

Cost Implications of Upstream Activities on the Financial Performance of Oil and Gas Companies in Nigeria

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Abstract

This study investigated the cost implications of upstream activities on the financial performance of oil and gas companies in Nigeria: A study of Elf and Addax petroleum exploration. Two hypotheses were formulated to guide the study. The study investigated the relationship between social cost and financial performance of Elf and Chevron petroleum exploration (Nigeria). Survey research design was adopted for the study. Primary and secondary data were used for the study. Data collected was analyzed using Ordinary least square multiple regression. Results of the findings revealed that social cost on education, health agriculture and social donations significantly influence financial performance of the two companies under study. It was recommended that oil companies in our economy should establish a sound social responsibility system and shareholders should not frown or see as a hindrance to the preparation of social responsibility accounts and the compensation to the society by the firm, no matter the degree or magnitude of the financial involvement. After all it helps in protecting the image of the company which also helps in yielding more revenue to the business set up.

1. Introduction

Petroleum production is Nigeria's largest and most important industrial sector. Petroleum came to the forefront of foreign exchange earnings after the most reliable sustainer of the Nigeria economy. Agriculture has been pushed to the background. Depending on the angle of focus, the issue of economy attracts different reactions from different people. To the environmentalist, the

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ecological impact of oil exploration and the production of oil for service of humanity is a laudable achievement. To the consuming nations, it is an inevitable requirement to keep the socio-economic wheel of producers, the vital wealth without which an inevitable dis-equilibrium could result with fatal consequences for the well being of the people.

The exploration and drilling for oil on land and offshore involves a certain amount of alteration of land surface in a conspicuously negative fashion. Vegetation is cleared to make way for seismic lines, sites for drilling rigs are labeled, roads are built, drilling mud and oil may reach streams, surface water and land, thus making them unfit for either domestic or industrial purposes. The rising concern with environmental issues can be attributed to the new perspective we gained from space that give us a clear view of our responsibilities to our environment for which we are all custodians. Our growing technological power not only gives us this new perspective but it also gives us the capability of damaging the environment. Man in his endeavor to satisfy his needs and aspirations for better living conditions through resources exploitation, has created an increasing number of environmental problems (Faure & Hui, 2003).

While all these oil business activities have generated immense financial benefits for the country they have at the same time resulted in serious environmental destruction through oil spillage. In spite of the major role played by the industry in facilitating the economic development of the nation, there is no authoritative pronouncement on accounting rules to be followed in the industry apart from the existing legislation. Since the oil companies operating within the industry come from different countries of the world, the industry has developed a wide diversity of accounting practices. There is therefore, a need to develop an accounting standard to be used by all the companies within the industry in order to ensure the comparability of financial statements or reports. This gave rise to the statements of accounting standard fourteen (SAS 14) issued by the Nigeria accounting standard board (NASB) in December, 1993.

1.1 Statement Of The Problem

Upstream companies are involved in the exploration of oil and gas which is both onshore and offshore. As part of the efforts to reduce the risks in oil and gas exploration, companies typically engage in arrangements such as joint ventures, carried interest, button hole, dry hole arrangement, production sharing arrangements and others. In carrying out their activities, certain environmental pollution problems such as pesticide contamination, increased incidences of cancers from

carcinogens, lack of access to clean water, toxic wastes, and unsustainable extraction of resources and the most notable of which is oil pollution and physical destruction of landscape.

Consequently, these companies are up large to bear certain cost such as social corporate responsibility cost so as to savage the situation. But to greatest dismay most of these companies hardly carry out their responsibility as required by law. As such, it is common to see protest from host communities against the activities of oil exploration companies which most often lead to vandalization of the pipelines of the oil companies. These often result to a great lost from the side of the oil exploration companies which invariably reduces their profitability of the companies. Also, refusal by the company to bear their social cost as required by the government will not portray a good image of the company to the outside world. This most often contribute to poor performance of most companies.

The researcher interest therefore is to investigate the cost implications of upstream activities on the financial performance of oil and gas companies in Nigeria.

1.2 Operational Hypotheses

There is no significant relationship between social cost and financial performance for Addax petroleum exploration (Nigeria)

There is no significant relationship between social cost and financial performance for chevron Nigeria

2. Literature Review

2.1 Accounting For Drilling And Development Cost

While a well is being drilled, Cost incurred may primarily be accumulated in control accounts referred to as “work in progress” on completion of the job, all costs are transferred from the work in progress account to either a dry hole costs or to a producing well account.

In ascertaining the proper classification and contribution of well costs between capital and revenue, the following matters should be considered.

- a. Accounting standard on oil and gas operations
- b. The companies procedures for allocating charges and expenses through manuals procedures guides etc.
- c. Government regulations and laws on petroleum operations.

The petroleum profit tax Act, allows the capitalization of qualifying drilling expenditure and the expensing of intangible drilling cost. It also allows the expensing of the cost of the first two appraisals well in a particular field, including the expenditure incurred on cement and casing and well fixtures.

Generally, all development drilling cost are capitalized, some companies expand those development wells which prove to be unsuccessful development costs are however, classified as wither;

2.2 Intangible Drilling And Development Cost

2.2.1 Equipment Costs

The distinction between the two classes although not in all cases sharply drawn is of importance for income tax purposes. Equipment costs are further subdivided into tangible equipment costs such as floating platforms, sub-sea completion system, cost of transportation facilities (pipeline, tanker loading system cost of on-shore facilities such as treatment separation and stabilization plant, storage tanks and piping etc, intangible equipment costs such as hired on leased equipment contracted services, general overhead expenses, relating to development operation salaries and wages, insurance etc and interest expenses. It is generally accepted that cost falling into the first of these three categories should be capitalized, the cost centre for capitalization is usually the field, and all costs associated with the development, and hence the revenue earning capacity, if the field should be charge to that costs centre (Homer-Dixion, 1999).

Good oil practice demands that-some cost incurred in a company's oil and gas producing activities do not always result in acquisition of an assets and therefore are usually charges to expenses. Examples include geological and geo-physical costs, the cost of carrying and retaining undeveloped properties, and the cost of drilling those exploratory wells that do not result in proved reserves

The cost of a company's well and related equipment and facilities and the cost of the related proved properties are usually amortized as the related oil and gas reserves are produced from the reserves. Depreciation, depletion and amortization of capitalized acquisition, exploration and development costs also becomes part of the cost of oil and gas product along with production (lifting) cost.

Development costs are incurred to obtain access to proved reserves and to provide facilities, for extracting, gathering treating, and the oil and gas. The costs are incurred after a decision has been taken to develop a field or reservoir, and include the following:

- a. Drilling, equipping and testing development and production wells.
- b. Production platforms, down hole and well head equipment, pipelines, production and initial treatment and storage facilities and utility and waste disposal system and, improved recovery systems and equipment. Development costs are usually capitalized as part of the costs of a company's well and related equipment and facilities.

Thus all costs incurred to drill and equip development well and services wells are development costs and are capitalized whether the well is successful or unsuccessful costs of drilling those and costs of constructing equipment and facilities are usually include in the company's uncompleted wells construction in completed.

Prior to completion, the costs of drilling an exploratory well as capitalized as part of the company's uncompleted wells, equipment and facilities pending determination of whether the well has found proved on or shortly after completion of the drilling to expense or be reclassified as part of the costs of the enterprise and related equipment and facilities at the time. If the exploratory well shall find oil and gas reserves in an area requiring a major expenditure in the case, the cost of drilling exploratory well shall continue to be carried as an asset pending determination of whether proved reserved have been found only as long as both of the following conditions are met. Although outage runs usually represent sales, they may represent oil run for consumption as fuel or other purpose. The first method of accounting for oil produced provides a somewhat better safeguard against any continuing loss of oil from theft or other cause, but it has the disadvantage of requiring more mechanical accounting and hence being the more expensive of the two methods.

Also a change in the posted price of oil raises a minor problem of valuation adjustment with respect to oil in the stock tanks. Under the second method, the price variation is automatically absorbed in the inventory variation adjustment, unless explicit recognition is desired.

In accounting for oils sold or used, ordinarily, oil runs tanks to the pipeline or to a tank truck represents sales to outsider. When such runs are used on other properties, they must be recorded on run tickets, since the royalty owner and any other with interest in the production property are entitled to payment for their shares of production. The recording of such runs also provides a more accurate measure of operating results. Depending upon the terms of the lease the royalty owner and others may also be entitled to payment for shares of oil run for use on the producing property itself. Proceeds are often divided share among the parties according to a division, order agreed upon after deducting production taxes from the share of each party (Bryant, & Brant, 2003).

2.3 Oil And Gas Accounting Methods

All companies engaged in oil and gas exploration, development and production activities shall state in their financial statement, the policy for accounting for costs incurred and the manner of disposing capitalized cost in respect of such activities. In addition, the policy on accounting for restoration and abandonment cost should be disclosed in their financial statements even if already include in cost of sales (Dicks, 1998)..

A company may either use the “full cost method or the successful effort method” the method used should consistently applied and discoursed.

2.3.1 Full Cost Method

All cost association with acquisition, exploration, appraisal and development activities must be capitalized. The theory is that all costs, even the unproductive cost are necessary, if the company is going to find any proved reserved. Thus, these costs are part of the cost of fixing the proved reserves that may later be obtained. All production cost are expense as incurred.

2.3.2 Successful Effort Method

In successful efforts method, acquisition and exploration costs are generally experience if the project does not fixed proved reserved and capitalized only if proved reserves are discovered.

Some cost such as geological and geo-physical cost, are seldom directly responsible for the discovery of proved reserves. They are therefore expenses at once even on projects where exploratory drilling eventually lead to proved reserve.

Costs that may eventually be capitalized are held in suspense account until doubt is resolved. Costs of exploratory dry holes are expenses when outcome is known. All development costs may be unproductive. All production costs are expenses as incurred. There are two primary differences between successful efforts and full cost methods of accounting. Firstly, successful efforts companies capitalizes only those costs which are directly related to proved reserves. Full cost companies capitalize all cost of acquisition, exploration, development regardless of whether or not proved reserves are discovered.

Secondly, full cost use a very large cost center size mostly usually a whole country. Whereas successful efforts companies use smaller cost centers, may be a field reservoir property or even a well, in many situations, the cost centre size has more impact on the financial statements than does the capitalization decision.

3. Methodology

Survey research design was adopted for this study. Survey research design according to Kerlinger (1973) is a design that allows that the researcher to use part of the population for the study and then generalize the result on the whole population. Survey research design was suitable for this study because the study intended to cover quite a larger number of sample, but because of time and money part of the population will be used for the study and then generalized the results on the whole population. Morse, the design allows the researcher the study the variables the way they were without manipulation. The population for this study comprises of all the 54 oil companies that are engage in upstream activities. This comprises of 24 multinational and 30 local (NNPC, 2008)

Simple random sampling technique was adopted to select the required sample for the study. Firstly, the name of each of the oil companies involve in upstream activities were written on separate pieces of papers and put in a basket. two draws were then randomly made and the names of the companies selected were then used for the study. Thus the company selected include: Chevron Nigeria and Elf Petroleum Nigeria.

Both primary and secondary sources of data information were used in the course of this research study. Secondary data was gotten from annual reports of the companies under study. this include the profitability and the social cost spent by the companies.

Primary data for study involve the use of a questionnaire to ascertain the percentage of social cost spent on different aspect of social responsibility of the company to the environment they are operating. The questionnaire was constructed by the researcher with the help of the supervisor. Data collected was analyzed using Ordinary least square regression technique

4. Data Analysis

4.1 Test Of Hypothesis

4.1.1 Hypothesis One

There is no significant relationship between social cost and financial performance for Elf Petroleum Nigeria. The dependent variable in this hypothesis is performance of Elf Petroleum Nigeria while the independent variable is social financial cost. Ordinary least square multiple regression statistical technique was employed to test this hypothesis. The result is presented in Table 1

Variable	Estimated Coefficients	Standard Error	T-Statistic	P- Value
(Constant)	-792635.252	385766.073	-2.055	.109
Edu	6.375	2.615	2.438	.071
Agric	-.078	.184	-.426	.692
Health	1.508	.222	6.804	.002
Donation	-1.535	.565	-2.717	.053

R = .961
R-Square = .92
Adjusted R-Square = .848
F – Statistic = 12.119 (P-Val= 0.01)

Table 4.1: Regression Results Of The Relationship Between Social Cost And Financial Performance (Profitability) For Elf Petroleum Nigeria

Dependent variable: Profitability (PROF)

Source: Computed by SPSS (See Appendix II)

The R^2 value of 0.92 in Table 1 shows that about 92 per cent changes in profitability of elf petroleum Nigeria is caused by changes in social cost of company (edu, agric, health and donation). This implies social cost spent by the company is a prime determinant of profitability of the company. Also, the adjusted R^2 value of 0.848 means that the model is about 85 per cent well fitted. The F-value of 12.119 which is significant at 0.05 level of significant goes to confirm the fact that social cost (Edu, agric, health and donation) are prime determinant of profitability of the company.

The estimated coefficient for edu and health is positive, meaning that there exist a direct relationship between expenditure on education and health and the profitability of the company. This result is in order with economic a priori criteria. The results are all significant at 0.05 level of significance. The estimated coefficient for agric and donation are negative, implying that there exist an inverse relationship between spending on agriculture and donation by the company and profitability of the company, these results are not statistical

Hypothesis two

There is no significant relationship between social cost and financial performance for Chevron Nigeria. The dependent variable in this hypothesis is performance of Chevron Nigeria while the independent variable is social financial cost. Ordinary least square multiple regression statistical technique was employed to test this hypothesis. The result is presented in Table 2

Variable	Estimated Coefficients	Standard Error	T-Statistic	P-Value
(Constant)	-158583.639	90506.267	-1.752	.140
Edu	-.026	.043	-.607	.571
Agric	.113	.153	.740	.492
Health	-.056	.113	-.492	.644
Donation	1.976	.674	2.931	.033

R = .978
R-Square = .956
Adjusted R-Square = .922
F – Statistic = 27.44 (P-val= 0.01)

Table 2: Regression Results Of The Relationship Between Social Cost And Financial Performance (Profitability) For Chevron Nigeria

Dependent variable: Profitability (PROF)

Source: Computed by SPSS (See Appendix II)

The R² value of 0.978 in Table 2 shows that about 98 per cent changes in profitability of Chevron Nigeria is caused by changes in social cost of company (edu, agric, health and donation). This implies only 2 per cent changes in profitability if caused by other factors not shown in the equation. Thus, social cost spent by the company is a prime determinant of profitability of the company. Also, the adjusted R² value of 0.956 means that the model is about 96 per cent well fitted. The F-value of 1 27.44 which is significant at 0.05 level of significance goes to confirm the fact that social cost (Edu, agric, health and donation) are prime determinant of profitability of the company. The estimated coefficient for education and health are negative, meaning that there exist an inverse relationship between expenditure on education and health and the profitability of the company. This result is not in order with economic a priori criteria. The results are all not statistical significant at 0.05 level of significance. The estimated coefficient for agric and donation are positive, implying that there exist a direct relationship between spending on agriculture and donation by the company and profitability of the company. This results are not statistical

significant at both 5 and 10 per cent level of significant though the result are in order with economic theory.

5. Discussion Of Findings

Based on the analysis and empirical results, the regression result showed that the estimated coefficients of the regression parameters have the positive signs and thus confirm with our economic a priori expectation or theory. The implication of this positive sign is that the dependent variable corporate performance mirrored by profitability (PROF) is positively influenced by social cost (Sc) (education, health, agriculture, and donations). This means that an increase in social cost (Sc) would bring about an increase in corporate performance mirrored by profitability (PROF).

The high coefficient of determination R^2 for all the companies under study revealed a significant variation in profitability is caused by variation in the social cost of all the companies. Which also indicates that there exist a significant relationship between profitability and social cost. This finding is agreement with the finding of Ibeanu (2005) who in his finding discovered that there exist a significant relationship between social cost spend by the company and the profitability of that company. According to the author, social cost helps in redeeming the image of the company and consequently increased the number of clients of that company. The finding of this study is also in line with finding arrived by the Jerome (2005) who in his finding found out that there exist a significant relationship between social cost and profitability of the company.

5. Conclusion And Recommendations

5.1 Conclusion

In the modern globalized economy, policy makers, corporate executives, citizens of the country and environmentalists have become more concerned about sustainable development. In response to that concern, many leading oil companies of the world are taking initiatives to ensure sustainable development. In the present situation, it is necessary for oil companies to practice oil and gas accounting to comply with the international trend, although implementation of oil and gas accounting will face many problems such as lack of available oil and gas related information, lack of experts etc. From the forgoing analysis, it is important to note that business enterprises in our society has to hold fast the principles of social responsibility as it will help in reviving our ailing

economy. Government on the other hand should encourage business organizations in our economy by making laws that will protect them as well as regular disclosures.

5.2 Recommendations

Based on the findings, the researcher considered it pertinent at this junction to make bold the following recommendations:

- a. As a matter of urgency, the oil companies in our economy should establish a sound social responsibility system.
- b. Shareholders should not frown or see as a hindrance to the preparation of social responsibility accounts and the compensation to the society by the firm, no matter the degree or magnitude of the financial involvement. After all it helps in protecting the image of the company which also helps in yielding more revenue to the business set up.
- c. The whole concepts and principles of social accounting should be embraced totally.
- d. Oil companies should show the economic value of the reserve of Oil and Gas resources in their annual report.

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