothesis should be rejected. This indicates that cloud accounting will have a significant positive influence on data storage of financial information quality of selected firms in Nigeria. The result is in agreement with the position of Al-Zoubi (2017), also $R=0.710$ in table 3A reflected positive and high relationship between the variables which indicated the fact that Cloud Accounting has the ability to enhance efficiency of data storage of FIQ of selected firms in Nigeria. The analysis of variance table (ANOVA) in Table 3B tests the significance or otherwise, the fitness of the model. The F-calculated value of 405.201 is higher than the F-tabulated value 0.00 at 5% significance level, hence, the null hypothesis is rejected while the alternative hypothesis is accepted.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R ² Change	F Change	df1	df2	Sig. F Change	
1	.710	.504	.503	.31291	.504	405.201	1	398	.000	2.001

Source: Researcher’s computations (2022)

Table 3B: Analysis of Variance (ANOVA)

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	39.674	1	39.674	405.201	0.000
	Residual	38.969	398	0.098		
	Total	78.644	399			

Source: Researcher’s computation (2022)

Table 3C: Coefficient

Source: Researcher’s computation (2022)

Variable	Coefficient	Std. Error	t-Statistic	Prob.	Tolerance	Multicollinearity
Constant	0.588	0.179	3.284	0.001		
CA	0.828	0.041	20.130	0.000	1.000	1.000

H₀₂: Cloud Accounting does not have a significant effect on Data efficiency of financial information quality in selected firms in Nigeria.

Linear regression was also used and t value= 9.410 was significant at 0.05 ($\alpha = 0.647$, $P = .000 < .05$) this shows that the null hypothesis should be rejected. This indicates that cloud accounting will have a significant positive influence on data efficiency of financial information quality of selected firms in Nigeria. The result is in agreement with the position of Mugenyi (2018), also $R=0.682$ despite having a moderate value, reflected positive and high relationship between the variables. Cloud accounting has the ability to influence Data efficiency of financial information quality of selected firms in Nigeria. The analysis of

variance table (ANOVA) in Table 4B tests the significance or otherwise, the fitness of the model. The F-calculated value of 346.257 is higher than the F-tabulated value 0.000 at 5% significance level, hence, the model is fit for generalisation.

Table 4A: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R ² Change		F Change			Durbin-Watson
					df1	df2	Sig.	F Change		
1	0.682 ^a	0.465	0.464	0.26469	0.465	346.257	1	398	0.000	1.632

Source: Researcher’s computations (2022)

Table 4B: Analysis of Variance (ANOVA)

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	24.259	1	24.259	346.257	0.000
	Residual	27.884	398	0.070		
	Total	52.143	399			

Source: Researcher’s computations (2022)

Table 4C: Coefficient

Variable	Coefficient	Std. Error	t-Statistic	Prob.	Tolerance	Multicollinearity
Constant	1.426	0.152	9.410	0.000		
CA	0.647	0.035	18.608	0.000	1.000	1.000

Source: Researcher’s computations (2022)

H₀₃: Cloud Accounting does not have a significant effect on Data mining of financial information quality in selected firms in Nigeria.

Linear regression was used and t value= 3.497 was significant at 0.05(? = 0.809, P = .001 < .05), this shows that the null hypothesis should be rejected. This indicates that cloud accounting will have a significant positive influence on data efficiency of financial information quality of selected firms in Nigeria. The result is in agreement with the position of Ogunsola (2021), also R=0.606 despite having a moderate value, reflected positive and significant relationship between the variables. So, Cloud accounting has the ability to influence Data mining of financial information quality of selected firms in Nigeria. The analysis of variance table (ANOVA) in Table 4B tests the significance or otherwise, the fitness of the model. The F-calculated value of 230.908 is higher than the F-tabulated value 0.000 at 5% significance level, hence, the model is fit for generalisation.

Table 5A: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R ² change		F Change			Durbin-Watson
					df1	df2	Sig.	F Change		
	.606 ^a	.367	.366	.40523	.367	230.908	1	398	.000	1.824

Source: Researcher’s computations (2022)

Table 5B: Analysis of Variance (ANOVA)

	Model	Sum of Squares	df	Mean Square	F	Sig.
	Regression	37.918	1	37.918	230.908	0.000
	Residual	65.357	398	0.164		
	Total	103.275	399			

Source: Researcher's computations (2022)

Table 5C: Coefficient

Variable	Coefficient	Std. Error	t-Statistic	Prob.	Tolerance	Multicollinearity
Constant	0.812	0.232	3.497	0.001		
CA	0.809	0.053	15.196	0.000	1.000	1.000

Source: Researcher's computations

Discussion of findings

The aim of the research study was to examine the effect of Cloud accounting on financial information quality. The study adopted the quantitative survey approach relying on a questionnaire. A sample of 400 managers, departments' heads and accountants responded to the questionnaire. The following findings were reached after the analysis of the primary data:

Their appeared to be a high level of awareness regarding cloud accounting (CA) involvement within the profession of accounting given that all respondents had the ability to process the questionnaire and answering it correctly. The three hypotheses raised for the study were accepted with a high and positive relationship indicating that cloud accounting technique is able to positively influence data storage, data efficiency and data mining.

Cloud accounting positively influences Data storage of financial information quality: It became clear through the above analysis that cloud accounting variable had obtained high and above average values, because cloud accounting contributed significantly to influencing the dependent variable by relying on data storage in presenting financial information. This result agreed with Sumini *et al.*, (2021) who conducted a study on Cloud Accounting in Indonesia. The results of the study showed that 90% of the respondents agree that financial accounting information quality system has evolved to more digitalized accounting system in Industry 4.0, It was also found through the study that allowing the cloud to store accounting data in a quick and sufficient manner had a role in maximizing the efficiency of accounting operations through cloud accounting, This findings contradicts the study of Deeksha and Rakesh (2019) and Livera (2017) who conducted same study and the results of their studies depicted the major challenges for the adoption of cloud-based accounting from the perspective of accountants. On the other hand cloud accounting positively influences Data efficiency of financial information quality: from the result of the analysis with regard to data efficiency, it was observed that there is an impact of cloud accounting techniques on financial information quality. The study proved that cloud accounting techniques will contribute to giving decision makers and users of financial information a real time value of accounting information by conserving money, time, and energy agreeing with the study of Ogunsola, (2021) who carried out a study on effect of Cloud Accounting on the Financial Reporting Quality of SMEs in Nigeria whose findings revealed that that there is need for SMEs to adopt cloud accounting technology in order to increase their financial reporting quality but negates the study of Yau-Yeung (2017) whose findings showed that cloud accounting not only entails risks to general cloud computing services but also it introduces a stronger magnitude in certain specific risks, such as regulatory compliance, location of data storage, ownership of data and financial statement reliability.

Lastly, cloud accounting positively influences Data mining of financial information quality: Based on the

analysis of data and its findings, it has been proven that cloud accounting techniques will provide firms with the possibility of following up the production lines through forecasting and predictive analysis tools and their effectiveness in relation to inventory control, in addition Knowing basic information technology and statistics tools afforded by data mining may help accountants to forecast future financial situations and explain accounting events which in turn will enhance the quality of financial information. This result agreed with the findings of Egiyi *et al.* (2020) and SAHA *et al.* (2020), whose results analysis supported the study alternative hypotheses that cloud accounting can improve financial information quality but disagrees with the findings of Haslinda *et al.* (2017) who emphasized that the impacts of cloud elements differ across studies as opposed to the real utilization of the innovation.

Conclusion and Recommendations

The study carried out investigation on the effect of cloud accounting on financial information quality of selected firms. Regardless of the influence of cloud accounting on financial information quality, from the result the research study, the study concluded that cloud accounting contributes significantly to reducing the challenges that accountants may face, and gives preference to work more efficiently and intelligently and in a smooth and easy way. Based on the research findings, the study thus provided the following recommendations to further improve quality of financial information in selected firms:

1. Government should provide high-quality data centers to motivate companies to invest in cloud accounting. Some companies are scared of patronizing low-quality data centers for obvious reasons. Companies in this category will certainly be rest assured if government invests in this direction.
2. Reduce the cost of data and accessories this will act as incentive to many organizations to key into the new technology.
3. Organisations should be encouraged to invest more in automated accounting and effectively train their accounts staff for better efficiency in financial and other accounting functional reporting.

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Dear Respondent,

REQUEST FOR THE COMPLETION OF QUESTIONNAIRE

I am a postgraduate student in the accounting department of Afe Babalola University (ABUAD) Ado-Ekiti, currently undergoing a study for a PhD in Accounting. I am conducting a research on a study titled “Cloud accounting and the enhancement of financial information quality in selected firms in Nigeria”. This study will help companies and users of financial information in the automation of time-consuming manual processes, improved accuracy and compliance and the ability to accelerate financial close processes with less effort and enhance financial information Quality.

I hope to have a few minutes of your time to fill out this questionnaire and wish to emphasize that all information provided will be treated as confidential and will be used for academic purpose only

Best regards,

Akpan, James

SECTION A

Background Information

Kindly tick (?) on that which agrees with your opinion.

1. 1. Type of firm: Manufacturing () Oil & Gas () Health care () Banking () I.T ()
Telecommunications () Construction () others (specify).....
2. Do you have access to internet facility? Yes () No ()
3. 3. Do you have access to electronic gadget to aid your work? Yes () No ()
4. Do you have the technical knowhow about the use of accounting software? Yes () No ()

SECTION B

This section contains sets of questions or statements raised in respect of Cloud accounting and the enhancement of financial information quality in selected firms in Nigeria. Please tick (?) the most appropriate option that agrees with your opinion. As stated below:

Code: SA- Strongly Agree, **A-** Agree, **UD-** Undecided, **D-** Disagree, and **SD-** Strongly Disagree

(Bi). Cloud accounting measures

SN	QUESTION / STATEMENT	SA	A	UN	D	SD
		5	4	3	2	1
1	Easy integration of accounting records would enhance the quality of accounting information.					
2	Availability of accounting software aid access to accounting records at any location thereby improve the quality of accounting information.					
3	Recording of income and expenditure of business made possible to keep track of their historical financial performance and leads to enhancement of quality of accounting information.					
4	Accounting software updates financial information automatically and provides financial reporting in real-time through the Internet facility, thereby improve the quality of accounting information.					
5	Accounting software improve data integrity and accuracy and lead to enhancement in quality of accounting information.					
6	Accounting data can be accessed from anywhere on any device with an Internet connection and this enhance the quality of accounting information.					

(Bii). To Assess the Effect cloud accounting on data storage

1	Cloud allows storage of all financial information in a single data base					
2	With cloud storage, business owners don't need to contend with time consuming software installation					
3	Lots of paper work will be reduced and there will be no need to physically store archived paper					
4	Only authorized user can access your data through access control and encryption					
5	Improves accuracy by eliminating many of the error prone manual steps.					
6	Authorized user can log in from any location through a web browser or mobile app.					
7	Accountants and team members can collaborate more easily due to online data storage					
8	Staff members don't have to scramble to consolidate data from disparate systems to meet deadlines.					

(Biii). To Examine the Effect of Cloud accounting on Data efficiency

S/N	QUESTION / STATEMENT	SA 5	A 4	UN 3	D 2	SD 1
1.	Quality of information is more better with cloud accounting					
2	Accurate real time view of financial data across the entire business					
3	Matching of internal transaction to bank records and flagging of errors is made easy.					
4	Data set ensure consistency across all accounting process and financial reports					
5	Payment or invoices can be approved without having to wait until accountants are back in to the office					
6	Cloud software can match received invoices to payment and shipment and even automate reconciliation process.					
7	Up to date financial data is available throughout the organization					

8	Cloud accounting is important for customers because they are able to only pay for the module they need					
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(Biv). To Evaluate the Effect of cloud accounting on Data mining

SN	QUESTION / STATEMENT	SA 5	A 4	UN 3	D 2	SD 1
1	Everyone across the company can use data available to make decision that improve business performance					
2	Allows acceleration of financial process and simplification of other tasks such as forecasting.					
3	Accounting team members are always plugged in to the most current financial information and real time analytics.					
4	Managing finances with spreadsheets quickly becomes unimaginable as business expands					
5	The platform helps private and public companies with tax compliance by producing accurate financial statements					
6	Because the software is in the cloud, businesses will always have the most up to date version.					