IMPACT OF ENVIRONMENTAL COSTS ON EARNINGS PER SHARE OF OIL AND GAS COMPANIES IN NIGERIA

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ABSTRACT

The fulcrum of this study was to investigate impact of environmental costs on earnings per share of oil & gas companies in Nigeria as of 2010 to 2019. Major objective was to critically examine the impact of environmental costs on earnings per share of oil as well as gas corporations. Using multiple regression analytical techniques, Environmental Impact Assessment Agency and various Companies' annual reports were collected. The test result revealed that there was no significant relationship between oil spillage cost gas flaring cost on earnings per share of the oil as well as gas industries. Again, that fines as well as penalties paid by Nigeria's oil & gas companies negatively affected the earnings per share. It was therefore concluded that oil spillage with gas flaring costs do not significantly affect the earnings for each share of oil & gas industries, as a result of the monopolistic nature of these companies in Nigeria. Base on that, it is recommended inter alia that, oil, as well as gas corporations operating in Nigeria, should take crucial measures to stay away from the payment of fines as well as penalties. And this oil and gas companies where their operations impacts the environment ought to enhance plans as well as guidelines for operating as internal corporate standards required to meet the values of the industry.

Keywords: *Oil spillage cost, gas flaring cost, fines and penalties, earnings per share.*

INTRODUCTION

Though environmental regulations, activities of pressure groups as well as consumer consciousness are weak in the third world nations, several companies in nations as these, are becoming aware of their global market in addition to making substantial efforts concerning sustainable business practices, (Murphy,2003). It is a truism however that, a huge number of organizations in Nigeria are still apathetic about their social responsibility and ecological costs.

The call for corporate organizations to disclose their annual financial reports and account environmental information and develop environmental cost responsiveness is very essential. Backman (2003) 'Conventional approaches of cost accounting being the crux of the matter, happen to be inadequate, and as accounting practices that are conventional overlooked vital environmental costs as well as those that impact consequences on the environment'. Consequential effect on corporate organizations may lead to acquisition of future capital expenditure in addition to cash flows. This can impinge ongoing concerns, because the balance sheet secured loans might not be secured in any case; if land value, for example, is affected by the environmental factor.

According to Campbell (2003), ''Petroleum exploration as well as production has far-reaching impacts on different people from diverse ways". It serves as a means of revenue to the government of the producing as well as consuming nation and indigenes of oil-producing communities. It is an alleged means of livelihood. Environmental impact of the oil and gas production as a basis of service to humankind is not desirable, while the indigenous communities are disadvantaged due to oil spilled and gas flared without appropriate development (Campbell, 2003). Consequently, petroleum production as well as exploitation in Nigeria especially within the Niger Delta region for many years now has invariably resulted in many socio-economic, political and environmental problems (as cited in Tapang, Bassey & Bessong, 2012).

Gas flaring and oil spillage have vehemently caused severe degradation of the environment, loss of human lives, plants and animals and revenue loss to the government and the oil-producing companies as well. The exploitation, production, exploration, storage, transportation, and distribution of petroleum-related products have tremendously affected the environment negatively. The question is, to what extent have these environmental costs affected corporate entities in the upstream and downstream sector of country's economy, with regards to their earnings per share?

In view of the foregoing, it becomes imperative to establish the extent gas flaring cost affects the earnings per share of corporate entities upstream as well as downstream segment of the Nigerian economy. It is similarly important to determine the implications of payment of penalties and fines for not complying with environmental guidelines on the earnings per share of these companies. It is as well urgent to establish a relationship between oil spillage cost and earnings per share of firms in the upstream and downstream sector. To guide the researchers to achieve the objectives of this study, the formulated hypotheses are:

H_{01}:   There exists no significant relationship between oil spillage costs and earnings per share of   oil and gas companies in Nigeria.

H_{02}:   There is no significant correlation between gas flaring cost and earnings per share of oil and   gas companies in Nigeria.

H_{03}:   There is no significant link between fines and penalties and earnings per share of oil and gas companies in Nigeria

THEORETICAL FRAMEWORK

In Nigeria, there has not been any documented research on impact of environmental costs on earnings per share of the oil and gas corporations. However, some researches conterminous with this study are in international accounting literature. For instance, Clause and Pall (2008) did a study on environmental investment and its effect on investment decisions. Findings revealed that information related to environmental disclosure influences allocation of investment decisions. Based on the findings, the companies that are not willing to be environmentally responsible might eventually experience loss in the value of the price of their stock. That is, granted that their investors are sensible to consider the company's future value, considering its present level of environmental accountability. Nagle (1994) discovered a positive relationship between corporate equity returns and environmentally responsible business practices. Similar studies carried out by Balabanis (1998), using indicators like 'return on capital employed in addition to assets', revealed that significant relationship existed between some indicators of performance and environmental costs of corporate entities. Mackinglay (1997) finds no strong relationship between environmental costs and economic performance of business entities. It is not every social and environmental investment that can yield return in monetary form; but can enhance corporate competitive approach as well as tactical value(Hillman & Kein, 2001).

Be that as it may, when a theory is criticized and subsequently debunked, its proponents in an attempt to rekindle interest in what they believe reappear under a new label (Ndebbio & Ekpo, 1991).This explains the rationale for various postulations on environmental costs and earnings per share. The closely connected theories, although not complete, are as follows.

ENVIRONMENTAL QUALITY COST THEORY

The theory is as well called environmental cost reduction' model. This theory states that, the lowest environmental costs can be achieved when there is zero-damage to the surroundings (McWilliams & Siegel, 2000). It is believed that for environmental costs information to be given, the definition of environmental costs should be provided. Environmental quality cost theory is a perfect situation of zero-harm to the surroundings. It is similar to the environmental quality management (EQM) which is the zero- defect situation of overall quality management. Certainly, it is well-matched through the idea of eco-efficiency. These costs acquired, were costs emanating because of the fact that poor environmental quality may exist or existed and must be prevented, reduced or remedied. Environmental costs are costs linked with the development, detection, re-mediation as well as avoidance of environmental degradation (McWilliams & Siegel, 2000). However, environmental costs have four classes based on classification, namely; (1) prevention, (2) detection, (3) internal as well as (4) outer failure costs.

1. **Environmental contamination prevention costs**: It means costs of actions that were intended to avert the production of contaminants and wastes capable of causing degradation of environment. These costs consist of costs acquired in selecting and evaluating pollution control equipments, quality environment consumables, designing procedures, products designing as well as embarking on environmental studies. Additional, are the audit of environmental risks and development of environmental management systems.

2. **Environmental detection costs:** They refer to costs consequent upon activities to ascertain if production procedures in addition to other events within the corporation comply with suitable environmental standards. These costs inter alia, are the audit of environmental activities that inspect products as well as processes and development of environmental performance measures, testing pollution in addition to ascertaining the level of contamination.

3. **Environmental internal failure costs:** There refers to the costs ensuing from the activities carried out as pollutants as well as wastes are generated but are not yet sent out to the environment. Internal costs are

acquired to reduce as well as manage the wastes generated. These costs are for the operation of pollution control equipment, licensing services for the production of contaminants in addition to costs emanating from recycling scraps.

4. **Environmental external failure costs:** Refer to costs of activities carried out after sending out pollutants into the surroundings. These costs are the ones in the cleaning of polluted lake, contaminated soil, clearing of oil spills, and settling individual injury claims which have to do with the environment as well as the restoration of land to normal condition among others. The quest for environmental bookkeeping is to augment as well as further drive the benefit of eco-efficiency which stated that organizations where activities negatively affect the environment may perform roles of production, at the same time, mitigating negative environmental impacts, costs and resource consumption. This study therefore would be anchored on environmental quality cost theory. This will be dealt with by appraising and evaluating environmental costs of oil and gas companies operating in Nigeria vis-a-vis how such affect their earnings per share.

TRIPLE BOTTOM LINE THEORY

The triple bottom line theory was postulated by Elkington (1997). He stressed the need for a paradigm for a sustainable business practice. His first theory is demand for economic feat. Based on this, Elkington reverberates' Adam Smith's supposition of the firm, which stated that; ''the firm has only one goal to satisfy the needs of shareholders via profits making. Be that as it may, there is no possibility of profit being achieved where the environment that the firm operates is out rightly neglected. For Elkington (1997), firms should as well be answerable for social in addition to environmental performance. The economic, social as well as environmental awareness of companiess- the tripod goal, produces a balance which ensures their operations and actions are sustainable. The novel involvement as a matter of fact must permeate all factors of the firm's operations. The organization has to carry out life-cycle technology, recreate corporate governance, accommodate pressure and social groups, change products structure and services and ensure strict adherence to rules and regulations. According to Elkington (1997), any company that adopts the triple bottom line contributes to sustainable development goal. To back up this idea, Hart (1997) stated further; to achieve sustainability it would need a combination of product stewardship, green technology in addition to the prevention of pollution. In Hart's argument, 'if the processes of production as well as technology are modernized, the company would have advanced pollution controls one step further'. This is because, if a practical prevention policy is established, it prevents the stage of having to control and perhaps clean up after an incidence of pollution, hence saving mutual costs in addition to redeeming corporate image. Implementation of product stewardship means inter alia that the firm is preventing pollution from the perspective of product production by means of total life cycle. The fulcrum of environmental theory is established under two key theories: techno-centric, with eco-centric. Epstein (1995) the pioneer of Techno-centric theory, stated that it emphasizes the need for environmentally affable products as well as pure technology. Then eco-centric theory postulated by Dobson (1990) highlighted reasons for business to generate the balanced report of impact of business activities on the environment. Vital report would encompass how corporate organizations have been able to manage its remote and immediate environment. However, a large number of businesses are found wanting in the area of strategy management of the environment. Consequently, Epstein (1995) emphasizes the essence to develop a corporate environmental impact through waste reduction strategy, recycling, and life cycle assessment. In his opinion, modern Corporation can be organized as well as managed in a way less damaging to the environment. Fraction of this management must comprise adequate environmental reports in the internal management decisions of the company to assist in planning for the environmental as well as responsibility cost facing organizations. Consequently, Muller (1996) propounded a novel form of business responsibility to facilitate the management of the environment. He further recommended environmental management plans that involved investment in the ecology. This is thoughtful if environmental as well as social responsibility of business must be attained for sustainable economic development.

The theories are sum up in the definition of sustainable development by the United Nation (U.N) as ''development that meets the present needs with no compromise of the ability of the future generation to satisfy their needs''. The crux of the matter is that any organization that want to achieve its ultimate long term economic goal, must not in any way neglect the social and environmental responsibilities cost as part of the triple bottom objective of sustainable economic growth.

ENVIRONMENTAL COSTS

According to Gray and Bebbington (2006), the term environmental cost, was frequently referred to the costs acquired so as to comply with regulatory standards. It as well involves costs incurred so as to curb or get rid of the release of dangerous matters in addition to every other cost linked with corporate practices directed to reducing environmental impacts.

In the opinion of Fagg (1993) ''Identifying environmental costs lead to the application of terminologies, for instance; Full and Total Costs, True Costs, Life Cycle Costs with additional explanatory costs, attempting to stress the inadequacy of usual approaches as they are yet to acknowledged environmental costs.

According to U.S EPA (1995), ''Environmental costs as well include voluntary costs, for instance; those go further than compliance to statutory requirements.'' These include community relationship, insurance as well as viability studies. Back - end environmental costs relatively different from the upfront costs with others that could be hidden and poorly distributed, are unlikely to be documented in any way.

Oil spillage cost: oil spillage cost presupposes the cost incurred consequent upon the leakage of petroleum resources into the surface of a large body of water. The costs of such accidental oil spills are significant in both ecological and economic terms.

Gas flaring cost: gas flaring cost is the cost incurred as a result of releasing excess natural gas from an oil field and burned. This excess gas is generated during extraction and drilling of oil. The cost of such flare is considerable in both economic and environmental terms.

Environmental accounting: This has to do with the provision of key information relating to environmental performance to various stakeholders within and outside the corporate entity.

Environmental management accounting: This is used generally to provide managerial information for purpose of decision making within a corporate entity.

Earnings per share (E.P.S): This means earnings per-ordinary share capital. In a nut shell, Earnings per share can be seen as the ratio of operating profit after tax of a corporate organization for a financial year and the number of issued ordinary share capital of the organization. Thus;

$$EPS = \frac{profit\ after\ tax\ and\ preference\ dividend}{ordinary\ share\ capital}$$

Earnings per share are an index used to measure performance of a corporate organization which is of primary interest to both potential and existing shareholders, and their advisers.

REGULATIONS, STANDARDS AND CODES ON ENVIRONMENT IN NIGERIA
These are diverse statutes, values, suggested practices as well as regulations in Nigerian Federal Ministry of Environment. There are rules in Nigeria prohibiting as well as controlling water pollution, air in addition to land, prior to the approval of 'Environmental Impact Assessment Act' of 1992 which have to do with the;

➢ Oil in Navigable Water Act of 1968

➢ Petroleum Act of 1969, Section: 8

➢ Mineral Oils (Safety) Regulation

➢ National Environmental Protection Regulation (NEPR), 19

The environmental impact assessment act (1992)

This Act makes EIA compulsory for all the new private and public projects sited in the country and puts in place the following guidelines:

- think about possible effects and degree of these effects on environment prior to embarking on activities as well as projects;

- encourage policy implementation in every federal lands as well as territorial waters in such a way that all the laws and processes of decision making by major objective of the Act is achieved;

- promote the advancement of processes for exchange of information, consultation and notification between persons and organizations when the suggested activities are probable to have considerable environmental impact.

The Act provides particular powers to 'Federal Ministry of Environment (F.M.E) to ease implementation of EIA Studies of the entire projects.

Department of Petroleum Resources (D.P.R) environmental guidelines as well as values for petroleum industry in Nigeria (E.G.A.S.P.I.N) 2002

Department of Petroleum Resources Act of 1979 that created the department authorizes it to check activities of the Oil and Gas sector in Nigeria. It was also set up to make sure the petroleum companies do not mortify the surroundings in their operations. D.P.R's EGASPIN 200, are guidelines for the control of:

- Released drilling mud, drill cuttings and Produced fluids

- Noise

- Air emissions as well as flaring;

- wastes management;

- Amenities de-commission.

These are regulatory guidelines that have achieved high standards in the Nigerian petroleum sector. It is akin to international principles.

METHODOLOGY

In this study, an ex-post facto design was employed. Eex-post facto (after the fact) according to Asika (2004:25), was a methodical empirical study by which researchers do not in any case manipulate independent variables since, the situation for studying exists before now or has already occured'.

Population of this study consisted of 15 quoted oil and gas exploration companies in Nigeria which activities vehemently impacted on the environment. They are made up of both multinational and local companies operating in Nigeria. (See Appendix 1 for the list of the companies).

The stratified sampling was employed to select the sample size. This was due to the significance of oil and gas corporations. Stratified sampling on the other hand, is done in accordance with considered company activity impact on the locale with gas flaring, oil spillage and fines and penalties paid. (See Appendixes i for list of sampled companies). In this study, secondary data obtained from Environmental Impact Assessment Agency, Nigeria Stock Exchange Fact book and the various companies' annual reports were used.

The econometric model used in the study (which is in line with what is mostly found in the literature) is given inter alia:

EPS = f (GFC, OSC, FP) ---------- (i)

Where;

EPS = Dependent variable

GFC, OSC, FP = Independent Variable

F = Functional notation

The ordinary least square for the model above is as follows:

$EPS = b_0 + b_1 GFC + b_2 OSC + b_3 FP + e$ ----- (ii)

Where;

EPS = Earnings per share

GFC   =   Gas flaring cost

OSC   =   Oil spillage cost

FP   =   Fines and penalties

b_0 =   Unknown constant to be estimated

b_1-b_3 =   Unknown coefficients to be estimated

e   =   Stochastic error term

$b_0, b_1, b_2, b_3 \geq 0$

The study employed experiential methodological framework. After the collection of data from secondary sources, the data were tabulated and analyzed statistically with the use of the Ordinary Least Square (OLS) technique.

These equations were all estimated with the use of OLS techniques. The signs of the regression coefficients were verified to know if they were in line with the economic a priori prescriptions.

ANALYSIS OF RESULT

The empirical results of the OLS estimates are presented in appendix II. These statistics are considered: coefficient of multiple determinations (R^2), F – ratio; 'standard error' of the regressions (S.E.R) as well as Durbin-Watson (D.W).

The overall goodness fit of regression plane is measured using the R^2. The higher R^2, the better is 'goodness of fit'. The coefficient of determination should contain a value not less than fifty percent to get ahead of the "goodness of fit" test. Degree of f-statistics represents the test of the significance of correlation between the dependent as well as independent variable of the model used together. However, Durbin-Watson's statistic was employed in the test of the first-order auto correlation of random variable. Since the regression model was employed, adjusted R^2 was also used. It is the standard as well as procedure of nearly all research work of this nature.

As of appendix II, the R^2 and the adjusted R^2 turned out with sixty eight percent and fifty three percent respectively. This shows that up to sixty eight percent of the variation in the explanatory variables was explained leaving thirty two percent unexplained. The adjusted R^2 of fifty three percent indicates a goodness of fit of the parameter estimate. This implies that the variables in the regression equation accounted for fifty three percent variation in earnings per share. The total difference of the observed manners of earnings per share was utilized as a measure of the impact of environmental costs on earnings per share. It is jointly explained by variation in oil spillages cost; gas flaring cost and fines and penalties paid by oil and gas industries up to fifty three percent. The forty seven percent remaining is accounted for by the stochastic error limit or other unidentified subjects not included in the model.

The constant term- 93.39981 is autonomous and is statistically significant. The model Analysis of Variance (ANOVA) on the F-statistics is employed in the test of the significance level. In this case, the high significance value of F-statistic 4.429708 shows the high certainty of the model did not happen by chance. In fact, it confirms that, the model fits the data fine. In the test for statistical significance of the parameters, the f-statistic of particular variables is considered. With regards to the likelihood values that are automatically generated in the process of computation by the statistical software, the constant term was significant at five percent significance level. The apriori expectations concerning signs of the parameter's estimation are authentication of the economic theory. Every variable here apart from fines as well as penalties that were paid by oil and gas companies penetrated the model through positive signs. To interpret result, one percent increase in oil spillage as well as gas flaring cost will affect earnings per share by fifteen percent respectively. For fines and penalties paid by oil and gas companies, a one percent increase in the variable will decrease earnings per share by seventy three percent all things being equal.

Testing for the autocorrelation in the residual, the Durbin-Watson statistical calculation was employed to distinguish with table D.W value. The decision rule of no autocorrelations with the residuals of model is that calculated DW values should be bigger than the DL. With the calculated DW stat = 1.035817., dl = 0.376, and du = 1.414 as K = 4 variable with n = 10years at a significant level of five per cent, it there means the model is free from serial correlation.

In testing these hypotheses;

H_{01}: $\propto = 0$

Ha_1: $\propto \neq 0$

H_{01}:   There exist no significant relationship between oil spillage cost and earnings per share (EPS) of oil and gas companies

Ha_1:   There is a significant relationship between oil spillage cost and earnings per share (EPS) of oil and gas companies

With reference to appendix II and adopting the t-statistic for the test of level of significance of expected coefficients; the t-statistic calculated was 1.503400 with table value 3.355 at confidence intervals of ninety five percent. With the calculated t-statistic less than table value, which is 1.503400 < 3.355 and degrees of freedom n − 2 (i.e. 10 − 2) = 8, one tail, and five per cent significance levels, the null hypothesis is retained, and the alternative hypothesis is rejected. This therefore, shows that no significant relationship exists between oil spillage cost and earnings for each share of oil and gas industries in the study locale.

H_{02}: $\propto = 0$

Ha_2: $\propto \neq 0$

H_{02}:   There exist no significant correlation between gas flaring cost and earnings per share of oil & gas industries.

Ha_2:   There is a significant correlation between gas flaring cost and earnings per share of oil & gas industries.

Also, with reference to appendix II, the t-statistic was employed to test for the significance level of the anticipated coefficient. Calculated t-statistics is 2.784657 with table value 3.355 at a confidence interval of ninety five percent. Since the t-statistic calculated is less than the table value which is; 2.784657< 3.355 with degree freedom; n – 2 (i.e. 10 – 2) = 8 at one tail and five percent significance level, the null hypothesis of no significance was accepted, with alternative rejected. Consequently, it shows that significant relationship does not between gas flaring cost and earnings for each share of oil and gas industries.

H_{03}: $\alpha = 0$

Ha_3: $\alpha \neq 0$

H_{03}:   There is no significant link between fines and penalties and earnings per share of oil & gas industries in Nigeria.

H_{a3}:   There is a significant link between fines and penalties earnings per share of oil & gas industries.

Again, from appendix II, the t-statistic is used for the test of significance level of the anticipated coefficients. The t-statistic computed is -0.537590 with table value 3.355 at a confidence interval of ninety five percent. Since, the calculated t-statistic is less than table value, 0.537590 < 3.355 with degrees of freedom (D.F), n – 2 (i.e. 10 – 2) = 8, one tail five per cent significance level. The null hypothesis is accepted, with alternative declined. To this end, it is concluded that there is no significant link between fines and penalties paid by oil and gas companies in Nigeria and their earnings per share.

In addition to T-statistic, an overall test was conducted to observe the significant effects of all the independent variables on dependent variables via F-statistic. With the result in table 4.6 and at $V_1 = K – 1$ and $V_2 = n – k$ degree of freedom. The value of the cut-off point for the f-ratio at (3, 6) from the f-ratio is 4.76, the decision rule for the test of hypothesis is that:

If calculated F-ratio (3, 6) < 4.76 accept H_0

If calculated F-ratio (3, 6) $\geq$ 4.76 accept H_a

Therefore, 4.33 < 4.76, so we accept H_0 and reject H_a meaning; 'there is no significant link between environmental costs and earnings per share (EPS) of Nigerian oil and gas corporations.

DISCUSSION OF FINDINGS

Considering data analysis and test of hypotheses, the test result showed that no significant link existed between environmental costs and earnings for each share of oil and gas industries in the study locale. Though it could be seen theoretically that oil spillage in addition to gas flaring cost and fines and penalties paid by these companies should have impact on earnings per share, but the result reveals that; oil spillage cost in addition to gas flaring cost does not conform to economic apriori expectation while fines and penalties conform to economic apriori expectation. This is sequel to the monopolistic nature of oil as well as gas companies. The finding conforms to that of Etkin (1995) who established that the cost of oil spills has no significant effect on earnings per share.

It is also apposite, however, to highlight that fines and penalties paid by Nigeria's oil as well as gas companies affect negatively their earnings per share.

CONCLUSION

In this study, the researchers have assessed the impact of environmental costs on earnings for each share of oil & gas industries. This study proffers a structure for environmental costs of the oil and gas industry in Nigeria. To this end, it adds to studies on environmental costs globally using the Nigerian situation of oil as well as gas industries. Therefore, the conclusion is that oil spillage in addition to gas flaring costs, do not significantly affect the earnings per share of oil and gas industries in the country''. It is however concluded that fines and penalties negatively affect the earnings for each share of oil and gas industries in Nigeria.

RECOMMENDATIONS

From an in-depth study as well as analysis of the impacts of environmental costs on earnings for each share of oil & gas industries, various recommendations were made:

1. Oil and gas companies operating in Nigeria must take essential actions to avoid the payment of fines as well as penalties. To guarantee this, they should be strict compliance with environmental guidelines as specified by the regulatory agency of the oil and gas corporation.

2. Government of Nigeria should reduce the monopoly existing in the oil and gas company by ensuring effective diversification of the economy.

3. A compulsory legislation should be for oil and gas prospecting industries to monitor oil spillage and gas flaring. Compensation Fund should be provided to take care of future incident of oil spillage and gas flaring even though their activities do not significantly affect their earnings per share.

4. The Oil and gas industries whose operation has impacts on the surroundings should create plans as well as operating guidelines as internal corporate standards which are expected to meet industry operating standards. Corporate plans and operating guidelines should focus on minimizing impact on environment. Consequently, inspection programme of corporate operating facilities should be put in place. There should be continued evaluation of new technologies to reduce environmental impacts.

5. Finally, since environmental cost accounting has become a burning issue in determining the performance of the oil and gas industries, it is worth suggesting that prospective researchers in this area should broaden their study to cover a wider spectrum of environmental costs.

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APPENDICES

Appendix I: Quoted Oil and Gas exploration companies in Nigeria.

S/N	Company name
1	Total
2	Shell
3	Addax

4	Mobil
5	Chevron
6	AP
7	Oando
8	Eterna oil
9	Conoil
10	Atlas oil and gas
11	Beco petroleum product
12	Capital oil
13	Forte oil
14	Japaul oil & maritime services plc
15	Navitus Energy plc

Appendix II: Regression Result on earnings per share and environmental costs

Dependent Variable: LTEPS

Method: Least squares

Date: 05/29/2020 Time: 20:36

Sample: 2010 2019

Included observations :10

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	93.39981	175.9247	0.530908	0.6146
LTOSC	0.154667	0.102878	1.503400	0.1834
LTGFC	0.150120	0.053910	2.784657	0.0318
LTFP	-7.304489	13.58747	-0.537590	0.6102

R - squared	0.684228	Mean dependent var	3.808107
Adjusted R-squared	0.526342	S.D dependent var	0.291457
S.E. of regression	0.200589	Akaike info criterion	-0.085942
Sum squared resid	0.241416	Schwarz criterion	0.035092
Log likelihood	4.429708	Hannan-Quinn criter.	-0.218716
F-statistic	4.333688	Durbin-Watson stat	1.035817
Prob (F-statistic)	0.060123		