

# Social and Environmental Accounting: The Challenges of Implementation in Oil Prospecting Companies in the Niger Delta States of Nigeria

OYADONGHAN KEREOTU JAMES (ACA) (corresponding author)

DEPARTMENT OF ACCOUNTING

NIGER DELTA UNIVERSITY, WILBERFORCE ISLAND, PMB 071 YENAGOA, BAYELSA STATE E-mail: [tupele\\_ebi@yahoo.com](mailto:tupele_ebi@yahoo.com)

EZE PETER GBALAM (ACA)

DEPARTMENT OF ACCOUNTING

NIGER DELTA UNIVERSITY, WILBERFORCE ISLAND, PMB 071 YENAGOA, BAYELSA STATE

## ABSTRACT

Social and environmental accounting is the ability to provide accurate information in the financial statements regarding the estimated social cost occasioned by the production externalities on the environment and how much deliberate intervention cost had been incurred to bridge the gap between the marginal social cost and the marginal private cost by a firm. This study examines the factors affecting the practice of social accounting disclosure in Nigerian oil prospecting companies. Three (3) companies operating in the Niger Delta States of Nigeria where randomly sampled with thirty (30) host communities drawn from Delta, Bayelsa, Rivers and Akwa-Ibom states. Secondary data were collected from each company's annual reports from 2002 to 2011 and one hundred and seventy two questionnaires were administered to staff and host community members for direct inter personal information. The researchers used least square regression analysis with the help of Econometric view (E-view) model to analyse the effect of the identified variables on the practice of social and environmental accounting. The study revealed that the sampled companies did not in detail, report a close to reality estimate of the externalities generated by their production activities but reports the little intervention cost incurred under the directors or the chairman's report. Again, that factors such as cost of implementation, the effect on profitability, the existence of a legal frame work, the peaceful environment and top management support affects 79% of the level of implementation of social and environmental accounting practice among the companies studied. The paper recommended that a strong legal frame-work should be provided to ensure that more than 80% value of actual economic value of externalities generated in a year is to be reported in the director's report and the actual intervention cost is to be reported in the profit and loss account under social cost.

**Key words:** Social, Environmental, Accounting, Implementation, Challenges, Niger Delta States, and Nigeria.

## INTRODUCTION

The objective of accounting is culture based, culture is the general perception of things by a group of people which determines their objectives, goals and values, values are social ventures, cherished and dictates the patterns of life, prescriptions of guidelines on which premises relationships, transactions and associations are established and legalized, (Youndt 2000). Accounting as an b system is value oriented, it translates the values of transactions and financial relationships into approved formats that measures the related variables in monetary units, (Ross et al 2001).

In recent years, there had been increasing interest by scholars, governments and societies to report value in social issues as they relate to accounting. The reason being that most social issues that create value are economic in nature. (Davies 2007). A major responsibility of financial accounting is to identify the users of the reports and their needs, then to incorporate information that satisfy such needs in the accounts. (Kiabel 2011, Gray 2000). This psychological facet of accounting serves as a system of interface between those who generate the economic values and those who based their decisions on the reported values. This relationship should be based on the double entry principle, such that the values reported are equal to the information needs of the society

Where the reported value fails to be at par with the informed knowledge of the recipients, which determines the content of the information need, then, the financial statements will create a knowledge gap (Essia,2005) and goal incongruence (Micheal, 2001). Such incongruence accounts for disputes, conflicts and industrial breakdowns. (Branco, Manuel and Redrigues 2007). Relating this to the Nigerian oil/gas sector of the economy reveals that, the lack of corresponding financial report on the environment where such companies operate had resulted to the crisis in the Niger Delta states and investment unfriendly environment, loss of income to the government and the affected companies (Appah 2011).

It is expected that the negative externalities caused by production activities and the remedial actions taken by such companies are reasonably reported in the financial statements. Unfortunately, social accounting standards and laws are incompetent to enable corporations to efficiently, sufficiently and accurately provide socially valued information in the annual reports. This deficiency creates social information gap which the researchers wish to call “information disequilibrium” or “social accounting imbalance”.

The objective of this research is to identify and make a critical analysis of the variables responsible for such a low practice of social and environmental accounting among companies operating in the Niger Delta States in Nigeria and to make necessary recommendations.

#### THEORITICAL AND EMPERICAL REVIEW

One of the ethical issues of corporate governance in the private sector is the principle of interest and responsibility. The business environment perceives the interest of a corporation as the various parties which economic and livelihood are affected by the actions and decisions of the corporation. Such interest groups include investors, employees, governments and the host communities (Elegido, 2004). It therefore means that corporations have a responsibility to satisfy the economic and information needs of these groups.

One of the information needs of all these groups is production externalities (Buhari 2002). An externality is an effect that production or consumption has on third parties, people who are not involved in the production or consumption process. It is a by-product which has no value or market, such as air, land and water pollution and the effect is on human health and the environment. (Buhari 2002). (see figure 1).

The above consumer graph illustrates a market situation where the production process of a firm produces a negative externality such as air or water pollution. The supply curve (‘s’) reflects only the private marginal cost incurred by the firm, while the second supply curve (‘si’) incorporates the cost imposed on third parties by the firm due to its externalities with the private marginal cost (mpc) giving a total cost at marginal social cost (msc). The triangle marked x is the difference in cost between the msc and the mpc suffered by the third parties which does not make part of the production cost of the firm. This gap can only be narrowed by the firm through deliberate compensation, remedial actions and philanthropic activities to the third parties by the firm, without which, the free market economy will set a very low cost price for the goods such as in  $P_i$  as against  $P_{ii}$ , because the firm does not pay for the cost of externalities. As for the low cost price, the firm will be tempted to produce more goods at  $Q_{ii}$  Instead of ending at  $Q_i$ .

This will cause a “deadweight loss” as represented by the triangle area marked x. This means, for every unit of additional output produced in excess of  $Q_i$ , the marginal social cost (msc) will exceed marginal social benefit as shown in the demand curve (D). This seemingly low cost of production leads to aggressive industrialization without recourse to its effect on the environment resulting to a geometric destruction of the eco-system.

To the accountant, it is a responsibility of every corporation to be able to provide accurate information in the financial statements, regarding the estimated marginal social cost occasioned by its production activities on the environment and how much interventional cost had been incurred to close the gap between the  $S_i$  and  $S_{ii}$ . This is what social and environmental accounting seeks to solve. The failure to bridge this cost information gap is what social scientists called information asymmetry (Appah 2011; Davis and Okorite 2007).

Information asymmetry means that information about a product may not be equal on both sides of a market. The purpose is to hold the less knowledgeable in a cage for greater exploitation. (Essia 2005), but in real sense this situation does not last long due to globalization and education, which results to distrust, conflicts and breaking of socially valued relationships. Stressing the importance of bridging this information gap, Essia (2005) said, “New information affects the content and structure of the mind, the mind is thus inherently unstable, man is in perpetual search for information, interaction and activities to fill a self felt knowledge gap and the lack of it creates man’s mental insecurity and the venting of it is unpredictable”.

#### Empirical Studies

Several studies had been done on environmental/social accounting and disclosure in the financial statements. Most of them were based on content analysis of annual reports. Content analysis is presently the most widely used technique for analysis of narratives in annual financial reports (Appah, 2011). Since this method is most used by authors, we will limit our review to such studies. Table 1 summarizes the methodology, sample and findings of these studies.

#### MATERIALS AND METHODS

This study takes a little deviation from content analysis to seeing the effect of the factors influencing social and environmental accounting among oil prospecting companies in the Niger Delta States in Nigeria. Primary data was generated through the administration of questionnaires to evaluate the factors affecting the full implementation of social accounting on two hundred and eighty respondents made up of management and accounting staff from three (3) oil prospecting companies in the Niger Delta part f Nigeria and community leaders of thirty (30) host communities drawn from Delta, Bayelsa, Rivers and Akwa-Ibom states.

The study was conducted between 16<sup>th</sup> of May 2012 to October 9<sup>th</sup> 2012. The Yaro Yamen model was used to determine the sample size. A total of one hundred and seventy two questionnaires were completed and used for the analysis representing sixty one (61%) percent. The modeled questionnaire was pre-tested, using five (5) communities and one company in Delta state. A reliability and internal consistency test was done on data collected using Cronbach Alpha and Pearson product movement correlation coefficient. The test shows that the questionnaire was reliable and consistent at 0.732 and 0.781. Excel was used to transform the data into analyzable format, after which the least square regression was used with econometric view (E-View) soft ware as explained by Gujarati and Porter (2009), that the ordinary least square regression analysis shows the direction of causing and affecting between the regressand and the regressor variables.

The ordinary least square was guided by the following models.

$$Y = f(x) \text{-----} \quad (1)$$

Where x means the factors that affect the implementation of social and environmental accounting (SOEA) by corporate beings

$$Y = f(X1, X2, X3, X4, X5) \text{-----} \quad (2)$$

Where X1 = cost of implementation (com), X2 = effect on profitability (eop), X3 = Top management support (tms), X4 = -corporate legal environment (cle) and X5 = peaceful environment (pe).

$$SOEA = a_0 + a_1COM + a_2EOP + a_3TMS + a_4CLE + a_5PE + E \text{-----} \quad (3)$$

A priori expectation of the linear function is as below

$$COM/SOEA > 0; EOP/SOEA > 0; TMS/SOEA > 0; CLE/SOEA > 0; PE/SOEA > 0.$$

a1, a2, a3, a4, and a5 are the co-efficient of the regression and a is the intercept of the regression and E is the error term, capturing other explanatory variables not included in the model.

## RESULTS AND DISCUSSION

Table 2 presents the multiple regression result on the factors affecting the practice of social and environmental accounting. It shows that social and environmental accounting is significantly related to the cost of implementation, effect on profitability, top management support, level of existing corporate laws and the peacefulness of the environment with probabilities of 0.8629, 0.0004, 0.1919, 0.4284 and 0.3005 respectively which is greater than the critical value of 0.5%. This findings agrees with the studies of Punnu and Okoth (2009), Owolabi (2008) and Adams, Hils and Roberts (1998). This result shows that cost of implementation has a weak relationship with 0.8629 probability, all others have a relatively strong relationship with effect on profitability being the strongest.

### DURBIN-WASTON STATISTICAL TEST

From table 2, The Durbin-waston stat test of auto-correlation is 2.430834, which shows that the data is stable, and that the result is capable to forecast a long-run relationship between the dependent and the independent variables of the model. Again at N= 20 and K= 5, the Durbin-waston stat test tabulated is 0.792 to 1.991 which is less than 2.430834, indicating that there is no presence of positive first order serial correlation in the model.

### F statistical test

The F stat test calculated from table 2 is 15.31458, at a V1 of 6 – 1 =5 and V2 of 20 – 5 =15 the critical value tabulated is 2.9013. Since the tabulated is less than the calculated value, the hull hypothesis is rejected, while the alternative is accepted that social and environmental accounting practices are influenced by the cost of implementation, effect on profitability, top management support, corporate legal environment and the peaceful environment.

### R-SQUARE TEST

From table 2, the R-Square computed is 0.845428, which means that the independent variables in the model explains 84% of the behaviour of social and environmental accounting practice among oil prospecting companies in the Niger Delta States of Nigeria. With the Adjusted R-Square result, they explain 79% of the behaviour while those variables not included in the model explains only 21% of the behaviour. .

Table 3 shows a Jarque Bera test of normality as follows;

Skewness -1.562730 and Kurtosis as 5.636. With a skewness of less than 0, and kurtosis of more than 3, and a probability of 0.0009, the hull hypothesis is rejected and the alternative is accepted as with the F stat test above since the observed variables residuals are not perfectly normally distributed as in table three above.

From table 4, the result indicated a probability of 0.052 which is greater than the critical value of 0.05. showing that there is no heteroskedasticity in the models.

The result from table 5 indicated a probability of 0.235886 which is greater than the critical value of 0.05. Showing that the model for the study is well specified.

## CONCLUSION AND RECOMMENDATIONS

The study provided sufficient evidence that the practice of social and environmental accounting is influenced by the following factors; the cost of implementation, the effect of the report on the profitability of the firm, the existing environmental accounting reporting laws available in the corporate environment, the attitude of the top

management staff towards the report and the level of peace enjoyed in the environment by the corporation and the host. Companies only report a little of the social and environmental externalities caused by their operations either in the chairman or directors' report in the annual financial statements.

The researchers recommended that Government should enact and enforce strong laws on reporting operational externalities by oil companies in their financial statements, such as effects of gas flaring and oil spillage on the eco-system in the main books as estimated by environmental analysts and the financial value of deliberate interventions taken in the profit and loss account as environmental effect intervention cost. This will help the public to know the estimated cost by experts and the cost paid by the company and the margin of the difference between the valued damage and the compensation paid for and be able to judge the company to be satisfactory or non satisfactory in their actions to remedy the externalities.

#### ACKNOWLEDGEMENT

The researchers wish to acknowledge the following companies; NNPC, Warri. Shell Nig Plc, Port-Harcourt, Mobil, Akwa-ibom State and the 30 host communities used in Delta, Bayelsa and Rivers States of Nigeria.

#### REFERENCES

- Adams C. A., W. Y. Hills and C. B. Roberts, 1998. Corporate Social Reporting Practices in Western Europe: Legitimizing Corporate Behaviour? *Br Account Rev.*,30(1): 1 - 21
- Appah E 2011. A Study of Social Accounting Disclosure in the Annual Reports of Nigerian Companies: *Asian Journal of Business Management*. Vol 3, no 3 pg 145 – 151.
- Boardman E. A; Greenberg H. D; Vining R. A and D. L Weimer (1996). *Cost-Benefit Analysis: Concepts and Practice*. New Jersey; Prentice-Hall. Inc.
- Branco E, C. Emanuel and L Rodrigues, 2007. Issues in Corporate Social and Environmental Reporting Research, an Overview. *Issues in Social and Environmental Accounting* 1 (1) 77 – 90
- Buhari A. L. 2002. *Staight to the Point Ican/Polytechnic Public Finance*. Ilorin, UnIlorin Press.
- Davies N. and L. Okorite, 2007. Corporate Social Responsibility Accounting: a Wake-up call to the Nigerian Accountant. *Nigerian Accountant*, 40(2): 44 – 48
- Elegido J. M. 2004. *Fundamentals of Business Ethics. A Developing Country Perspective*, Ibadan. Spectrum Books.
- Essia U. 2005. *Issues in Mordern Economic Thought, Vol 3. The Evolution of Economics, Facts, Phantoms and Fictions*. Calabar, Saesprint Publishers.
- Gray R. 2000. Current Developments and Trends in Social and Environmental Auditing, Reporting and Attestation. A Review and Comments. *International Journal of Audit*. 4: 247 - 268
- Gujarati D. N. and D. C. Porter 2009. *Basic Econometrics (5<sup>th</sup> edition)* New York. McGraw-Hill.
- Kamla R. 2007. Critically Appreciating Social Accounting and Reporting in the Arab Middle East: A Post Colonial Perspective. *Advance International Accounting*, 20: 155 – 177.
- Kesaprakon P. 2009. Corporate Social Responsibility, a Triple Bottom Line Investment to Create Business and Social Value for all. <http://www.ilo.org/actrav/lang-en/index.htm> (retrieved March 12 2012).
- Kiabel B. D. 2011. *Accounting Principles*. Port-Harcourt; Mgbaa Printing Press.
- Mamman S. 2004, Disclosure of corporate social responsibility performance in accounting reports. *Nigerian Journal of Accounting Research*. 1. (1): 14 – 21.
- Micheal A. 2001. *Human Resources Management Practice*. London. Kogan Page.

Owolabi A 2008. Environmental Disclosure in Annual Reports. The Nigerian Perspective. Paper presented at the 2<sup>nd</sup> Italian Conference on Social and Environmental Research. Rimini, 17 – 19 September, 2008. [www.riviate.paviauniversitypress.it/index.php/ea/article/download/433/489](http://www.riviate.paviauniversitypress.it/index.php/ea/article/download/433/489). (June, 18 2012)

Ponnu C. H. and O. A. Okoth 2009. Corporate Social Responsibility Disclosure in Kenya; the Nairobi Stock Exchange. African Journal of business Management 3(10): 601 – 608

Ross S. A, R. W. Westerfield and B. D. Jordan, 2001. Essentials of Corporate Finance with Solutions (3<sup>rd</sup> edition). New York, Mcgraw-Hill Primis Custom Publishing.

Youndt M. A. 2000, Human Resources Considerations and Value Creation: The Mediating Role of Intellectual National Conference of US Academy of Management, Toronto.

TABLES AND FIGURES

Table 1. Empirical review of related studies

Authors	Methodology and sample	Main findings
Appah E (2011)	Content and simple percentage analysis on 40 companies listed in the Nigerian stock exchange for a period of 2005 to 2007	i. Nigerian companies prefer to disclose social accounting in the director's report, chairman's report and notes to the accounts. ii. the most popular themes in the report are, human resources, community involvement and environmental effects
Ponnu and Okoth (2009) Kenya	Content analysis and chi-square of all the 54 listed companies in Nairobi stock exchange	Corporate social disclosure is given only a modest attention, based mainly on community involvement.
Owolabi (2008)	Content analysis on 20 listed companies in the Nigerian stock exchange, covering 10 sectors of the economy from 2002 to 2006.	i. 35% of companies show social disclosure in their annual reports. ii. social information is disclosed by multi-national companies more than indigenous companies.
Kamla (2007) Saudi Arabia	Content analysis of 68 companies annual reports from Saudi Arabia, Oman, Kuwait, Syria, Jordan and Egypt.	i. employee disclosure is more in the financial statements. ii. environmental disclosure is low in Arab Countries.
Adams et al (1998) UK	Content analysis of 150 companies annual reports from Netherland, Sweden, Switzerland, France, Germany, and the United Kingdom	Significant factors influencing social reporting patterns were found to be company size, industry grouping and country of domiciliation.

SOURCE: Several Authors

### Table 2 E-Views Result

Dependent Variable: SOEA  
 Method: Least Squares  
 Date: 10/02/12 Time: 12:27  
 Sample: 1992 2011  
 Included observations: 20

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	75.04583	14.03134	5.348444	0.0001
COI	0.044314	0.251967	0.175872	0.8629
EOP	-1.615765	0.348455	-4.636939	0.0004
TMS	0.316182	0.230604	1.371104	0.1919
CLE	0.130191	0.159629	0.815585	0.4284
PE	-0.099006	0.092087	-1.075139	0.3005
R-squared	0.845428	Mean dependent var	67.20000	
Adjusted R-squared	0.790224	S.D. dependent var	11.73210	
S.E. of regression	5.373451	Akaike info criterion	6.444143	
Sum squared resid	404.2357	Schwarz criterion	6.742863	
Log likelihood	-58.44143	F-statistic	15.31458	
Durbin-Watson stat	2.430834	Prob(F-statistic)	0.000030	

source e-view analysis result.

### Table 3. Jarque – Bera Test Of Normality

Series: SOEA, Sample 1992 2011, Observations 20

Mean 67.20000, Median 68.50000, Maximum 85.00000, Minimum 32.00000, Std. Dev. 11.73210,

Skewness -1.562730, Kurtosis 5.636153, Jarque-Bera 13.93150, Probability 0.000944

Table 4 White Heteroskedasticity Test:

F-statistic	8.968642	Probability	0.001457
Obs*R-squared	18.17604	Probability	0.052066

Table 5 Ramsey RESET Test:

F-statistic	0.946116	Probability	0.348462
Log likelihood ratio	1.405033	Probability	0.235883

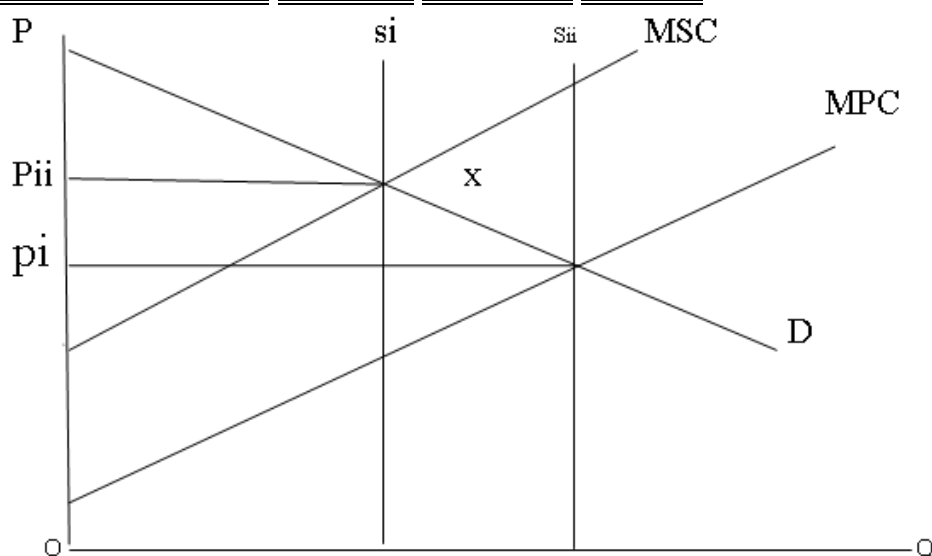


Figure 1. Negative externality graph. Adopted from Boardman et al (1996)

This academic article was published by The International Institute for Science, Technology and Education (IISTE). The IISTE is a pioneer in the Open Access Publishing service based in the U.S. and Europe. The aim of the institute is Accelerating Global Knowledge Sharing.

More information about the publisher can be found in the IISTE's homepage:

<http://www.iiste.org>

## CALL FOR JOURNAL PAPERS

The IISTE is currently hosting more than 30 peer-reviewed academic journals and collaborating with academic institutions around the world. There's no deadline for submission. **Prospective authors of IISTE journals can find the submission instruction on the following page:** <http://www.iiste.org/journals/> The IISTE editorial team promises to review and publish all the qualified submissions in a **fast** manner. All the journals articles are available online to the readers all over the world without financial, legal, or technical barriers other than those inseparable from gaining access to the internet itself. Printed version of the journals is also available upon request of readers and authors.

## MORE RESOURCES

Book publication information: <http://www.iiste.org/book/>

Recent conferences: <http://www.iiste.org/conference/>

## IISTE Knowledge Sharing Partners

EBSCO, Index Copernicus, Ulrich's Periodicals Directory, JournalTOCS, PKP Open Archives Harvester, Bielefeld Academic Search Engine, Elektronische Zeitschriftenbibliothek EZB, Open J-Gate, OCLC WorldCat, Universe Digital Library, NewJour, Google Scholar

