Effect of cloud accounting characteristics on performance of listed food and beverages companies in Nigeria

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Abstract: The study examined the effect of cloud accounting characteristics on the performance of listed food and beverage companies in Nigeria. Cloud accounting characteristics were proxied by the Cost of Software (COSW), Cost of Risk (CORSK), and Cost of Training (COTR), while Return on Equity (ROE) and Market Value (MKV) were used to measure performance. The population of the study comprises all twenty-three (23) food and beverage companies listed on the Nigerian Stock Exchange (NSE) as of December 31, 2021. A purposeful sampling technique was used to choose ten (10) foods and beverages, with secondary data needed for the study of ten (10) years (2012–2021). The study employed the multiple regression analysis technique. The findings revealed that COSW had a negative and significant effect on ROE and MKV. However, COTR has a positive and significant influence on ROE and MKV. The study concluded that COSW and COTR have a significant effect on the performance of food and beverage companies in Nigeria. Hence, the study recommended that food and beverage companies in Nigeria should ensure mechanisms to regulate the cost of training to enjoy the maximum benefit of cloud accounting.

Keywords: Cost of software; Cost of risk; Cost of training; Performance; Food and beverages companies.

1. Introduction

Although accounting software was first developed a few decades ago, its potential has grown through time, and the end result is a complex instrument. Recent accounting debates have been sparked by the growth of information technology, which ultimately led to the advancement of computerized accounting systems like cloud accounting. Companies' accounting departments are now more vulnerable to the effects of business digitization, the enormous potential of the internet, the implications of big data, and the growing significance of data mining as a result of technical advancements. Businesses can access applications and services over the cloud without the burden and expense of owning and managing the hardware. Unquestionably influential, cloud computing is expected to serve as the foundation for future developments in the economy (Ferri et al., 2019; Fu et al., 2019). Cloud accounting encompasses using cloud-based software on any device with a web connection. Accounting software is now essential as an accountant tool for quicker and more effective work completion due to the sizeable information volume and the necessary processing time. (Rao et al., 2018; El-dalabeeh, 2019; Turner & Weickgenannt, 2020).

Because financial records are given in a more orderly manner thanks to advanced cloud accounting software, cloud computing is advantageous to corporate enterprises. Since the development of automated accounting systems has demonstrated to improve overall corporate performance, the adoption of cloud accounting in rising and developing nations has recently presented a significant challenge to scholars (Owolabi & Izang, 2020).

Financial performance can be measured from an accounting or market-based perspective and refers to the company's financial situation during a specific time period as well as its capacity to manage and control its resources. Despite the regulatory authorities' concerted attempts to revive manufacturing enterprises, Nigerian manufacturing sector continues to witness unsteady growth in their performance coupled with distress and failure occasioned by low profit (Egiyi & Udeh, 2020). The majority of industrial enterprises operate below capacity, which can be attributed to outdated technological infrastructures and inadequate acco33unting systems. Additionally, the current outbreak of the corona virus has highlighted the need of cloud accounting, particularly in developing nations like Nigeria (Abdul-Azeez & Ho, 2015; Oyedokun et al., 2019).

The Covid 19 outbreak exposed the advantages of cloud accounting software in developed economies like the United States, the United Kingdom, and Canada. Since cloud accounting supports remote access, this suggests that employees were able to work from home since there is remote access to information from any location in real time. Evidence from the literature on cloud accounting points to data security, software acquisition costs, training costs, maintenance costs, and risk element costs as the primary determinants of cloud accounting in Nigeria. According to empirical assessments, the majority of cloud accounting research was done in industrialized nations (Raihan, 2019; Effiong et al., 2020; Abdel et al., 2021; Al-Nsour, Weshah & Dahiyat, 2021). Few studies (Onyali, 2016; Egyi & Udeh, 2020; Ndegwa, 2020; Abidde, 2021) have been conducted on the impact of cloud accounting on the performance of manufacturing companies in Nigeria.

These studies have produced conflicting results and have primarily focused on theory papers. By taking into account a special combination to proxy cloud accounting characteristics, such as the cost of software acquisition, training costs, and cost of risk element, this study aims to close this research gap. Thus, this study examined the effect of cloud accounting characteristics on return on equity as well as on market value of listed food and beverage companies in Nigeria.

2. Literature review

The Cloud is used by cloud accounting software to store accounting data. Owners and employees can now view financial data from any location with an Internet connection. Cloud accounting is the collection of computer systems, software, and services offered by a private

provider outside the workplace and used to deliver a variety of services. Cloud accounting is the use of cloud computing on the internet to create a virtual accounting information system, i.e., cloud computing plus accounting is equal to cloud accounting (Al-Rabi'e & Ali, 2020).

Performance of a company is a purely arbitrary indicator of how well it can use technology to advance its operations. It's a capacity to meet its goals while using the resources at its disposal. Studies show that cloud accounting has become more popular recently, but few researchers paid attention on it, especially in terms of its implications on manufacturing firm performance. Huang (2016) asserts that accounting cloud has a significant competitive advantage due to its low costs, which can lower business costs, and high efficiency, which can significantly improve the working efficiency of financial accounting of companies. It also offers a user-friendly interface, which can undoubtedly make it easier for users to improve the performance of businesses (Aini et al., 2019). The empirical assessments revealed that earlier research notably that done in Nigeria, solely looked at data security as a proxy for cloud accounting characteristics, ignoring factors like cost and risk aspect. The performance of food and beverage enterprises in Nigeria was therefore studied in this study in relation to the cost of software purchase, the cost of training, and the cost of the risk element.

Diffusion of Innovation Theory: This study was anchored based on Diffusion of Innovations (DOI) theory. A DOI theory aims to explain how, why, and how quickly new ideas and technologies spread across civilizations. French sociologist initially investigated the idea (Gabriel, 2004). Five steps are passed by each person: information, persuasion, decision, implementation, and confirmation. If the innovation is used, it spreads through numerous routes of communication. According to the notion of innovation dissemination, an innovation's adoption is influenced by five characteristics (Rogers, 1995). The adoption of technological breakthroughs by users is described by the DOI model. Innovation is defined by Rogers (1995) as an idea, practice, or thing that an individual or other unit of adoption perceives as novel. Diffusion is the process through which an innovation spreads among the individuals within a social system over time through certain routes. Our hypothesis is pertinent to this research because it explains how novel ideas and concepts become widely accepted. It also takes into account a number of characteristics related to technical advancements that influence how quickly they catch on.

3. Methods

The study employed an ex-post facto research design. The population of the study comprises all twenty-three (23) food and beverage companies listed on the Nigerian Stock Exchange (NSE) as of December 31, 2021. A purposeful sampling technique was used to choose ten (10) foods and beverages, with secondary data needed for the study of ten (10) years (2012–2021). Both dependent and independent variables data were sourced from the annual reports of selected firms (Table 1). The study employed the multiple linear regression analysis technique.

In other to examine the effect of cloud accounting characteristics on financial performance of food and beverages companies in Nigeria, sequel to the objectives of the study, the models were identified below:

$$ROE = f(COSW, COTR, CORSK) \tag{1}$$

$$MKV = f(COSW, COTR, CORSK) \tag{2}$$

The functional form of the models are further expressed in econometric form given as:

$$ROE = \beta_o + \beta_1 COSW + \beta_2 CORSK + \beta_3 COTR + U \tag{3}$$

$$MKV = \beta_o + \beta_1 COSW + \beta_2 CORSK + \beta_3 COTR + U \tag{4}$$

Where: ROE is Return on Equity, MKV is Market Value; β_0 = Constant, β_1, β_2, β_3, = Slope Coefficient, COSW = Cost of Software, CORSK, Cost of Risk, COTR = Cost of Training, U= Stochastic disturbance, i=ith firm, t=time period.

Table 1 - Measurement of Variables

Variable	Type	Name	Acronym	Measurement and sources
Dependent	Performance	Return on Equity	ROE	Net profit after tax/ Shareholders equity ×100 (Akesinro & Adetoro, 2016)
		Market Share Value	MKV	Current market price per share × total number of outstanding shares. (Qurotul *et al*., 2020)
Independent	Cloud Accounting Characteristics	Software Acquisition Cost	COSW	Cost used in acquisition of software (Al-Rabie & Ali, 2020)
		Cost of Training	COTR	Total monetary value for training staff (Kemski & Nyberg, 2014)
		Cost of Risk Element	CORSK	Administration cost (Al-zoubi, 2017)

Source: the authors (2023).

4. Case Study

Moudud-ul-hug et al. (2020) conducted an empirical study on overview of cloud accounting in Bangladesh. The study employed regression analysis. The findings confirmed that cloud accounting can boost business performance. Fatima (2020) also investigated the potential for cost savings using cloud accounting. The study found that certain organizations' ability to reduce costs is positively impacted by cloud accounting. Similar research was conducted by Aries et al. (2020) on the implementation of cloud accounting software and security measures for accounting in MSMEs. The study found that the adoption of cloud accounting software and its security system had a favorable impact on MSMEs' accounting. More so, Qurotul et al. (2020) investigated the impact of cloud accounting as an income statement on accountant performance in the same vein. The study found that because the template can be altered to suit the requirements of the business, cloud accounting makes it simple for accountants to perform their work, particularly on the income statement.

Furthermore, a study on the function of cloud accounting in the global accounting information system was conducted by Asaduzzaman and Syed in (2020). The study found that the worldwide accounting information system benefits from cloud accounting. Similar assessments of cloud accounting as an accountant reconciliation tool were made by Alexander and Ellen (2020). The study found that cloud accounting improves account reconciliation by providing accurate data that is readily available when needed. Additionally, Mitran (2020) did research on the advantages and disadvantages of using cloud accounting. The survey found that there are many benefits to cloud computing that small- and medium-sized businesses in particular can no longer ignore. Egiyi and Udesta (2020) also examined how cloud accounting has affected Nigeria. According to the survey, cloud accounting lowers the cost of data and accessories like laptops and cell phones.

According to the results of a study conducted in Jordan by Abdel et al. (2021), top management support, organizational competency, service quality, system quality, perceived usefulness, and perceived simplicity of use are all associated favorably with the adoption of cloud accounting. Similar research was conducted on the disadvantages and benefits of cloud accounting information systems by Al-Nsour et al. in (2021). According to the study's findings, while labor and overtime cost savings are among cloud accounting's main advantages, penetration, disruption, and

secrecy are among its main drawbacks. Additionally, in a different study on the use of cloud accounting to the accounting process conducted by Marsintauli et al. (2021). The result of the study indicated that cloud accounting has passed all levels of technological readiness and has become a trusted accounting information system in providing the benefits of ease of management in relation to corporate financial transactions.

Based on the review of most related studies above, it can be observed that the majority of the studies were carried out in developed countries, and their findings have mixed results. The understanding of cloud computing adoption decisions is marred by inconsistencies on the influence of a myriad of organizational, technological, environmental, and human factors that vary by situational context and need to be empirically analyzed, particularly in developing economies such as Nigeria. The current study is unique because it focused on the effect of cloud accounting on the performance as well as on the market value of food and beverage companies in Nigeria.

5. Results and Discussion

A graph for both dependent and independent variables is shown in Figure 1. Data for study variables were sourced from the annual reports of selected firms for ten years. The graph shows that firm performance measured by return on equity and market value was above all the independent variables (software acquisition cost, cost of training, and cost of risk element).

Figure 1: Graph of Study Variables
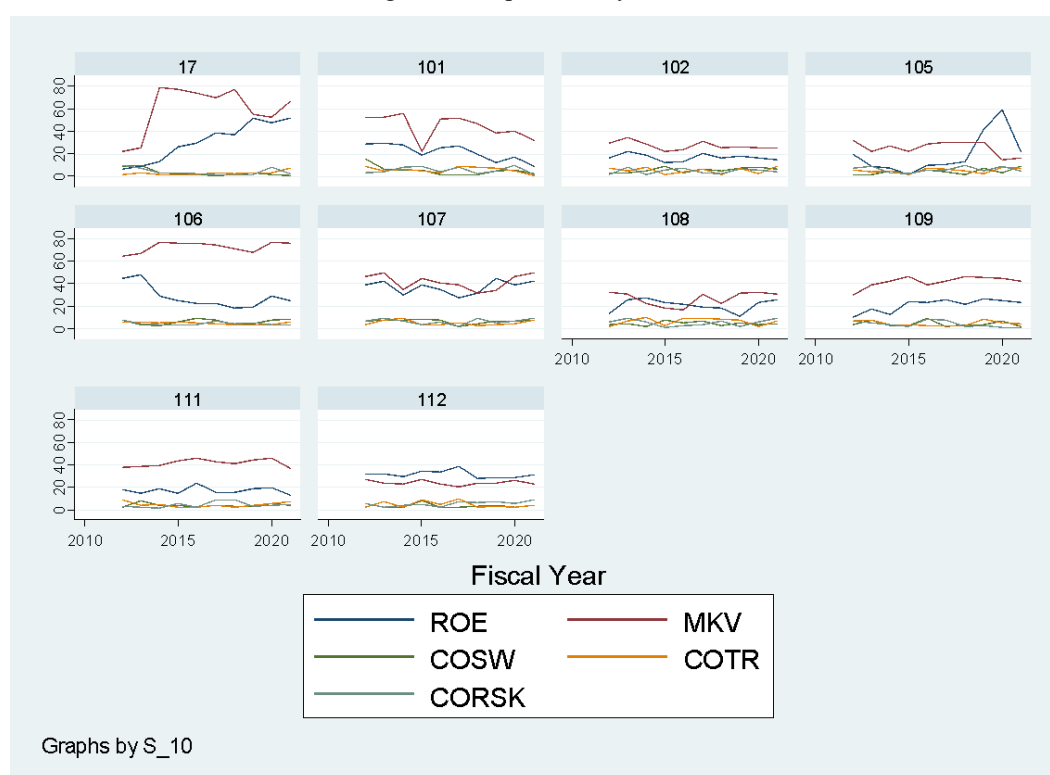
Source: the authors (2023).

In the process of analyzing the effect of cloud accounting and financial performance on food and beverage companies listed on the NSE, Table 2 shows the descriptive statistics of the study variables, including their mean, maximum, minimum, standard deviation, skewness, and kurtosis. The ROE and MKV means were 19.459 and 525.211, respectively. The means of ROE and MKV, which represent the proxy performance of the sampled firms, were 19.459 and 52.211, respectively. As a result, companies with values between 19.459 and 52.211 are performing well. The mean

values of the cloud accounting characteristics proxies COTR, COSW, and CORSK are respectively 15.012, 16.395 and 16.655. The standard deviations of all the study variables are: ROE, MKV, COTR, COSW, and CORSK: 46.165, 106.295, 0.506, 1.170, and 1.38, which suggest that MKV has a high level of dispersion. The gaps between the maximum and minimum clearly show that the sampled companies are similar. Kurtosis values indicate that most of the study variables, particularly ROE and MKV, were highly selected. Apart from ROE and CORSK, other study variables were positively skewed.

Table 2 - Descriptive Statistics

Variable	ROE	MKV	COTR	COSW	CORSK
Mean	19.459	52.212	15.012	16.394	16.655
Maximum	100.275	176.000	16.429	18.867	19.400
Minimum	-37.344	-13.000	14.093	14.583	12.611
Std. Dev.	46.165	106.295	0.506	1.170	1.383
Skewness	-6.338	3.238	0.6293	0.3084	-0.463
Kurtosis	56.072	13.730	3.626	1.7455	2.797

Source: the authors (2023).

Table 3 shows the correlation among the variables. ROE and COTR, as well as CORSK, have a positive but weak correlation. However, COSW was negatively correlated with ROE. More so, MKV has a negative correlation with COTR and CORSK while exerting a positive relationship with COSW. The weak correlation between variables may be due to other types of relationships that are not captured by a linear correlation, such as non-linear or interaction effects. Also, it may be because variables are related through a causal chain or when the correlation is consistent across different subgroups.

Table 3 - Correlation Matrix

Variable	ROE	MKV	COTR	COSW	CORSK
ROE	1				
MKV	0.414	1			
COTR	0.005	-0.419	1		
COSW	-0.163	0.250	-0.183	1	
CORSK	0.024	-0.011	0.033	-0.173	1

Source: the authors (2023).

4.1. Effect of Cloud Accounting Characteristics and Performance

In order to examine the effect of cloud accounting characteristics on the financial performance of listed food and beverage companies measured by ROE and MKV models, both models are controlled by three variables (COSW, COTR, and CORSK). The authors chose ROE because it provides an insight into a firm's profitability for its stakeholders. Also, it shows whether or not a firm's income is appropriate for its size and how good a company is at generating benefits for its capital providers beyond earnings. The importance of correlating ROE with independent variables includes observing whether the expectations of the stakeholders were met or not, measuring the effectiveness of a training program on overall profitability, focusing new hire training on targeted business outcomes, and estimating how efficiently a company's management is able to generate profit with the available assets.

Similarly, market value was chosen due to the fact that it provides a genuine way of eliminating ambiguity or uncertainty for determining the worth of an asset and enabling firms to

understand their position in the market. It correlates with independent variables because the cost of risk elements, software, and training has a direct impact on the level of stock prices, and market prices improve. Firms that effectively manage risk are perceived as being relatively low-risk and likely have a higher market value. High-quality software can enhance a company's reputation and attract customers, investors, and partners, ultimately increasing its market value. Software and training costs can impact a firm's market value by affecting its reputation, productivity, and overall performance. COSW had a negative and significant influence on ROE [= -2.334; p>|t|=0.0030.05], according to the findings. COTR and CORSK, on the other hand, had a positive and significant effect on ROE [= 5.807; p>|t|=0.0000.05; = 3.723; p>|t|=0.0000.05]. Furthermore, COSW had a negative and significant impact on ROE [= -4.413; p>|t|=0.0000.05]. Nonetheless, COTR and CORSK had a positive and statistically significant effect on ROE [= 6.259p>|t|=0.0000.05]. CORSK had a positive, but not statistically significant, effect on MKV [= 1.388; p>|t|= 0.172> 0.05].

The adjusted R2 is 0.518 and 0.412, respectively, which are both moderate. The lower adjusted R2 implies that firm performance of selected firms cannot be 100% explained by study variables. The unexplained part of firm performance can be attributed to exclusion of other independent variables (cloud accounting characteristics) that can impact on firm performance but were excluded because they are outside the scope of this study. The values of the F-statistic of 25.786 (0.000) and 58.468 (0.000) for ROE and MKV, respectively, indicate that variables together are significant to determine the effect of cloud accounting characteristics on the financial performance of listed food and beverage companies measured by ROE and MKV. Therefore, it shows that the null hypothesis was rejected in lieu of the alternative hypothesis; hence, there is a significant effect of the cost of software acquisition and setup costs on the return on equity and market share value of listed food and beverage companies in Nigeria (Table 4).

Table 4 - Regression Analysis

Variable	ROE Model	MKV Model
COSW	-2.334**	-4.413**
	(0.003)	(0.000)
COTR	5.807**	6.259**
	(0.000)	(0.000)
CORSK	1.723	1.388
	(0.128)	(0.173)
Constant	21.707**	6.046**
	(0.000)	(0.000)
R-Square	0.590	0.469
Adj. R-Square	0.518	0.412
F-Statistic	25.786	58.467
	(0.000)	(0.000)

Note: ** implies 5% significance level.

Source: the authors (2023).

The negative and significant effect of COSW on ROE and MKV suggests that one unit increase in the cost of software reduces ROE and MKV by 2.3% and 4.4%, respectively. The findings are consistent with previous research by (Kemiski & Nybary, 2014; Tahmina, 2017). However, the positive and significant effect of COTR on ROE and MKV implies that one unit

increase in the cost of training increases ROE and MKV by 5% and 6%, respectively. The study aligns with the research findings of Al-Nsour et al. (2021).

6. Conclusion and Recommendations

The study examined the effect of cloud accounting characteristics on the financial performance of food and beverage companies in Nigeria. The study concluded that the cost of software and the cost of training have a significant effect on the performance of food and beverage companies in Nigeria. Hence, the study recommended that food and beverage companies in Nigeria should ensure mechanisms to regulate the cost of training to enjoy the maximum benefit of cloud accounting. Also, there is a compelling need for the government to enact a law to protect cloud data and ensure its seamless utilization.

References

Abidde, M. O. (2021). Cloud Computer Based Accounting and Corporate Financial Performance: A Study of Some Listed Manufacturing Companies in Nigeria; *IOSR Journal of Business and Management (IOSR-JBM)* 23(3), 12-19.

Alexander D & Britton A (1999), *Financial Reporting*, U.K, International Thompson Business Press, 5th Edition.

Abdel-Basset, M., Chang, V., & Nabeeh, N. A. (2021). An intelligent framework using disruptive technologies for COVID-19 analysis. *Technological Forecasting and Social Change*, *163*, 120431.

Abdul-Azeez, I. A., & Ho, C. S. (2015). Realizing low carbon emission in the university campus towards energy sustaina9bility. *Open Journal of energy efficiency*, *4*(02), 15.

Aini, Q., Anoesyirwan, A., & Ana, Y. (2020). Effect of Cloud Accounting as income statement on Accountant Performance. *Aptisi Transactions On Management (ATM)*, *4*(1), 13-21.

Akesinro, S. A., & Adetoso, J. A. (2016). The effects of computerized Accounting system on the performance of banks in Nigeria. *Journal of economics and sustainable development*, *7*(14), 76-82.

Al-Nsour, B. H. (2021). The impacts of COVID-19 on the Jordan tourism & accommodations sector: An empirical study. *Journal of Entrepreneurship Education*, *24*(4), 1-11.

Al-Rabi'e, A & Ali, O. A, M (2020). The Intellectual Impact of Cloud Accounting in Enhancing the Quality of Auditing for Jordanian Audit Offices; *Journal of Business & Economic Policy 7*(3), 432-441.

Al-zoubi, A, M. (2017) The Effect of Cloud Computing on Elements of Accounting Information System, *Global Journal of Management and Business Research Accounting and Auditing*, *17*(3), 1-8.

Effiong, S. A., Asuquo, A. I., & Enya, E. F. (2020). Discretionary accruals and going concern of manufacturing companies. *International Journal of Scientific & Technology Research*, *9*(2), 2976-2983.

Egiyi, M. A. & Udeh, S. N. (2020). Overview of cloud computing in Nigeria, *International Journal of Academic Management Science Research*, 4(6), 81-88.

El-dalabeeh, A. E. R. K. (2019). The impact of accounting information systems development on improving e-commerce in the jordanian public shareholding industrial companies. *Academy of Accounting and Financial Studies Journal*, *23*(2), 1-11.

Fatimah, Y. A., Govindan, K., Murniningsih, R., & Setiawan, A. (2020). Industry 4.0 based sustainable circular economy approach for smart waste management system to achieve sustainable development goals: A case study of Indonesia. *Journal of Cleaner Production*, *269*, 122263.

Ferri, L., Spanò, R., Maffei, M., & Fiondella, C. (2020). How risk perception influences CEOs' technological decisions: extending the technology acceptance model to small and medium-sized enterprises' technology decision makers. *European Journal of Innovation Management*. 4(6), 231-241.

Fu, J., Liu, J., Tian, H., Li, Y., Bao, Y., Fang, Z., & Lu, H. (2019). Dual attention network for scene segmentation. In *Proceedings of the IEEE/CVF conference on computer vision and pattern recognition*, 3146-3154.

Gabriel, E. (2014). Socialism and the Public Sphere in the Era of Anarchist "Propaganda of the Deed": 1890–1902. In *Assassins and Conspirators*, 135-166.

Huang, N. (2016). Discussion on the Application of Cloud Accounting in Enterprise Accounting Informatization. In 2nd *International Conference on Economics, Social Science, Arts, Education and Management Engineering (ESSAEME 2016)*, Published by Atlantis Press, 136-139.

Kemski, F & Nyberg, A, (2014). *How is the Cloud Impacting Accounting Practice? A Case Study on Provider & User Perspectives of Accounting Software-as-a-Service Partnerships* in Sweden; Business Administration Master's Thesis; Karlstad Business School, Karlstad University, Karlstad , Sweden.

Marsintauli, F., Novianti, E., Situmorang, R., & Djoniputri, F. (2021). An analysis on the implementation of cloud accounting to the accounting process. *Accounting*, *7*(4), 747-754.

Mitran, D, (2020). "Risks And Benefits Of Adopting Cloud Accounting," *Internal Auditing and Risk Management, Athenaeum University of Bucharest*, *60*(4), 22-32.

Moudud-Ul-Huq, S., Asaduzzaman, M., & Biswas, T. (2020). Role of cloud computing in global accounting information systems. *The Bottom Line*, *33*(3), 231-250.

Ndegwa, R., Simiyu, J., Ayieta, E., & Odero, N. (2020). A fast and accurate analytical method for parameter determination of a photovoltaic system based on manufacturer's data. *Journal of Renewable Energy*.

Onyali, C.I, (2016). The Use of Cloud Computing And Accounting Packages For Corporate Business Transactions In Nigeria: An Explorative Study; *IOSR Journal of Business and Management (IOSR-JBM)*, *18*(7), 113-117.

Owolabi, S.A & Izang, J.U (2020). Cloud Accounting and Financial Reporting; International *Journal of Research Publications*; www.ijrp.org.

Oyedokun, G. E., Tomomewo, A. O., & Owolabi, S. A. (2019). Cost Control and Profitability of Selected Manufacturing Companies in Nigeria. *Journal of Accounting and Strategic Finance*, *2*(1), 14-33.

Qurotul Aini, Q. A., Mukti Budiarto, M. B., Poh- Putra, P. O. H., & Untung Rahardja, U. R. (2020). Exploring e-learning challenges during the global COVID-19 pandemic: A review. *Journal of Information System*, *16*(2), 47-65.

Rao, M.T., Jyotsna, T.G., Sivani, T.G. (2018), Impact of Cloud Accounting: Accounting Professional's Perspective, *IOSR Journal of Business and Management*, 53-59.

Rogers, E. (1995). *Diffusion of Innovations,* 4th ed.; The Free Press: Detroit, MI, USA, 15–23.

Rohani M.B & Che hussin A. R, (2015). An Integrated Theoretical Framework for Cloud Computing Adoption by Universities Technology Transfer Offices (TTOs); *Journal of Theoretical and Applied Information Technology*; *79*(3), 178-190.

Saha, T., Das, S. K., Rahman, M. M., Siddique, F. K., & Uddin, M. G. (2020). Prospects and Challenges of Implementing Cloud Accounting in Bangladesh. *The Journal of Asian Finance, Economics and Business*, *7*(12), 275-282.

Turner, L., Weickgenannt, A. B., & Copeland, M. K. (2022). *Accounting information systems: controls and processes*. John Wiley & Sons.