

## **Qualitative Analysis on Costs and Benefits of Adopting a Cloud-Based Accounting Information System: A Case Study of Rural Banks in Ghana**

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**ABSTRACT:** *The accounting and recording approach have been impacted by the expansion of the internet and the advancement of information technology. Cloud accounting is a result of the use of cloud computing technology. Cloud computing is growing in acceptance, and more companies are using cloud-based software to boost productivity and gain a number of other advantages. The purpose of this study was to learn more about the advantages and difficulties of implementing a cloud-based accounting information system. The study, which employed a qualitative approach, discovered that cloud accounting enhanced operations compared to using in-house software, increased accessibility of the banks' services, and sped up customer turnaround time. High maintenance costs, network failure, trouble deciphering reported error codes, insufficient technical help, and system failure during an update are a few of the difficulties.*

**KEYWORDS:** accounting information systems, cloud accounting, and cloud information Systems

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### **INTRODUCTION**

Giving users accurate, timely, and relevant information to help their decision-making is accounting's aim. To accomplish this, financial statements must fairly and properly reflect economic reality. The reliability of accounting information is determined by the accuracy of the accounting records processed by the accounting system, and the relevance of accounting information is determined by the caliber of the financial reporting standards used in the creation of the financial statements (Singerová, 2018).

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Accounting data processing used to be done manually in the past. Ledgers, journals, and other original entry books were used for the manual processing of accounting information. The automation of accounting data started in the late 1950s and spread like wildfire. The development of accounting software has greatly enhanced accounting procedures. Due to the amount of information and the time required to process it, accounting software has developed into a very useful tool for accountants to do their responsibilities more quickly and effectively. The drawbacks of manually processing accounting data, such as reporting delays, inefficiencies, and errors, led to the development of accounting software. Despite the fact that accounting software has been available for some time, it has developed and grown in complexity (Dimitriu & Matei, 2015). As a result of the requirement to effectively and properly transform economic realities into numbers, accounting has been constantly developing. This recording art has been influenced by the development of information technology and the introduction of the internet. The quick expansion of these solutions in our daily activities has indeed seen numerous stages of IT advancement in the twenty-first century, enriching our lives in the process (Dimitriu & Matei, 2015). This was reaffirmed by Zhang (2014), who asserted that cloud accounting, as a new type of accounting information model, is crucial to the enterprise accounting informationization process. Cloud accounting provides the benefit of having minimal entry barriers, low maintenance costs, and cheap investment costs when compared to traditional accounting informationization systems. However, as cloud accounting has advanced, pertinent issues, including weak security and special services, have surfaced. Businesses, suppliers, and the government must collaborate to find solutions to these problems and to promote the adoption and use of cloud accounting in our company. Cloud computing has the ability to completely transform business models. According to Musyaffi and Muna (2021), cloud computing (accounting) is the newest technology that has the power to transform the commercial sector. Cloud computing technology makes it simple to access data and information from anywhere at any time without the need for an internal or external hard drive. Thanks to the context of cloud technology, users may readily access data and information at any time and from any location. Cloud accounting is becoming a more vital business tool for SMEs. Cloud-based accounting can help SMEs become more effective, financially structured, and flexible. In order to move the informative system's center of gravity to a new paradigm of data processing and storage on the cloud, small and medium-sized firms must replace existing resources with new informational technology (Ionescu et al., 2013). The relevance of cloud-based accounting systems and services is highlighted by this uptake, which may lead to increased SME skills, financial reporting, and decision-making (Ionescu et al., 2013). Online accounting, commonly referred to as cloud accounting, performs comparable tasks to desktop accounting software but is hosted on servers that offer online services that users can access using web browsers. Cloud accounting has thus become a new industry (Dimitriu & Matei, 2015). Small and medium-sized businesses (SMEs) and global firms alike can access information thanks to cloud

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computing from any location. Different file formats, data types, and application types can all be accessed in a single cloud environment. Additionally, a variety of services, including data storage and useful programs, can be made available. because cloud accounting is so important.

This paper's major goal is to analyze the advantages and drawbacks of employing cloud-based accounting technology in the T-24 system for Ghana's Rural Banks. Even though the topic of cloud computing is not new, there are only a few research publications looking at the impact of cloud accounting, which made this study necessary.

There hasn't been enough research done on the topic (Saha et al., 2020), and the majority of these studies are theoretical or anecdotal with little empirical support for the issues that users of cloud accounting actually face (Yau-Yeung, 2020). The majority of articles in the current academic literature are primarily technical reports, surveys, and market studies. In addition, since the introduction of cloud accounting in rural banks in Ghana, this is the first major empirical study to be conducted to come out with the benefits and challenges of using the system.

## **REVIEW OF LITERATURE AND FORMULATION OF RESEARCH QUESTION**

### **Theoretical Foundations**

The unified theory of acceptance and use of technology (UTAUT), created by Venkatesh et al. in 2003, unifies divergent viewpoints on user and innovation acceptance and harmonizes the literature related to the adoption of new technology. For this study, this theory is used. In order to predict behavioral intention to use a technology and actual technology use in organizational environments, UTAUT identifies four main components (performance expectancy, effort expectancy, social influence, and facilitating conditions) and four moderators (age, gender, experience, and voluntariness). According to UTAUT, behavioral intention and facilitating factors govern technology use, with behavioral intention being determined by performance expectancy, effort expectancy, and social influence. Additionally, various combinations of the four moderators were predicted to moderate specific UTAUT interactions and were later found to do so (Venkatesh, Thong, & Xu, 2016). UTAUT investigations have been carried out by a wide range of researchers using a variety of research approaches in varied settings and with a wide range of research aims and areas of concentration. Through the blending of UTAUT with other theoretical models and, occasionally, a re-specification of the underlying relationships between UTAUT variables, many new constructs have been added to the original theory in this broad body of work (Williams et al., 2015). It is a high-quality hypothesis, according to a Venkatesh et al. (2016) review. The target class of things, the general qualities, the associations, and the state space are just a few examples of the aspects that UTAUT is

particularly good at defining and explaining. Because it integrates existing theories, concentrates on the crucial issue of technology acceptance and use, changes existing theories significantly by incorporating higher-order moderation effects into the model, and is subject to rigorous empirical validation, UTAUT as a whole performs well in the importance, novelty, and falsifiability dimensions. UTAUT has two drawbacks as a whole, namely its lack of a meso-level formulation and the relatively low parsimony caused by the complicated interconnections among the qualities represented by the moderating effects. This hypothesis was chosen because it pinpoints important elements that influence how people use technology.

### **Cloud Computing**

Customers, data centers, and distributed servers are the many topological components that make up a cloud computing solution. The clients in a local area network (LAN) are analogous to those in a cloud computing architecture. Usually, they are the desktop computers you have at your workstation. However, they could also be portable devices like laptops, tablets, smartphones, or PDAs, all of which are vital for cloud computing because of their portability. Clients, in any event, are the tools that end users employ to manage their data in the cloud. The application to which you have subscribed is housed in the datacenter, which is a group of servers. It might be a sizable space in the basement of your building or a room packed with servers on the other side of the globe that you connect to online. The servers do not need to be kept in the same place, though. Geographically separated places are typically where servers are found. These servers appear to be operating side by side to you, the cloud subscriber, but (Velte et al., 2010). Cloud computing is a result of technological advancements in computing and data storage. The phrases "cloud" and "data center" are synonymous in cloud computing. The computing industry can now foresee moving into the cloud computing era as a result of the amazing advancements in computing and information technology over the previous three decades.

Among the breakthroughs are the creation of the Internet backbone, the widespread use of broadband Internet access, the robust server and storage network in data centers, and improvements in high-performance and scalable software architecture for data centers and the Web (Kim, 2009). According to Qian et al. (2009), cloud computing is a computing method in which vast, inexpensive computer units connected by IP networks provide IT services. Search engine platform architecture is the cornerstone of cloud computing. Massive computing resources, scalability and elasticity, a shared resource pool (including virtual and physical resources), dynamic resource scheduling, and general purpose are the five main technical characteristics of cloud computing. A cloud is a significant group of linked computers. These machines can be public or private, personal or network servers. This computing cloud is much bigger than any single business or organization. Across organizational and platform borders, a wide range of users can access the apps and data in

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the cloud. These files and applications are accessible from any Internet-connected computer by any authorized user. In a word, cloud computing enables a move from the computer to the user, from tasks to apps, and from isolated data to data that can be accessed and shared from anywhere. The user is no longer required to maintain data or even remember where it is. The fact that the data is immediately accessible to that user and other authorized users since it is on the cloud is all that matters (Mirashe & Kalyanka, 2010). The concept of "cloud computing" refers to computing, software, data access, and storage services that do not require end users to be aware of the location or system setup used to deliver the services. Making greater use of distant resources, combining them for increased throughput, and resolving complex processing issues are the main objectives of cloud computing. According to Jadeja and Modi (2012), cloud computing is concerned with virtualization, scaling, interoperability, quality of service, and cloud delivery methods like private, public, and hybrid. However, the phrases cloud computing, network computing, and outsourcing have distinctions. Network computing and cloud computing are not the same thing. Network computing refers to the hosting of applications or documents on a single company's server for access over the company's network. More than that is included in cloud computing. Multiple businesses, servers, and networks are included (Mirashe & Kalyanka, 2010).

Furthermore, unlike network computing, which only allows access within the company's network, cloud services and storage are accessible from anywhere on the globe via an Internet connection. Additionally, typical outsourcing, in which a business farms out (subcontracts) its computing services to an outside business, is not the same as cloud computing. Although an outsourcing company may host a company's data or applications, Armbrust et al. (2010) note that these files and programs are only available to the company's employees via the company's network and not to the entire world online. Small and medium-sized businesses (SMEs) and global firms alike can access information thanks to cloud computing from any location. Different sorts of files, data, and apps can all be accessed in one cloud environment, along with a variety of services from data storage to useful programs, and collaboration between a number of remote users is also conceivable (Tawfik et al., 2022). There are three instances where cloud computing performs better than conventional hosting. The first case is a changing demand for a service. When a data center is configured for peak load, it must handle a few days each month; for instance, it is underutilized at other times. Instead, cloud computing enables an organization to pay for computer resources on an hourly basis, which can lead to cost savings even when renting a machine from a cloud provider is more expensive per hour than buying one. Another situation is one in which demand is not understood in advance. For instance, if a Web company gets famous, it will need to accommodate a spike in demand, followed by a dip if some users stop visiting. The "cost associativity" of cloud computing allows batch

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analytics users to accelerate computations by employing 1,000 EC2 machines for one hour for the same price as one machine used for 1,000 hours.

The advantages and disadvantages of cloud computing vary. The ease of administration is one benefit of cloud computing. The hardware and software maintenance of the infrastructure is streamlined, causing the IT team to experience fewer headaches. Additionally, using programs that need a lot of storage is simpler in the cloud environment than it is when the organization uses them on its own. At the user level, all you actually need is a basic web browser and access to the internet. Costs are also decreasing. This is where SMEs will find their major advantage. The cost of SMEs' IT is dramatically reduced by cloud computing. Because the infrastructure is provided by a third party and does not need to be purchased, the cost is greatly lowered. Costly systems are not necessary for the rare application of powerful computing resources. Furthermore, the employment of human resources is not required by such systems. Even basic programs like email can be set up for free by utilizing tools like Google Web. Low outages are another benefit of cloud computing services, allowing consumers to keep utilizing their services without interruption. But there have been interruptions in the past, like the Gmail incident in 2009. However, they are significantly more reliable than the infrastructure set up on the organization's premises (Jadeja & Modi, 2012). Other cloud companies, such as EC2, have also experienced occasional failures. Users have the flexibility and ease to change how much they use computing resources and services. In actuality, customers have access to cloud services at any time and place (Kim, 2009).

It is obvious that the biggest barrier to cloud computing has been the security issue. Without a doubt, many people find the idea of storing their data on someone else's hard drive and running their program on someone else's CPU intimidating. Data loss, phishing, and botnets (which operate remotely on a group of computers) are all well-known security issues that seriously endanger an organization's data and software (Dillon et al., 2010). Additionally, personal information integrity has grown to be a major concern for both on-premises and cloud computing. Guaranteeing complete security and privacy protection against all potential sources of breach is practically impossible, including avoidable software bugs, increasingly sophisticated hackers, inadequate procedures, human mistakes, and misconduct. When it comes to cost, users must weigh the costs and benefits of computation, communication, and integration. Cloud computing vendors must use the most advanced and modern tools and procedures, and they must work to provide better security and privacy than on-premises computing (Kim, 2009). Although switching to the cloud can result in significant infrastructure cost savings, it also increases the cost of data communication (Dillon et al., 2010).

### **Factors that influence the use of cloud computing.**

Computing is a brand-new phenomenon that is revolutionizing company operations. According to Low et al. (2011), cloud computing is a new paradigm shift that incorporates data storage, distributed system soft applications, and computing resource services. As a result, the computing industry is quickly moving toward a model in which millions of people receive their favorite apps as services rather than having them installed on their own computers. The main objective of cloud computing is to reduce the cost of IT services while boosting processing throughput, reliability, availability, flexibility, and processing time.

Cloud computing is the way of the future in computing. This was further emphasized by Ali et al. (2020), who are of the opinion that this idea has steadily developed in the mainstream information and communications technology (ICT) sector with the advent of resource sharing concepts like cloud computing over the past few decades. The benefit of cloud computing is that it improves corporate performance. The essential business processes were more closely correlated with cloud computing technology. As a result, the organization can carry out crucial functions along the value chain thanks to the adoption of cloud computing (Low et al., 2011).

Even though cloud services have many clear advantages, many companies are still hesitant to use them. There could be a variety of causes for this hesitation. Some companies seem to be experiencing technical difficulties (Hsu & Lin, 2016). The popularity of cloud computing has been determined by a number of factors, according to research. These elements have been categorized according to organizational factors, infrastructure accessibility, and rivalry among businesses. According to Oliveira et al. (2014), a firm's adoption of cloud computing is influenced by a variety of factors, including relative advantage, complexity, technological preparedness, top management support, and firm size. For decision-makers in businesses considering cloud-based projects, the findings offer a good basis for assessing the direct and indirect consequences of the innovation features of cloud computing as well as the literature connected to its adoption in various industries. According to Ali et al.'s (2020) research, the adoption of cloud-based services in local governments was also found to be positively impacted by compatibility, complexity, cost, security concerns, predicted benefits, and organization size. In a different study, it was discovered that in Sri Lanka, adoption of cloud-based accounting is positively influenced by IT infrastructure, compatibility, perceived value, relative advantage, top management support, and competitive pressure, while adoption is negatively influenced by perceived cost and complexity (Dulmin et al., 2021). Relative advantage, top management support, firm size, competitive pressure, and trade partner pressure are all found to have a substantial impact on the adoption of cloud computing in a study by Low et al. (2011). Six out of the fourteen hypotheses in a different study by Alhammedi et al. (2015) were found to be

statistically significant. Among these issues are security worries, organizational readiness, top management support, company standing, government support, and compatibility. However, other experts believe that the financial costs of implementing cloud-based accounting should be taken into account. As cost is still a big element in the adoption of any new technology by SMEs, Vidhyalakshmi and Kumar (2016) contend that ROI and TCO estimates are some fundamental metrics calculations that must be completed before stepping into the cloud. An organization that wants to use cloud computing technology to handle its accounting information system must take into account a number of issues, including the desire of management, the accessibility of support infrastructure, and the financial effects.

### **Adoption of cloud Accounting in SME, s**

Due in part to the reduced investments SMEs will need to make to access cloud services, they are the main business organizations that will benefit from cloud accounting. Cloud-based solutions may be more affordable than on-premises alternatives, which appeals to SMEs that lack the resources and expertise to construct these solutions themselves (Sultan, 2014). According to Musyaffi and Muna (2021), cloud accounting is becoming a crucial operational tool for SMEs. Cloud-based accounting can help SMEs become more effective, financially structured, and flexible. According to Sastararuji et al. (2022), there is a growing demand across industries for a new type of accounting that is more prompt, automated, enables remote access, and performs intelligent analysis because finance is the lifeblood of SMEs. Every organization can use the computing system known as cloud computing. Tawfik et al. reaffirmed this. According to 2022, cloud computing enables all kinds of businesses, from small and medium-sized firms (SMEs) to global conglomerates, to access information from any location. Small and medium-sized businesses (SMBs) are new and frequently alter their scope of activities in response to market influences, claim Christauskas and Miseviciene (2012). Their actions were impacted by the rapidly growing economy during the past ten years. Organizations must adapt their strategies to keep up with advancements in science, business, and technology on a global scale because the environment is always changing. This can have an impact on corporate performance. Furthermore, despite the fact that cloud accounting seems more suitable for small and medium-sized organizations (SME's) than for huge corporations, Contrarily, small firms take longer than large businesses to adopt new technologies. Because it generates jobs, lowers investment costs, and gives access to new services and technology, such as software upgrades, it appeals to small and medium-sized firms (SMEs), which play a significant role in the economy (Singerová, 2018). According to Lutfi (2022), CB-AIS might be seen as a less expensive alternative to traditional AIS that SMEs could adopt and employ because it is practical and advantageous. Eldalabeeh et al. (2021), who emphasize that cloud solutions also allow for a faster rate of change that has permeated the domain and area of accounting, emphasized this further. As expected, cloud service providers have developed cloud-based



accounting software that has many benefits. According to Kariyawasam's (2019) study in Sri Lanka, SMEs there have the potential to increase their company performance by putting in place a cloud accounting system that will affect their accounting and finance divisions. The results show that cloud accounting has a favorable effect on the components of intellectual capital, and given the continual interactions between these three components, a SME may be able to anticipate improved business performance following the installation of a cloud accounting system. In a study on the effects of cloud computing on the components of the accounting information system. Al-Zoubi (2017) finds that cloud computing results in a reduction in the size of the enterprise in terms of the building and the offices, an improvement in operational performance in terms of facilitating the completion of operations, and accurate accounting operations. This is because cloud accounting allows property to be owned anywhere without management commitment to a specific location. The study finds that PU, SC, TMS, OR, CP, and SCS have a favorable and significant impact on IACB-AIS in Jordanian SMEs. Lutfi (2022) explores understanding the intention to adopt cloud-based accounting information systems in Jordanian SMEs. For CB-AIS computing providers in Jordan, these findings offer reliable information for strategic business decisions. According to a qualitative study by Sastararujji (2022), vendors should concentrate on the unique traits and requirements of SMEs. SMEs, on the other hand, need to assess the cloud accounting platform's organizational fit and integrate it with other areas of their business processes. According to Kariyawasam (2019), cloud accounting has a favorable effect on the components of intellectual capital. As a result of the continual interactions between these three aspects, a SME may anticipate that installing a cloud accounting system will enhance business performance.

### **The Benefits and Drawbacks of Cloud Accounting.**

SME's may now operate their accounting information systems more effectively and competitively thanks to cloud accounting and cloud computing. According to the theory put forth by Tawfik et al. (2022), cloud computing enables all sizes of businesses, from small and medium-sized enterprises (SMEs) to multinational corporations, to access information from any location. There are difficulties with this fresh endeavor, particularly in poor nations. According to Al-Okaily et al. (2022), the price of acquiring and maintaining such ICT systems is seen as a barrier to deployment in many developing countries (such as Ghana). While using cloud-based accounting services has many advantages, there are also certain dangers and disadvantages. The problem of data security is one of the main difficulties with cloud computing. There is a widespread belief that data security has been breached. According to Gupta & Jain (2017), the fact that cloud computing integrates a wide range of technologies—including networks, databases, operating systems, virtualization, resource scheduling, transaction management, load balancing, concurrency control, and memory management—raises a number of security risks. As a result, cloud computing shares many of the systems' and technologies' security

problems. For instance, mapping virtual computers to physical machines and the network connecting the systems in a cloud both require security. Encrypting data and putting in place suitable protocols for data sharing are both components of data security. System integration, security, and privacy are among the difficulties connected with system specification, according to research by Aman and Mohamed (2017). This is supported by Egiyi and Udeh (2020), who draw the conclusion that security is a key issue with using the cloud because some sensitive files could go viral as a result of a single error or service interruption. The data stored in cloud storage becomes more of a target as it becomes more widespread. When someone uploads data to the cloud, they trust a team of people they have never met in person with that data. Cloud computing offers the ability to reduce costs while increasing efficiency. Businesses should be aware of the risks and security issues before embracing cloud technology. By putting into practice a systematic risk assessment approach that includes creating effective cloud usage restrictions and a risk response strategy (Kinkela, 2013), it will be possible to address the data connectivity issue in addition to the security issues that have been brought up in previous studies, particularly in developing nations. According to Egiyi and Udeh (2020), employing cloud accounting has various disadvantages. In Nigeria, where the internet hasn't yet reached many places, cloud technology requires a constant internet connection, which may not always be attainable. It also operates badly at low speeds. When it comes to the public sector's inability to employ cloud accounting, the legislative framework is a problem. The most challenging part of integrating cloud computing into the public sector is the legal framework. The availability, accessibility, confidentiality, and security of public data are crucial for the public sector but are not adequately regulated in the majority of countries. Any security breach could jeopardize citizen security and, depending on the amount of secrecy, could jeopardize national sovereignty (Crîșmariu & Omîtcă, 2022). Therefore, a legal framework is necessary. The advantages of cloud solutions are becoming more and more apparent among businesses nowadays in terms of technology that may be used in the corporate environment (Gupta & Jain 2017). In order to increase operational efficiency and gain a competitive edge, cloud computing offers advantages including flexibility, scalability, ease of installation, and the capacity to adapt to the needs of the modern business environment (Tawfik et al., 2022). The absence of a long-term commitment makes cloud solutions an appealing option. There are no agreements that obligate you to use a specific vendor or type of cloud accounting software (Gupta & Jain, 2017). If necessary, the company can switch to a different vendor. Additionally, speed has been supported by prior research. Financial data can no longer be delayed thanks to cloud computing, which enables every user to be mobile in all of their activities. By authorizing transactions, authorizing payments, entering financial data, preparing financial statements, and other tasks from anywhere without needing to be in an office where the accounting software package is installed on a desktop, accountants in the cloud can perform mobile accounting (Al-Zoubi, 2017). According to Egiyi and Udeh (2020), cloud accounting is widely advised for a

number of reasons. It makes it possible for IT administrators and data center management teams to develop a thorough understanding of both their managed cloud services and internal systems. Numerous initiatives understand that platforms, infrastructure, and cloud accounting software delivered as on-demand services can offer strategic benefits in terms of cost-effectiveness and scalability, allowing systems to scale actively to meet demand rather than being built for usage configurations that rarely occur. The centralization of data and information through the integration of organizational activities including inventory management, fixed assets, and billing, according to Gupta and Jain (2017), is a benefit of shifting data to the cloud. As a result, there is a decrease in workload and time needed to achieve outcomes. The necessity to install IT equipment locally is eliminated, which results in significant savings at the budget and cost level, but the technical function is outsourced as a trade-off. As was already mentioned, a corporation may be able to repurpose valuable and limited resources (both tangible and intangible) through the use of cloud computing for more strategic goals, generating true organizational value (Cleary & Quinn, 2016). The accountant can convey some activities to the clients when accounting moves to the cloud. Turcan et al. (2022), who reaffirmed this, claim that accounting firms can employ cloud accounting to cut back on various accounting processes and processing, which they can subsequently pass along to their clients. This is possible up until a point where computer processing flows coincide with the tasks carried out by conventional accounting software. Accounting professionals don't have to waste time storing data or doing data backups since, with cloud accounting, data is automatically stored and backed up as you go. Accountants may be able to lessen their dependency on paper while simultaneously accelerating the payment process by communicating invoices to customers via cloud accounting rather than printing and sending them (Gade & Rao, 2022). The study looks into the following research question

*RQ What are the advantages and difficulties of cloud accounting systems in Ghana's rural and community Banks*

## **TECHNIQUE AND DATA**

The study's goal was to determine the costs and advantages of deploying a cloud-based accounting information system in Ghana's rural banks. Given that it will elicit comments from practitioners, the qualitative research approach was deemed acceptable for the study. In most cases, from the standpoint of the participant, qualitative methods are utilized to address questions regarding experience, meaning, and perspective. This method was chosen because, according to Hammarberg, Kirkman, and de Lacey (2016), when researchers ask people to talk about their experiences, they frequently learn more than they intended to. A "full richness of data" that admirably takes the context of the study problem into account can be obtained by researchers through the use of qualitative approaches like

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semi-structured interviews, according to Partington (2002). In the naturalist (interpretive) paradigm, survey use functions in the reverse order, whereas methods like interviews and observations are dominant in the naturalist (positive) paradigm and supplemental in the positive paradigm (Golafshani, 2003).

To address the research problem, semi-structured interviews were conducted. Parts of the interview guide were taken from Yau-Yeung (2017). The CEO, credit manager, credit officers, operations manager, branch manager, agency accountants, and accounts officers of a rural bank make up the study's population. Seventy participants made up the study's population. In-person interviews with clients took place in their offices and often lasted 30 minutes. By signing the consent papers, the interviewees gave their permission for the interview. To help the interviewees get comfortable with the interview, the essential questions were emailed to them beforehand. After introducing themselves, the researchers discussed the study's goals and gave out contact information to each potential volunteer. A reminder was issued to the specified people if the request was declined (Yau-Yeung et al., 2020). There were 16 participants from the bank in the final sample size. Based on the process of deliberate sampling, the sample was chosen. This approach was used in order to gain a full insight into people's experiences (Tuckett, 2004), as well as to make sure that research participants had some level of experience in their respective sectors and a thorough grasp and appreciation of the banking systems (Segal, 2014). After interviewing 12 people, theoretical saturation was reached because the interview did not produce any additional findings after that point. By guaranteeing each participant's complete anonymity and offering them the choice to leave the study at any time, response bias was reduced. Leading questions were avoided during the interviews to maintain objectivity. Additionally, the interviewer's interview process made sure that the data gathering and interviews were done regularly. The InViVo program was used to aggregate the interview results into themes and analyze them. In order to derive inferences from the data, the researchers found themes, patterns, and linkages.

The validity and reliability tests employed in quantitative studies are as significant in qualitative studies, according to Amaning et al. (2021). To assess the validity (i.e., credibility) of the study's findings, the researchers used triangulation techniques. Prior to creating themes, the researchers used this technique to look for convergence between the participants and other sources of data (Kuranchie, 2021). One must make sure that the findings are credible, relevant, reliable, and consistent in order to assure the validity of a study. Credibility serves as the standard for assessing the real worth or internal validity of qualitative research. When a qualitative study's conclusions are presented with sufficient context descriptions, it is believable if both those who have had the event and others who care for or treat them can identify with the findings. Similar to external validity, internal validity can be determined by how trustworthy the findings are when they are

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understandable to both those who have had the experience and those who provide care or treatment for them (Hammarberg, Kirkman, & de Lacey, 2016). Consistency, or the dependability of the outcomes, is the criterion for evaluating reliability (Ibiamke & Ajekwe, 2017). This does not suggest that the same result would occur in other situations, but rather that other researchers would find comparable patterns using the same data (Amaning et al., 2021). Maximum diversity in a phenomenon's experience is frequently sought after by researchers in order to both shed light on the phenomenon and deter it from living up to their own narrow expectations.

**PRESENTATION AND DISCUSSIONS OF RESULTS**

This section presents analysis and discussion of results. It starts with the demographic information before a thorough analysis and discussion based on the research objectives and in line with empirical studies were carried out.

*Demographic Information*

Table 1.0 Demographic information

Code	Gender	Highest Educational Qualification	Number of Years Experience	Number of Years in Using the system	Rank
x1	M	Degree	14	11	Branch Manager
x2	F	Diploma	18	6	Accounts manager
x2	F	Degree	17	11	Branch Manager
x4	M	Degree	6	4	Credit Officer
x5	M	Degree	3	3	Systems Administrator
x6	M	Degree	3	3	Credit Officer
x7	F	PGD	17	11	Branch Manager
x8	M	Degree	4	4	Accounts manager
x9	F	MBA	12	12	Branch Manager
x10	M	Degree	16	11	CEO
x11	M	Degree	17	11	Operations Manager-Finance
x12	M	Degree	17	13	Head, IT
x13	F	MSC	12	12	Head, Compliance
x14	M	MPhil	13	4	Head of Operations
x15	M	Degree	24	14	Head, Audit
x16	M	Others	9	9	Internal Auditor
Average			13	9	

Source: Field Survey, 2023

**Advantages of cloud-based accounting software.**

Numerous advantages of cloud accounting information systems have been identified in the literature. According to the study's respondents, rural banks now run more efficiently thanks to the use of cloud accounting by community and rural banks. They all agreed that the system had increased the bank's operational efficiency because, in contrast to the prior method in use, it permitted withdrawals from different branches. provides bank officers with a 360-degree perspective of all actions taking place within the organization.

The UTAUT theory, which suggests that adoption of technology improves performance, lends support to this viewpoint. Additionally, it is consistent with literature and research that have shown that cloud computing increases resource efficiency (Gou et al. 2010, Kinkela 2013). Additionally, the cloud concept is growing in acceptance over time, and more companies are implementing cloud-based software to boost productivity, according to Dimitriu and Matei (2015).

Other study participants claim that using cloud accounting has increased data security. Below is a summary of their viewpoint.

Data is secure and protected since it is kept outside of the bank by a third party. Additionally, internal human meddling and manipulation are eliminated. This is a departure from the literature, which has suggested that a fundamental problem with using a cloud accounting system is data security.

For instance, Gupta & Jain (2017) bring out a number of security concerns related to cloud accounting. System integration, security, and privacy are mentioned as issues related to system specification by Aman and Mohamed (2017) in another study. This is supported by Egayi and Udeh (2020), who draw the conclusion that security is a key issue with using the cloud because some sensitive files could go viral as a result of a single error or service interruption.

Some participants agreed that consumers who would otherwise need to visit their account-holding branches for withdrawals and deposits may readily access banks because of the system. According to them, it has increased the bank's accessibility because customers of rural banks can now withdraw money from locations other than the branches where they have accounts. Other participants agreed that the method had reduced the amount of time it took for customers to leave the banking halls. What they had to say was the following Since the speed of retrieving and processing customer information has significantly increased, it has also helped to decrease the turnaround time for consumers in our banking halls.

Goble (2017) asserts that Temenos T24, like many core banking systems, is a real-time platform, which means that all incoming data is read, processed, and made available nearly immediately. This is corroborated by the literature. The banking halls can turn around more quickly as a result.

### **Cloud Accounting Information System Challenges**

When asked about the system's challenges, some users listed cost as one of the biggest issues. They observed that the system is expensive to maintain. Environmental costs, connection costs, data center costs, and software costs must all be covered by the user. Together, these factors raise the system's cost.

This perspective concurs with the assertion made again by Al-Okaily et al. in 2022 that the expense of acquiring and maintaining such ICT systems is seen as a roadblock to implementation in many developing countries. According to Christauskas and Miseviciene (2012), it appeals to SMEs, who are significant contributors to the economy, because it boosts employment and lowers investment costs. The findings, however, do not support the opinions of Sultan (2014), who considers cloud applications to be an affordable option for SME's, or Mangiuc (2017), who contends that because this business model does not require the purchase of hardware or software licenses, a company's initial investment can be greatly reduced. Another opinion expressed by the survey participants was that of network breakdown. According to their opinions,

The system frequently experiences network failures. The software, service provider, or servers in the receiving bank may be to blame for this.'

This confirms research findings that network failure is a significant weakness in the system. Marsintauli (2021) claims that the issue is network failures that cause system downtime, and Khanom (2017) discovered that 10% of organizations had a network failure or software lock-up that caused "major" downtime in the preceding year.

Other participants expressed their opinion that there is a problem with how error codes are occasionally reported, which makes it challenging to grasp even if you are inclined toward IT. Due to the reported error code not being in simple English but rather a number of alphanumeric codes, they stated that it was difficult to understand.

Officers will be better able to fix issues that develop while using the system if they are aware of these error codes. According to Ryder and Fu (2005), dependability and fault tolerance depend on the software code's ability to handle these exceptions correctly. According to Gopstein et al. (2017), it's imperative to be able to identify and get rid of these confusing program components for reasons other than simply preventing accidents.

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One of the most crucial components of a software project that consistently succeeds is understanding the current source code. The literature supports this conclusion. Another response is the data centre's insufficient technical support service for system-related difficulties.

Participants agreed that the suppliers' technical support services are insufficient and that the data center is slow to resolve problems. According to Badotra and Panda (2019), the usage of conventional networking techniques in cloud data centers presents a number of difficulties and problems. The considerable influence of data center utilization rates on maximum response was not anticipated, even though Paananen's research from 2022 implies that data center response is restricted to the actual load level of a UPS. Some participants shared the opinion that the banks are not helped by the network being intermittent during an upgrade because of this. They claim that "during upgrades, the system goes down for a long time before problems are resolved, posing a risk to the banks as people may believe the bank's inability to run efficiently may be caused by liquidity challenges."

Literature supports this opinion. Building the required infrastructure networks and removing unreliable network connections are crucial for the effective adoption of cloud computing (Kobis, 2013), as cited by Wyslocka & Jelonek (2015). Onyali and Okafor (2016), who believe that cloud accounting is commonly affected by erratic internet access and subpar network connectivity, have further hinted at this.

## **CONCLUSIONS**

As a result of the requirement to effectively and properly transform economic realities into numbers, accounting has been constantly developing. This recording art has been influenced by the development of information technology and the introduction of the internet. Cloud accounting was created as a result of the use of cloud computing technology.

The idea of the cloud is gaining popularity as time goes on, and more companies are utilizing cloud-based software to boost productivity and gain a variety of other advantages. The cloud accounting approach enables tight collaboration between all business players (owners, accountants, auditors, and clients) by providing simultaneous online access to current financial data (Gupta & Jain, 2017).

The purpose of this study was to learn more about the advantages and difficulties of implementing a cloud-based accounting information system. Among them are the system's enhanced customer turnaround time, data security, and organizational performance.



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According to Altin and Yilmaz (2022), the adoption of cloud-based accounting services is significantly influenced by computer self-efficacy, performance expectations, and perceived risk. The UTAUT theory is in agreement with these results. High maintenance costs, network failure, trouble deciphering reported error codes, insufficient technical help, and system failure during an update are a few of the difficulties. With the T24 software, rural banks are usually doing well, and if some of the issues found are fixed, the system would be excellent for them.

## **IMPLICATION AND FUTURE RESEARCH**

The study has a number of repercussions. To safeguard data security, policymakers in Ghana might establish regulations on the use of cloud accounting. A legislative framework is necessary since any security breach might jeopardize the safety of citizens and, depending on the amount of confidentiality, could also threaten national sovereignty, claim Crişmariu and Omîtcă (2022). Additionally, software makers should begin setting up data centers with the intention of migrating their operations to the cloud to enable numerous organizations to subscribe to it, as having one's own software is steadily becoming less and less common. Efforts should be made to strategically lower cloud accounting costs in Ghana. The majority of respondents thought it was too expensive for banks to pay for software, data centers, environmental costs, and communication costs.

This study used a qualitative design to examine the advantages and difficulties of cloud accounting. Future research should examine what businesses can do to lessen some of the difficulties associated with cloud accounting systems. Additionally, a quantitative study can be conducted to support or contradict the conclusions of this one.

### **Contribution to Knowledge**

This paper has look at the cost and benefits of cloud accounting on rural and community banks. It is obvious cloud accounting is the new order of the day. The study has contributed to knowledge because it has brought to light some of the difficulties rural and community banks faced by adopting the cloud accounting system in their operations. Other researchers can look at what interventions rural and community banks can put in place to overcome some of the challenges of the system and to be able to take full benefits of the advantages there is to cloud accounting

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