Indo-Asian Journal of Finance and Accounting
Vol. 3, No. 2, 2022, pp. 85-96
https://DOI: 10.47509/IAJFA.2022.v03i02.02

ARF INDIA
Academic Open Access Publishing
www.arfjournals.com

Accounting Practices and its Effect on Performance of Oil and Gas Companys in Nigeria

Zwingina, Christy Twaliwi[1], E. A. Adegun[2] and Kayadi Biradawa[3]

[1]*Department of Management, Bingham University, Karu, Nasarawa State, Nigeria*
[2]*Department of Accounting, Adeleke University, Osun State, Nigeria*
[3]*Department of Banking and Finance, University of Maiduguri, Nigeria*

Received: 16 July 2022; Revised: 22 August 2022;
Accepted 28 August 2022; Publication: 28 December 2022

Abstract: This work examined the extent to which Accounting practices affect theprofitability of Oil and Gas companies in Nigeria, particularly those in the upstream sector. The Researchers used Stratified Sampling Design approach. The target population comprised of Oil and Gas Companies in Nigeria. A total of 84 respondents were drawn from the population. Both primary and secondary data were used in the study. Primary Data were collected using questionnaires drawn using the Likert's Scale with five points ranging from very great extent to no extent, while secondary data were sourced from already published materials. Hypotheses were formulated and data were analyzed using SPSS Software and other Descriptive statistical tools such as; percentages and tables. The result of the study showed that accounting practices had a significant relationship with performance of Oil and Gas Companies, particularly, the Return on Assets and Return on Capital Employed. It was recommended that proper and best accounting practices should be adopted by Oil and Gas companies to ensure better performance on one hand and fair, transparent and reliable financial reports on the other hand.

Keywords: Accounting practices, performance, oil and gas sector, Return on Assets, Return on Capital Employed

1. Introduction

Accounting can be defined as a systematic procedure that identify, record, measure, classify, verify, summarize, interprets, and communicate financial facts. It reveals profit or loss for a given period, and the value and nature of a firm's assets and liabilities and owner's equity. It involves ascertainment, recording, summarizing, and reporting of financial information used in evaluating and monitoring a firm's economic undertakings. An accounting

for citation :

Zwingina, Christy Twaliwi, E.A. Adegun & Kayadi Biradawa (2022). Accounting Practices and its Effect on Performance of Oil and Gas Companys in Nigeria. *Indo-Asian Journal of Finance and Accounting*, Vol. 3, No. 2, pp. 85-96. https://DOI: 10.47509/IAJFA.2022.v03i02.02

system, therefore, is an organized set of manual and computerized accounting methodology, processes, and wheels which are used in gathering, recording, classifying, analyzing, summarizing, interpreting, and presenting accurate and timely financial information for decision making in an organization.

The accounting tools such as the cost accounting system, the financial accounting practices and even the management accounting practices provide information on the profitability and other useful information about the entity to the various users. The objective of financial statements is to provide information about the financial position, performance and changes in financial position of an enterprise that is useful to a wide range of users in making economic decisions. According to McMahon (1998) financial performance can be defined as a subjective measure of how well a firm can use assets from its primary mode of business and generate revenues. Further this term is used as a general measure of a firm's overall financial health over a given period of time, and can be used to compare similar firms across the same industry or to compare industries or sectors in aggregation. Financial statements should be understandable, relevant, reliable and comparable. Reported assets, liabilities and equity are directly related to an organization's financial position. Reported income and expenses are directly related to an organization's financial performance.

Similarly, accounting practice is the system of procedures and controls that an accounting department uses to create and record business transactions. Accounting practice should ideally be extremely consistent, since there are many business transactions that must be dealt with in exactly the same manner in order to produce consistently reliable financial statements. Accounting practice also calls for the continual installation and updating of best practices, so that both the efficiency and effectiveness of the accounting processes are improved over time. Doing so calls for additional skills in identifying best practices and in the installation and monitoring of any changes made.

Oil and gas industry play an important role in the Nigerian economy through revenue generation to the government, employment generation and being the major contributor to the growth of the Gross Domestic Product. Oil and Gas Companies, like other entities, are required to prepare and present their financial statements in accordance with Generally Accepted Accounting Practices and/or International Accounting Standards. Such financials are expected to be relevant, reliable and faithfully representing the financial position and performance of the affairs of the reporting entity at any particular point in time.

Financial performance of companies can be measured by use of accounting information or stock market values in a financial accounting

practices context. When accounting information is used, accounting ratios are employed. Among the common accounting ratios used to measure profitability are: return on assets (ROA) and return on capital employed (ROCE). Return on assets is an indicator of how profitable a company is relative to its total assets. It gives an idea as to how efficient management is at using its assets to generate earnings.

In Nigeria, not enough researches have been carried out by scholars on the Effect of Accounting Practices on the Performance of Oil and Gas Companies. Some Scholars have look at the effect of Waste Management Expenditure on the Profitability of Oil and Gas Companies in Nigeria. Others have looked at the effect of Security and Militancy Costs of the Performance of Oil and Gas Companies in Nigeria. But none have looked at the problem of how financial accounting practices employed by Oil and Gas Companies impact on their Performance, particularly their profitability. This study has an earnest desire to have a deeper and clearer understanding regarding the effect of Accounting Practices on the performance of Oil and Gas Companies in Nigeria. The results of this study will be highly beneficial to different members of the business community and other stakeholders. To a very great extent, it would help accountants, financial advisers, and managers of the oil industry in the areas of oil and gas accounting policy formulation to regulate the industry. Finally, but not the least, the researchers also believed that the study will also provide some research literature and direction for future researches in the subject of accounting for oil and gas.

Financial statements also show the results of management's stewardship of the resources entrusted to it. This information, along with other information in the notes to the financial statements, assists users of financial statements in predicting the entity's future cash flows and, in particular, their timing and certainty. To meet these objectives, financial statements provide information about the entities' assets, liabilities, equity, income and expenses (including gains and losses), contributions by and distributions to owners in their capacity as owners and cash flows. This study examined the effect of financial accounting practices employed by Oil and Gas Companies on their financial performance.

The purpose of this study is to examine the degree of impact of accounting practices on the profitability of oil and gas companies in Nigeria. Some specific objectives as follows: To examine the effect of accounting practices on Return on Assets (ROA) of Oil and Gas Companies in Nigeria; To establish the influence of accounting practices on Return on Capital Employed (ROCE) of Oil and Gas Companies in Nigeria.

2. Literature Review

Accountants are faced on a daily basis to measure, record and communicate the economic activity of business activities in their financial reports. The accrual-based method of accounting provides the most acceptable approach for reporting financial events of entities. Economic effort and expected changes in economic well-being constitute the focal points for decision makers as they decide to invest in and lend to entities.

Financial reports are the primary mode of communication used by the company to correspond with stakeholders (Botosan, 1997; and Lang and Lundholm, 1993). Through these reports, companies disclose relevant information which plays a crucial role in the decision-making processes. As stakeholders rely heavily on these pieces of information when making different types of decisions, Cooke claims that it is important to assess the extent of disclosures made by a corporation (Cooke, 1989). These pieces of information are crucial in the decision-making processes regarding the allocation of scarce resources for stakeholders.

The business world is involved in a myriad of transactions, and accounting is the tool that seeks to simplify every aspect of this complex environment. Through the years, business has evolved and has become increasingly complex and dynamic. This is not unconnected with the increasing rate of trade volumes between countries and entities worldwide, thereby reducing the world to a global village. Financial statements provide basically quantitative financial information about a business enterprise that is useful to a wide variety of users in making economic decisions.

Financial reporting involves the disclosure of financial information to management and the public (if the company is publicly traded) about how the company is performing over a specific period of time. Financial reports are usually issued on a quarterly and annual basis. This is different from management reporting, which is financial information that is disclosed to those inside the company to be used to make decisions within the company. Financial reports are included in a public company's annual report.

Financial reporting serves two primary purposes. First, it helps management to engage in effective decision-making concerning the company's objectives and overall strategies. The data disclosed in the reports can help management discern the strengths and weaknesses of the company as well as its overall financial health. Second, financial reporting provides vital information about the financial health and activities of the company to its stakeholders including its shareholders, potential investors, consumers, and government regulators. It's a means of ensuring that the company is being run appropriately.

The Nigerian oil and gas industry has been vibrant since the discovery of crude oil in 1956 by the Shell Group. However, the sector was largely dominated by multinational corporations until the early 1990s when Nigerian companies began to make a foray into the industry. Local participation was boosted with the implementation of the Nigerian Content Directives issued by the Nigerian National Petroleum Corporation (NNPC) about a decade ago, and eventually, by the promulgation of the Nigerian Oil and Gas Industry Content Development (NOGIC) Act (The Act) in 2010. The Act seeks to promote the use of Nigerian companies/resources in the award of oil licenses, contracts and projects. In terms of structure, the industry is broadly divided into: Upstream sector and Downstream sector

Upstream sector is characterized by exploration and production of crude oil and gas (petroleum operations). The upstream oil sector is the single most important sector in the Nigerian economy, accounting for over 90% of the country's exports and about 80% of the Federal Government (FG's) revenue. The Downstream Sector on the other hand consists of (a) Transmission and Conveyance which involves the transportation of oil and gas to the refinery and gas stations. There is a pipeline network from the wellhead to the refinery or plant. Tankers and purpose-built vessels are also used for this purpose; (b). Refining which involves transforming the crude to products such as PMS, diesel, kerosene, etc. and (c) Distribution and Marketing- which entails the distribution and marketing of refined petroleum products and other complementary activities. Distribution also involves the transportation of refined petroleum products from the refineries through pipelines, coastal vessels, road trucks, rail wagon etc. to the storage/ sale depots.

All companies involved in oil and gas exploration, development and production activities must indicate in their financial statements the policy for accounting for costs incurred and the manner of costs capitalization in respect of oil and gas activities (Davies *et al*., 2014). Companies involved in the exploration and development of crude oil and natural gas have the option of choosing between two accounting approaches: the "successful efforts" (SE) method and the "full cost" (FC) method. These differ in the treatment of specific operating expenses relating to the exploration of new oil and natural gas reserves.

The successful efforts (SE) method allows a company to capitalize only those expenses associated with successfully locating new oil and natural gas reserves. For unsuccessful (or "dry hole") results, the associated operating costs are immediately charged against revenues for that period. Davies *et al.* (2014) argued that in successful efforts method, acquisition and exploration costs are generally expensed if the project lead to prove

reserve and capitalizes only if proved reserves are discovered. Accordingly, the view behind the SE method is that the ultimate objective of an oil and gas company is to produce the oil or natural gas from reserves it locates and develops so that only those costs relating to successful efforts should be capitalized. Conversely, because there is no change in productive assets with unsuccessful results, costs incurred with that effort should be expensed.

The alternative approach, known as the full cost (FC) method, allows all operating expenses relating to locating new oil and gas reserves – regardless of the outcome – to be capitalized. The FC method holds that, in general, the dominant activity of an oil and gas company is simply the exploration and development of oil and gas reserves. Therefore, all costs incurred in pursuit of that activity should first be capitalized and then written off over the course of a full operating cycle. Here, "all costs associated with acquisition, exploration, appraisal and development of oil and gas activities are capitalized. The theory is that all costs, even the unproductive costs are necessary, if the company is going to find proved reserve" (Davies et al 2015). Exploration costs capitalized under either method are recorded on the balance sheet as part of longterm assets. This is because like the lathes, presses and other machinery used by a manufacturing concern, oil and natural gas reserves are considered productive assets for an oil and gas company; Generally Accepted Accounting Principles (GAAP) require that the costs to acquire those assets be charged against revenues as the assets are used.

The accounting method that a company chooses affects how its net income and cash flow numbers are reported. Therefore, when analyzing companies involved in the exploration and development of oil and natural gas, the accounting method used by such companies is an important consideration. In general, SE and FC methods differ in their approach to treating costs associated with the unsuccessful discovery of new oil or natural gas reserves. Although both methods are indifferent as to the type of reserves, oil versus natural gas, that are associated with the costs incurred, the specific treatment of those costs by each method is responsible for the difference in the resulting periodic net income and cash flows numbers. Regardless of the method it chooses to follow, an oil and gas company engaged in the exploration, development and production of new oil or natural gas reserves will incur costs that are identified as belonging to one of four categories acquisition cost, exploration costs, development costs and production costs.

The effect of choosing one accounting method over another is apparent when periodic financial results involving the income and cash flow statement are compared with the effect of highlighting the way each method treats the individual costs falling into these four categories. But such a

comparison will also point out the impact to periodic results caused by differing levels of capitalized assets under the two accounting methods.

Much in the same way the financial results of a manufacturing company are impacted by depreciation expense for plant, property and equipment, those for an oil and gas company are equally affected by periodic charges for depreciation, depletion and amortization (DD&A) of costs relating to expenditures for the acquisition, exploration and development of new oil and natural gas reserves. They include: the depreciation of certain long-lived operating equipment; the depletion of costs relating to the acquisition of property or property mineral rights; and the amortization of tangible non-drilling costs incurred with developing the reserves.

The periodic DD & A expense charged to the income statement is determined by the "units-of production" method, in which the percent of total production for the period to total proved reserves at the beginning of the period is applied to the gross total of costs capitalized in the statement of financial position.

Depreciation, Depletion & Amortization (DD&A), production expenses and exploration costs incurred from unsuccessful efforts at discovering new reserves are recorded on the income statement. Initially, net income for both a Successful Effort and Full Cost company is impacted by the periodic charges for DD&A and production expenses, but net income for the SE company is further impacted by exploration costs that may have been incurred for that period. Thus, when identical operational results are assumed, an oil and gas company following the SE method can be expected to report lower near-term periodic net income than its FC counterpart. However, without the subsequent discovery of new reserves, the resulting decline in periodic production rates will later begin to negatively impact revenues and the calculation of DD&A for both the SE and FC Company. Due to the FC company's higher level of capitalized costs and resulting periodic DD&A expense in the face of declining revenues, the periodic net earnings of the SE company will improve relative to those for the FC Company, and will eventually exceed those costs.

The essential point is that when investing in companies involved in the exploration and development of oil and natural gas reserves, company analysis should include recognizing which accounting method a company follows. The differences between the two methods and their impact on near- and long-term net income and cash flow should prove helpful when comparing individual companies' past results and future expectations.

Measures of corporate performance are numerous. Traditional common measures include; Return on Assets (ROA) and Return on Capital Employed (ROCE). These measures are discussed below.

Return on Assets: This is an indicator of how profitable a company is relative to its total assets. ROA gives an idea as to how efficient management is at using its assets to generate earnings. It is calculated by dividing a company's annual earnings by its total assets. It is computed as follows:

ROA = Net income (EBIT)/Total assets (expressed as a percentage) (1)

ROA tells us what earnings were generated from invested capital (assets). ROA for public companies can vary substantially and will be highly dependent on the industry.

Return on Capital Employed**:** ROCE indicates the efficiency and profitability of a company's capital investment. It is one of the most important operating ratios that can be used to assess corporate profitability. It is expressed as a percentage and can be very revealing about the industry in which a company operates in, the skills of management and occasionally the general business climate. As a general rule, a firm with a high return on capital employed will probably be a very profitable business. ROCE is calculated as follows:

ROCE = PBIT (Net Income)/Capital Employed (2)

Where:

Capital Employed = Total Assets – Current Liabilities = Equity + Non-Current Liabilities.

3. Methodology

The Stratified Sampling design procedure was considered most appropriate for this study. For the study, the target population consists of Oil and gas companies in Nigeria. However, due to the difficulty of conducting an effective study on the entire population, the researchers resorted to limit their study to an accessible population comprising Accountants and selected Management staff of Total, E&P, Agip Nigeria Ltd and Chevron Nig. Ltd, from where the sample of the study were drawn. As a result of the large number of staff in the three companies the researchers employed the stratified sample technique to select a total of 84 respondents, which were used for the study. A Stratified sampling technique was then used to select those members of the population finally used in the study. Descriptive statistics in form of tables and percentages were used to present demographic and other data.

The research questions were answered and hypotheses tested with one or more of the following statistical tools: tables and percentages. To ascertain the strength of the relationship between variables, simple regression statistic was used. These were analyzed with the Statistical Package for Social Science (SPSS). Testing of hypotheses was done at a 0.05 level of significance. The

analysis of the responses to the question shows that there was a relationship financial accounting practices and performance of oil and gas companies in Nigeria.

4. Data Presentation and Analysis

For the study, a total of 90 copies of the questionnaire were distributed to staff drawn from the management and accounting departments/sections of the affected oil and gas companies used for the study. Out of 90 copies of the questionnaire administered, a total of 85 were retrieved and used for the study, representing 94% response rate. Whereas, 5 copies of the questionnaire representing (6%) were not returned. The results of their responses are represented as shown in the tables below.

Table 1: Showing result of the relationship between Financial Accounting Practices and Return on Assets

Statistical variables	*Values*
Correlation (R)	0.980
R Square (R2)	0.961
Adjusted R square (AR2)	0.951
T-Test (t) Return on Assets	9.945
T-Test constant	0.599
F figure	98.901
B value Beta	0.886
	0.980

Table 2: Showing the relationship between Financial Accounting Practices and Return on Capital Employed

Statistical variables	*Values*
Correlation (R)	0.530
R square (R^2)	0.300
Adjusted R Square (AR^2)	-0.330
Statistical variables	*Values*
T-Test (t) Return on Capital	0.092
Employed	1.015
T-Test constant	0.900
F figure	0.200
B value Beta	0530

The hypotheses were tested using the primary data collected from respondents.

HO_1: There is no significant relationship between Financial Accounting Practices and Return on Assets in Oil and Gas Industry in Nigeria.

Table 1 above shows a correlation coefficient (r) of 0.980. This implies that a very strong correlation exists between financial accounting practices and explanatory variables. The coefficient of determination (r^2) is 0.961 which shows that 96% of the variation in Return on Assets is attributable to the variations in the financial accounting system. Also, the F-value calculated of 98.901 has a correlation corresponding value of 0.00 which implies a good model utility. The test of significance conducted as shown in the tables above states that ROA has a calculated value of 9.945 and a corresponding significance value/probability value of 0.000. The positive sign of t-value (9.945) shows the direction of the variables. This therefore implies that when a fairer financial accounting practice is used, this leads to a better, reliable and fairer financial result that is objective and represent the true state of affairs in the oil and gas companies proportionately. However, given that the probability value (PV) of 0.000 is less than 0.05 level of significance, the researcher concludes that return on assets is significantly influenced by the financial accounting system employed. Conventionally, t-test (Return on Assets) = 9.945, t-constant = 0.599. Therefore, the null hypothesis H_O is rejected meaning that there is a significant relationship between financial accounting practice and the ROA.

HO_2: There is no significant relationship between Financial Accounting Practices and Return on Capital Employed in Oil and Gas Industry in Nigeria.

Table 2 as shown above indicates a correlation coefficient (r) of 0.530. This implies that a moderate correlation exists between financial accounting practice and ROCE. The coefficient of determination (r^2) is 0.300 which shows that 30% of the variation of ROCE is attributable to the variation in financial accounting practice used by the company. Also, the F-value calculated of 0.900 has a correlation corresponding value of 0.932 which implies an improper model utility. The simple regression table shows the linearity of the variables. However, the *t-figure* of 0.092 for ROCE being less than the constant *t-figure* of 1.015 shows an insignificant correlation of financial accounting practice and ROCE of Oil and Gas companies; therefore, the null hypothesis H_O is accepted, this shows that there is no significant relationship between financial accounting practices and Return on Capital Employed in the Oil and Gas Industry. As indicated by the information collected, financial accounting practice is important but can be manipulated by users. The *beta values* give the contribution or relevance of the independent variable. The *beta value* of 0.530 shows a moderate correlation between the variables.

5. Conclusion and Recommendations

The researchers in their course of investigation made the following findings; there is a significant relationship between Financial Accounting Practices and Return on Assets of oil and gas companies in Nigeria. Also, there is a significant relationship between Financial Accounting Practices and Return on Capital Employed of oil and gas companies in Nigeria.

Based on the findings of the study, the following recommendations were made: Companies should adopt Generally Accepted Accounting Practices, as it relates to the Oil and Gas Industry Accounting. This is to ensure reliability, comparability, and consistency. It will help to check unwholesome practices. Regulatory agencies and other stakeholders should hold the companies accountable for the performance of their lapses in the adoption of sound and acceptable accounting practices. Government should enact regulatory laws that will ensure that companies carry out their accounting responsibilities. Extant laws should be properly enforced. The management should ensure timely, relevant and transparent accounting system and reporting. This will make them more accountable to the stakeholders.

References

Davies, S.D, Nangih, E. &Egbai, E.O. (2014). Cost Implications of Upstream Activities on Financial Performance of Oil and Gas Companies in Nigeria. *International SAMANM Journal of Finance and Accounting. Vol. 2, No. 1 January 2014.*

McMahon, R.G.P. (1998). Financial Reporting Practices of Australian Manufacturing SMEs. *Finance and Small Business Management, 12(3) 24-37.*

Nigerian National Corporation (NNPC). (2009). Development of Nigeria's Oil Industry by Nigerian National Petroleum Corporation. *Retrieved on June April 18, 2017 from http://www.nnpcgroup.com*

Obara, L.C. (2017). A Compendium on Oil and Gas Accounting. *An Unpublished M.sc Lecture Notes of Department of Accountancy, Rivers State University, Port Harcourt, Nigeria.*

Obara, L.C., Nangih, E. & Agba, J.N. (2016).Accounting Systems and Payroll Fraud in the Public Sector: A Survey of Selected Ministries and Parastatals in Rivers State, Nigeria. *Journal of Accounting and Financial Management ISSN 2504-8856 Vol. 3 No. 2, 2017.*

Obara, L.C., Ohaka J., Nangih, E. and Odinachukwu I.O. (2017). The Effect of Accounting for Waste Management Expenditure on the Profitability of Oil and Gas Companies in Nigeria. *International Journal of Economics, Commerce and Management. Vol. V, Issue 3, March 2017.*

Patel, B.P. (2015). Effects of Accounting Information System on Organizational Profitability. *International Journal of Research and Analytical Reviews. Vol. 2, Issue 1 Jan- Mar 2015.*

Schugart, G. (2002). Workbook on Oil and Gas Accounting. Institute for Energy, Law & Enterprise, University of Houston Law Centre.

Sharma, G. (2015). Practices of Financial and Management Accounting: Evidence from Small and Medium-sized Enterprises of Nepal. *The Journal of Nepalese Business Studies. Vol IX No 1 December 2015.*

Ukpai, N.A., Kiabel, B.D., & Obara, L.C. (2012). Financial Accounting 1. David Stone Publishers, Port Harcourt, Nigeria.

Vitalone, J. (2013). Accounting for differences in oil and gas accounting. *http://www.investopedia.com/articles/fundamental-analysis/08/oil-gas.asp*#