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Audit quality and financial performamnce of listed pharmaceutical firms in Nigeria

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Abstract
The medication industry is crucial to the prosperity of a nation and advancement because of the inextricable link among good health and, by consequently, worker efficiency. In addition to supplying the drugs and other health products necessary for a healthy and productive workforce, a thriving pharmaceutical sector also creates good jobs for locals, boosts GDP, and brings in both foreign currency and import substitution. This study set out to answer the question, "Does audit quality correlate with the economic performance of widely traded Nigerian pharmaceutical companies?" for the industry. The design was decided upon after the occurrence. At the.05 level of significance, we tested three hypotheses. Secondary information was gathered from 2015-2021 public company financial reports. Five of the pharmaceutical firms represented in NXG were utilized for this study. Ordinary least square regression was used in conjunction with E-views version 9 to evaluate the collected data. The findings established a beneficial and mathematically substantial correlation between the amount of employees and nature of the audit firm and the overall profits of mentioned medical companies in Nigeria. Since using the Big 4 audit companies has been demonstrated to have better odds of enhancing the financial performance of pharmaceutical performance businesses in Nigeria, it was advised that focus be urged on their usage.

Keywords: Audit, quality, financial performamnce, pharmaceutical, firms

Introduction
The healthcare sector is crucial to the prosperity of a nation and advancement because of the inextricable link connecting wellbeing and, by consequently, worker efficiency. According to Ugbam and Okoro (2017) [21], a thriving pharmaceutical sector not only ensures a healthy and productive workforce by producing drugs and other health products, but also provides citizens with high-quality employment opportunities, boosts GDP, and brings in foreign currency. Since the pre-independence period, when companies like Beechɑ̡m, Mɑ̡y and Bake̡r, Pfize̡r, Glɑ̡xo, and JL Morrisón sent their own salespeople to distribute their products, the Nigerian pharmaceutical industry has gone a long way. To date, over 130 pharmaceutical companies have set up shop in the nation, with only five holding a combined 58% of the market share in drug production. The sector is only able to meet 25% of the local demand for drugs, with the remaining 75% coming from imports, mostly from Asian nations, according to the performance indicators that are currently available for the sector. Approximately 70% of the drugs that pharmaceutical companies in Nigeria market are imported. Capacity utilization for the sector is 40%. The value of pharmaceutical imports was $481 million in 2013, and experts predict it will rise to $789 million in 2018. Unfortunately for the healthcare industry, Nigeria is not among the top 17 emerging markets, despite the fact that the global pharmaceutical business is expanding quickly and is predicted to double to $1.3 trillion over the next five years. It is estimated that the industry would add 0.19 percent to GDP this year.

Although data on pharmaceutical industry longevity is lacking, the manufacturing sector as a whole has a very low survival rate; as of 2016, an investigation by Manufacturers Association of Nigeria (MAN) shows that 30% of the business sectors were categorized as being shut down, 60% were categorized as ailing, and only 10% of the companies in the field were categorized as functioning at feasible level (MAN, 2016) [27].

Financial irregularities and the subsequent worldwide economic collapse have highlighted the continuing need of sustaining high-quality financial reporting that investors can trust. An independent audit is crucial for publicly listed businesses in Nigeria, especially oil and gas corporations that are subject to stringent regulations because of their potential economic effect. Financial reporting by businesses is a public-interest endeavour because of its central role in the framework for regulation and supervision. The quality of an audit is one of the most important difficulties in modern auditing. Stakeholders refer to the many people and organizations within and outside of the firm that have an interest in the reliability of the company's audited financial statements. By offering adequate confidence that management's accounting records are unaltered by substantial errors, an independent examination of financial declarations is a system set up to continually track all data featured therein, thus decreasing information asymmetry and securing the legitimate needs of various stakeholders.
Auditors have a responsibility to society to ensure that financial statements are produced in conformity with accepted standards and laws and to mitigate the risk of material misstatements. Revenue statements and records that have undergone examined by an established external auditor are more trusted by consumers, a significant portion of whom are clients, than those authorized by unscrupulous auditing professionals. Independent accountants, especially those working for larger corporations, have a worse reputation than their skewed counterparts in the accounting industry. If we want efficient markets and better financial performance, we need financial statements that can be trusted. A third-party quality inspection reinforces confidence in the accuracy and honesty of financial records, which is essential for the smooth functioning of economies and the improvement of financial management. Reporting firms may benefit from having their financial statements audited by an independent third party in accordance with rigorous auditing standards to ensure they are reliable, transparent, and applicable. By bolstering effective governance, risk management, and internal control, audits may aid a company's bottom line. As a result, researchers in this study analyzed the audit quality and financial output of Nigeria's publicly traded pharmaceutical enterprises.

Statement of problem

It is regularly observed that the standard of an examination may affect the impact that good accounting has on the financial achievements of a business. One would assume that Big4 audited companies do better financially than those that aren't Big4 audited. Companies in Nigeria are failing at an alarming rate due to the rise in financial scandals and fake financial reporting. The existing research on scope, kind, and specialty of audit firms are all good indicators of the integrity of the audit, specialization is scant, according to the available evidence. The study's goal is to fill an understanding void.

Aim and objectives of the study

The study's goal was to examine the publicly listed pharmaceutical companies in Nigeria and evaluate their auditing practices and economic outcomes. The following were among the particular aims of the study:

- Determine the connection between audit firm type and NPM of listed pharmaceutical companies in Nigeria.
- Determine the connection between Audit firm size and NPM of listed pharmaceutical companies in Nigeria.
- Determine the impact of Audit firm specialisation and NPM of listed pharmaceutical companies in Nigeria.

Research Questions

The following research questions were formulated to guide the study:

1. What is the connection between audit firm type and NPM of listed pharmaceutical companies in Nigeria?
2. What is the connection between Audit firm size and NPM of listed pharmaceutical companies in Nigeria?
3. What is the impact of Audit firm specialization and NPM of listed pharmaceutical companies in Nigeria?

Hypotheses

At the 0.05 level of relevance, the subsequent null hypotheses were developed and examined

H01: There is no significant relationship between audit firm type and net profit margin of listed pharmaceutical firms in Nigeria.

H02: There is no significant relationship between Audit firm size and NPM of listed pharmaceutical companies in Nigeria.

H03: There is no significant relationship between Audit firm specialization and NPM of listed pharmaceutical companies in Nigeria.

Literature Review

Audit Quality

To provide an opinion on the reliability and objectivity of an audited report for an accounting time frame. When a business wants to make sure its books are in order, it hires an outside party known as an accountant to go through everything. In order to provide stakeholders, trust in the dependability of accounting records, the Code (2018) mandates having a third-party auditor provide an objective assessment of the reliability of a company's accounting statements.
The incapacity of auditors to detect substantial errors in the accounting records is a major threat to investors because it casts doubt on the statements' accuracy. Due to this, the effectiveness of audits has to be prioritized. Audit quality is a measure of how well the audit itself was conducted. Although there is no universally accepted definition of "audit quality," this study explores the problem from the perspective of people who may be affected by the audit. So, the market predicts how likely it is that a certain accountant would discover and report a flaw in the customer's bookkeeping system, and this probability is what we call audit quality. There are several conceptual factors and aspects that affect audit quality. The accountant's skills, independence, qualifications, and work expertise, alongside the accountant's compensation, the frequency with which the Auditor's firm is rotated, the extent to which the Audit Committee oversees the Auditor, and the size of the Auditor's company are all made public. The probability of an objective and honest assessment of the accounting records being reviewed tends to increase in tandem with the magnitude of the auditing company conducting the audit. expenses, expertise, assessment plan, independence, qualifications, and expertise all rise in tandem with the

company's size.

Firm Performance

Individual investors, stakeholders, and the economy as a whole all have a vested interest in a company's financial results. Return on investment is of paramount importance to investors. If a company is doing well, its investors will reap the benefits. A company's financial success may boost employee compensation, customer satisfaction, and the firm's reputation in the community in which it works. Better financial results for a business may pave the way for expansion and new possibilities that, in turn, boost economic growth and benefit society at large. How efficiently a business utilises its assets to accomplish its goals is a measure of its performance. Rahul (2017) [23] defines corporate performance as the extent to which an organization is able to meet its strategic goals using the resources at its disposal. According to Suleiman (2013) [24], the success of an organization may be measured by how successfully it evaluates and plans to achieve its goals and objectives. A company's ability to produce revenue from its operating assets might be inferred from its financial performance. How efficiently a company uses its principal business's assets to create profits is one subjective measure of financial success, according to (Van-Horn 2005) [28].

Authors use a variety of metrics to assess business success. Economic viability, gross profit, capital yield, sales yield, equity yield, percentage of market, revenue increase, and stock price are a few examples.

Net Profit Margin

The net profit margin quantifies profits per transaction. Profit for the period is compared to sales for the current period, hence this accounting-based performance indicator may be classified as forward looking. The profit margin is the amount of money made after taxes as a percentage of sales. The key point is that it reveals how much of a profit may be made from sales. A company's net profit margin should become steadier and higher as it ages. The net profit margin refers to the amount that determines how much net profits surpass sales as a percentage. The proportion by which a business manages to make an overall profit. Share what percentage of sales result in profits for the company. A business's net income or net profit may be calculated by deducting all of its operational expenditures, product costs (which incorporates raw material expenses), and tax bills from its total revenue.

Audit quality and financial performance

There is evidence linking competent auditing to healthier accounting records outcomes for businesses. According to Afza & Nasir (2014) [2], investors have more trust in a company's operational success when the quality of its independent audits is high. They found that businesses audited by major accounting firms were more likely to provide trustworthy financial statements in an effort to win back investors' confidence. But as Bouaziz (2012) [3] points out, providing a proper and sufficient index for the accounting records is one of a accountant's primary responsibilities, the expenses of the agent may be reduced, as can the costs of the monitor, allowing the firm to operate more efficiently. However, Farouk and Hassan (2014) [9] and Hanim Fadzil and colleagues (2005) [11] shown that there is a correlation between audit standards and financial results for companies. It follows that an audit of high quality should have a beneficial effect on financial outcomes.

Theoretical Review

Signaling Theory

Michael Spence first put out the theory in 1973. The majority of investors will have higher trust in a company's financial statements if they have been audited by one of the "Big 4" accounting companies. This research is relevant to Signalling theory since having one of the Big4 audit firms examine a business's financial accounts and market outcomes sends a strong message that the company is in good standing.

Empirical evidence on audit quality and financial performance

In discussing the relationship between audit excellence and profitability, we present and debate the subsequent empirical outcomes:

Babatunde, Adedeji, and Adegbite (2021) examined the effectiveness and efficiency of audits conducted by DMBs in Nigeria. The findings suggest that the bookkeeping evaluation of a bank's performance (ROA) has a strong and positive correlation to both the audit fee and the size of the auditor. Nonetheless, auditor expenses as well as magnitude have a favorable effect on the stock market as assessed by Tobin's Q, while the relationship is not statistically substantial.

Listed deposit money institutions in Nigeria have their audit quality parameters and share prices correlated by Eneisik and Micah (2021) [25]. Auditing expenses have a small detrimental impact on Tobin's Q. A statistically relevant adverse impact of audit tenure on Tobin's Q, according to the data. The empirical data reveals that the size of the auditing company significantly and positively affected Tobin's Q.

Using data from 2010 to 2019, Amahalu and Obi (2020) [29] analyzed the connection between audit quality and the financial success of publicly traded Nigerian corporations. The results showed that the audit board's size, autonomy, and financial understanding all had a favourable effect on the profit on resources at the 5% level of relevance.

Abdullahi, Norfadzilah, Umar, and Lateef (2020) [1] looked on how audit quality affected the financial results of Nigerian publicly traded firms. Using a panel data approach, data from 2010-2018 was analyzed for 84 NSE-listed firms over 756 samples. The research employed model validation by means of multi-regression. The findings indicate that accounting fees are favorably and marginally related to ROA. This data implies that public firms in Nigeria might benefit financially from a reduction in expenses incurred for employing an auditing firm. This high positive association among audit company stature and ROA lends credence to the organization concept. This encouraging trend indicates that as the percentage of businesses subject to Big4 audits increases, so does their return on investment (ROI). Similarly, there is a positive and statistically significant relationship between auditor independence and ROA. At last, it is shown that auditor independence affects financial performance more than auditor size.

Ugwunta, Ugwuanyi, and Ngwa (2018) used regression and covariance analysis to examine the impact of audit standards for valuations of shares in Nigeria's energy sector. Findings show that the composition of the auditor designation and auditing body composition both have significant effects on the market value of publicly traded companies. The covariance analysis found a negative correlation between audit tenure and stock price, whereas positive correlations were found for forms of audits, the accountant sovereignty, and committee of auditing Makeup. Although this study is current, further research is needed to determine the effect of audit quality on overall performance, since it only examined one aspect of performance.

To ascertain the influence of audit business features on the financial achievements of money deposit banks in Nigeria, Egbụnike and Abiạhu, 2017 looked at the relationship between audit firm reports and the success of these institutions. The survey includes all commercial banks that offered savings accounts for customers as of the 2015 fiscal year's close, which was collected using an ex post facto and correlational research methodology covering the five years from 2010 to 2014. According to the findings, audit efficiency has a substantial impact on the return on investment for Nigerian banks, but audit expenses and the audit report's latency have no appreciable impact on ROI, EPS, or NPM for Nigerian banks. This research is likewise important, but it may have yielded different results, or at least more reliable ones, if it had included both market and financial indicators of success.

Al-Attạr (2017) studied the impact of reviewing on trading prices on the Ammạn Stock Exchange. The audit's influence may be seen in the way stock prices react to changes in the company's financial performance. Listed businesses' finance managers on the Amman stock market provided the primary data on audit and its influence on stock prices. Descriptive statistics, a factor analysis, and a structural equation model were used to arrive at these findings. Companies' stock prices on the Amman Stock Exchange were shown to react directly to audit quality, with higher-quality audits correlating to better financial performance. Although questionnaires were used in Al-Attar's study, researchers should be wary of their results due to the ease with which they might be manipulated.

Hụa, Hlạ, and Isạ (2016) examined the connection between the effectiveness of audits and economic reporting typical procedures and the financial performance of Malaysian enterprises. The research group looked at a selection of construction companies that were publicly traded in Malaysia between 2010 and 2013. The research team used publicly available yearly reports as their primary data source. The usage of a well-respected auditing firm as an indicator of audit quality and the rate of return on assets are both common metrics for evaluating the success of businesses. The link between the study's variables was examined using an Ordinary Least Squares Regression Model. Financial performance is shown to be favorably and substantially connected with compliance with relevant disclosure requirements of financial reporting standards and audit quality assurance of the companies. Consistent with previous research, this study evaluates audit quality in relation to business size and financial performance (ROA and ROE).

Eshitemi and Omwenga (2016) [8] analyzed the correlation between the economic performance of listed parastatals on the NSE and the accountant's objectivity, the audit company's stature, the audit committee's qualifications, and the auditor's competence. The researchers used a questionnaire with limited structure to collect primary data. The researchers in this study employed a number of linear regression techniques. The results demonstrate a correlation between financial performance metrics such ROA and ROE and audit quality proxies (audit companies' size, independence, audit team eligibility, and auditor experience).

Research Gap

Methodology

This investigation was conducted using ex-post facto, which drew upon preexisting information from the firm's archives. All of the used information comes from secondary sources, including the financial statements and annual reports of publicly traded pharmaceutical businesses. All 134 Nigerian pharmaceutical firms with valid registrations make up the research population. Since the Nigeria Exchange Group only contains listings for registered businesses, we chose to sample 5 pharmaceutical companies at random. Glaxó Smith Kline̦ Consumer PLC; Neimeţh International Pharmaceuticals PLC; Fidsón Healthcare; and Mạy & Bakeṛ Nig. Plc are the winning companies.

Below is a description of the model in its functional form. It demonstrates a functional relationship between audit quality and the bottom line.

For the linear regression models, a functional form would read as;

$$NPM = f(AQM) \qquad (3)$$

Where AQM = Audit Quality Measure which is proxied as Audit Firm Size (AFZ), Audit Firm Type (AFT), Audit Firm Specialization (AFS)

NPM = Net Profit Margin

This equation can be restated in an econometric form as:

$$NPM = ao + a_1AFZ_t + a_2AFT_t + a_3AFS_t + \mu \quad (1)$$

Where ao = Autonomous or intercept a1 = Coefficient of parameter AQM μ = Stochastic variable or error term.

When comparing oil and gas businesses audited by a Big 4 company and a non-Big 4, one independent variable to examine is the audit firm's type, size, and specialty (AFT, AFZ, AFS). Companies in the renewable energy sector who have one of the "Big 4" accounting firms review their financial statements are given a rating of 1, whereas those that do not get a value of 0. Delloite, Price Water House Coopers, Ernst & Young, and KPMG are the "Big 4" auditing companies in Nigeria.

The data was analysed using the ordinary least squares technique in E-VIEWS statistics. The degree to which 2015-2022 net profit margins of publicly traded pharmaceutical companies were correlated with corporate social responsibility was quantified using the adjusted coefficient of determination (adj. R2). If the p-value is less than 0.05, the null hypothesis is rejected; otherwise, it is accepted.

Result and Analysis

Table 1: Descriptive statistics

	NPM	AFZ	AFT	AFS
Mean	2.09E+08	0.049886	0.139629	0.476414
Median	95568156	0.044200	0.124300	0.489400
Maximum	6.84E+08	0.142500	0.299400	0.530000
Minimum	49200000	0.004800	0.009800	0.389400
Std. Dev.	2.34E+08	0.045087	0.097627	0.054783
Skewness	1.371593	1.305223	0.314287	-0.566882
Kurtosis	3.424643	3.708247	2.220763	1.870795
Jarque-Bera	2.247404	2.133845	0.292342	0.746820
Probability	0.325074	0.344066	0.864010	0.688383
Sum	1.47E+09	0.349200	0.977400	3.334900
Sum Sq. Dev.	3.28E+17	0.012197	0.057186	0.018007
Observations	7	7	7	7

E-Views Output (2023) [30]

The average value of NPM was approximately 2.09E+08. AFZ, AFT and AFS had mean values of 0.049886, 0.139629 and 0.476414 respectively. This shows that the average NPM for all listed pharmaceutical firms is roughly 3billion in between 2015 and 2022. The statistical analyses demonstrate that all the parameters are significantly skewed, which is an essential indicator of the variation in the pattern about the mean that is not uniform. The data are right-skewed, as shown by the positive skewness values; this indicates that the right tail is longer than the left tail. The next step is the Jarque-Bera (JB) test, which checks for anomalies and unacceptable values to verify whether the data follow a standard distribution.

Table 2: Correlation matrix of the selected variables

Variables	NPM	AFZ	AFT	AFS
NPM	1			
AFZ	0.8218	1		
AFT	0.5951	0.9083	1	
AFS	-0.04168	0.4083	0.7009	1

E-Views Output (2023) [30]

The table above revealed that NPM had a positive, strong relationship with AFZ and AFT respectively, and a negative weak relationship with AFS.

Testing Hypotheses

Hypothesis 1

There is no significant relationship between audit firm size and NPM of listed pharmaceutical companies in Nigeria.

Dependent Variable: NPM				
Method: Least Squares				
Date: 27/05/23 Time: 11:33				
Sample: 2015 2021				
Included observations: 8				
Variable	Coefficient	Std. Error	T-Statistic	Prob.
C	0.016724	0.014794	1.130499	0.3096
AFZ	1.58E-10	4.91E-11	3.225204	0.0233
R-squared	0.675366	Mean dependent var		0.049886
Adjusted R-squared	0.610439	S.D. dependent var		0.045087
S.E. of regression	0.028141	Akaike info criterion		-4.068215
Sum squared resid	0.003960	Schwarz criterion		-4.083669
Log likelihood	16.23875	Hannan-Quinn criter.		-4.259226
F-statistic	10.40194	Durbin-Watson stat		1.778707
Prob (F-statistic)	0.023330			

E-Views Output (2023) [30]

Adjusting the R-squared value to 0.6104 explains 67.54 percentage points of variation in the dependent variable. With an F-statistic of 10.40, we can rule out the possibility that any regression coefficient is zero. F-statistics and adjusted R2 for the regression model are indicative of a strong fit and an ability to account for NPM variations. The t-statistic for our dependent variable, AFZ, was positive [t-statistic (3.2252), p (0.0233 0.05)]. The alternative theory is accepted. As a result, the net profit margin of publicly traded Nigerian pharmaceutical companies is significantly correlated with the size of the audit company conducting the audit.

Hypothesis 2

H02: There is no significant relationship between Audit firm type and NPM of listed pharmaceutical companies in Nigeria.

Dependent Variable: NPM				
Method: Least Squares				
Date: 27/05/23 Time: 11:35				
Sample: 2015 2021				
Included observations: 8				
Variable	Coefficient	Std. Error	T-Statistic	Prob.
C	0.087630	0.045181	1.939548	0.1101
AFT	2.48E-10	1.50E-10	1.655884	0.0186
R-squared	0.354168	Mean dependent var		0.139629
Adjusted R-squared	0.225002	S.D. dependent var		0.097627
S.E. of regression	0.085945	Akaike info criterion		-1.835259
Sum squared resid	0.036933	Schwarz criterion		-1.850713
Log likelihood	8.423407	Hannan-Quinn criter.		-2.026271
F-statistic	2.741952	Durbin-Watson stat		1.113942
Prob (F-statistic)	0.158648			

E-Views Output (2023) [30]

Adjusting the R-squared value to 0.225 explains 35.41 percentage points of variation in the dependent variable. With an F-statistic of 2.74, we can rule out (p.05) the possibility that all regression coefficients are zero. F-statistics and adjusted R2 for the regression model are indicative of a strong fit and an ability to account for NPM variations. The t-statistic and coefficient for our dependent variable AFT were both positive (1.6558, 0.0186, 0.05). The alternative theory is accepted. Therefore, the audit firm's type has no statistically significant effect on the NPM of listed Nigerian pharmaceutical companies.

Hypothesis 3

H03: There is no significant relationship between Audit firm specialization and NPM of listed pharmaceutical companies in Nigeria.

Dependent Variable: NPM				
Method: Least Squares				
Date: 27/05/23 Time: 11:37				
Sample: 2015 2021				
Included observations: 7				
Variable	Coefficient	Std. Error	T-Statistic	Prob.
C	0.478458	0.031520	15.17938	0.0000
AFS	-9.76E-12	1.05E-10	-0.093280	0.9293
R-squared	0.001737	Mean dependent var		0.476414
Adjusted R-squared	-0.197915	S.D. dependent var		0.054783
S.E. of regression	0.059959	Akaike info criterion		-2.555346
Sum squared resid	0.017976	Schwarz criterion		-2.570801
Log likelihood	10.94371	Hannan-Quinn criter.		-2.746358
F-statistic	0.008701	Durbin-Watson stat		1.053108
Prob (F-statistic)	0.929303			

E-Views Output (2023) [30]

Adjusting the R-squared value to 0.197 explains an additional 1.71 percentage points of variability in the variable being investigated. With an F-statistic of 0.008, we can rule out the possibility that all regression coefficients are zero (p.05). Adjusted R2 and F2 values for the regression model are consistent with a strong fit and an ability to explain variations in net profit margin. The coefficient and T-Statistic for our dependent variable (AFS) were negative [t-statistic (-0.093280), p (0.9293 >0.05)]. We thus maintain the null hypothesis. Therefore, the accounting firm's area of expertise has no bearing on the NPM of publicly traded Nigerian pharmaceutical companies.

Summary of Findings

The main findings of this study were summarized as

S/N	Independent variable	Dependent variable	Relationship	Decision
1	AFZ	NPM	Positive and strong	significant
2	AFT	NPM	Positive and strong	significant
3	AFS	NPM	Negative and weak	Not significant

Researcher's Desk (2023)

Discussion of Findings

Findings from research 1 found that the NPM of pharmaceutical companies in Nigeria listed on stock exchanges is positively correlated with the size of the audit company conducting the audit. Adjusting the R-squared value to 0.6104 explains 67.54 percentage points of variation in the dependent variable. There is also a statistically significant correlation between audit company size and net profit margin. These findings support Eshitemi and Omwenga (2016) [8] and Hua, Hla, and Isa (2016) [14] who indicated a favorable and statistically significant correlation between financial achievement and adherence with accounting guidelines' relevant obligation to disclose and audit quality assurance of the companies.

Findings from research 2 revealed that audit firm type have a positive and strong relationship with net profit margin of listed pharmaceutical firms in Nigeria. Adjusting the R-squared value to 0.225 explains 35.41 percentage points of variation in the dependent variable. Also, the relationship between audit firm type and net profit margin is statistically, significant. These findings support (Al-Attar 2017) [31], Eshitemi and Omwenga (2016) [8] and Hua, Hla, and Isa (2016) [14] who reported that audit quality has a significant effect on financial performance of listed firms.

Research 3 found an adverse and weak association between the accounting firm's area of specialty and the net profit margin of listed Nigerian pharmaceutical companies. Adjusting the R-squared value to 0.225 explains an additional 1.71 percentage points of variability in the dependent variable. Also, the relationship between corporate social responsibility expenditures and net profit margin is statistically not significant. These findings support Babalola (2012) [26], who reported that audit firm specialisation has no significant effect on net profit margin of listed firms. However, this does not support the findings of (Yang 2012) [32] who reported that AFS has a significant relationship with net profit margin of listed firms in China.

Conclusion and Recommendation

The study has established that audit firm size and type have a positive, strong and significant relationship with net profit margin of listed pharmaceutical firms in Nigeria. The research also confirmed that audit firm specialization is negatively related to the net profit margin of listed pharmaceutical enterprises in Nigeria, however the association is weak and not statistically significant. The report concludes that pharmaceutical performance businesses in Nigeria stand to benefit most from using the Big 4 audit firms, and so suggests that their usage be emphasized.

References

1. Abdullahi BA, Norfadzilah R, Umar AM, Lateef SA. The Impact of Audit Quality on the Financial Performance of Listed Companies Nigeria. Journal of Critical Reviews. 2020;7:9.
2. Afza T, Nazir MS. Audit quality and firm value: A case of Pakistan. Research Journal ofApplied Sciences, Engineering and Technology. 2014;7(9):1803-1810.
3. Bouaziz Z. The impact of auditor size on financial performance of Tunisian companies. Paper presented at the Faculty of Economics and Management. Sfax University, Tunisia; c2012.
4. Chen LJ, Chen SY. The influence of profitability on firm value with capital structure as the mediator and firm size and industry as moderators. Investment Management and Financial Innovations. 2011;8(3):121-129.
5. Chen YC, Hung M, Wang Y. The effect of mandatory CSR disclosure on firm profitability and social externalities: Evidence from China. Journal of Accounting and Economics. 2018;65(1):169-190.

6. De-Angelo L. Auditor size and audit quality. Journal of accounting and economics. 1981;2:1.
7. Egbunike FC, Abiahu MF. Audit firm report and financial performance of money deposit banks in Nigeria; c2017.
8. Eshitemi PB, Omwenga J. Effect of Audit Quality on the Financial Performance of Listed Parastatals in Botswana. International Journal of Accounting and Financial Reporting. 2016;9(1):229-244.
9. Farouk MA, Hassan SU. Impact of audit quality and financial performance of quoted cement firms in Nigeria. International Journal of Accounting and Taxation. 2014;2(2):1-22.
10. Gujarati ND. Basic Econometrics (4th Ed.). New Delhi: Tata McGraw-Hill. 2003;748:807.
11. HanimFadzil F, Haron H, Jantan M. Internal auditing practices and internal control sys-tem. Managerial Auditing Journal. 2005;20(8):844-866.
12. Hayes R, Dassen R, Schilder A, Wallage P. Principles of Auditing: An Introduction to International Standards on Auditing, 2nd ed., Prentice Hall; c2005.
13. Hinkle W, Jurs H. Applied Statistics for the Behavioral Sciences (5th ed.); c2003.
14. Hua G, Hla U, Isa T. Impact of audit quality and financial reporting standard practices of firms on their financial success in Malaysia; c2016.
15. Kaoje NA, Babangida MA, Kaoje RM. Sustainability Reporting and Financial Performance of Oil and Gas firms in Nigeria: A Paradox of Environmental Cost. 1st Annual Faculty of Arts, Social and Management Sciences National Conference, Federal University, Birnin Kebbi, Kebbi State; c2022.
16. Kaoje NA, Abubakar MY, Ibrahim GT, Adeiza MO. Financial Performance and Sustainability Reporting of Oil Marketing Companies in Nigeria. International Journal of Research and Scientific Innovation. 2019;6(5):2321-2705.
17. Kaoje NA, Garba F, Adam SI, Bakare TO. Firm Characteristics and Financial Performance of Oil and Gas Marketing Companies in Nigeria. 4th Annual Faculty of Management Science, National Conference, Usmanu DanFodiyo University, Sokoto; c2021.
18. Kaoje NA, Sani AB, Tanko GI, Babangida MA, Yabo AS. The implication of corporate social cost on profitability oil marketing companies in Nigeria. Journal of Business and Management. 2020;22(1):51-56.
19. Santos JB, Brito LAL. Toward a subjective measurement model for firm performance. BAR-Brazilian Administration Review. 2012;9:95-117.
20. Thu TH, Lam AL, Thi TL, Dung MT, Dang TT. The impact to audit quality on performance of enterprises listed on Hanoi Stock Exchange. Management Science Letters; c2020.
21. Ugbam UO, Okoro EO. A Strategic Study of the Nigerian Pharmaceutical Sector: Organizational leadership, market-share, and competitive performance. International Journal of Business, Humanities and Technology. 2017;7(1):1-10
22. Ugwunta DO, Ugwuanyi BU, Ngwa CU. Effect of audit quality on market price of firms listed on the Nigerian stock market. Academic Journals. 2018;10(6):61-70.
23. Rahul, Abhishek K, Datta S, Biswal BB, Mahapatra SS. Machining performance optimization for electro-discharge machining of Inconel 601, 625, 718 and 825: An integrated optimization route combining satisfaction function, fuzzy inference system and Taguchi approach. Journal of the Brazilian Society of Mechanical Sciences and Engineering. 2017 Sep;39:3499-527.
24. Suleiman H, Zhang L, Roth R, Heuser JE, Miner JH, Shaw AS, *et al.* Nano scale protein architecture of the kidney glomerular basement membrane ELIFE. 2013 Oct 8;2:e01149.
25. Eneisik GE, Micah LC. Audit quality indicators and market price per shares of listed deposit money banks in Nigeria. International Journal of Business & Law Research. 2021;9(4):1-22.
26. Babalola YA. The impact of corporate social responsibility on firms' profitability in Nigeria. European Journal of Economics, Finance and administrative sciences. 2012;45(1):39-50.
27. Shahzad F, Alhabeb M, Hatter CB, Anasori B, Man Hong S, Koo CM, Gogotsi Y. Electromagnetic interference shielding with 2D transition metal carbides (MXenes) Science. 2016 Sep 9;353(6304):1137-40.
28. Lieberman AF, Van Horn P, Ippen CG. Toward evidence-based treatment: Child-parent psychotherapy with preschoolers exposed to marital violence. Journal of the American Academy of Child & Adolescent Psychiatry. 2005 Dec 1;44(12):1241-8.
29. Sidhom K, Obi PO, Saleem A. A review of exosomal isolation methods: is size exclusion chromatography the best option?. International Journal of Molecular Sciences. 2020 Sep 4;21(18):6466.
30. Abbas J, Wang L, Belgacem SB, Pawar PS, Najam H, Abbas J. Investment in renewable energy and electricity output: Role of green finance, environmental tax, and geopolitical risk: Empirical evidence from China. Energy. 2023 Apr 15;269:126683.
31. Al Attar WS, Soomro N, Sinclair PJ, Pappas E, Sanders RH. Effect of injury prevention programs that include the Nordic hamstring exercise on hamstring injury rates in soccer players: a systematic review and meta-analysis. Sports Medicine. 2017 May;47:907-16.
32. Luo R, Liu B, Xie Y, Li Z, Huang W, Yuan J, *et al.* SOAPdenovo2: An empirically improved memory-efficient short-read de novo assembler. Gig science. 2012 Dec 1;1(1):2047-17X.