

THE EFFECT OF IDENTIFICATION OF ENVIRONMENTAL COST ON QUALITY OF DISCLOSURE: A CRITICAL ANALYSIS OF SHIPPING LINES IN NIGERIA

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ABSTRACT

This paper establishes the effect of identification of environmental cost on quality of disclosure on shipping lines. This study adopts both descriptive design and correlation analysis and the population of the study is the registered shipping lines in Nigeria. The target population of this study was restricted to the legal department, finance and account department, and technical and marine department of the shipping companies. This study makes use of primary data. Primary data was collected through administering of questionnaires to the staff of the shipping lines in Nigeria. Simple regression model was used to establish the relationship between the dependent variable and the independent variable. Data analysis was done using Statistical Package for Social Sciences (SPSS) generating both descriptive and inferential statistics like Pearson's correlation. Descriptive statistics include; frequencies, mean and standard deviation. The findings show that identification of environmental cost influences quality of disclosure on shipping lines in Nigeria. Based on the findings of this study, it is highly recommended that companies are to decide in their discretion which expenditure or cost should be included under the environmental expenses or cost. Operating expenses have defined expenses associated with environmental measures to primarily include production related costs and product research and development expenses that are solely incurred for environmental protection as distinct from product improvement. This process will create or enhance quality of disclosure on shipping lines in Nigeria.

Keywords: Quality of disclosure, environmental cost, environmental expense, operating expenses, and shipping lines.

INTRODUCTION

In relation to environmental costs, there is no standard definition and this is left to the discretion of the companies to decide which expenditures or cost should be included under the environmental expenses or costs. Measuring environmental performance and setting targets is a critical component for organizations to become more productive, more profitable, and more sustainable (Freedman, *et al.*, 2006). Monitoring key metrics such as energy, waste, and water usage leads to reductions in greenhouse gas emissions as well as operational efficiency improvements and cost savings. Environmental accounting is an inclusive field of accounting. Environmental accounting includes identification of environmental cost, capitalization of environmental cost, identification of environmental liability and measurement of environmental liability. It provides reports for both internal use, generating environmental information to help make management decisions on pricing, controlling overhead and capital budgeting, and external use, disclosing environmental information of interest to the public and to the financial community. Internal use is better termed

environmental management accounting (Bartolomeo, Bennett, Bouma, Heydkamp, James & Wolters, 2000). Neungruthai and Mula (2012) carried a study towards a conceptual design for environmental and social cost identification and measurement system. Suggestions from literature showed that there was a need for a conceptual framework for environmental management accounting (EMA) and social management accounting (SMA) practices to be developed. The study indicate that companies are intending to change to new management accounting practices while looking for ways to improve cost identification and measurement of environment and social impacts.

When environmental costs are not adequately allocated, cross-subsidization occurs between products. In most cases, different products are made by different processes, and each process tends to have a different environmental cost (Christ & Burritt, 2013). Accountants, as the basic custodian and light bearer of economic development can no longer shut their eyes to the effect of environmental issues on business management, accounting, audit and disclosure system. Protection of environment and the potential involvement of accountant is becoming a common subject of discussion among the accountant all over the world (Pramanik, Shil & Das, 2007). Accountants are expected to take a proactive role in the environmental protection process with the advent of liberalization, remove of trade barriers makes it logical that the costs of environmental degradation due to industrial activities should be internalized in corporate account to the extent possible, that is why environmental accounting and reporting therefore is of paramount importance today (Pellegrino & Lodhia, 2012). According to Clarkson, Richardson and Vasvari (2008), disclosure and transparency are critical elements of a robust corporate governance framework as they provide the basis for informed decision-making by shareholders, stakeholders and potential investors with respect to capital allocation, corporate transactions and financial performance monitoring. High quality disclosure, through its influence on investors and lenders who must assess risks and returns and decide where best to place their money, strengthen the efficiency of capital allocation as well as offer the benefit of reducing the costs of capital. Furthermore high quality corporate disclosure provides clarity on the extent to which companies meet legal and ethical requirements.

Problem Statement

Accounting reports in shipping lines have been found to be deficient over time in the sense that they lack vital information that will enable stakeholders make informed decisions (Nzekwe, 2009). The financial information in corporate annual reports includes both mandatory and their determinants have attracted considerable research attention in developed countries rather than developing ones (Akhtaruddin, 2005:40; Barako, 2007:114). Discoveries in the developed countries most especially in the European Union (EU) have aided the government to revamp the compliance mechanisms. They have also assisted the government in issuing out directives that facilitate the harmonization process and invariably bring all community companies up to a reasonable level of disclosure. According to Bassey, Effiok, and Okon, (2013), environmental accounting helps the firm to record all environmental costs incurred by the business thereby finding a way of reducing the cost (environmental expenses) so that the business can increase profit. Also, it helps to disclose to the outside world their ability to be environmental friendly. The deficient adoption is expected to influence the quality of disclosure. Ali *et al.* (2004:183) opined that the government regulatory bodies and the accountancy profession of emerging nations suffer from structural weaknesses and often take a lenient attitude towards default of accounting regulations. Consequently, private and institutional investors (local and foreign) are hesitant

in investing in such emerging economies due to lack of transparency. It is widely believed that the lack of proper use of International Accounting Standards in affected countries (of which Nigeria is a part) hinders “transparency” in the financial statements of corporations. Hence, this study is set to examine the effect of identification of environmental cost on quality of disclosure on shipping lines in Nigeria.

Objectives of the Study

The objective of this study is to establish the effect of identification of environmental cost on quality of disclosure on shipping lines in Nigeria.

Research Hypothesis

The research hypothesis of this study was based on:

H₀: There is no significant relationship between identification of environmental cost and quality of disclosure on shipping lines in Nigeria.

LITERATURE REVIEW

Theoretical Framework

Voluntary Disclosure Theory

The notion of voluntary disclosure supports the idea, even in the absence of regulation; managers still wish to disclose additional information. This idea is based on the considerations found in agency theory, which assert that agency costs are borne mainly by agents (Jensen & Meckling, 1976). Therefore, agents try to reduce their agency costs to maximize their wealth. As described in agency theory, agency costs are a product of information asymmetry, whereby the agent has more private information about the firm’s performance than the principal. Theoretical and empirical studies in accounting focus on the informational role of voluntary disclosures for the capital markets (Healy & Palepu, 2001; Verrecchia, 2001). The Securities and Exchange Commission and the FASB provide guidelines for mandatory disclosures; the disclosure literature in accounting refers to voluntary and discretionary disclosures, interchangeably, as information management releases itself. Healy & Palepu (2001) opined that the underlying assumption in the disclosure literature is that manager possesses superior information to all outsiders. The result is managers’ trade-off between making accounting choices and providing disclosures to “communicate their superior knowledge of a firm’s performance to investors, and to manage reported performance for contracting, political, or corporate governance reasons”.

Legitimacy Theory

The legitimacy theory is probably the most widely used to explain environmental disclosure. According to Cho and Patten (2007), the legitimacy theory implies that environmental disclosure is a function of the intensity of societal and political pressure faced by a company regarding the environmental performance. As a reaction on this pressure, firms try to provide more environmental information. Campbell, Craven, and Shrives (2003) examined perceived legitimacy gap alongside of Voluntary Disclosure requirement for social and environmental issues and costs. Legitimacy theory posits that organizations are continually seeking to ensure that they operate with the bounds and norms of their respective societies (Deegan, 2000). Legitimacy can be considered as “a generalized perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed system of

norms, values, beliefs and definitions” (Suchman, 1995). To this end, organizations attempt to establish congruence between “the social values associated with or implied by their activities and the norms of acceptable behaviour in the larger social system of which they are part” (Dowling & Pfeffer, 1975). Consistent with this view, Richardson (1987) asserts that accounting is a legitimating institution and provides a “means by which social values are linked to economic actions”.

Empirical Literature Identification of Environmental Cost

In relation to environmental costs, there is no standard definition and this is left to the discretion of the companies to decide which expenditures or cost should be included under the environmental expenses or costs. Besides, there is no specific or concrete guideline from the accounting regulators in this regard. There are some industry guidelines which are available as regards environmental cost, they are: The Chemical Manufacturer’s Association’s Responsible CARE Program, The Japanese Industry Association, and the International Chamber of Commerce’s (ICC’s) Business Charter for Sustainable Development. According to these guidelines, operating expenses have defined expenses associated with environmental measures to basically include production related costs and product research and development expenses that are solely incurred for environmental protection as distinct from product improvement. Lack of government or industry guidelines may encourage companies to design their own mechanism for the same purpose. The Survey of the International Standards of Accounting and Reporting (ISAR) showed that there was no formal instruction from regulatory authorities though companies had divided the total environmental expenditures into six categories which are:

- Capital investments
- Operating costs
- Research and Development costs
- Environment Administration and Planning
- Expenses for remediation measures, and
- Recovery Expenses

Neungruthai and Mula (2012) carried a study towards a conceptual design for environmental and social cost identification and measurement system. The purpose of this paper was to identify an effective management accounting system using sustainability accounting concepts for environmental and social cost measurement to add shareholder value. Suggestions from literature showed that there was a need for a conceptual framework for environmental management accounting (EMA) and social management accounting (SMA) practices to be developed. The authors therefore designed a conceptual model for a sustainability management accounting system (SMAS) combining EMA and SMA practices to create more accurate cost information of environment and social impacts. A SMAS also expands on activity based costing (ABC) application to help in the cost analysis and allocation of environment and social impacts. By applying a SMAS, companies generate more accurate cost information thus fully costing products for internal management decision and reporting purposes. The results of the study indicate that companies are intending to change to new management accounting practices while looking for ways to improve cost identification and measurement of environment and social impacts.

Bailey, Dickins and Reisch (2010) carried a study on discussion of public identification of US audit engagement partners on who benefits and who pays. The Public Company

Accounting Oversight Board had issued a Concept Release, which would require audit engagement partners of US publicly traded companies to be identified by signing their firm's audit reports. In this article, the authors attempted to identify who would benefit from – and who would pay for – identification of audit engagement partners. The authors summarized the commentary of responders on the Concept Release, comparing the Concept Release to provisions contained in the Sarbanes–Oxley Act of 2002, examining arguments for and against identifying the audit engagement partner, and summarizing the likely impact of adopting the Concept Release. They concluded that, if adopted, it is unlikely that audit partner identification would enhance audit quality. Further, the cost of additional audit and/or quality control procedures associated with implementation will likely be borne by companies and their shareholders.

Cohen (2008) conducted a study on Quality of Financial Reporting Choice: Determinants and Economic Consequences. The author investigates the determinants and economic consequences associated with firms' financial reporting choices. Recognizing the endogeneity associated with these choices, he finds evidence of a positive association between investors' demands for firm-specific information and financial reporting quality. The author also finds that higher proprietary costs are associated with a lower quality of financial information. As for the economic consequences, the evidence suggests that firms with high quality financial reporting policies have reduced information asymmetries. However, after accounting for the endogeneity associated with the reporting quality choice, the author finds no significant evidence that firms choosing to provide financial information of higher quality enjoy a lower cost of equity capital.

Dunk (2002) conducted a study on Product Quality, Environmental Accounting and Quality Performance. The author noted that quality has typically been regarded as a key strategic component of competitive advantage and, therefore, the enhancement of product quality has been a matter of prime interest to firms. Quality provides a basis for strategic advantage, and thus improvement in product quality may lead to enhanced performance. However, a frequent concern is that product quality no longer provides enduring competitive advantage; instead, it has become essentially a competitive prerequisite. Hence, an assessment of whether improvements in product quality are reflected in greater quality performance is likely to be of considerable interest to organizations. Suggestions have been made that the implementation of environmental accounting also contributes to the enhancement of quality performance. The author argued that the greater the integration of environmental issues into financial decision processes, the better the performance of the firm.

Fransesco, Paul, Dionysia and Ioannis (2014) carried out a study on Goodwill Related Mandatory Disclosure and the Cost of Equity Capital. The authors examine whether goodwill related disclosure, as mandated by IFRS 3 and IAS 36, reduces implied cost of equity capital (ICC) for a sample of European firms for the period 2008 to 2011. They focus on goodwill since it is a significant amount on a company's balance sheet and it conveys current and forward looking information relevant to a firm. Additionally, the goodwill impairment tests give rise to concerns about their implementation quality. The results of the study indicate a mean (median) compliance level of about 82% (83%) and a high variation among firms' disclosure levels. In depth analysis reveals that non-compliance relates mostly to proprietary information and information that reveals managers' judgment and expectations.

Botosan (1997), Botosan and Plumlee (2002), and Botosan, Plumlee, and Xie (2004) investigate Aggregate Disclosure's Direct Link to Cost of Equity Capital. Botosan (1997)

limits the sample to the 1990 annual reports of companies in the machinery industry, develops a disclosure index based on disclosures in each firm's annual report, estimates cost of equity capital using an accounting-based valuation formula rooted in early work by Preinreich (1938) and Edwards and Bell (1961), and documents a negative association between disclosure level and cost of equity capital for those firms with a low analyst following.

Quality of Disclosure

Corporate disclosure is critical for well-functioning capital markets (Healy & Palepu 2001). Published annual reports are required to provide various users such as shareholders, employees, suppliers, creditors, financial analysts, stockbrokers, management, and government agencies with timely and reliable information useful for making prudent, effective and efficient decisions. The extent and quality of disclosure within these published reports vary from company to company and also from country to country. Literature reveals that the level of reliable and adequate information by listed companies in developing countries lags behind than in developed ones and government regulatory forces are less effective in driving the enforcement of existing accounting standards (Ali, Ahmed & Henry, 2004). Non-disclosure results from immature development of accounting practice in developing nations (Osisioma, 2001). The government regulatory bodies and the accountancy profession in these nations suffer from structural weaknesses which could encourage corporate fraud at the expense of those that have economic and proprietary interest in the business environment.

Dunk (2002) investigated the extent to which product quality and the implementation of environmental accounting positively influence quality performance. He suggested that the integration of environmental issues into financial decision processes by using environmental accounting would contribute to the enhancement of quality performance and firm performance as a whole. Gamble *et al.* (1995) (US) investigated the quality of environmental disclosures in the 10K and annual reports of 234 companies in twelve industries, between 1986 and 1991. An instrument was designed to measure the content of environmental disclosures, and descriptive reporting codes were used, based on the manner in which the sample firms disclosed environmental information. Companies in the sample were from industries thought to have the greatest potential for environmental impact; oil and gas; chemicals and related; plastics, resins and elastomers; soap, detergent and toilet preparations; perfume, cosmetics and toilet preparations; paints varnishes and lacquers; petroleum refining; steel works and blast furnaces; motor vehicles and car bodies; and hazardous waste management.

Deegan and Gordon (1996) (Australia) analyzed the environmental disclosure practices of Australian corporate entities in three ways. Firstly, by reviewing the annual reports of a sample of companies for the 1991 financial year, secondly, by determining the change in corporate disclosure practices for the period 1980-1991 and thirdly, by investigating the role of environmental lobby groups. Overall, they found an increase in environmental disclosures over the period 1980-1991, but the standard of the 1991 disclosures was not necessarily very impressive, with an average of 186 words of self-laudatory material per annual report. Environmental lobby groups appeared to have an effect because there was a positive correlation between environmental sensitivity and the level of disclosure, and in some sensitive industries between environmental disclosure levels and firm size. Burritt and Welch (1997) (Australia) reported on an exploratory analysis of the environmental disclosures of a

sample of Australian Federal public-sector entities. The annual reports of sixty entities were examined for the ten-year period 1984-1993. The results showed an increase in total environmental disclosures over the period with budget entities reporting a greater volume of environmental disclosures than non-budget entities. The predominant form of environmental disclosure was qualitative not physical or financial. Seven themes were found with community education and training, and energy related disclosures the most prominent. Future directions for research in this area identified by the authors included; possible new accountability structures based on ecological considerations, and measurable environmental outcomes.

Macve and Carey, (1992) argued that to effect changes in the adoption of environmental reporting, several steps may be taken by management. They should establish clear lines of responsibility on environmental matters and give a board member overall responsibility for such issues. The company should also set out its environmental policy, prioritize objectives and develop information systems for monitoring its performance. Stakeholders, acting either formally or informally, individually or collectively, are a key element in the firm's external environment that can positively or negatively affect the organization (Murray & Vogel 1997:142). Their diverse nature and range of actors intrinsically present a problem for individual managers who are searching for a clear working definition for stakeholder dialogue. The challenge for business involves identifying to whom and for whom they are responsible, and how far that responsibility extends. Underpinning the difficulties of managing the relationship between a business and its stakeholders are the issues of divergent (and often conflicting) expectations between stakeholders (Greenfield 2004; Deresky 2000; Bowmann-Larsen & Wiggen 2004).

Today's challenges to business to raise the level of its environmental performance come from many quarters. They arise from new legislation and government regulations, market pressures from the 'green consumer', the interests of stakeholders such as investors and employees, and general public awareness, focused by the activities of environmental groups and reporting in the media. It has become essential for companies to increase their responsibility regarding all aspects of the environment and to adopt existing practices so as to cause less environmental damage. Harnessing this awakening responsibility within the corporate sector is therefore a key element in any strategy for achieving the goal of 'sustainable development' (Deloitte Touché Tohmatsu International, *et al.*, 1993).

Research Methodology

The research design for this study was based on descriptive survey and correlation analysis where the relationship of the independent variable and dependent variable was identified. The population of this study was the 101 shipping lines in Nigeria. The target population was restricted to three departments. However, the respondents of the target population comprise of the legal department, finance and account department and technical and marine department of each company selected. The sampling frame is the list of 101 registered shipping companies in Nigeria. Sample of the respondents was grouped into strata of the legal department, finance department and the technical and marine department staff of the shipping lines in Nigeria. Within each of the strata, simple random sampling was used to identify individual respondents who will be issued with a questionnaire to respond to research statements. The following formula developed by Cochran (1963) was used to guide the selection of the respondents as suggested by Mugenda (2008).

$$n = \frac{Z^2 * p * (1-p)}{}$$

$$e^2$$

Where: n = Sample size for large population

Z = Normal distribution Z value score, (1.96)

p = Proportion of units in the sample size possessing the variables under study, where for this study it is set at 50% (0.5)

e = Precision level desired or the significance level for the study which is expressed as decimal (e.g., .05 = +/- 0.05 percentage points).

The substituted values in determining the sample size for a large population are as follows.

$$n = \frac{(1.96)^2 * (0.5)(0.5)}{(0.05)^2} = 384$$

Therefore, the sample size was 384 i.e the sample should not be less than 384 respondents.

For the purpose of this study, primary data was collected through use of questionnaires. A total of 505 questionnaires were distributed to the respondents while 410 questionnaires were returned. A pilot study was carried out to test the reliability and validity of the instrument. In this study, the pilot test was conducted using 10% of the sample size. Reliability was used to test the consistency of a set of measurement items. Validity was used to test the degree to which results obtained from the analysis of the data actually represent the phenomenon under study. For this study, questionnaires were pre-tested to ensure they are not faulty and that the participants understood them. Descriptive and inferential statistics was used to analyze and interpret the data used in this study which include means and frequencies. Inferential statistics included regression and correlation analysis. To test and analyze the quantitative data, a simple regression model was used as laid below where the independent variable was regressed against the dependent variable to obtain inferential results. Furthermore, simple regression was useful in showing whether the identified linear relationship was significant or not. A regression coefficient with a p value of less than 0.05 indicated that the variables (identification of environmental cost) significantly influence the quality of disclosure. Therefore, the study used the following model to test whether quality of disclosure is a function of the independent variables.

$$Y = \beta_0 + \beta_1 X_1 + \varepsilon$$

Where Y – dependent variable – odds of Quality of disclosure

X_1 – identification of environmental cost (IEC)

ε – is the error term which is assumed to be normally distributed with mean zero and constant variance

β – Parameters to be estimated, while β_1 , is the coefficient of the independent variable.

β_0 is a constant (intercept)

Data Presentation, Interpretation and Analysis

Introduction

This chapter contains the presentation and discussion of the findings of this study. The main objective of the study was to establish the effect of identification of environmental cost on quality of disclosure on shipping lines in Nigeria. The study was guided by one independent variable and one dependent variable. The independent variable was identification of environmental cost and the dependent variable was quality of disclosure.

Identification of Environmental Cost and Quality of Disclosure

Correlation

According to Kothari (2004), Karl Pearson Correlation Coefficient is the most widely used method of measuring the degree of relationship between two variables. It ranges from -1 to

+1. A correlation coefficient of -1 indicates a perfect negative correlation, 0 indicates no correlation while +1 indicates a perfect positive correlation. It tells a researcher the magnitude and direction of the relationship between two variables.

The Pearson Correlation of identification of environmental cost versus quality of disclosure was computed and established as 0.527 (p-value=0.000) which is a strong significant and positive relationship between the two variables. A relationship therefore exists since it is above the recommended 30% (Mugenda & Mugenda, 2003). Neungruthai and Mula (2012) in their study on conceptual design for environmental and social cost identification and measurement system found a significant positive relationship between identification of environmental cost and quality of disclosure. From table 4.1, it could then be concluded that there is a positive linear relationship between identification of environmental cost and quality of disclosure.

Table 4.1 Pearson Correlation of Identification of Environmental Cost and Quality of Disclosure

		Quality Disclosure	Identification of Environmental Cost
Quality Disclosure	Pearson Correlation	1	.527**
	Sig. (2-tailed)		.000
	N	410	410
Identification of Environmental Cost	Pearson Correlation	.527**	1
	Sig. (2-tailed)	.000	
	N	410	410

** . Correlation is significant at the 0.01 level (2-tailed).

Regression Analysis

The regression analysis shows a relationship $R=0.527$ and $R^2=0.277$. This meant that 27.7% of variation in the quality of disclosure be explained by a unit change in identification of environmental cost. The remaining percentage of 72.3% is explained by other variables. This is shown in table 4.2.

Table 4.2 Model Summary for Identification of Environmental Cost and Quality of Disclosure

R	R Square
.527 ^a	.277

a. Predictors: (Constant), Identification of Environmental Cost

F-test was carried out to test the null hypothesis that there is no relationship between identification of environmental cost and quality of disclosure. The ANOVA test in Table 4.3 shows that the significance of the F-statistic 0.000 is less than 0.05 meaning that null hypothesis is rejected and conclude that there is a relationship between identification of environmental cost and quality of disclosure.

Table 4.3 ANOVA Results for Identification of Environmental Cost and Quality of Disclosure

	Sum Squares	of df	Mean Square	F	Sig.
Regression	2097.759	1	2097.759	156.522	.000 ^b
Residual	5468.143	408	13.402		
Total	7565.902	409			

a. Dependent Variable: Quality Disclosure

b. Predictors: (Constant), Identification of Environmental Cost

To test the significance of regression relationship between identification of environmental cost and quality of disclosure, the regression coefficients (β), the intercept (α), and the significance of all coefficients in the model were subjected to the t-test to test the null hypothesis that the coefficient is zero. The null hypothesis state that, β (beta) = 0, meaning there is no significant relationship between identification of environmental cost and quality of disclosure as the slope β (beta) = 0 (no relationship between the two variables). The results on the beta coefficient of the resulting model in table 4.4 shows that the constant $\alpha = 12.065$ is significantly different from 0, since the p- value = 0.000 is less than 0.05. The coefficient $\beta = 0.605$ is also significantly different from 0 with a p-value=0.000 which is less than 0.05. This implies that the null hypothesis $\beta_1=0$ is rejected and the alternative hypothesis $\beta_1 \neq 0$ is taken to hold implying that the model $Y=12.065+0.605$ (Identification of Environmental Cost) is significantly fit. The model Quality of Disclosure = $\alpha + \beta$ (Identification of Environmental Cost) holds as suggested by the test above. This confirms that there is a positive linear relationship between identification of environmental cost and quality of disclosure.

Table 4.4 Coefficient for Relationship between Identification of Environmental Cost and Quality of Disclosure

	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	12.065	1.148		10.506	.000
Identification of Environmental Cost	.605	.048	.527	12.511	.000

a. Dependent Variable: Quality Disclosure

CONCLUSION AND RECOMMENDATION

CONCLUSION

Based on the findings it was concluded that identification of environmental cost is a critical determinant to quality of disclosure. This study determined that identification of environmental cost enhance quality of disclosure of shipping lines in Nigeria. The regression analysis showed that there is a positive joint relationship $R=0.527$ between the independent variable identification of environmental cost and quality of disclosure. R -Square = 0.277 meaning that identification of environmental cost explains 27.7% of quality of disclosure. Further analysis indicated that coefficient of identification of environmental cost and quality of disclosure is significant. It can be concluded from this study that there exists a positive significant relationship between identification of environmental cost and quality of disclosure of on shipping lines in Nigeria.

RECOMMENDATIONS

Companies are to decide in their discretion which expenditures or costs should be included under the environmental expenses or costs. Operating expenses have defined expenses associated with environmental measures to primarily include production related costs and product research and development expenses that are solely incurred for environmental protection as distinct from product improvement.

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