ACCOUNTING CHOICE AND EARNINGS QUALITY OF THE NIGERIAN OIL AND GAS INDUSTRY

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ABSTRACT

This work studied the effect of accounting method choice on earnings quality in the Nigerian oil and gas industry. Specific objectives of the study included: to determine the effect of full cost and successful efforts accounting methods on earnings predictability, earnings persistence and earnings variability. Secondary were obtained from the director's reports of annual financial statements of sampled companies. The ex-post facto research design was adopted to determine the effect for 8 oil and gas companies purposively selected for the period of 2006-2020. The panel regression model estimation technique was employed using the STATA computer software version 16.0 for statistical analysis. Findings revealed that full cost method of accounting had negative significant effect on earnings predictability, earnings persistence and variability while successful efforts method of accounting had positive insignificant effect on all dependent variable. It was recommended that managers of companies in the Nigerian oil and gas industry should adopt full cost method of accounting for their operations if higher earnings quality is to be achieved.

Keywords: Accounting Choice, Earnings Quality, Full Cost Accounting, Successful Effort Accounting

Introduction

The quality of anything has to do with meeting the minimum standard required to satisfy basic needs of humanity. In every activity of life, quality is expected to play a key role in

ensuring satisfaction and fulfillment. High quality brings excitement while low quality causes a lot of concern. In the corporate business world, quality especially, the quality of a company's earnings is of interest to various users of financial statements. This is because earnings and the varied metrics derived there from are utilized in making contracting and investment decisions. From a contracting perspective, low-quality earnings for instance may result in unintended wealth transfers, while on the investor's side, they may result in a defective resource allocation signal (Schipper & Vincent, 2003). High quality earnings on the other hand are said to improve capital market efficiency. Investors and other stakeholders are therefore interested in high-quality earnings of the financial reporting accounting information. For that reason, standard setters strive to develop accounting standards that improve earnings quality, and many recent changes in auditing, corporate governance, and enforcement have a similar objective too.

Earnings quality is one of the most important components of financial statements for companies and even though the phrase "earnings quality" is widely used today, it has neither an agreed-upon meaning assigned to it nor a generally accepted approach to measuring it (Schipper & Vincent, 2003). Earnings quality is therefore a broad concept that reports the stability, sustainability and lack of variability in reported earnings of a company. According to Ranjbar, Mohebbi and Moosavi (2013); Bellovary, Giacomino and Akers (2005) and Richard (2001) earnings quality is the degree of stability of earnings performance in future periods. It is the measure of a sustained beauty, consistency and stability of the total reported earnings of a company.

It is a widely held belief in extant literature that, the choice of a particular accounting method (accounting policy choice) affects reported earnings of a company thereby affecting its earnings quality (Bandyopadhyay, 1994). Researchers such as Deakin (1989), Bandyopadhyay (1994), Murdoch and Krause (2009), and Nichols (2012), Hassan and Farouk (2014),Shehu and Musa (2014), Chukwuma and Efeeloo (2017) have asserted that, the American Accounting Principles Board (APB), the Financial Accounting Standards Board (FASB), the Securities Exchange Commission (SEC) and several other accounting standard setting bodies have debated over the years whether the choice of successful efforts or full cost accounting methods which are generally used in the oil and gas accounting practice, provide investors with more informative numbers (earnings) and thus should be mandated for use by oil and gas companies globally. This debate which has continued

without an end in sight is related to the idea of "quality of earnings" and has gained attention both in the popular press and in the academic literature (Bandyopadhyay, 1994). The debate which dates back to the mid 20th century is unlikely to end anytime soon and is further fueled by the inability of regulators to choose one method over the other, thereby leaving the decision to the whims and caprices of companies. The debate is also exacerbated by the failure of accounting standard setting bodies to make a defined and agreed choice for the use of a particular method in the oil and gas industry. This debate has continued to generate a wide range of issues in the face of the two alternative choices between full cost and successful efforts accounting methods.

Accounting choice is defined as any decision whose primary purpose is to influence (either in form or substance) the output of the accounting system in a particular way (Fields, Lys and Vincent, 2001). Usually what motivates investors, regulators, employees and any other users of financial statements to show preference for the use of a particular method of accounting over the other is the large capital outlay and attendant profit or loss which accrues to the users. The choice of any accounting method, therefore, is a function of a company's philosophy, motive and environmental variables.

It is on the basis of the aforementioned issues raised, therefore, that this research sought to focus on the extent the choice of accounting method affects quality of earnings in the Nigerian oil and gas industry. The essence was to determine the extent of the effect and resolve the long standing debate by establishing which method is to be recommended for use by oil and gas companies in Nigeria in particular and the world at large.

The oil and gas (petroleum) industry occupies a very strategic position in the Nigerian economy as one of the nation's major provider of income. The industry plays a major role in facilitating economic development of the nation. The oil industry accounts for over 90% of the country's foreign exchange earnings. It also plays a predominant role in the country's gross national product index.

There has been a lot of research work aimed at exploring choices of accounting methods (i.e the use of full cost and or successful efforts accounting methods) in the oil and gas industry. Such works include amongst others the works of Collins and Dent (1979), Dhaliwal (1980), Johnson and Ramanan (1988), Bryant (2003), Erekle P. (2020), Alwan et al. (2021) and Lugemwa (2014). However, not many of such works have been carried out in Nigeria,

particularly in the area of comparing the quality of earnings of oil companies with the choice of accounting methods they make.

Another noticeable gap identified which is practical in nature is in the area of policy gap. Most of the research carried out on accounting method choice and earnings quality had presented conflicting results. Researchers over time have not been able to agree on which method out of the two most acceptable methods in the oil and gas accounting provide investors with higher earnings and should be recommended for adoption.

Lastly, in terms of time dimension, most of the studies conducted on these two methods were in the 1970s, 1980s, and 1990s (20th Century). This was because it was majorly the period when different standard setting bodies debated on having one accounting method for the petroleum industry to ensure comparability of financial statements. Conducting a further research in the current period can help reveal whether the findings in earlier research are still applicable in this modern time or not. The gaps enumerated above provided a basis upon which this research was carried out.

Objectives of the Study

The broad objective of the study was to ascertain the effect accounting choice has on earnings quality in the Nigerian oil and gas industry. The specific objectives included the following:

(1) To determine the effect of full cost accounting on earnings predictability in the Nigerian oil and gas industry
(2) To examine the effect of full cost accounting on earnings persistence in the Nigerian oil and gas industry
(3) To ascertain the effect of full cost accounting on earnings variability in the Nigerian oil and gas industry
(4) To know the effect of successful efforts accounting on earnings predictability in the Nigerian oil and gas industry
(5) To analyze the effect of successful efforts accounting on earnings persistence in the Nigerian oil and gas industry
(6) To establish the effect of successful efforts accounting on earnings variability in the Nigerian oil and gas industry

Hypotheses of the Study

The research hypotheses were as follows:

Ho_1: Full cost accounting method does not significantly affect earnings predictability in the Nigerian oil and gas industry.

Ho_2: The choice of full cost accounting method does not significantly affect earnings persistence in the Nigerian oil and gas industry.

Ho_3: Choosing full cost accounting method does not significantly affect earnings variability in the Nigerian oil and gas industry.

Ho_4: Earnings predictability is not significantly affected by the choice of successful efforts accounting in the Nigerian oil and gas industry.

Ho_5: Earnings persistence of the Nigerian oil and gas companies are not significantly affected by the choice of successful efforts accounting.

Ho_6: Earnings variability is not significantly affected by the choice of successful efforts accounting in the Nigerian oil and gas industry.

Literature Review

Empirical Review

Some empirical studies have been carried out on the variables of interest in this study namely: earnings quality and accounting choice or methods. The empirical studies are hereby reviewed in this section as follows:

Aguguom and Salawu (2022) studied earnings smoothing and market share price: evidence from Nigeria. The reason for the study was that empirical studies of earnings smoothing revealed inconclusiveness as most corporate organizations considered earnings smoothing irresistible. A theoretical debate suggested that earnings smoothing happened as a strategic flattening of curves to remain afloat or intentionally to fix managerial incompetence. Following this argument therefore, the research investigated the impact of earnings smoothing on the market share price of listed companies in Nigeria. The study adopted ex-post facto research design using data sourced from published financial statements of selected

companies. The population comprised 173 listed companies in Nigeria, covering a period of 2009-2020 as of 31st December 2020. 51 companies were purposively selected. The reliability and validity of the data was based on financial statements audited by the external auditors. The panel data was employed for the estimation using the Unobserved Effects Model (UEM), and Hausman test results to choose between random effect and fixed-effect models. The study found that earnings smoothing had a positive effect on market share price. Introducing control variables, SMOTH exhibited a negative significant impact on MSP while LEV revealed a negative significant impact.

Solomon and Mamman (2022) carried out a study on the effect of debt covenant violation on accrual-based earnings management of listed consumer goods firms in Nigeria. The study examined the effect of debt covenant violation on accrual-based earnings management of listed consumer goods firms in Nigeria. The study used data extracted from the financial statement of 15 listed consumer goods firms in Nigeria for the period of 2011 to 2018. The study employed ex-post facto design and panel regression technique of data analysis. The study revealed that debt covenant violation has negative significant influence on accrual-based earnings management of listed consumer goods firms in Nigeria.

Macgregor and Ibanichuka (2021) examined accounting information quality and firm performance of quoted oil and gas companies in Nigeria. The aim of the study was to empirically analyze the relationship between accounting information quality and firm performance of oil and gas companies in Nigeria. Time series data on different types of accounting information quality and earnings per share from 2009-2018 were collected from central bank of Nigeria statistical bulletin, annual central bank of Nigeria reports, national bureau of statistics and Federal Inland Revenue Service. Ordinary Least Square regression analysis, Autoregressive Distribution Lag, Co-integration, Augmented Dickey-Fuller Unit root test, Serial Correlation and Heteroskedasticity test and Error Correction model with the aid of E-view version 10 were employed. The empirical results indicated that accounting information quality significantly relate to firm performance; explaining about 83.1% of total variation in earnings per share, audit lag and disclosure quality were each found to significantly relate to earnings per share.

Rusdiah et al. (2021) investigated the effect of firm size, debt, current ratio, and investment opportunity set on earnings quality: An Empirical Study in Indonesia. The study analyzed the effect of the variables firm size, the leverage ratio as manifested by the debt-to-equity ratio,

the liquidity ratio exemplified by the current ratio, and the investment opportunity set (IOS) on earnings quality. The study subjects were initial public offer (IPO) companies engaged in the food and beverage sector with a study observation period using secondary data (financial statements), namely in 2016–2019, totaling 17 companies. Several stages of testing were carried out to answer statistical analysis (eg, normality test, heteroscedasticity test, multicollinearity test, *T*-test, and *F*-test) then the final testing stage was the regression test. The results of the study showed that the firm size, leverage ratio, does not contribute to earnings quality. Liquidity positively contributed to earnings quality, IOS also contributed to earnings quality.

Taiwo et al. (2020) carried out a study on earnings predictability of quoted firms in Nigeria. The study evaluated the earnings predictability of Nigerian quoted firms with a view to establishing the ability or inability of earnings to predict itself. Also, the study examined the impact of volatility on earnings predictability of Nigerian quoted firms. The total number of seventy three (73) quoted Nigerian firms constituted the population of the study and the entire 73 firms were studied. The causal relationship research design was adopted. The secondary data used were collected from the financial statements of the quoted firms for the period 1996 to 2015. The system generalized method of moment (GMM) was used to estimate the dynamic panel regression models of the study. The study found that earnings of firms are predictable. The study also found that volatility had adverse effect on earnings predictability.

Mazadu (2020) did a study on earnings predictability and adoption of the International Financial Reporting Standards (IFRS) in the Nigerian deposit money banks. The study investigated the effect of earnings predictability on the IFRS adoption in the Nigerian deposit money banks. The population of the study was all the 14 listed Nigerian deposit money banks as at 31st December 2016 out of which ten banks were drawn as sample. The multivariate technique of data analysis was employed using a multiple regression model, structured using longitudinal balanced panel data. The findings of the study revealed that earnings under IFRS adoption predicted and influenced the share price of listed Nigerian deposit money banks more than before adopting of IFRS.

Munir et al. (2020) examined the effect of monitoring characteristics on earnings quality of listed conglomerate firms in Nigeria for the period of ten years from 2010-2019. Three variables independent directors, audit committee and institutional ownership were used to

represent monitoring characteristics. The Francis et al (2005) model was used as measure of earnings quality. Multiple panel regression was used to test the model of the study using Ordinary Least Square (OLS) regression and data was collected from the annual reports and accounts of the sampled firms. The findings of the study revealed that two of the monitoring characteristics variables (IND and INST) positively and significantly affected earnings quality while AC had a significant but negative effect on earnings quality of listed conglomerate firms in Nigeria.

Lugemwa (2014) studied earnings quality of the successful efforts and full costing accounting methods used by upstream oil and gas companies in the United States. The research relied primarily on secondary data from annual reports, journals and textbooks for the purpose of analysis and interpretation with the help of Microsoft excel and Statistical Package for Social Sciences (SPSS). Both qualitative and quantitative methodologies were used in the study. Regression analysis was employed to test formulated hypotheses. In all, the study covered 76 public listed oil and gas companies in the U.S. (39 full cost firms and 37 successful efforts firms), engaged primarily in the exploration and production of crude oil and natural gas, with data for the years 2009 to 2013. The findings of the research indicated that the correlation coefficient for successful efforts firms was extremely significantly higher than that of full cost firms, implying that the successful efforts earnings was more highly correlated with cash flows than was full costing earnings.

Research Design

This study adopted ex-post facto research design as it was consistent with the criteria for adoption and has been used in other studies. The design was also used because of the availability of data from the annual reports of the sampled oil and gas companies under investigation.

The scope of this study was limited to the Nigerian oil and gas industry (upstream sector only). The period for the study covered fifteen years from 2006 to 2020. The choice of the period was to be able to use recent data so that the findings of the study could be recent and relevant to the contemporary situation.

Secondary were generated from published annual reports of the sampled companies. The study used published raw data from director's report in the annual reports of companies

selected for the study. Annual reports which were the major source of data were obtained from the Nigerian Exchange Group and processed by a public online database maintained by MachameRatios Database, a registered regression data providing company. Data for the list of exploration oil and gas companies registered in Nigeria were obtained from a registered google online information provider nairametrics.coM

Techniques of Data Analysis

The statistical techniques which were employed in testing and analyzing all the hypotheses were as follows: Panel regression analysis, correlation test, heteroskedasticity test, hausman test, multicollinearity test. These tools or techniques were very relevant in testing the hypotheses because they were the most widely used statistical techniques in social and management sciences. Their ability to measure the degree of association between dependent and independent variables as well as determine the causal effect of the relationship made them relevant to this study. The instruments were employed through the use of the STATA computer software version 16.0 to ensure accuracy in statistical analysis.

Model Specification

The model adopted for this study was the panel regression analysis model which is a tool popularly used by researchers to measure the extent of the causal relationship between the dependent and independent variables. In order to test for the relevance of the hypotheses regarding the effect of accounting choice on earnings quality of oil and gas companies in Nigeria, the following multiple regression equation as used in Onwumere (2009) was applied for the respective variables and analysis of the hypotheses:

$Y = f(X_1, X_2, X_3)$ - (1)

where Y is the dependent variable which describes earnings quality performance indicators such as:

(1) Earnings Predictability
(2) Earnings Variability
(3) Earnings Persistence

X is the independent variable which represents accounting method choice, f represents an acronym for function of the independent variable.

The above equation takes the form of a two-variable linear function:

$Y = \alpha + \beta_1 X_1, \beta_1 X_2, \beta_1 X_3 + \mu$ - (2)

Where,

Y= dependent variable

X= independent variable

α = constant indicating the point of interception with Y.

β = slope or gradient or coefficient of X

μ = error or control term

Rewritten as

EarQual=f (AcctgChoi) - (3)

The following models were therefore specified for analysis of the stated hypotheses:

$EarPred = \alpha + \beta_1 FCAcctgChoi + \beta_1 SEAcctgChoi + \mu$ - - - - - - - - - (1)

$EarPers = \alpha + \beta_1 FCAcctgChoi + \beta_1 SEAcctgChoi + \mu$ - - - - - - - - - (2)

$EarVar = \alpha + \beta_1 FCAcctgChoi + \beta_1 SEAcctgChoi + \mu$ - - - - - - - - - -(3)

Where,

EarPred= Earnings Predictability

EarPers= Earnings Persistence

EarVar= Earnings Variability

FCAcctgChoi = Full Cost Accounting Choice

SEAcctgChoi = Successful Efforts Accounting Choice

α = constant indicating the point of interception with independent variable.

β = slope or gradient or coefficient of dependent variable

μ = control variables represented by FSIZE, ROA and LEV

Data Presentation

Data collected from the sampled oil and gas companies have been presented in tables and analyzed. In this section, analysis was done in the following manner:

4.2.2 Descriptive Statistics

Table 4.1: Descriptive Statistics of the Study Variables

Variables	Obs	Mean	Std Dev	Min	Max
EPERS	120	0.1832	1.226	-3.904	4.1005
EVAR	120	0.1628	1.6266	-3.58	3.47
EPRED	120	0.0002	0.1984	-0.3403	1.3135
FC	120	0.5667	0.3321	0	1
SE	120	0.4333	0.4976	0	1
ROA	120	3.24	19.67	-71/36	176.27
FSIZE	120	3.65+e07	5.57+e7	55.542	2.78+e8
LEV	120	32	15.91	4	64

Source: STATA Output, 2022.

Table 4.1 showed the result of the descriptive statistics of the study variables.

4.2.3 Robustness Checks

Before running regression analysis, certain assumptions about the characteristics of the data had to be checked. This section treated such checks for data validation.

4.2.3.1 Normality of the Data

Normality tests were conducted using histogram of residuals, pnorm and qnorm graphs. These were presented in this section for each of the three models:

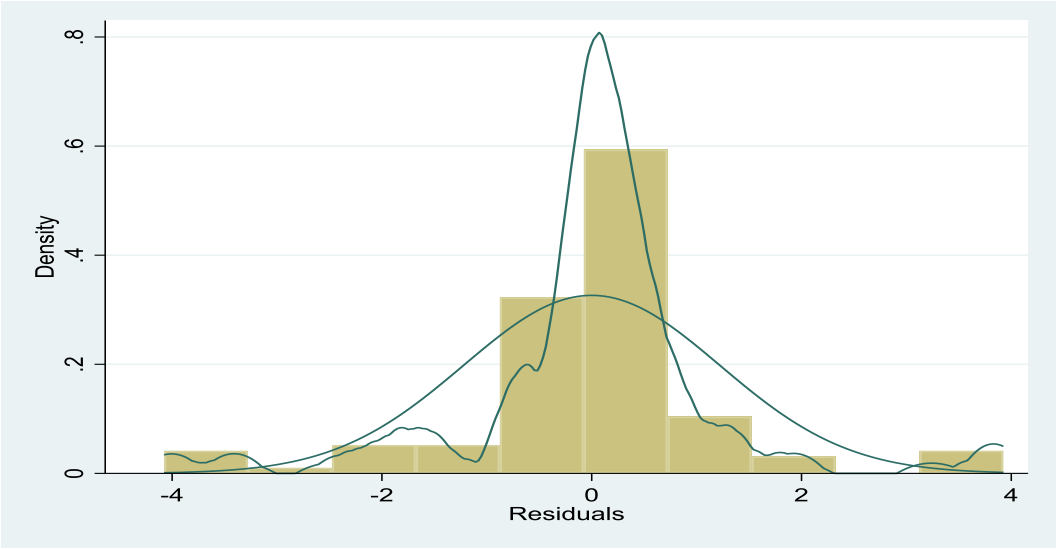

Figure 4.1: Histogram of Residuals for Model 1

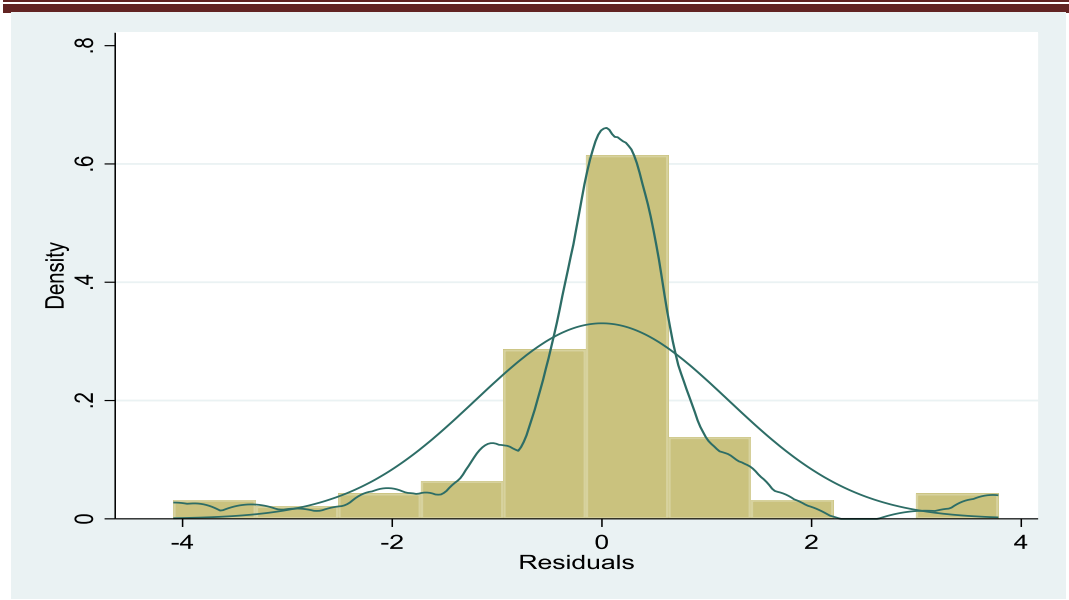

Figure 4.2: Histogram of Residuals for Model 2

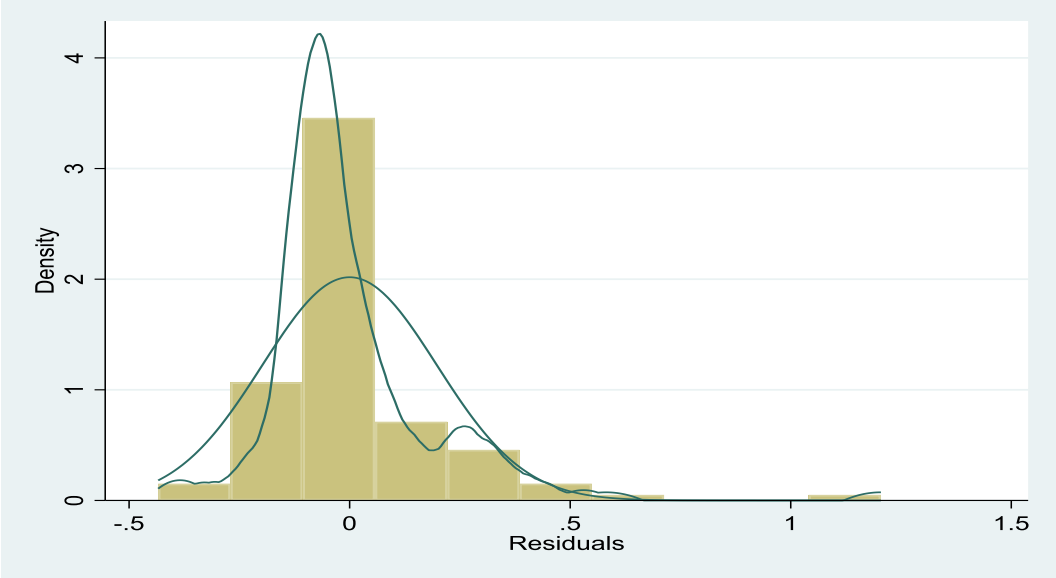

Figure 4.3: Histogram of Residuals for Model 3

The histogram of residuals for models 1-3 as shown in figures 4.1 – 4.3 revealed that the data used for this study were normally distributed since they almost had a dome shape of the curve falling around the origin, 0. However, that of model 3 seemed to be left aligned implying that some level of kurtosis challenge may have been seen.

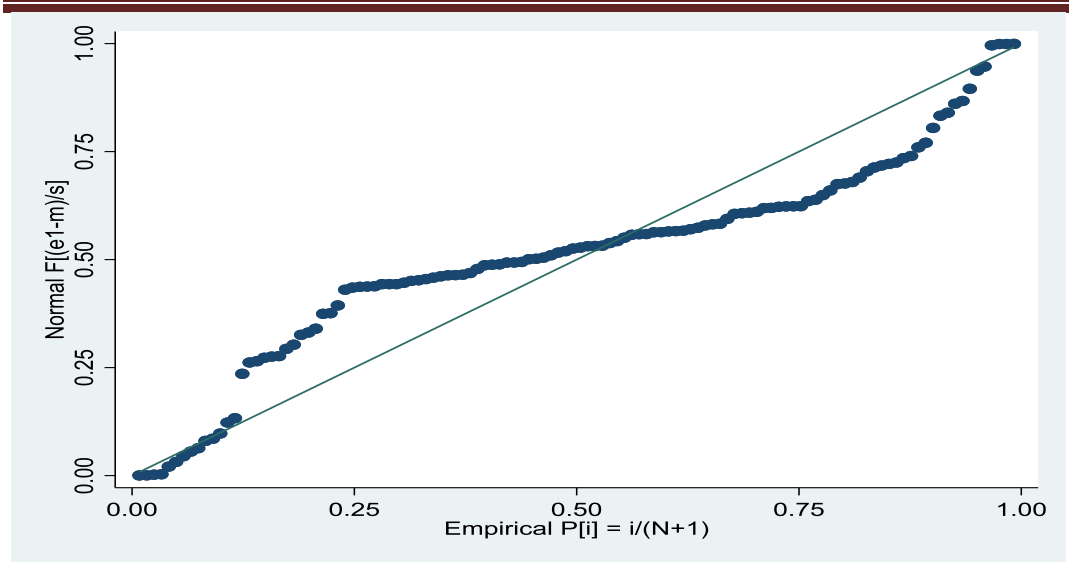

Figure 4.4: Pnorm for Model 1

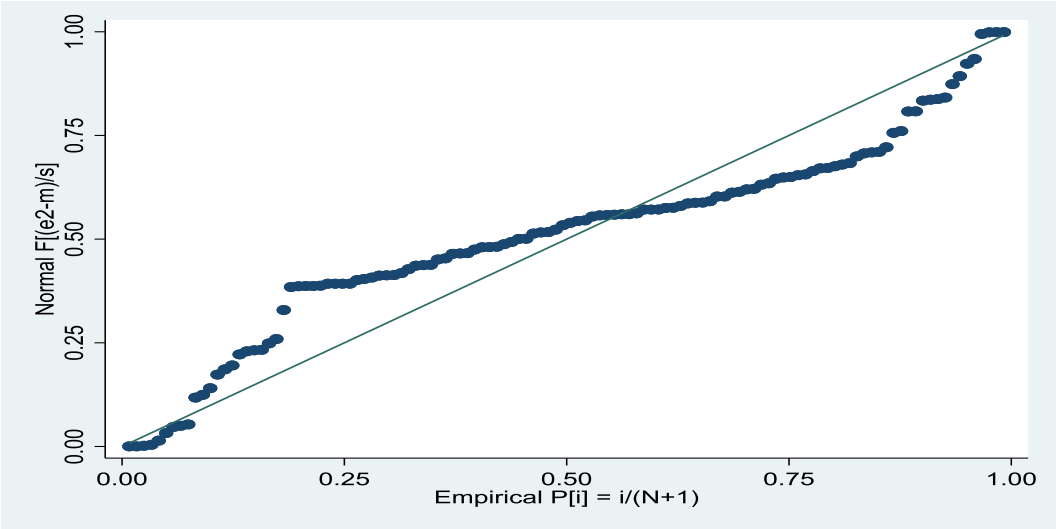

Figure 4.5: Pnorm for Model 2

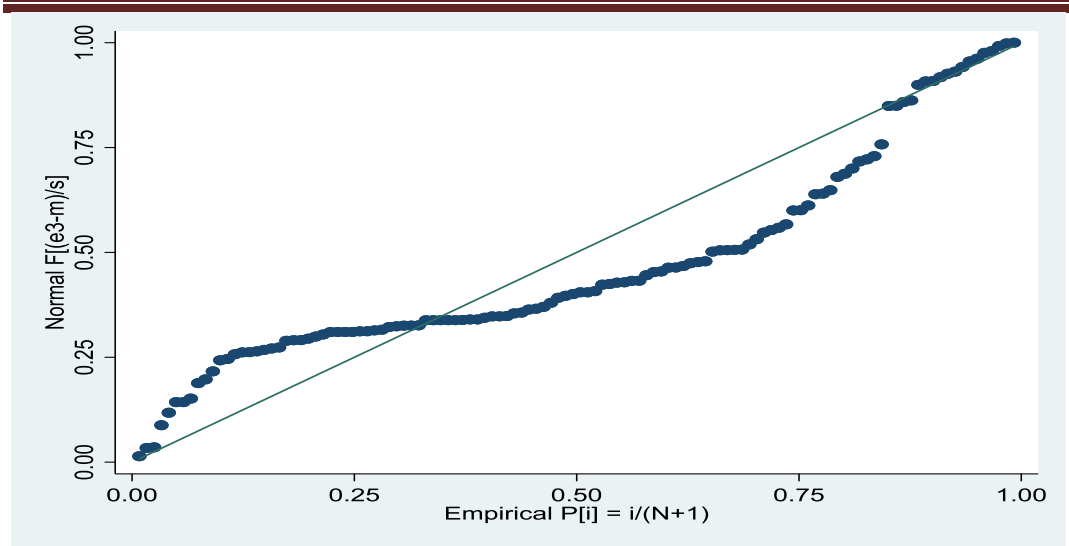

Figure 4.6: Pnorm for Model 3

Figures 4.4 – 4.6 showed that the data set used for this study was normally distributed because their probability of normality as depicted by the plots were along the line of best fit producing end-to-end plots for all the 3 models. The data sets almost clustered above and below the line showing a good degree of uniform normality.

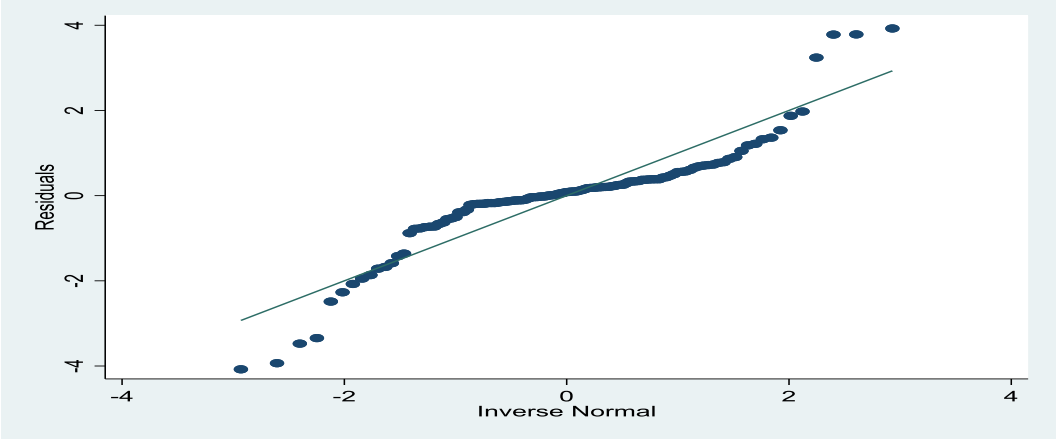

Figure 4.7: Quartile Normality for Model 1

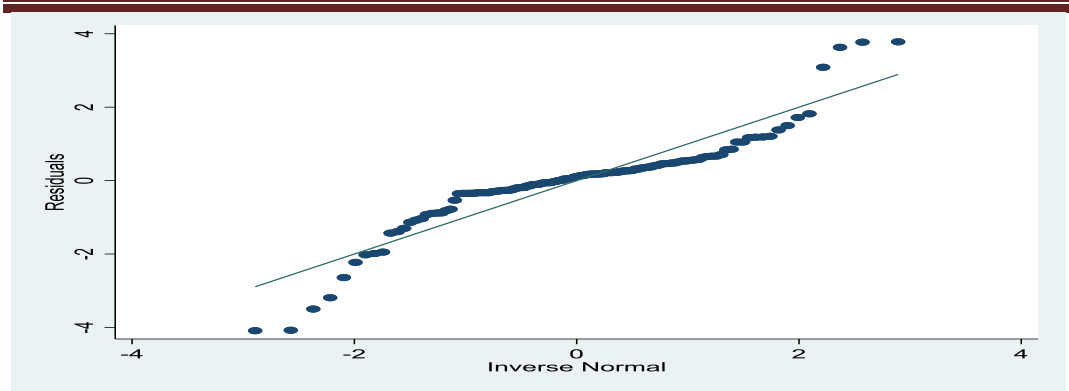

Figure 4.8: Quartile Normality for Model 2

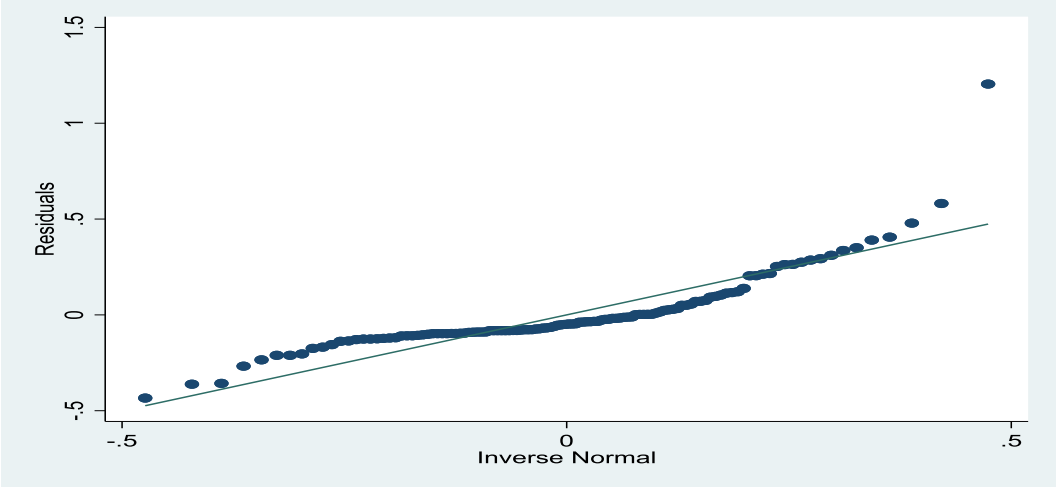

Figure 4.9: Quartile Normality for Model 3

Figures 4.7 – 4.9 showed the plots of the quartile normal distribution of the data sets. Since the plots were found along the line of best fit for each quartile with little variations at their upper ends, the data sets may have been adjudged to be normally distributed.

4.2.3.2 Test for Multicollinearity

Table 4.3: Variance Inflation Factor (VIF)

```
. vif

    Variable |       VIF       1/VIF
-------------+----------------------
    FULLCOST |      1.42    0.703652
 SUCCESSFUL |      1.39    0.717061
       FSIZE |      1.18    0.845911
         ROA |      1.12    0.893701
         AGE |      1.09    0.917798
-------------+----------------------
    Mean VIF |      1.24
```

The data set was also tested for multicollinearity with the help of Variance Inflation Factor which showed that the data sets were free from collinearity issues amongst the independent variables used in the study. The mean VIF value was significantly less than 5 as well as their individual values as depicted in table 4.3.

4.2.3.3 Test for Model Misspecification

Table 4.4: Ramsey RESET and Link Test

Tests		Model 1	Model 2	Model 3
Ramsey RESET	F(3,111)	0.14	5.90	1.69
	Prob>t	0.9342	0.0009	0.1722
Link test	Hart square	0.931	0.849	0.493

Source: STATA Output, 2022

Table 4.4 showed the test statistics for model specification using two measures. For the first which was Ramsey RESET statistics, the prob>t values for models 1 and 3 were insignificant (0.9342 and 0.1722 respectively) which implied that the 2 models were correctly specified. Model 2 was misspecified using Ramsey RESET statistics. Therefore, a link test which was another test that checked model misspecification was used. Here, all the three models had hart square values greater than 0.05 (0.931, 0.849 and 0.493 for models 1, 2 and 3 respectively). This showed that the three models were correctly specified.

4.2.3.4 Test for Equality of Variances

Table 4.5: Heteroskedasticity Test

	Model 1	Model 2	Model 3
Chi2(1)	7.02	19.13	3.95
Prob>chi2	0.000	0.000	0.0469

Source: STATA output, 2022

From table 4.5, the prob>chi2 values for the three models were less than 0.05 which implied that the data sets were heteroskedastic. To manage this problem, the final regression models were run with robust standard error term specifications in order to correct the equal variances that were present in the standard error estimates produced by the models. This reduced the possibility of spurious results.

4.2.3.5 Choice of the Model

Table 4.6: Hausman Test

	Model 1	Model 2	Model 3
Chi2(4)	6.42	2.28	3.47
Prob>chi2	0.1698	0.6849	0.4830

Source: STATA Output, 2022

Table 4.6 presented the Hausman tests for the three models to help in choosing the right regression model to run the data. Since the prob>chi2 for all the models were greater than 0.05, random effect regression models were used.

4.2.3.6 Choice of the Random Effect Model

Table 4.7: Lagrangian Multiplier Test

	Model 1	Model 2	Model 3
Chibar2(01)	0.00	10.19	136.26
Prob>chibar2	1.000	0.0007	0.000

Source: STATA Output, 2022

Table 4.7 presented the results for the tests that further suggested the kind of random effect model to be used. The choice was whether to use ordinary least square (OLS) or random effect regression. For model 1 where prob>chibar2>0.05, OLS was used, while for models 2 and 3 where prob>chibar2 were less than 0.05, random effect models were adopted.

4.2.4: Regression Results

The regression results of the study were presented in tables as follows:

Table 4.8 Regression Result for Earnings Predictability

Variable	Coefficient	Robust Std Error	T	prob/t/
Full Cost	-0.9632	0.4951	-1.99	0.042
Successful Effort	0.3571	0.2597	1.38	0.169
ROA	-0.2135	0.1235	-1.73	0.084
FSIZE	-0.0072	0.9315	-0.01	0.994
LEV	-0.7767	0.4758	-1.63	0.103
Cons	-0.9387	2.3456	-0.40	0.689
Obs	120			
Prob>f	0.0273			
R-square	0.0943			

Source: STATA Output, 2022.

Table 4.8 showed the result of the effect of accounting choice on earnings predictability. The result indicated that as a company increased its choice of full cost method, earnings predictability would be reduced by 96.32%. This showed that full cost method of accounting for oil and gas capital costs would improve earnings quality of the sampled oil and gas companies in Nigeria. This result implied that as companies migrate from other methods to full cost as an accounting choice method, earnings predictability will be reduced thereby improving earnings quality of the industry as a whole.

Table 4.9 Regression Result for Earnings Persistence

Variable	Coefficient	Robust Std Error	T	prob/t/
Full Cost	-0.8436	0.3341	-2.52	0.003
Successful Effort	0.2418	0.2631	0.92	0.360
ROA	0.5215	0.1442	3.62	0.000
FSIZE	0.4807	1.0916	0.44	0.660
LEV	0.1087	0.1813	0.66	0.549
Cons	-2.864	3.163	-0.90	0.370
Obs	120			
Prob>f	0.000			
R-square	0.1443			

Source: STATA output, 2022

Table 4.9 showed the result of the regression of accounting choice on earnings persistence. The result indicated that a unit increase in company's choice of full cost method will reduce earnings persistence by 84.36%. This implied that an increase in the adoption of full cost method will reduce earnings quality of oil and gas companies in Nigeria.

Table 4.10 Regression Result for Earnings Variability

Variable	Coefficient	Robust Std Error	T	prob/t/
Full Cost	-0.8669	0.6511	-2.33	0.013
Successful Effort	-0.2069	0.2770	-0.70	0.486
ROA	0.1139	0.1937	0.59	0.556
FSIZE	-1.653	0.6055	-2.73	0.006
LEV	0.1562	0.6542	0.24	0.811
Cons	4.6963	2.8307	1.66	0.097
Obs	120			
Prob>f	0.0113			
R-square	0.1033			

Source: STATA Output, 2022

Table 4.10 showed the result of the regression analysis of the effect of accounting choice on earnings variability. The table indicated that if companies increased their adoption of full cost method of accounting practice for oil and gas expenditures reporting by 1, earnings variability will reduce by 86.69%. This suggested that full cost method of accounting as applied in the oil and gas sector had the potentials of reducing earnings variability amongst the sampled oil and gas companies in Nigeria.

Test of Research Hypotheses

The hypotheses stated in chapter one are hereby restated and tested in this section as follows:

Ho_1: The choice of full cost accounting method does not significantly affect earnings predictability in the Nigerian oil and gas industry.

Table 4.8 was used to test this hypothesis. From the table, prob>/t/ =0.042 which was less than 0.05. This led to the rejection of the null hypothesis and the acceptance of the alternative that the choice of full cost accounting method significantly affects earnings predictability in the Nigerian oil and gas industry.

Ho_2: The choice of full cost accounting method does not significantly affect earnings persistence in the Nigerian oil and gas industry.

Table 4.9 was used to test this hypothesis. From the table, prob>/t/ =0.003 which was less than 0.05. This led to the rejection of the null hypothesis and the acceptance of the alternative that the choice of full cost accounting method significantly affects earnings persistence in the Nigerian oil and gas industry.

Ho_3: The choice of full cost accounting method does not significantly affect earnings variability in the Nigerian oil and gas industry.

Table 4.10 was used to test this hypothesis. From the table, prob>/t/ =0.013 which was less than 0.05. This led to the rejection of the null hypothesis and the acceptance of the alternative that the choice of full cost accounting method significantly affects earnings variability in the Nigerian oil and gas industry.

Ho_4: Earnings predictability is not significantly affected by the choice of successful efforts accounting in the Nigerian oil and gas industry.

Table 4.8 was used to test this hypothesis. From the table, prob>/t/ =0.169 which was greater than 0.05. This led to the acceptance of the null hypothesis that earnings predictability is not significantly affected by the choice of successful efforts accounting in the Nigerian oil and gas industry.

Ho_5: Earnings persistence is not significantly affected by the choice of successful efforts accounting in the Nigerian oil and gas industry.

Table 4.9 was used to test this hypothesis. From the table, prob>/t/ =0.360 which was greater than 0.05. This led to the acceptance of the null hypothesis that earnings persistence is not significantly affected by the choice of successful efforts accounting in the Nigerian oil and gas industry.

Ho_6: Earnings variability is not significantly affected by the choice of successful efforts accounting in the Nigerian oil and gas industry.

Table 4.10 was used to test this hypothesis. From the table, prob>/t/ =0.486 which was greater than 0.05. This led to the acceptance of the null hypothesis that earnings variability is not significantly affected by the choice of successful efforts accounting in the Nigerian oil and gas industry.

Discussion of Findings

From the result of the test of research hypotheses, the findings were hereby discussed below:

The result of the effect of accounting choice on earnings quality as demonstrated in this study indicated that earnings predictability was negatively significant when full cost method of accounting was adopted. The result of the study implied that the adoption of full cost method of accounting will reduce earnings predictability of oil and gas companies in Nigeria. This means that since full cost capitalizes all costs of both successful and unsuccessful exploration and development costs of oil reserves, profits may be less for those years of operating activities, thereby paving way for management to manipulate earnings in order to smoothen it.

The second hypothesis centered on the effect of full cost accounting choice on earnings persistence in the Nigerian oil and gas industry. Findings of this study revealed that there was a negative and significant effect of full cost method on earnings persistence. This finding implied that if full cost method of accounting for oil and gas operations is adopted in Nigeria, the ability of earnings quality to persist will reduce.

The third hypothesis which was to ascertain if full cost accounting choice has the potential of affecting earnings variability revealed a negative significant effect. The negative effect is supported by Lugomwa (2014) who also found that full cost accounting method reduces earnings.

The test of hypothesis four showed that successful efforts method of accounting for oil and gas operations in Nigeria had a positive insignificant effect on earnings predictability. The result also showed that successful efforts method of accounting for oil and gas operations in Nigeria had an insignificant effect on earnings predictability.

The test of hypothesis five revealed that successful efforts method of accounting for oil and gas operations had positive insignificant effect on earnings persistence. This insignificant effect may be due to the fact that too much cost which are otherwise suppose to be capitalized are expensed thereby making the method irrelevant in determining earnings persistence.

The sixth and the last hypothesis centered on the effect of successful efforts method of accounting for oil and gas operations in Nigeria on earnings variability. The findings showed that successful efforts method had a negative insignificant effect on earnings variability.

Conclusion

From the findings of the study, it is pertinent to conclude therefore that:

i. Oil and gas companies operating in Nigeria considered full cost method of accounting for oil and gas operations as an important accounting choice since it enhanced and increased their earnings predictability thereby making quality of earnings higher.

ii. When importance is attached to full cost method of accounting for oil and gas operations in Nigeria, earnings persistence would be low decreasing the quality of earnings.

iii. Full cost method of accounting choice has been found to be very relevant and good for narrowing earnings variability thereby increasing earnings quality.

iv. Successful efforts method of accounting for oil and gas operations in Nigeria is found to be less important in influencing earnings quality thereby widening the gap between earnings and their predictive ability.

v. Successful efforts method of accounting is also found to be more or less irrelevant in explaining earnings even though, it enhances persistence of earnings.

vi. Although, successful efforts method of accounting for oil and gas operations in Nigeria is found to have less relevance in affecting quality of earnings, it encourages the stability of quality of earnings over the years for operational activities of the oil and gas industry.

Recommendations

Based on the conclusions enumerated above, this study recommends that:

i. Managers of companies in the Nigerian oil and gas industry should adopt full cost method of accounting for their operations if their earnings are to be predicted correctly and higher earnings quality are to be achieved.

ii. If oil and gas companies want to ensure that earnings continue consistently and persist into the future, they should choose full cost method of accounting for their operations.

iii. Managers of oil and gas companies operating in Nigeria should also adopt full cost method if they want to narrow variability of earnings. This study proves full cost accounting to be relevant and a key determining choice factor for stability of earnings.

iv. Regulatory authorities such as standards organization of Nigeria, ministry of petroleum resources etc should reduce their coercive tendencies as institutionalized in their regulatory powers.

v. Due to the capital-intensive nature of operations in the oil and gas industry, fund providers, investors and other relevant stakeholders such as customers, employees and analysts should understand that maintenance of cordial and harmonious industrial working relationship amongst themselves is key to ensuring that the capital employed in the oil and gas business is not lost due to strikes, litigations and other issues of misunderstandings.

vi. As the oil and gas sector is central to revenue generation capacity of the federal government, government should always grant accelerated capital allowances and reliefs so as to encourage investments in this sector.

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