
The Essentialities of Cloud Accounting Information System on The Operational Efficiency of Firms In Nigeria

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Abstract

Novel accounting technology such as cloud accounting information system has taken the Centre stage in its presumed capacity to provide relevance online accounting and auditing solutions that are accessible from anywhere through the cloud service providers. It is no doubt that keeping pace with this accounting technology has come with apprehension from target audiences, that have created apathy in the deployment of cloud accounting by some companies in Nigerian, due to some speculative drawbacks such as high security breaches, high cost of IT services, risk of unauthorized access and viruses among others. It is in this light, that the study firstly examined the essentialities of cloud accounting information system on the operational efficiency of firms in Nigeria and secondly evaluated if there are significant differences in the perception of respondents in deployment of cloud accounting on corporate exigencies in Nigeria. The survey research design was adopted to collect data from 385 respondents in 32 companies cutting across four sectors in Nigeria. The Chi-square and Analysis of Variance were used for the test of hypotheses and it was discovered that cloud accounting significantly enhances the operational efficiency of firms in Nigeria, while there were no significant difference in the perception of respondents in deployment of cloud accounting leading to increase in the risk of unauthorized access, weak or no access control and high cost of IT services etc. In all, the benefits of the deployment of cloud accounting outweighs the exposures and it was recommended among others that organizations should endeavour to implement substantial security measures to protect IT infrastructure through effective internal control architecture.

KEYWORD: Accounting Technology, Cloud Accounting Information System, Operational Efficiency, Corporate Exigencies

1. Introduction

Technology has continued to impact accounting practices in several ways. Firms all over the world are using dynamic forms of accounting technology for not only automating diagnosis but for predictive analysis that better serve clients and utilize their knowledge more effectively

(Rubino, 2022). It is also essential to state that, accounting technology is in a constant state of flux that should not be ignored for good effect.

Implicatively, firms and accountants all over the world including Nigeria are presumed to keep pace with the intricacies of the changes in the accounting technologies in order to remain relevant in the 21st century business environment. This technological dynamic has recently resonated in cloud accounting through which the previously paper-driven processes and systems are transformed into streamlined accounting workflow solutions that are accessible anytime through cloud-based software (Dimitriu & Matei, 2015). By this, firms are able to process and store their financial records on the internet, while, accountants, shareholders and other interested parties can also work collaboratively in a digital environment and easily distribute financial data irrespective of their locations (Asiaei & Rahim, 2016).

According to Satya (2018) cloud is a web-based storage data that is carried out on a remote server and can be accessed using internet connection. Marr (2022) added that, cloud-based accounting technology is a form of cloud computing in which networks, data storage, applications, security and development tools are all enabled via the Internet (i.e., the cloud). Traditional accounting runs on desktop computer with software installation while cloud accounting is an internet bound application that does not require any installation and maintenance software on desktop computer (Dimitriu & Matei, 2015). Cloud accounting requires less maintenance, updates financial information automatically, provides financial reporting in real-time and allows management to focus on growing businesses (Khanom, 2017).

Cloud accounting is also suitable to users with small budget as they benefit more since it is cheaper with time to finance cloud accounting software than old-fashioned accounting software (Cong & Du 2010). This is because the budget specifies how resources, especially time or money, will be allocated or spent during a particular period or fiscal year (Beredugo, Azubike & Okon, 2019).

To capitalize on this fast innovation and economies of scale; some forward-thinking accountants are already taking full advantage of cloud-based accounting technology as means of not only getting up-to-date view of a business, but to save time with automation and improve accuracy of accounting practices which is not the case with the traditional accounting practices in most industries. In response, companies in Nigeria are increasing becoming aware of the business value that cloud accounting brings and are expected to take steps towards transitions to the cloud. However, some are receptive while others are apprehensive of this innovative landmark up to the extent that some firms are disassociating themselves with the usage of cloud accounting, which they attribute to high magnitude of security and privacy breaches, risk of unauthorized access, high cost of IT services and serious threat of a weak or no access control among others.

Evidently several companies in Nigeria are still using the traditional accounting methods in their business process which often has a toll on company's performance because data processes are relatively slow, prone to errors, thus leading to absurd information and the occurrence of fraud

in some cases. It is against this background, the article assesses the essentialities of cloud accounting on the operational efficiency of firms in Nigeria.

2. Literature Review

2.1. Keeping pace with trends in Accounting Technology

Accounting is ever-changing and industry-technology providers are constantly releasing new, innovative accounting technology that changes the way accountants do their jobs; as such, keeping up in the accounting sector, means keeping up with the technological trends (Rubino, 2022).

Technological trends have changed how professionals conduct business and will continue to shape the future of every industry, including accounting. Businesses measure success in numbers, which is why accountants are in such high demand. It is important to stay up to date on the latest technologies that can make the accounting profession easier. Being adaptable, future-focused, and comfortable with accounting technology can help a professional to stand out in a highly competitive field. Keeping pace with the recent accounting software in changing times simply empowers the accounting professional and give the companies an edge in their operational accomplishments.

In recent times however, clients and firms expect their accountants to offer automated services, and accounting professionals of all specializations are expected to meet those demands. These expectations are not just coming from clientele, either. According to FinancesOnline (2022) over 50% of C-level executives in the accounting industry in the UK anticipate the development of automated accounting systems. Accounting professional are expected to stay ahead of emerging trends in order to avoid all form of redundancy. A focus on continuous improvement will surely change the way we perceive accounting processes. This is because with the right accounting technology in place, accountants can automate manual activities, save precious time and money while also improving accuracy, enabling collaboration and work/life balance and boosting staff and client engagement levels. Accounting technology definitively incorporates the accounting information system that revolves around the transaction processing, general ledger and financial reporting system without compromising organization's revenue, expenditures, human resources, production and finance cycles (Belfo, 2013).

The more firms embrace and focus on continuous improvement in accounting technology, the more the nature of accounting and the role of the accountant will change in the future. Accounting technology therefore offers accountants the ability to share data and documents with clients and staff in real time, by enabling remote work and online collaboration with clients, and boosting staff engagement. Accounting technology helps accountants to analyze data, surface valuable insights, stay current on the latest tax laws, and proactively provide guidance and support to clients to include the assessment and calculation of pension funds to meet pensioners' wellbeing upon retirement (Beredugo, 2015).

In today's complex tax landscape, accounting technology is a catalyst to making informed decisions and sustaining growth. Cisco (2014) also advanced that the use of this contemporary

technology will inevitably alter a company's operating environment and thus makes the auditors appraise the risks going with the changes easily and timely. Asiaei and Rahim (2016) added stated that, many accounting technology providers had already accepted cloud computing in their different line of products delivery and to sustain this, accounting professional, facilitator, software developers, should keep trainings and retraining clients on the newest technology.

2.2. Essentialities of Cloud Accounting Information System on the Operational Efficiency of Firms

Businesses use cloud-based accounting, to record and store all financial transactions online and make them accessible from anywhere at any time through cloud application service providers. This cloud-based accounting package conveniently processes all general ledger transactions and makes available financial and management reporting as demanded or when required (Sobhan, 2019). Importantly, there is no cloud accounting without cloud computing, and cloud computing, is the on-demand provision of computing services that do not require active control by service users (Khanom, 2017). Cloud accounting is therefore, the use of cloud computing on the internet to create a virtual accounting information system, as well as turning accounting into a cloud-based service (Dimitriu & Matei, 2015).

Some of the essentialities of cloud-based accounting technology are that it enables accountants to work securely with clients in real time and empowers staff to collaborate from anywhere. It effortlessly engages in drawing up trial balance, payroll, financial statement analysis and more on a single platform (Livera 2019). This comprehensive cloud-based accounting technology also offers a path to significantly increased productivity and an enhanced client experience. In essence, cloud-based accounting technology makes it easy for accountants to maintain their day-to-day accounting activities while providing real-time access to critical data for proactive client engagement and guidance.

In other instances, cloud-based accounting information system discourages manual data entry in order to reduce the risk of errors, while the accounting system increases visibility of client needs with connected solutions (Marr, 2022). It also helps user to gain insights for analysis and decision support, as well as automate key processes and reduce hours spent on non-billable work (Sunarjo, 2020).

With the right software in place, cloud accounting information system will flag inaccuracies and errors, and it will prevent new errors from occurring as well as improving and speeding up the financial planning and analysis process. In addition, cloud accounting helps companies to become more competitive and productive because they spend less time on processes that would normally take several months (Rubino, 2022). Among other benefit cloud-based accounting technology represent is that it is secured but companies must choose an established accounting technology provider. Data will be protected with multiple layers of security, including network-level security, virus protection, encryption schemes, and more (Sunarjo, 2020).

The present cloud accounting market is many and is extremely populous with genius as well as fake products; consequently, companies have to ensure their uninterrupted attention before engaging with a particular data provider or solution (Livera 2019). In choosing a virtual

accounting application; it has to fix all the specific necessities and goals of the business. Those in the accounting field argue that automated technology will make accountants' lives more efficient, cutting down the time spent on manual entry and reducing human error. This efficiency can provide accountants additional time to optimize their involvement in a company's economic strategies and this could translate to higher profitability. However, could this be possible in a dynamic environment like Nigeria? It is in view of this that the study poses the first research question: if cloud accounting significantly enhances the operational efficiency of firms in Nigeria?

2.3. Deployment of Cloud Accounting and Corporate Exigencies in Nigeria

2.3.1. Deployment of cloud accounting and effective tax computation.

The issues of effective tax computations have always been a problem with most companies in Nigeria and they are always looking for effective ways of computing their tax liability in view of their obligation to pay their taxes (Igbeng, Beredugo & Adu 2015), without any form of sanctions from tax administrators. This is because tax computation submitted by tax payers must agree with the underlying records (Beredugo, Azubike & Mefor, 2019).

Johnson, Berres, Salvar, Betson, Young and Ha (2013) established that cloud based accounting affects accounting exercise in several ways such as payroll and tax automation software that is used to streamline human resource tasks by automatically calculating payments, applying tax rates, and storing employee tax information. Cloud accounting could not only influence the revenue recognition, fixed assets, but helps in tax management. Established also was that with a seamless tax workflow process from start to finish, accountants benefit from automating key processes, reducing the hours spent on non-billable work, and creating efficiencies that free up staff for more meaningful work. Khanom, (2017) shows that evidence abounds where cloud accountant engaged in tax activities and delivered client tax returns by e-mail. He also established that with cloud accounting in place, irrespective of the tax regulations change, one do not have to purchase and install updates. Cloud accounting automatically updates itself to serve the tax computation purposes. The question is that, could this be true given our Nigerian business environment? It is in this light our second research question includes: if there are significant differences in the perception of respondents on the deployment of cloud accounting leading to effective tax computation among businesses in Nigeria?

2.3.2. Deployment of cloud accounting and increase in the risk of unauthorized access to companies' accounting information system

The cloud gives clients and colleagues the ability to access certain data, making it easier to collaborate and exchange information. It is used on the internet to create a virtual accounting information system, turning accounting into a cloud-based service (Dimitriu & Matei, 2015). As such it is susceptible to risk of unauthorized access. Most cloud accounting information system is for large audience. Internet fraudulent activities have been on the increase and one major thing companies would want to shy away from is to be swindled by fraudsters who have unauthorized access to their companies' accounting information system. The veracity of its susceptibility is in context. Although, the need for frequent change of password becomes

obligatory to salvage or reduce the risk; the exposure of increase in unauthorized access to companies' accounting information system still lingers. The third research question is therefore raised to include: if there is a significant difference in the perception of respondents on the deployment of cloud accounting leading to increase in the risk of unauthorized access of companies' accounting information system?

2.3.3. Deployment of cloud accounting and threat of a weak or no access control of companies' accounting information system

Cloud computing is a technology put in place to allow easy access to software which are already installed on the network and made available as a service by another business over the Internet (Sobhan, 2019). In relation to cloud accounting, companies apply accounting information system in the cloud system which means all the financial transactions are recorded and stored on the internet and can be accessed anywhere and anytime through service providers of cloud application (Dimitriu & Matei, 2015). It is a model developed to enable convenience while accessing on-demand network access to a shared pool of data services that can be quickly provisioned and released with little management effort. The issue here is that, does management of companies have full control of their accounting information system or are they exposed to threats of weak or no access control of their accounting information?

Given, the Nigerian scenario, it is possible cloud computing Service providers might be unwilling to grant full control on the ground of initiating additional future charges for unspecified services, among others. It is in view of this the fourth questions was asked: If there is a significant difference in the perception of respondents on the deployment of cloud accounting leading to threat of a weak or no access control of companies' accounting information system?

2.3.4. Deployment of cloud accounting and high cost of IT services

For a business to succeed in competitive market where different brands compete for patronage and consumers have freedom of choice, coupled with high running costs, there is need for proper and exhaustive realization and understanding of what could add value at a reduced cost (Eze, Nnabuko & Beredugo, 2014). In view of this, one of the first areas where cloud accounting outscore traditional accounting is the cost. With a cloud-based system, businesses do not make a lump-sum purchase of a program, or buy and set up a server to host it. This minimizes IT professional fees and helps to avoid installation fees altogether. As accounting rules and tax regulations change, one would not have to purchase and install updates. Instead, the monthly or annual subscription cost includes the updating cost, and these are completed by the provider as needed.

It should be recalled that the motive of cloud computing is to create a remote cluster of servers that can permit easy access to information technology resources at a minimum cost. Chiang, Chen & Hsu, (2019) opined that utilization of cloud accounting is a platform for the reduction of the cost of information as well as means of optimizing time for more productivity, while Smith, (2018) and Babur, Jazba, Sabila, Faiza, Zainab, Farania, Sehresh, Amina & Ali, (2019)

on the other hand only see it has as an impediment to employment opportunities and an impairment to the growth of SMEs.

The exposure here is that inasmuch as companies' accounting information is now domiciled with the cloud accounting service provider, there is latitude that either the service provider or their partners in Nigeria might want to overburden their clients with persistent increase in the annual subscription cost. It is this fuss that leads to the fifth research question: If there are significant differences in the perception of respondents on the deployment of cloud accounting leading to high cost of IT services?

2.3.5. Deployment of cloud accounting and increase in the risk of viruses on companies' accounting information system

Cloud computing is also important because it keeps all financial information secured. According to Haslinda, Mohd and Norhaiza (2017), keeping data on a desktop is insufficient because the system could be infected by a virus, which would result in the loss of all the data saved there. Additionally, if all financial information are stored online, there will be no loss even if the desktop and hard drive files are infected with a virus since it is accessible through the cloud. Khanom (2017) added that personal desktop may be susceptible to a virus but cloud accounting information system avert all impending virus from infecting files in the cloud.

Al-Nsoura, Weshah and Dahiyat (2021) opined that using of the Cloud Accounting Information system leads to reducing risks of virus and achieving benefits from the viewpoint of Jordanian external auditors. However, from the views of practitioners in Nigeria this subject matter is not known with certainty. It is in line with this, that the sixth research question is posed: if there are significant differences in the perception of respondents on the deployment of cloud accounting leading to increase in the risk of viruses on companies' accounting information system?

2.3.6. Deployment of cloud accounting and reduction in the manipulation of companies' financial reports.

The application of the cloud accounting information system leads to the reduction in the manipulation of financial reports (Al-Nsoura, Weshah and Dahiyat, 2021). This is because cloud accounting information system stores source documents and automatically processes and stores the information. All entries into CAIS are visible to all stakeholders who have access to it and any alteration requires appropriate justification, authorization and access. In fact, any information entered into the Cloud Accounting Information System cannot be altered without the knowledge and approval of management and designated board members of an organization. However, it has challenges in issues such as account hijacking, broken authentication, including compromised credentials. It is in this view that the seventh research question was asked: If there are significant difference in the perception of respondents on the deployment of cloud accounting leading to reduction in the manipulation of companies' financial reports?

2.3.7. Deployment of cloud accounting and auditors access to necessary information required to carry out the audit tasks

Nurhajati (2016) established that, in a cloud environment, the audit is a combination of information systems audit and audit of Information Technology (audit of infrastructure IT). He emphasized that because the technologies and controls are located outside the entity, it is challenging to comprehend the auditing process in cloud computing environments. Nurhajati (2016) also opined that auditing methodologies used by various audit companies varies. Bangalore, Deeksha and Rakesh (2019) on the other hand advanced that the lack of technical know-how is a critically responsible for non-adoption of the cloud accounting especially in private audit firms; while Al-Nsour, Weshah and Dahiyat, (2021) averred that the implementation of the Cloud Accounting Information System enhances the auditor's ability to get necessary information that enables them to carry out the audit tasks". These inconsistencies lead to the eighth research question: If there are significant differences in the perception of respondents on the deployment of cloud accounting in assisting auditors to access necessary information required to carry out their audit tasks.

2.3.8. Deployment of cloud accounting and breaches of security and confidentiality of companies' accounting information system?

Cloud-based accounting information system has been beneficial in the area of accuracy data, faster data entries and up-to date data, integrated and centralized system, easy-to-access mobile and human resources efficiency. However, some the major challenges are security issues such as account hijacking, hacked API and interfaces, broken authentication, compromised credentials and data breaches.

Khanom (2017) also emphasized that lesser security breaches have wreaked catastrophic consequences on global corporations and that accountants are fooling themselves if they think they are immune through cloud accounting information system. Muhrtala and Ogundeji (2013) established that handful of information have been revealed on the magnitude of financial losses experienced by companies around the world on security breaches of IT systems. They further added that the likelihood of security breaches to cloud accounting information system were mainly due from either insider abuse (present employee), and/or aggrieved past employee; or from remote locations by outsider. it is line with this thought that the ninth research question was asked: If there are significant difference in the perception of respondents on the deployment of cloud accounting leading to breaches of security and confidentiality of companies' accounting information system?.

2.4 Previous studies

It is no doubt that novel technology comes with both exposures and apprehension from target audience. However, Awotomilusi, Dagunduro and Osaloni (2022) had established that given the Nigerian scenario, internet services should be adequately provided and this should be supported by training and retraining of staff in the usage of information systems. Ehioghien and Ojeaga, (2022) & Asiaei and Rahim (2016) posit that firms should develop on strategies to adopt cloud technologies accounting and ensure training and retraining of professional accountants to enhance efficient performance in financial information. Strauss, et al (2015) in United Kingdom

reveal that 49 percent of respondents from non-financial sector were apathy to the use cloud Accounting. Banglore, Deeksha and Rakesh (2019) in their study further added that lack of technical know-how and high cost of information are the critical problem responsible for non-adoption of the cloud accounting especially in private audit firms. This study therefore focuses on the essentialities of cloud accounting on operational efficiencies and its attendant's effect on corporate exigencies in Nigerian.

3. Research Method

The study adopted survey research design to elicit required information. The population of the study was estimated at 10,719 staff from 32 companies cutting across four (4) sectors in Nigeria. These sectors include: the industrial goods, Conglomerate, Constructions and Consumer goods (Human Resource Report, 2023). The study subsequently arrived at a sample size of 385 members of staff that are knowledgeable in cloud computing. This comprises 45 for industrial goods; 72 for conglomerates; 86 for construction and 182 for consumer goods. The survey instrument was structured on a 4-point likertscale in the order of strongly agreed (4 points), fairly agreed (3 points), agreed (2 points), and undecided (1 point). The Chi-square and ANOVA were used to test if there are significant differences in the perception of respondents from the four sectors on the subject matter. All collated data are as presented in tables and percentages.

4. Result and Discussion

The tables below contain data from 385 respondents from 32 companies that cuts across four sectors. Information in table 1 contains respondents' opinions that were used to ascertain whether cloud accounting can contribute to the operational efficiency of firms in Nigeria and it was discovered from item 1a that 16.9 percent of the total respondents were undecided on that 'getting up-to-date view of a business through cloud accounting enhances effective decision making and delivery of quality financial report'. However over 83 percent agreed that cloud accounting enhances effective decision making and delivery of quality financial report. Item 1b recorded over 76 percent of the respondents affirming that reducing cost of accounting technology that is accompanied with less maintenance engenders increased competitiveness and productiveness.; while items 1c affirmed in equivocal term that over 91 percent opined that accounting automations through cloud accounting provides financial reporting in real-time.

Table1: Cloud accounting and operational efficiency of firms in Nigeria

QUESTIONS	U	A	FA	SA	Total
1a. Getting up-to-date view of a business through cloud accounting enhances effective decision making and delivery of quality financial report.	65 (16.9%)	41 (10.65)	113 (29.4%)	166 (43.1%)	385 100 %
1b. The tendency of reducing cost of accounting technology that is accompanied with less maintenance	92 (23.9%)	94 (24.4%)	102 (26.5%)	97 (25.2%)	385 100 %

engenders increased competitiveness and productiveness.					
1c. Accounting automations provides financial reporting in real-time.	33 (8.57%)	51 (13.2%)	127 (33%)	174 (45.2%)	385 100) %

Source: Field Survey, 2023

Table 2: Descriptive

QUESTIONS		N	Mean	Std. Deviation	Std. Error
2. Cloud accounting leads to effective tax computation among businesses in Nigeria	Industrial_Goods	45	3.2222	.79455	.11844
	Conglomerates	72	3.0694	.71850	.08468
	Construction	86	2.7791	.87314	.09415
	Consumer Goods	182	3.0275	.77553	.05749
	Total	385	3.0026	.79876	.04071
3. Cloud accounting leads to increase in the risk of unauthorized access of companies' accounting information system.	Industrial_Goods	45	2.9333	.88933	.13257
	Conglomerates	72	2.7639	.92680	.10922
	Construction	86	2.8023	.91805	.09900
	Consumer Goods	182	2.8736	.80774	.05987
	Total	385	2.8442	.86399	.04403
4. Cloud accounting presents a serious threat of a weak or no access control of companies' accounting information system.	Industrial_Goods	45	2.9556	.79646	.11873
	Conglomerates	72	2.7222	.93782	.11052
	Construction	86	3.1860	.69471	.07491
	Consumer Goods	182	2.9121	.82968	.06150
	Total	385	2.9429	.83032	.04232
5. Cloud accounting leads to high cost of IT services.	Industrial_Goods	45	2.8667	.84208	.12553
	Conglomerates	72	2.7917	.83813	.09877
	Construction	86	2.8953	.78259	.08439
	Consumer Goods	182	2.9066	.85208	.06316
	Total	385	2.8779	.83114	.04236
6. Cloud accounting leads to increase in the risk of viruses on companies' accounting information system.*	Industrial_Goods	45	3.1333	.66058	.09847
	Conglomerates	72	2.8194	.87736	.10340
	Construction	86	2.9186	.82910	.08940
	Consumer Goods	182	2.7912	.92260	.06839
	Total	385	2.8649	.87049	.04436
7. Cloud accounting engenders reduction in the manipulation of companies' financial reports	Industrial_Goods	45	2.8222	1.02888	.15338
	Conglomerates	72	2.8056	.84984	.10015
	Construction	86	2.9186	.75483	.08140

	Consumer Goods	182	2.9011	.84166	.06239
	Total	385	2.8779	.84666	.04315
8.Cloud accounting assist auditors in accessing necessary information required to carry out the audit tasks	Industrial_Goods	45	3.0222	.78303	.11673
	Conglomerates	72	2.8056	.88236	.10399
	Construction	86	2.9070	.83494	.09003
	Consumer Goods	182	2.9176	.82691	.06129
	Total	385	2.9065	.83328	.04247
9.Cloud accounting leads to breaches in security and confidentiality of companies' accounts	Industrial_Goods	45	3.1556	.67270	.10028
	Conglomerates	72	3.0000	.78722	.09277
	Construction	86	2.9419	.80227	.08651
	Consumer Goods	182	2.9505	.81612	.06049
	Total	385	2.9818	.79201	.04036

Source: Field Survey, 2023

The descriptive statistics reveals the mean response rate of respondents' perception from industrial goods, Conglomerate, Constructions and Consumer goods sectors and it reveals that from question 2 relating to cloud accounting leading to effective tax computation, all the sectors responses were above 3.0694 except for the construction sector with a mean of 2.7791. This indicates a disparity in the respondents' perception on cloud accounting leading to effective tax computation. The mean response for question three: shows that all the mean of respondents' perceptions were within 2.7639 to 2.9333. This represents little or no parity in their perception on Cloud accounting leading to increase in the risk of unauthorized access of companies' accounting information system. The descriptive result of the fourth question on 'cloud accounting representing a serious threat of a weak or no access control of companies' accounting information system shows that the least mean response was from conglomerate 2.7222 while the highest was construction with 3.1860. The parity between them is huge. On the other hand the descriptive statistics between the lowest and highest mean responses of questions five to nine show that the respondent perception were very close to the industrial mean response of 2.8779, 2.8649, 2.8779, 2.9065 and 2.9818. This shows that there is no industrial parity in relation to the responses elicited for the respective objectives.

4.1 Test of Hypotheses

Hypothesis one

H_0 : Cloud accounting does not significantly enhance the operational efficiency of firms in Nigeria.

The hypothesis was tested using information drawn from table 1. This result is as presented below:

Table 3: Chi-Square Test (Hypothesis One)

CLOUD ACCOUNTING	OPERATIONAL EFFICIENCY OF FIRMS					
	U	A	FA	SA	X ²	P-value
1a. Getting up-to-date view of a business through cloud accounting enhances effective decision making and delivery of quality financial report.	65 (63.3)	41 (62)	113 (114)	166 (145.7)	80.5	P< 0.05 Sig
1b. The tendency of reducing cost of accounting technology that is accompanied with less maintenance engenders increased competitiveness and productiveness.	92 (63.3)	94 (62)	102 (114)	97 (145.7)		
1c. Accounting automations provides financial reporting in real-time.	33 (63.3)	51 (62)	127 (114)	174 (145.7)		

Source: SPSS Output, 2023

The above table shows that result of the observed and expected variables of the chi-square test of significance. The observed variables preceded the expected variables which are presented in brackets. It was discovered that the chi square (X²) result of 80.5 at 6 d.f. was higher than the tabulated value at 0.05 level of significance [X²_{cal} = 80.5 > t_{0.05} = 12.592]. Hence the Null hypothesis (H₀) which specifies that cloud accounting does not significantly enhance the operational efficiency of firms in Nigeria was rejected.

It follows therefore that the alternative hypothesis (H₁) which states that “Cloud accounting significantly enhances the operational efficiency of firms in Nigeria” was accepted.

Table 4: Analysis of Variance (Anova)

		Sum of Squares	Df	Mean Square	F	Sig.
Hypothesis Two						
Cloud accounting leads to effective tax computation among businesses in Nigeria * company	Between Groups (Combined)	6.902	3	2.301	3.681	.012
	Within Groups	238.096	381	.625		
	Total	244.997	384			

Hypothesis Three						
Cloud accounting leads to increase in the risk of unauthorized access of companies' accounting information system. * company	Between Groups (Combined)	1.130	3	.377	.503	.681
	Within Groups	285.519	381	.749		
	Total	286.649	384			
Hypothesis Four						
Cloud accounting presents a serious threat of a weak or no access control of companies' accounting information system. * company	Between Groups (Combined)	8.771	3	2.924	4.352	.005
	Within Groups	255.972	381	.672		
	Total	264.743	384			
Hypothesis Five						
Cloud accounting leading to high cost of IT services of companies' accounting information system. * company	Between Groups (Combined)	.717	3	.239	.344	.793
	Within Groups	264.545	381	.694		
	Total	265.262	384			
Hypothesis Six						
Cloud accounting leads to increase in the risk of viruses on companies' accounting information system.* company	Between Groups (Combined)	4.628	3	1.543	2.052	.106
	Within Groups	286.349	381	.752		
	Total	290.977	384			
Hypothesis Seven						
Cloud accounting engenders reduction in the manipulation of companies' financial reports. * company	Between Groups (Combined)	.757	3	.252	.350	.789
	Within Groups	274.506	381	.720		
	Total	275.262	384			
Hypothesis Eight						
Cloud accounting assist auditors in accessing necessary information required to carry out the audit tasks. * company	Between Groups (Combined)	1.359	3	.453	.650	.583
	Within Groups	265.275	381	.696		
	Total	266.634	384			
Hypothesis Nine						
Cloud accounting leads to breaches in security and confidentiality of companies' accounts * company	Between Groups (Combined)	1.697	3	.566	.901	.441
	Within Groups	239.175	381	.628		
	Total	240.873	384			

Source: SPSS Output, 2023

Hypothesis two

Published by:

H₀: There is no significant difference in the perception of respondents on deployment of cloud accounting leading to effective companies' tax computation among businesses in Nigeria.

In relation to the second hypothesis, the result from the above table shows that there is a significant difference in the perception of respondents on ($F_{cal} = 3.681$, $p\text{-value} = .012 < 0.05$) the deployment of cloud accounting leading to effective company's tax computation.

Hypothesis Three

H₀: There is no significant difference in the perception of respondents on the deployment of cloud accounting leading to increase in the risk of unauthorized access of companies' accounting information system.

This third hypothesis test shows that there is no significant difference ($F_{cal} = 0.503$, $p\text{-value} = .681 > 0.05$) in the perception of respondents on the deployment of cloud accounting leading to increase in the risk of unauthorized access of companies' accounting information system.

Hypothesis Four

H₀: There is no significant difference in the perception of respondents on the deployment of cloud accounting representing a serious threat of a weak or no access control of companies' accounting information system.

The fourth hypothesis reveals that there is a significant difference ($F_{cal} = 4.352$, $p\text{-value} = .005 < 0.05$) in the perception of respondents on the deployment of cloud accounting representing a serious threat of a weak or no access control of companies' accounting information system.

Hypothesis Five

H₀: There is no significant difference in the perception of respondents on the deployment of cloud accounting leading to high cost of IT services of companies' accounting information system.

The fifth hypothesis reveals the F-Value was less than the cutoff point ($F_{cal} = 0.344$, $p\text{-value} = .793 > 0.05$) and the p-value was less than 0.05 indicating that there is no significant difference in the perception of respondents on the deployment of cloud accounting leading to high cost of IT services of companies' accounting information system.

Hypothesis Six

H₀: There is no significant difference in the perception of respondents on the deployment of cloud accounting leading to increase in the risk of viruses on companies' accounting information system.

The sixth hypothesis result shows that there is also no significant difference ($F_{cal} = 2.052$, $p\text{-value} = .106 > 0.05$) in the perception of respondents in the deployment of cloud accounting leading to increase in the risk of viruses on companies' accounting information system.

Hypothesis Seven

H₀: There is no significant difference in the perception of respondents on the deployment of cloud accounting leading to reduction in the manipulation of companies' financial reports.

The seventh hypothesis reveals that there is no significant difference ($F_{cal} = 0.350$, $p\text{-value} = .789 > 0.05$) in the perception of respondents on the deployment of cloud accounting leading to reduction in the manipulation of companies' financial reports.

Hypothesis Eight

H₀: There is no significant difference in the perception of respondents on the deployment of cloud accounting assisting auditors in accessing necessary information required to carry out the audit tasks.

The eight hypothesis also reveals that there is no significant difference ($F_{cal} = 0.650$, $p\text{-value} = .583 > 0.05$) on the perception of respondents in the deployment of cloud accounting assisting auditors in accessing necessary information required to carry out the audit tasks.

Hypothesis Nine

H₀: There is no significant difference in the perception of respondents on the deployment of cloud accounting leading to breaches of security and confidentiality of companies' accounting information system.

The ninth objective shows that there is no significant difference in the perception of respondents ($F_{cal} = 0.901$, $p\text{-value} = .441 > 0.05$) on the deployment of cloud accounting leading to breaches of security and confidentiality of companies' accounting information system.

5. Conclusion

Our result shows that although, cloud accounting plays a significant role in enhancing the operational efficiency of firms in Nigeria, there is a huge disagreement from the perception of respondents on the capacity of cloud accounting to assist in effective companies' tax computation. However, respondents somewhat agreed that the deployment of cloud accounting could lead to increase in the risk of unauthorized access of companies' accounting information system. Respondents also have divergent views on the deployment of cloud accounting instigating a serious threat of a weak or no access control by companies.

From the other findings, respondents were unanimous that cloud accounting could lead to high cost of IT services as well as lead to increase in the risk of viruses. However, against all odds, it was discovered that cloud accounting contributes in the reduction of the manipulation of companies' financial reports as well as assist auditors in accessing necessary information required to carry out their audit tasks. Discovered also was that cloud accounting could lead to breaches of security and confidentiality of companies' accounting information system.

Accounting is an ever-changing industry and technology providers are constantly releasing new, innovative accounting technology that changes the way accountants do their jobs. To keep up in the accounting sector, Accountants, financial managers and organizations are expected to keep up with the technology trends.

Accounting technology such as cloud accounting information system can be used to streamline accounting services and provide the best financial assistance in the drawing up and maintenance of companies' financial statements in the cloud.

It is no doubt that novel technology comes with both exposures and apprehension from target audience, and it has been revealed in the Nigerian context that although, cloud accounting involves high cost of IT services and could engender risk of unauthorized access and viruses of companies' accounting information system; cloud accounting helps companies to manage complex accounting tasks, including audits and cash flow management as well as assist in the reduction of the manipulation of companies' financial reports. In view of these, the benefits of the deployment of cloud accounting outweighs the exposures which can be effectively curtailed by scrupulous management team.

It is therefore recommended that organizations should endeavour to implement substantial security measures to protect IT infrastructure through effective internal control architecture. Management should put in place authorization procedures where authorized users should have access to only applications and data required to perform specific tasks only. Activity log and user credentials must be verified before authorization. There should also be regular monitoring of logical access to systems and data. This will go a long way to curtail if not to avert the risk of unauthorized access and viruses in companies accounting information system. In Addition, all Accounting and Auditing practitioners should upgrade their skills to be equipped with Cloud Accounting digital transformation knowledge and they should not only be indoctrinated on how cloud accounting could be effectively used for tax computation among other accounting and management exigencies but they should be opened to newer and emerging accounting technology.

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