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Books

- Bowersox, Donald J., Closs, David J., (1996), "Logistical Management." Tata McGraw, Hill, New Delhi.
- Hunker, H.L. and A.J. Wright (1963), "Factors of Industrial Location in Ohio," Ohio State University.

Contributions to books

- Sharma T., Kwatra, G. (2008) Effectiveness of Social Advertising: A Study of Selected Campaigns, Corporate Social Responsibility, Edited by David Crowther & Nicholas Capaldi, Ashgate Research Companion to Corporate Social Responsibility, Chapter 15, pp 287-303.

Journal and other articles

- Schemenner, R.W., Huber, J.C. and Cook, R.L. (1987), "Geographic Differences and the Location of New Manufacturing Facilities," Journal of Urban Economics, Vol. 21, No. 1, pp. 83-104.

Conference papers

- Chandel K.S. (2009): "Ethics in Commerce Education." Paper presented at the Annual International Conference for the All India Management Association, New Delhi, India, 19–22 June.

Unpublished dissertations and theses

- Kumar S. (2006): "Customer Value: A Comparative Study of Rural and Urban Customers," Thesis, Kurukshetra University, Kurukshetra.

Online resources

- Always indicate the date that the source was accessed, as online resources are frequently updated or removed.

Website

- Kelkar V. (2009): Towards a New Natural Gas Policy, Economic and Political Weekly, Viewed on February 17, 2011 http://epw.in/epw/user/viewabstract.jsp

REPORTING ENVIRONMENTAL ISSUES AND INFORMATION DISCLOSURES IN FINANCIAL STATEMENTS

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ABSTRACT

Corporate neglect and avoidance of environmental costing have left of financial incompleteness and absence of fair view of financial information reporting to users of financial statements, environmental regulatory agencies and the general public. Environmental reporting in accounting and in accounting information disclosure is crucial to the general public and today's management decision process. This study reviewed some environmental concepts. Specifically, the study assessed the level of independence of tracking of costs impacting on the environment; level of efficiency and appropriateness of environmental costs and disclosure reporting. The research instrument for the study was secondary data. For this purpose, both cross-sectional content analyses (within and across sector companies) and longitudinal (ten-year annual report and financial statements) content analyses were carried out. Findings are that environmental operating expenditures are not charged independently of other expenditures. There is also, absence of costing system for tracking of externality costs. Environmental accounting disclosure does not however, take the same pattern among listed companies in Nigeria.

KEYWORDS

Environmental Quality Reporting; Environmental Cost Accounting; Environmental Detection, Prevention and Failure Costs; Environmental Audit; and Externality Environmental Costs.

BACKGROUND

Corporate organizations are engaging more actively in environmental disclosure in their annual financial statements. This is peculiar with more financially successful companies in both the United States and the United Kingdom. In the United States of America, SEC regulations and accounting standards require American companies to disclose environmental information in annual reports (Soonawalla:2006 and IFAC: 2005). An International Public Accounting firm, KPMG, in 1999 (Gernon and Meek 2001:98), and Aert, Cormier and Magnam (2006:303) report from the KPMG's survey in 1996 that 'since 1993 the percentage of 100 companies in 12 leading industrial nations that mention the environment in annual reports have almost doubled to 69%'. Also, that '23% now produce separate environmental reports compared to 13% in 1993'.

This study draws from the study of Campbell, Craven and Shrives (2003), who captured voluntary social disclosure over a longitudinal period in excess of 20 years (1975 – 1997) in three companies, the tobacco, brewing and retailing in the U.K. Measurable variables for Environmental Quality Model (EQR) were explored through both primary and secondary data. EQR is expressed in two models 1 and 2 as shown in this study.

In the light of the background of increasing environmental attention, and that the oil and gas sector, the mineral extractive and indeed the manufacturing sectors have profound production impact on the environment, the study intends to explore an assessment of environmental accounting in these economic sectors in Nigeria. This is expected to facilitate effective and efficient costs measurement and reporting for corporate decision making.

The approach in this discus is subdivided into five parts: the first part constitutes the background to the study and the issue of environmental information; second part is the Review of literature theory, the third is the study methodology, the fourth is the discussions and findings and lastly the fifth constitutes policy recommendations and study conclusions

THE ISSUE OF ENVIRONMENTAL INFORMATION

Canada, Norway, The Netherlands, the United Kingdom and the United States of America have led in the pursuit of degradation and pollution prevention, control and the need for environmental safety (Skillius and Wennberg: 1998:54-59; IFAC: 2005:9). Leading developing nations are Zimbabwe, Namibia, The Philippines and Indonesia. They have led in championing policies to address need for accounting and accountability for environmental costs. The need for corporate organizations to develop environmental cost responsiveness and to disclose in annual financial reports environmental information has become of great importance.

The statement of the problem is that conventional approaches of cost accounting have become inadequate since conventional accounting practices have ignored important environmental costs and activities impacting consequences on the environment. Corporate neglect and avoidance of environmental costing leave gap in financial information reporting. There is no completeness and correctness of fair view to users of financial information, such as shareholders, environmental regulatory agencies, environmentalists and potential financial investors For example, degradation or other negative impact on the environment could affect corporate financial statement such as create actual or contingent liabilities and may have adverse impact on asset values. Consequential effect on corporate organizations may result in incurring future capital expenditure and cash flows which may impinge on going concern as balance sheet secured loans may not be secure after all if land values for instance are affected by environmental factors. The limited awareness of environmental costing principles and methodology has is an important issue to be addressed. If vital environmental issues and activities are not disclosed, financial statement cannot be said to reveal state of a 'true and fair view of affairs'. It is important too, to note that ethical investors will only invest in ethical companies and therefore, will watch out for these ethically responsible companies. Ethical companies therefore, have marketing advantage if they strategically position themselves environmentally. Ethical companies stand at advantage for corporate financing. The challenge of cost and valuation for damage, depletion and degradation of the environment externalities is a critical problem which continues to demand attention.

Since current requirement for reporting on environmental issues is voluntary, it is observed from most financial statements of corporate organizations that it has engendered disclosures of information which totally exclude environmental issues. At best where reported, are grossly inadequate. Environmental disclosures are critically important to informed public and financial stakeholders. Pertinent is the difficulty of evaluating environmental remediation for environmental degradation where environmental costs do exist.

The United States Securities Exchange Commission (SEC) has required of listed companies, information impacting on the environment in financial reporting. This is also now the requirement for the European Union countries effective 2005 (Soonawalla:2006 and IFAC: 2005). It is therefore, considered appropriate for

companies impacting on the natural environment, to design and implement environmental accounting in an emerging environmental policy changing environment. This is particularly critical for the Oil & Gas sector (prospecting and producing), the downstream sector (refining and distribution) and the manufacturing sector which impact heavily on the environment in Nigeria. There should be environmental considerations in corporate decision making for capital projects and investments.

The broad objective of the study was to investigate best practice of environmental accounting among manufacturing companies operating in Nigeria. The specific objectives of the study are to assess the independence of tracking of all costs impacting on the environment, assess the efficiency and appropriateness of environmental costs reporting and disclosure in statutory financial statements and ultimately, evolve and provide conceptual bases and design for cost and management accounting and disclosure in financial reporting of environmental information.

REVIEW OF LITERATURE THEORY

ENVIRONMENTAL QUALITY COST MODEL

This is also known as Environmental Cost Reduction Model. It suggests that the lowest environmental costs will be attained at the point of Zero-Damage to the environment. It is considered that before environmental cost information can be provided, environmental costs must be defined. Environmental quality model is the ideal state of zero-damage to the environment, which is analogous to Environmental Quality Management (EQM), a zero-defect state of total quality management. This is certainly compatible with the concept of eco-efficiency

Environmental costs incurred are costs arising because poor environmental quality exists or may exist and these have to be prevented, reduced or remedied. Hansen and Mowen (2000:668) have defined environmental costs 'as costs associated with the creation, detection, remediation and prevention of environmental degradation'. They therefore, classify environmental costs into four categories of: 1) Prevention Costs, 2.) Detection Costs, 3) Internal Failure Costs and 4) External Failure Costs.

ENVIRONMENTAL POLLUTION PREVENTION COSTS: These are costs of activities which are meant to prevent the production of contaminants and wastes which could cause damage to the environment. The costs include costs incurred in evaluating and selecting pollution control equipment, quality environment consumables, designing processes, designing products and carrying out environment studies. Others are auditing environmental risks, developing environmental management systems, recycling products and obtaining ISO 14001 certification.

ENVIRONMENTAL DETECTION COSTS: Environmental detection costs are costs resulting from activities to determine if products, processes and other activities within the company are in compliance with appropriate environmental standards. The costs include auditing environmental activities, inspecting products and processes, developing environmental performance measures, testing contamination and measuring contamination level.

ENVIRONMENTAL INTERNAL FAILURE COSTS: These are costs resulting from the activities performed because contaminants and wastes have been produced but have not been discharged into the environment. Internal costs are incurred to eliminate and manage the wastes produced. The costs are costs for operating pollution control equipment, costs incurred for treating and disposing of toxic wastes, maintaining pollution equipment, licensing facilities for producing contaminants and costs resulting from recycling scrap.

ENVIRONMENTAL EXTERNAL FAILURE COSTS: These are costs of activities performed after discharging contaminants and wastes into the environment. These costs are those for cleaning up a polluted lake, cleaning up oil spills, cleaning up contaminated soil, settling personal injury claims which are environment related, restoring land to natural state, among others.

The need for Environmental Accounting is to enhance and further drive for the benefit of eco-efficiency which maintains that organizations whose activities adversely affect the environment can carry out their activities of production while simultaneously reducing negative environmental impacts, resource consumption and costs.

GAP OF ENVIRONMENTAL QUALITY COST MODEL (EQCM: Zero-damage point to the environment may not be attainable at anytime and may therefore, be an illusion. Productivity in an environment may however, tend towards eco-efficiency. Certain costs may correctly fall on either one or two environmental costs classifications. Again, costs classification may not be held as watertight concept.

ENVIRONMENTAL AUDIT

Auditors and accountants are increasingly drawn to environmental issues and activities which affect corporate performance. To report on environment, they have to provide financial information and assurance reports which are credible. This is what decision makers in managements have to place reliance upon. Environmental auditing (INTOSAI: 2004) is expected to 'encourage greater transparency and informed decisions about the application of resources and the impact of activities on environmental outcomes without distorting existing accounting standards'.

Environmental Audit is assessing environmental impacts of corporations' operations. It is the measurement and evaluation of all inputs and outputs from the production process. In order to implement cleaner production and eco-efficiency improvements, environmental audit can be an effective risk management tool for assessing compliance with environmental legislation. This subsequently assists companies to avoid the risk of prosecution and fines arising from potential environmental breaches. According to Australian Government Department of Environment, Water Heritage and Arts, (INTOSAI: 2004) a good audit will include a number of components, some of which are listed below:

- **Data Collection**: to identify and measure all inputs and outputs from the production process and provide a baseline for comparison against targets and a background for improvement.
- **Compliance**: to review and compare a company's activities and business targets against all relevant regulations, codes of conduct and government policies to assess compliance.
- **Documentation**: to document all aspects of audit to assess progress at a further date and to verify environmental performance to staff, regulators and the general community.
- **Periodic Audits**: to assess the impacts of new or changed legislation on operations and to assess whether internal targets for environmental efficiency are being met."

ENVIRONMENTAL QUALITY COST MODEL (EQCM) AND FINANCIAL REPORTING

The Environmental Quality Cost Model prescribes ideal cost measurements which are found relevant in modern cost and management accounting. Activity Based Costing/ Management (ABC/M) and Management as approaches of cost driver certainly facilitate Environmental Quality Cost Model concept. Whereas, effective cost and management accounting in the ABC/M concept is at best reported for internal management consumption, it is not reported in annual reports and financial statements as disclosure to the public (Asaolu & Nassar: 1997:4, 2002; Okafor and Akinmayowa: 2004:106-117).

Environmental Quality Cost Model however gives us an indication and possible direction in the thought trend of environmental cost and management accounting. EQCM ideals are expected to enhance environmental accounting which is an improved state over current conventional cost accounting.

We however, consider the alternative which is based on the current financial reporting and disclosure requirement. This is what is currently feasible from our statutory annual financial statements. This will be a furtherance of the Legitimacy Theory and Risk Society Theory for companies' Voluntary SER disclosures of information and to the extent a perceived legitimacy gap can be closed. Campbell, Craven and Shrives (2003:564), selected three groups of companies. These companies depend on their supposed depth of more justification for the 'sinfulness' negative impact on the society (these were effect of tobacco and drinking on the society). This sample was restricted to those companies that had been continual members of the U.K. FTSE 100. In this regard, references are made to the works of Lindblom (1994); Gray et al (1995a:47-77); Trotman and Bradley (1981); Guthrie and Parker (1990:159-176); Patten (1991); Hacksten and Milne (1996:77-108) and Adams, Hill and Roberts (1998).

This study focuses on a wider scope by considering the Oil and Gas Sector and Manufacturing companies (particularly those listed in the Nigerian Stock Exchange) and Security Exchange Commission which are acclaimed to have far reaching degradation effect on the environment. We have however also considered other manufacturing companies through secondary data and information (i.e. annual reports and/or environmental reports). We have therefore

considered factors or variables such as those expressed in the functional form. The rating variables and modification in this research are agreeable to Aerts, Cormier and Magnan (2006:327) categorization of environmental costs as set below:

ECONOMIC FACTORS: Expenditures for pollution control equipment and facilities, Operating costs of pollution control equipment and facilities, Future estimates of expenditures for pollution control equipment and facilities, Future estimates of operating costs for pollution control equipment and facilities, Financing of pollution control equipment or facilities, Environmental debts, Risk provision, and Provision for charges.

LAWS AND REGULATION: Litigation (present and potential), Fines, Orders to conform, Corrective actions, Incidents, and Future legislation or regulation requirements.

POLLUTION ABATEMENT: Air emission information, Water discharge information, Solid waste disposal information, Control installations, facilities or processes described, Compliance status of facilities, Noise and odours.

SUSTAINABLE DEVELOPMENT REPORTING: Conservation of natural resources, Recycling, and Life cycle information.

Land Remediation and Contamination: Sites, Efforts of remediation (present and future), Cost/potential liability (provision for site remediation), Spills (number, nature, efforts to reduce), and Liabilities (actual and potential)

ENVIRONMENTAL MANAGEMENT: Environmental policies or company concern for the environment, Environmental management system, Environmental auditing, Goals and targets, Awards, Department or office for pollution control, ISO 14000, Participation in elaboration of environmental standards, Joint projects with other firms on environmental management

This means that relationships are expected between the dependent variables and the respective independent variables. The variables stated above are feasible for measurement from secondary data source which are the Corporate Annual Reports and /or Environmental Reports. Besides, EQCM also lends support to this option since it states that a tendency towards eco-efficiency through increasing reporting of environmental issues will have positive impact on corporate turnover, profitability and consequently, corporate net worth.

COST ESTIMATION FOR ENVIRONMENTAL ACCOUNTING

IFAC (2005) International Guidance Document on Environmental Management Accounting is an appreciable work on Environmental Accounting. Although, it is not yet a regulatory standard, it is intended to be a guide document which may translate into a future regulatory standard. This will be the case as accounting for the environment and related issues are taking on increasing global importance. Emerging benefits of Environmental accounting are valuable internal management initiatives with specific environmental focus towards cleaner production, supply chain management as well as environmentally preferable purchasing and Environmental Management System. EMA Guidelines form pertinent information for external reporting purpose globally.

EXTERNALITY ENVIRONMENTAL COSTS

The manner in which producers and consumers use environmental resources truly depend on the property rights governing those resources. Tietenberg and Lewis (2009) explain property rights as 'a bundle of entitlements defining the owner's rights, privileges and limitations for use of the resources'. Therefore, who is held for externality environmental costs has become an issue of controversy. If property rights are assigned to individuals (the sufferers) as in typically capitalist economy, to carry out their activities, polluter corporate organizations will be prepared either to pay the sufferers or aggressively engage Research and Development for more efficient technology to reduce to the barest their pollution activities. This will be the case since sufferers will prefer less or zero damage to their resources. On the other hand, if the property rights are assigned to corporate organization polluters, then those who suffer may be prepared to pay the polluter to reduce its scale of activity and the level of pollution. The process of bargaining ensues either way.

Arguments for and against are held on the commonly held view of Polluter Pays Principle (PPP) The Polluter Pays Principle has largely affected earlier Environmental Policies which had defined environmental principles and action such as prevention better than cure, environmental impacts to be taken into account in early decisions, co-ordination of national resources, environmental impact assessment, protection of nature and biodiversity, making most use of environmental resources, reducing pollution source, setting sustainable development targets and target climate change, acid rain and air pollution, urban quality of life and coastal resources.

In the view of Ison, Peake and Wall (2002:80) reasons for the equity argument are that if polluters are aware that they will have to pay compensation in full to sufferers of pollution, this will encourage research into more environmentally friendly technology. On the other hand, if sufferers are to pay, sufferers often find it more difficult to organize themselves; also that sufferers may not have sufficient funds to compensate polluters for the cost reducing pollution.

INTERNALIZING EXTERNALITY COSTS

Howes (2002:15) explains explicitly the critical need to internalize environmental externalities as follows:

While companies 'add value' through their activities they also extract value for which they do not pay. Their activities and operations give rise to external environmental impacts such as the contamination of groundwater, traffic congestion, poor urban air quality and so on. The costs of these external impacts are picked up by the rest of society, prices do not reflect costs and as such companies (and individuals) do not pay the full costs of their production and consumption decisions. Instead sub-optimal and inefficient decisions are made as producers and consumers respond to imperfect price signals…The degree to which the company is genuinely 'adding value' through its activities remains uncertain and if the company was to pay dividend, the payment could end up being made out of natural capital rather than income- a situation which is clearly unsustainable over the long term.

RESEARCH HYPOTHESES

The following Null Hypotheses were tested in order to achieve the stated objectives of this study:

1. H_0: The application of environmental accounting practice in the Oil & Gas and Manufacturing sectors does not impact on company performance in Nigeria.
2. H_0: Environmental accounting disclosure does not take the same pattern among the companies in Nigeria.

METHODOLOGY

RESEARCH DESIGN

The data for this study were mainly from secondary sources. For this purpose, both cross-sectional content analyses (within and across sector companies) and longitudinal (ten-year annual report and financial statements) content analyses of 132 companies in their sub-sectors as in Nigeria Stock Exchange Commission (NSE) were employed. The researcher has largely sourced for Company Annual Reports partly directly from Corporate Registrars of companies, direct requests from the companies, obtained from the Nigeria Stock Exchange (NSE) and the Manufacturing Association of Nigeria (MAN).

POPULATION AND SAMPLING PROCEDURE

The Kyoto Convention is particularly important as a reference point in environment protection. As remarked earlier in this report, the Kyoto Convention was a follow-up on the Montreal Protocol which was on substances that deplete the ozone layer. The Kyoto Convention was designed to ensure that nations' aggregate anthropogenic carbon dioxide equivalent emissions of greenhouse gases do not exceed their assigned amount. Party nations and corporate organizations in the Kyoto Convention shall individually or jointly work towards nations' attaining to the level of the expected reduction. Target is reduction of overall emission to at least 5% below the 1990 levels in the commitment period 2008 and 2012.

Although there have been prior international agreements on environment, but the Montreal Protocol in 1987 which was enforced in 1989 and the UN Framework Convention on Climatic Change in 1992 which was the immediate follow up to the Montreal Protocol are important reference years. However, the Kyoto Protocol adopted in December 1997 is made a focal determining date of environmental issues in corporate comparative analysis in this study. It has been remarked earlier in this study report that the issues on environment arising from the Kyoto Convention have implications for compliance to regulations on pollution prevention and environmental protection.

Estimated population size of companies are incorporated and those classified as registered businesses available in the Corporate Affairs Commission (CAC) of Nigeria contained in (Enyi, 2007) is well over 550,000. Of the estimate, manufacturing companies is estimated at about 59,500 By computation of Guilford and Fruchter (1973) sample size determinant of $n = N / \{1 + N (e^2)\}$, the sample size for this study was 397. The estimated sample size comprise also of the 215

effective companies (overall manufacturing and non-manufacturing companies) which are listed in the Nigeria Stock Exchange market (NSE) and Nigerian Securities Exchange Commission (SEC). In this study, sample size for manufacturing sector was 132 companies drawn from overall company population of 215 companies listed in the Nigeria Stock Exchange and the Securities Exchange Commission. These 132 sample companies comprise of the Oil & Gas and Manufacturing Sectors. The Manufacturing companies further comprise of those in Agriculture, Automobile & Tyre, Breweries, Building Materials, Chemical and Paints. Others are Conglomerates companies, Food/Beverages & Tobacco, Footwear, Healthcare, Industrial/Domestic Products, Packaging, Printing & Publishing, and Textiles. Added to the list of manufacturing are Foreign-listed Oil & Gas companies and other Emerging Markets known as Second-Tier Securities companies in the Nigeria Stock Market and the SEC (See Table 1)

TABLE 1: SUMMARY OF SECONDARY DATA ANALYZED IN COMPANIES

Secondary Data Companies	Company Years	Company Years %	Company	Company %	Oil and Gas Company Years	Manufacturing Company Years
Calculated Sample Size	3970	100%	397	100%	200	3770
Actual Companies Available	1320	33.2%	132	33.2%	200	1120
Actual Environmental Reported Companies	199	15.1%	38	29%	93 (46.5%)	106 (9.5%)
Environmental Non-Reported Companies	1121	84.9%	94	71%	107 (53.5%)	1014 (90.5%)

Source: Enahoro, J.A (2009): Design and Bases of Environmental Accounting in Oil & Gas and Manufacturing Sectors in Nigeria; Covenant University, Ota, Nigeria; Ph.D. Thesis in Accounting.

ENVIRONMENTAL QUALITY REPORTING/ DISCLOSURE MODEL SPECIFICATION

Environmental Reporting or Disclosure entails the release of a set of information relating to a company's past, current and future environment management activities, performance and financial implications. It also comprises information about the implications resulting from corporate environmental management decisions and actions. These may include issues such as expenditures or operating costs for pollution control equipment and facilities; future estimates of expenditures or operating costs for pollution control equipment and facilities. These may include sites restoration costs, financing for pollution control equipment or facilities, present or potential litigation, air, water or solid waste releases; description of pollution control processes or facilities; compliance status of facilities; among others (Aert, Cormier and Magnan 2006). Soonawalla (2006) admits that the main environmental issues in financial reporting among others are environmental costs, whether to expense or capitalize, classification of environmental costs, disclosure on details and/or breakdowns about environmental costs, and treatment of environment-related financial impacts on assets. Others are treatment of liabilities and contingent liabilities and how to recognize these, measurement of liabilities and contingent liabilities, environmental reserves, provisions and charges to income, impact of accounting rules (GAAP) on corporate behaviour, and environment information to be disclosed in greater details.

Corporate organizations are engaging more actively in environmental disclosure in their annual financial statements. This is peculiar with more financially successful companies in both the United States and the United Kingdom. In the United States of America, SEC regulations and accounting standards require American companies to disclose environmental information in annual reports. An International Public Accounting firm, KPMG, in 1999 (Gernon and Meek 2001:98), and Aert, Cormier and Magnam (2006:303) report from the KPMG's survey in 1996 that 'since 1993 the percentage of 100 companies in 12 leading industrial nations that mention the environment in annual reports have almost doubled to 69%'. Also, that '23% now produces separate environmental reports compared to 13% in 1993'. The same source reveals that Roche, a Swiss conglomerate is reputable for environmental disclosure on: Safety and Environmental protection expenditure, accidents and incidents, audit programme, developments in environmental policy, sustainable development, and environmental remediation Aert, Cormier and Magnam (2006). Disclosures at the moment worldwide are still voluntary. Except in few countries notably the European Union countries, most companies are deliberating on policies to incorporate environment costs.

This study draws from Campbell, Craven and Shrives (2003), who captured voluntary social disclosure over a longitudinal period in excess of 20 years (1975 – 1997) in three companies, the tobacco, brewing and retailing in the U.K. Measurable variables for Environmental Quality Model (EQR) were explored through secondary data. EQR is as expressed:

ENVIRONMENTAL QUALITY REPORTING MODEL

EQRM = ƒ(TUR, PAT, C NA, EPS)

EQRM, (Y) = $b_0 + b_1TUR + b_2PAT + b_3C\ NA + b_4EPS + \varepsilon$

The 'a priori' expectations are:

$b_1 > 0$; implying that the higher the TUR, the higher the Y.

$b_2 > 0$; implying that the higher the PAT, the higher the Y.

$b_3 > 0$; implying that the higher the C NA, the higher the Y.

$b_4 > 0$; implying that the higher the EPS, the higher the Y.

VARIABLE DEFINITIONS

Y = Environmental Quality Reporting (as Dependent Variable) and others, set below as Independent Variables

TUR = Annual Turnover of Company

PAT = Profit After Tax

C NA = Company Net Assets

EPS = Earnings Per Share

In this study Environmental Quality Reporting is expected to enhance positively relative to positive response of environmental variables of corporate organizations. Environmental Quality Reporting is also expected to enhance corporate profitability performance such as Turnover of company (TUR), Profit After Tax (PAT), Corporate Net Assets (CNA), and Earnings Per Share (EPS). This study measures the nature of responsiveness through research instrument of secondary data statutory Annual Reports and Financial Statements of the sample companies.

INSTRUMENT RELIABILITY AND VALIDITY

Secondary data instrument are the Companies' Annual Reports and Financial Statements. Annual Reports are reliable statutory reports, used in similar works (Campbell, Craven and Shrives: 2003:566). It is firmly asserted that the Annual Reports are documents of companies which are produced regularly which comply with statutory standards. They also serve as the most important documents for the organization's construction of its own social image. Audited Annual Reports and Financial Statements have reliability and credibility. For this purpose, both cross-sectional analyses (within and across sector companies) and longitudinal (ten-year annual financial) survey among 132 sample companies of 1320 company-years was carried out..

For Instrument validity, face-content validity, expert advice and best practice in environmental accounting were combined. In these regards, the views of experts and specialists in the Federal Ministry of Environment and the Department of Petroleum Resources (DPR) were sought on validity. Besides, past studies on environment conducted at the U.S. Environmental Protection Agency were consulted. Typical is the Tellus Institute Benchmark Survey of Management Accountants on Environmental Costs Accounting (U.S. Environmental Protection Agency: 1995). The works of Hansen and Mowen (2000:666-684) and Campbell, Craven and Shrives (2003:558-581) partly constitute bases for factor variables.

ESTIMATION TECHNIQUE / RATING SCALE

For secondary data, the scale rating (1- 3) applied in assessing environmental reporting level in sample companies were:

	Rate/Score
Environmental item described in quantitative and/or monetary terms	3
Environmental item specifically described	2
Environmental item discussed in general terms (neither quantified nor specific)	1
Environmental item not in any way referred to	0

TECHNIQUE FOR DATA ANALYSES

The study explores environmental costs reporting and disclosure content from companies in the Oil and Gas Sector as well as the Manufacturing Sector. In this regard, Environmental Reporting reflects the quality reporting rather than merely the quantity. As observed in the Estimation/Rating technique, quality estimation is measured by both the quantity of the reporting in terms of number of descriptive words and quality of the environmental items described in quantitative and/or monetary terms, Environmental item specifically described and environmental items discussed in general terms (neither quantified nor specific). No score is attached to reporting which does not have environmental content in anyway. Quantitative/monetary reporting or disclosure is regarded as of more quality than mere indicative or descriptive.

The test statistics applied in this study are the descriptive statistics, t-test and the ANOVA. The Multivariate Regression was also applied. Secondary data in the study meet with assumptions for the T- test and ANOVA, data are interval or ratio type, sample groups as randomly and independently selected, normality distribution in the population from which sample is selected and standard deviations and variability fairly similar.

The Multivariate Linear Regression Analysis attempts to describe relationship of environmental accounting reporting/disclosure to identifiable determinant variables such as Turnover (TUR), Profit After Tax (PAT), Corporate Net Asset (C NA) and Earnings Per Share (EPS). The four determinant variables which are individually proxies for company economic performance are expected to influence and affect positively corporate Environmental Quality Reporting (EQR). Theory supporting environmental accountability and sustainable clean environment culminates on the desirability of the stakeholders and the general public for corporate organization's products and activities. It has been noted earlier that ethical investors will only invest in ethical companies; also ethical companies have marketing advantage if they strategically position themselves environmentally. Recent trend reveals that ethical companies stand at advantage for corporate financing.

The OLS Multiple Regression Analysis was the test for H_1, and overall measurement of environmental quality and pattern of quality of environmental reporting in the sectors was the test for H_2

SOURCES OF DATA COLLECTION

Critical source of secondary data were disclosures and reporting in corporate annual reports. Annual Reports and Financial Statements were largely utilized in the works of Campbell, Craven and Shrives (2003); also in Lindblom, (1994); Gray, Kouhy, and Lavers (1995); Trotman and Bradley, (1981); Guthrie and Parker, (1990); Patten, (1991); Hacksten and Milne, (1996); and Adams, Hill and Roberts (1998). Owolabi (2007) also utilized company annual reports in his work. It is asserted that the Annual Reports are documents of companies which are produced regularly which comply with statutory standards. They also serve as the most important documents for the organization's construction of its own social image, and audited Annual Reports and Financial Statements have reliability and credibility.

The researcher has largely sourced for Company Annual Reports partly from Corporate Registrars of companies and also through direct request through correspondence to each company alongside questionnaires posted to them. The researcher visited the Nigeria Stock Exchange (NSE) for available financial data and also the Manufacturing Association of Nigeria (MAN) for more Annual Reports Data were extracted from corporate annual reports starting from the year of the Kyoto Protocol 1997 to 2006 (10 years). Environmental measurement and rating variables and modification in this research are agreeable to Aerts, Cormier and Magnan (2006) in which environmental coding comprise of 37 items which are grouped into six categories, namely: economic factors, laws and regulations, pollution abatement, sustainability development, land remediation and contamination and environmental management.

Secondary Data gathering were not restricted to Annual Financial Reports but were also explored from corporate websites of sample companies for reporting Environment Policies. It is discovered that certain companies report summaries in Annual Financial Reports while detailed environmental reporting is contained in corporate register website particularly for certain successful multinational companies.

ENVIRONMENTAL QUALITY REPORTING

PANEL A Environmental Quality Reporting in Combined Oil and Gas and Manufacturing Sectors

REPQUALS	Mean	N	Std. Deviation
Indicont	92.92	49	75.691
Descont	1012.09	109	1485.863
Quantcont	1185.88	41	1173.374
Total	821.57	199	1289.433

PANEL B Environmental Quality Reporting Separately in the Oil and Gas and Manufacturing Sectors

REPQUALS	Mean	N	Std. Deviation	Sum	Minimum	Maximum	Range
Indicontog	122.96	28	83.899	3443	25	253	228
Descontog	922.93	45	1432.255	41532	84	8150	8066
Quantcontog	978.05	20	960.524	19561	327	4140	3813
Indicontm	52.86	21	36.032	1110	26	124	98
Descontm	1074.78	64	1530.496	68786	90	5100	5010
Quantcontm	1383.81	21	1338.959	29060	120	3540	3420
Total	821.57	199	1289.433	163492	25	8150	8125

Indicontog is environmental report disclosure of indicative content in the oil and gas sector, Descontog is descriptive content in the oil and gas sector, and Quantcontog is quantitative content in the oil and gas sector. Also, Indicontm is indicative content in the manufacturing sector, Descontm is descriptive content in the manufacturing sector and Quantcontm is quantitative content of environmental report disclosure in the manufacturing sector.

SECONDARY DATA ANALYSIS

In table above of Environmental Quality Reporting, this is an attempt to evaluate both the quantity of environmental reporting and also the quality. Reporting is described as indicative content (indicont) if reporting is merely indicating environment clause i.e. neither quantified nor specific. Environmental reporting having specific description content is described as 'descont', and environmental item having quantitative and/or monetary term content is described as 'quantcont'. Environmental reporting and disclosure reflect those of dominant companies in the sub-sectors of petroleum marketing, indigenous Oil & Gas, foreign listing Oil & Gas companies. Those of other manufacturing companies were dominated by the sub-sectors of automobile and tyres, breweries, building materials, chemical and paint, and the conglomerates. Others are food and beverages, and the health care sub-sectors. Those without environmental reports are companies in the sub-sectors of agriculture, aviation, construction, foot wear, industrial/domestic product manufacturing, packaging manufacturing, printing and publishing, textiles manufacturing, and the second-tier securities sub-sectors. The sub-sectors were completely excluded from the data as a result of no environmental reporting or disclosure whatsoever.

Study reveals mean environmental reporting of 933.55 and 693.94 for the manufacturing and the oil and gas sectors respectively. The oil and gas however have highest environmental reporting of maximum of 8,150 as against 5,100 for the manufacturing sector. There are lowest reporting of 25 and 26 for the oil and gas

and the manufacturing respectively. Disclosure of environmental reporting in the context of mere indicative content or descriptive improved status, or quantitative and monetary content is evident in Panel A. In this respect, means of overall of environmental disclosure are quantitative 1,185.88, descriptive 1,012.09, and mere indicative 92.92. Standard deviation is highest for descriptive content 1,485.863, quantitative content 1,173.374 and indicative content of 75.691.

The study further discloses details of environmental disclosure. Maximum reporting of 8,150 occurred in foreign listing oil and gas companies in Panel B. Typical companies of such high quality and quantitative reporting and disclosures are Shell Petroleum Development Company (SPDC) and Exxon Mobil. Next to the foreign listing oil and gas sub-sector is food and beverages and health care sub-sectors. The dominating companies in this high category of environmental reporting and disclosure are Nestle Nigeria Plc for the food and beverages sub-sector and GlasxoSmithkline Consumer Nigeria Plc for the health care sub-sector.

DISCUSSION OF FINDINGS

Evidence in the study are that the extent of disclosure of environmental reporting in the context of mere indicative content or descriptive content improved status, or quantitative and monetary content which is most qualitative. In this respect, means of overall of environmental disclosure are quantitative content 1,185.88, descriptive content 1,012.09, and mere indicative content 92.92. Standard deviation is highest for descriptive content 1,485.863, quantitative content 1,173.374 and indicative content of 75.691. (See Appendix 1)

The study further in Panel D of Appendix 1 reveals means of environmental reporting of 933.55 and 693.94 for the manufacturing and the oil and gas sectors respectively. The oil and gas however have highest environmental reporting quality of maximum of 8,150 as against 5,100 for the manufacturing sector. Standard deviation is highest for descriptive content 1,485.863, quantitative content 1,173.374 and indicative content of 75.691. (See Panel A of Appendix 1) The companies of highest environmental quality and quantitative content reporting and disclosures are Shell Petroleum Development Company (SPDC) and Exxon Mobil. These are foreign listing oil and gas upstream sub-sector companies operating in Nigeria. Next to the foreign listing oil and gas sub-sector in quality reporting by reason of qualitative content is the food and beverages and health care sub-sectors. The dominating companies in this high category of environmental reporting and disclosure are Nestle Nigeria Plc of the food and beverages sub-sector and GlaxoSmithkline Consumer Nigeria Plc of the health care sub-sector. In Panel B, there are lowest reporting of 25 and 26 for the oil and gas and the manufacturing sectors respectively.

Environmental accounting disclosure does not take the same pattern among companies in Nigeria. Study shows a high significance of the non-equality of the between groups and within groups of sectors environmental reporting and disclosure. The high significance of the mean differentials, Sig. 0.001, $p<0.05$ is an indication that environmental accounting disclosure does not take the same pattern among companies in Nigeria. Within the same sub-sectors, while some companies have high level of environmental reporting, others are low. Therefore, environmental accounting practice does not impact on company performance in Nigeria.

EQR MODEL 1 REGRESSION FUNCTION AND TEST FOR HYPOTHESIS 1 (H_0)

Panels A – G of Table 4.4 is Multivariate Regression for Model 2 Environmental Reporting and Disclosure in the Oil and Gas and the Manufacturing sectors.

EQRM = *f*(a, TUR, PAT, C NA, EPS, ε)

EQRM, $Y = b_0 + b_1TUR + b_2PAT + b_3C\ NA + b_4EPS + \varepsilon$

The 'a priori' expectations are:

$b_1 > 0$; implying that the higher the TUR, the higher the Y.

$b_2 > 0$; implying that the higher the PAT, the higher the Y.

$b_3 > 0$; implying that the higher the C NA, the higher the Y.

$b_4 > 0$; implying that the higher the EPS, the higher the Y.

We explored the level of existence or non-existence of environmental costs reporting/disclosure in sample companies, whether of current or capital expenditure. Also, we explored the level of independence of tracking of all costs impacting on the environment through content analysis of company annual environmental reporting. The variables are summed up (i.e. additive) to establish the responsiveness of environmental costing and reporting of corporate organizations in the category sectors of Oil and Gas and the Manufacturing. Pearson Correlation of Environmental Reporting to Turnover (TUR) is .086, Profit After Tax (PAT) is .090, Company Net Assets (C NA) is .131 and Earnings Per Share (EPS) is .008. These are however at non-significant levels of 0.128 for TUR, 0.118 for PAT, and 0.460 for EPS. It is however significant, 0.041 for C NA.

In Panel C, R-Square and Adjusted R-Square of PAT as predictor variable are 0.017 and 0.01 respectively, while R square and Adjusted R Square in Panel D showing all predictor variables are however 0.03 and 0.008. Panel E reveals F value of 1.334, at Sig. 0.259, $p>0.05$. This is non-significant. Panel F of Appendix 3 shows predictor variables of Turnover (TUR) indicating t value -1.171, at significant level of 0.243 and Beta value of -0.225; Profit After Tax (PAT) indicating t value of 0.213 at significant level of 0.831 and Beta value of 0.033. Predictor Company Net Asset (C NA) has t value of 1.897 at significant level of 0.061 and Beta value of 0.362; and Earnings Per Share (EPS) have t value of -1.231 at significant level of 0.220 and Beta value of -0.117. Correlation is low between EQR and TUR, PAT, C NA and EPS.

A significant correlation indicates a reliable relationship, not necessarily a strong correlation (with enough subjects, a very small correlation can be significant). According to Cronk (2004), generally, correlations greater than 0.7 are considered strong and correlations less than 0.3 are considered weak. Also, correlations between 0.3 and 0.7 are considered moderate. The above Model function is therefore, valid with the coefficients stated as follows: EQRM, $Y = b_0 + b_1TUR + b_2PAT + b_3C\ NA + b_4EPS + \varepsilon$

$EQRM^1$, $Y^1 = 777.415 – 2.49E\text{-}05TUR + 2.707E\text{-}05PAT + 8.468E\text{-}05C\ NA – 4.188EPS + \varepsilon$

Although, the above EQR Model 1 is valid, the abysmally low Adjusted R Square level of 0.008 (0.8%), negative and low Beta values of predictors are indications of current low level of environment reporting and disclosure in most companies in Nigeria. Therefore, the null of Hypothesis 1 (H_0) is accepted which means that environmental accounting non-practice does not impact on Companies' performance in Nigeria at the moment.

We are not able to ascertain response of environmental reporting on Turnover (TUR), Profit After Tax (PAT), Corporate Net Assets CNA) and Earnings Per Share (EPS) because environmental reporting is barely disclosed in most companies. Besides, Environmental Policy Statements and performance, which are reported in a few companies such as in Guinness, Dunlop and Ashaka Cement are scarcely read by most Financial Statement users. Where these are read at all, contents are barely imbibed and their significance not appreciated. The level of awareness of the Financial Statement users and the general public for corporate responsibility for environmental accounting is very low. Consequently, reporting on environment or otherwise scarcely have effect on corporate performance with regard to TUR, PAT, C NA and EPS

Responses of environmental accounting variables in the model from sample companies are evident in empirical values which are low and negative in some cases. Also, beta coefficients of negative values and 0.041 (4.1%) and 0.071 (7.1%) indicate low effect of environmental costing responsiveness. (Appendix 2)

Reporting in most Nigerian companies is on Employees Health, Safety and Environment and these reports centre on safety workplace and hazard prevention for employees, with focus on employee health. There is little or no focus on environmental issues, activities or the prevention of degradation on the environment. There are also, no policy statements to prevent or alleviate these occurrences.

Nigeria's SAS 23 on Provisions, Contingent Liabilities and Contingent Assets became effective in 2006. This does not specifically provide for environmental issues and reporting. There are no accounting standards in Nigeria which recognize carbon allowances and trading as it is in the IAS 38. The IAS 38 recognizes carbon allowances as contingent assets and therefore disclosed in notes to financial statements. Carbon Trading and market have not commenced in Nigeria. In the oil & gas sector, for instance, there is still unrestricted gas flaring and carbon dioxide emission into the air in the manufacturing sector.

On disclosure of environmental issues in financial reports, it is suspected that there is much guesses by employees of Environmental Regulatory Agencies. This is likely the case when what is expected or what actually obtains with regards to statutory reporting are not certain. The positive responses do not correspond to

evidence on Annual Reporting. There may however be other forms of reporting which are statutorily required to be provided from the operators. Responses show that Environmental Impact Assessments (EIAs) are carried out on projects which are expected to have impact on environment.

Positive responses are high in the monitoring process. The Federal Ministry of Environment (FMEnv.) and the Lagos State Environmental Protection Agency (LASEPA) are particularly noted for engaging actively in environmental monitoring. The Department of Petroleum Resources (DPR) also actively regulates the oil & gas sector.

POLICY RECOMMENDATIONS

Corporate organizations whose operations impact on environment should develop Plans and 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, environmental compliance audit and inspection programme of corporate operating facilities should be put in place. There should be continued evaluation of new technologies to reduce environmental impacts.

Standard definitions should be agreed for environmental spending and expenditure for purpose of annual reports' environmental accounting in the manufacturing, Oil & Gas sectors operating in Nigeria. The adoption of the United Nations Environmental Management Accounting (EMA) Guidelines will enable for the formulation of a Generally Accepted Accounting Principle (GAAP) will evolve environmental accounting practice. This will not only move forward Environmental Accounting practice but enable for joining global campaign for environmentally enhanced society.

Accounting Standards Board and the nations' Accountancy Regulatory Institutes should accommodate the growing awareness in environmental accounting and formulate disclosure requirements. Bases and design for environmental accounting and management as emphasized in this study should be considered.

Both SEC and accounting practice in Nigeria should consider the urgency of placing demand on corporate organizations which impact on environment environmental disclosure requirement. Companies considered as polluters registered on the Stock Exchange Market should provide information about the costs incurred to conform to environmental legislations. Other companies not in that category who have it as voluntary requirement should be encouraged on environmental disclosure.

Since worldwide assented to the Kyoto Protocol, there is need the International Accountancy Standards Board (IASB) to promulgate relevant standards IN THE International Financial Reporting Standards (IFRS) to incorporate environmental issues in financial reporting. This is in line with International Accounting Standard 38 and global trend. This is the development in the EU Communities, Canada, the USA, Norway, Zimbabwe, Namibia, The Philippines and Indonesia, among others.

CONCLUSIONS

We are able to conclude from study that environmental expenditures are not charged independently of other expenditures; there is no cost accounting system for tracking of externality costs; and that environmental accounting practice does not impact on company performance in Nigeria. We are also able to conclude that Environmental accounting disclosure does not take the same pattern among companies in Nigeria. Low Adjusted R Square level of 0.008 (0.8%) and low Beta values of predictors which are indications of current low level of environment reporting and disclosure in most companies in Nigeria, reveal that environmental costing system is not significant for purpose of internal decision in Nigerian companies currently. Therefore, environmental accounting practice does not impact on company performance in Nigeria. However, a significant size of the upstream sector (not downstream) of the oil and gas sector integrate environmental cost consideration in capital projects and investments in the companies. This is also noted in a few multinational companies engaged in manufacturing.

Two main internal barriers which affect the ability of the company to collect environmental cost information are the absence of classification of costs on environmental bases. Skills in the principles and practice of environmental cost and management accounting have not yet attained prescribed standards in Nigeria. However, suggested bases and design in this study is expected to enhance the practice of environmental cost accounting. It is rightly observed by Salomone, and Galluccio (2001:34) that 'descriptive non financial information cannot help the reader to understand the interactions between the company and the environment in quantitative and financial terms.' They therefore, gave the opinion that 'qualitative disclosure must be accompanied by the same type of precise and clear financial information that is useful to reconstruct the economic consequences deriving from environmental problems.' In the same thought, it is considered that although environmental information could be published in other company forms such as in social reports, press releases, company websites, among others, but it is only in the corporate Annual Reports can these information be accepted as authentic, acceptable and justifiable.

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APPENDESES

APPENDIX 1: ENVIRONMENTAL QUALITY REPORTING

PANEL A: ENVIRONMENTAL QUALITY REPORTING IN COMBINED OIL AND GAS AND MANUFACTURING SECTORS

REPQUALS	Mean	N	Std. Deviation
Indicont	92.92	49	75.691
Descont	1012.09	109	1485.863
Quantcont	1185.88	41	1173.374
Total	821.57	199	1289.433

PANEL B: ENVIRONMENTAL QUALITY REPORTING SEPARATELY IN THE OIL AND GAS AND MANUFACTURING SECTORS

REPQUALS	Mean	N	Std. Deviation	Sum	Minimum	Maximum	Range
Indicontog	122.96	28	83.899	3443	25	253	228
Descontog	922.93	45	1432.255	41532	84	8150	8066
Quantcontog	978.05	20	960.524	19561	327	4140	3813
Indicontm	52.86	21	36.032	1110	26	124	98
Descontm	1074.78	64	1530.496	68786	90	5100	5010
Quantcontm	1383.81	21	1338.959	29060	120	3540	3420
Total	821.57	199	1289.433	163492	25	8150	8125

Indicontog is environmental report disclosure of indicative content in the oil and gas sector, Descontog is descriptive content in the oil and gas sector, and Quantcontog is quantitative content in the oil and gas sector. Also, Indicontm is indicative content in the manufacturing sector, Descontm is descriptive content in the manufacturing sector and Quantcontm is quantitative content of environmental report disclosure in the manufacturing sector.

PANEL C: ENVIRONMENTAL QUALITY REPORTING SUMMARY IN THE SUB-SECTORS

Sub-sectors	Mean	N	Std. Deviation	Minimum	Maximum	Range
Pm	439.96	47	384.907	25	1348	1323
flog	1188.86	35	1714.753	84	8150	8066
iog	204.36	11	72.401	92	253	161
automt	124.00	4	.000	124	124	0
brew	183.44	16	165.338	27	440	413
buidm	739.57	14	372.501	258	1016	758
chempt	287.65	17	144.678	120	480	360
congl	206.07	14	129.919	45	364	319
foodb	1764.90	29	1897.400	37	5100	5063
healthc	2184.50	12	1814.861	26	4520	4494
Total	821.57	199	1289.433	25	8150	8125

Table sub-sector descriptions are (pm) which is petroleum marketing sub-sector (oil and gas), (flog) is foreign listing oil and gas, and (iog) is the indigenous oil and gas sub-sector. Sub-sectors in the manufacturing sector are (automt) which is automobile and tyres sub-sector, (brew) for the breweries, (buildm) for the building materials, (chempt) for chemical and paint sub-sector, and (congl) for the conglomerates. Others still in the manufacturing sector are (foodb) for food and beverages and (heathc) for the health care sub-sector.

PANEL D: ENVIRONMENTAL QUALITY REPORTING SUMMARY FOR SECTORS

Sub-sectors	Mean	N	Std. Deviation	Minimum	Maximum	Range
Oil & Gas	693.94	93	1147.216	25	8150	8125
Manufacturing	933.55	106	1398.219	26	5100	5074
Total	821.57	199	1289.433	25	8150	8125

APPENDIX 2: COEFFICIENTS[A]

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 Intercept	777.415	121.012		6.424	.000		
TURNOVER	-2.49E-05	.000	-.225	-1.171	.243	.152	6.568
PAT	2.707E-05	.000	.33	.213	.831	.237	4.219
NETASSET	8.468E-05	.000	.362	1.897	.060	.155	6.460
EPS	-4.188	3.402	-.117	-1.231	.220	.623	1.604

a. Dependent Variable, Environmental Quality Reporting

APPENDIX 3: REGRESSION

PANEL A: DESCRIPTIVE STATISTICS

	Mean	Std. Deviation	N
Environmental Reporting Quality			
TURNOVER	868.08	1350.692	177
PAT	6594600	12207751.04	177
NETASSET	482961.9	1642659.299	177
EPS	3034250	5773722.713	177
	3.5613	37.76224	177

PANEL B: CORRELATIONS

		Reporting Quality	TURNOVER	PAT	NETASSET	EPS
Pearson Correlation	Reporting Quality	1.000	.086	.090	.131	.008
	TURNOVER	.086	1.000	.840	.887	.320
	PAT	.090	.840	1.000	.834	.478
	NETASSET	.131	.887	.834	1.000	.500
	EPS	.008	.320	.478	.500	1.000
Sig. (1-tailed)	Reporting Quality	.	.128	.118	.041	.460
	TURNOVER	.128	.	.000	.000	.000
	PAT	.118	.000	.	.000	.000
	NETASSET	.0.41	.000	.000	.	.000
	EPS	.460	.000	.000	.000	.
N	Reporting Quality	177	177	177	177	177
	TURNOVER					
	PAT					
	NETASSET					
	EPS					

PANEL C: MODEL SUMMARY – PAT AS VARIABLE PREDICTOR

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	129[a]	.017	.010	1064.085

a. Predictors (Constant), PAT

PANEL D: MODEL SUMMARY – ALL VARIABLES AS PREDICTORS

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.173[a]	.030	.008	1345.549

a. Predictors (Constant), TURNOVER, PAT, NETASSET, EPS

PANEL E: ANOVA[b]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	9661813	4	2415453.319	1.334	.259[a]
	Residual	3.11E+08	172	1810623.410		
	Total	3.21E+08	176			

a. Predictors (Constant), TURNOVER, PAT, NETASSET, EPS

b Dependent Variable: Environmental Quality Reporting

PANEL F: COEFFICIENTS[a]

	Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
Model	B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1 Intercept	777.415	121.012		6.424	.000		
TURNOVER	-2.49E-05	.000	-.225	-1.171	.243	.152	6.568
PAT	2.707E-05	.000	.33	.213	.831	.237	4.219
NETASSET	8.468E-05	.000	.362	1.897	.060	.155	6.460
EPS	-4.188	3.402	-.117	-1.231	.220	.623	1.604

a. Dependent Variable, Environmental Quality Reporting

PANEL G: COLLINEARITY DIAGNOSTICS

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions				
				(Intercept)	TURNOVER	PAT	NETASSET	EPS
	1	3.227	1.000	.02	.01	.02	.01	.02
2		.946	1.847	.38	.00	.01	.00	.29
	3	.611	2.298	.41	.02	.04	.00	.44
	4	.148	4.666	.19	.07	.88	.22	.01
	5	6.833E-02	6.872	.00	.89	.06	.77	.25

a. Dependent Variable: Environmental Quality Reporting

REQUEST FOR FEEDBACK

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Hoping an appropriate consideration.

With sincere regards

Thanking you profoundly

Academically yours

Sd/-

Co-ordinator