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RESEARCH ARTICLE

AN APPRAISAL OF SUSTAINABILITY ENVIRONMENTAL ACCOUNTING IN ENHANCING CORPORATE PRODUCTIVITY AND ECONOMIC PERFORMANCE

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Abstract

This paper has attempted to assess the appraisal of Sustainability environmental accounting in enhancing corporate performance and economic growth. This study reviewed various forms including journal papers, articles and other relevant materials. This paper analyzed and tested two hypotheses with Pearson Product Movement Correlation Co-efficient. Based on this, the study discovered that sustainable environmental accounting has significant impact on corporate productivity in order to enhance corporate growth. Thereby recommends that sustainable environmental cost accounting which is committed to improving organizational performance and which has effectively contributed to the development of firms should be persistently enforced.

1. Introduction

Firms are facing increasing demands from their stakeholders to integrate their efforts in environmental, social, and economic realms to ensure a sustainable world. Oil and Gas industries, in particular, are vulnerable to such pressures due to the nature of their business. Two of the identifying characteristics of the oil and gas industries are depleted products used as inputs for many finished products and do not renew in a short time frame along with the activities of extraction of oil and gas which leave environmental and social footprints. The demands for these inputs are increasing as they are needed worldwide to improve the standards and quality of living of this generation. Unless these activities are properly managed, they can result in irreversible harm to the communities.(Lee et al, 2011)

A case in point is the recent oil spills in the Gulf of Mexico that not only damaged the ecosystem close to the drilling activity but also affected the livelihood of people that are reliant on the fishing and hospitality industries in New Orleans. There were quite a few instances that have brought oil and gas industries to their knees due to their mismanagement of resources.

The responsibility of a firm does not end at compliance to regulations and mandates, but to develop safeguards that will prevent disastrous events from occurring. The responsibility should also extend above and beyond to serve the current and future interests of the society.

The notion of engaging beyond compliance is ethically desirable, albeit, it takes away resources from a firm's immediate needs. There are studies that argue that it is not at the best interest of shareholders that a firm spends resources beyond compliance (Friedman 1970; Walley & Whitehead 1994; Elgin 2007).

Sustainability is a conceptual framework that recognizes that a viable relationship exists between an organization's economic performance and its environmental and social activities.

Sustainability has been primarily used as a dialogue to frame business strategy as a dynamic approach for managers to frame organizational strategies and associated business activities. For managers, sustainability provides them a framework to view the business as having interdependence and intertwined in the local and regional as well as international communities for continued growth and profitability.(Fiksel et al, 1999)

Sustainability as an integrated framework encourages managers to reorient their business for new strategy and growth in new areas. It helps link the capabilities of business leadership and employees capabilities/competencies to align them with organizational resources. (Fiksel et al, 1999)

Most of the study however, had revealed on both negative and positive effects of sustainable environmental accounting. Interestingly enough, substantial disagreement still about whether management is obliged to focus on business in a more narrow sense relating all activities directly to financial performance or whether management has a social responsibility that requires voluntary social and environmental activities exceeding the compliance with regulations (Freeman 1984; Friedman 1997). This disagreement is strongly coloured by different ideologies and by perceptions of the social embeddedness and role of a company, ethical perspectives of leadership and the role of stakeholders in setting up a business.

However, it is considered appropriate for companies impacting on the natural environment, to design and implement environmental accounting in an emerging environmental policy. This is particularly critical for the manufacturing sector which impact heavily on the environment in Nigeria. The adverse impacts on the environment due to such operation can be significant, and the net effect of different logistics systems is not obvious.

This study however, focused on two major issues- its impact on corporate productivity and economic performance as these are crucial factors behind global warming. In this respect, this study conducted a survey to know the level of impact at which sustainable environmental accounting can play in increase productivity thereby enhance economic performance.

To achieve this aim, the paper attempts to give a critical summary of previous work. Journal papers and articles produced so far.

Hypotheses

1. HO: There is no relationship between sustainable environmental accounting and increase in corporate productivity to enhance corporate growth.
2. HO: There is no relationship between sustainable environmental accounting and economic performance of a corporate organization.

Literature Review

The Concept of Environmental Accounting

According to Okafor (2010), environmental accounting is a general term which may mean the integration of environmental dimension into the macro or micro level despite that it is more applicable to the latter level. Environmental Accounting which calls to introduce a system that supports Sustainable Development (SD), has many meanings and uses. Environmental Accounting can support national income accounting, ecological accounting at local administration level and at micro level related to financial accounting, cost accounting or internal business managerial accounting (Ahamid, 2002).

However, Environmental Accounting can be used both in accounting and management which can be relates to environmental performance then the information can be forwarded to both internal and external stakeholders in organization. According to Graff et at, (1998), environmental accounting is a broad based term that refers to the incorporation of environmental costs and information into a variety of accounting practices. It is a growing field that identifies measures and communicates costs from a company's actual or potential impact on the environment. (Okafor, 2010). Environmental accounting can be considered either as a subset or superset of accounting proper, because it aims to incorporate both economic and environmental information. 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 et al, 2000).

Hansen and Mowen (2000) defined environmental costs as costs associated with the creation, detection, remediation and prevention of environmental degradation At AT & T, according to the US EPA (1995), Green Accounting or Environmental Accounting is defined as: Identifying and measuring the costs of environmental materials and activities and using this information for environmental management decisions. The purpose is to recognize and seek to mitigate the negative environmental effects of activities and system. Howes (2002) defines Environmental Accounting as: The generation, analysis and use of miniaturized environmentally related information in order to improve corporate Environmental and economic performance. In the opinion of Howes, Environmental Accounting does not only focus on internal and external environmental accounting but links environmental and financial performance more visibly. Environmental accounting assists in getting environmental sustainability embedded within an organization's culture and operations. The aim is to provide decision makers with the information that enable the organization to reduce costs and business risks and to add value. (Ibemgbor,2011).

According to Nagle (1994), on environmental accounting reveals that corporate manager are placing high priority on environmental accounting. Environmental accounting as a prevalent subject in the international community is not yet a priority in Nigeria. B. Field and M. Field (2002), explain pertinent aspect of environmental degradation and costs as those including emissions into the air, water and land. Also, aspects of untreated domestic waste outflows into rivers and coastal oceans, quantities of solid waste that must then be disposed of, perhaps through land spreading or incineration. Pollution include Airborne SO2 emissions from power plants by stack-gas scrubbing which leaves a highly concentrated sludge and degradation which incorporates midnight dumping, illegal dumping along the sides of roads or in remote areas. (Ibemgbor,2011). In Nigeria, some of the sampled companies were seen to seriously pollute the environment in their production process. It was seen that some firms discharge waste into public highways, streams and rivers. Some oil companies and chemical companies in Lagos and Port Harcourt still flare gas into the air. It was also discovered that some of the streams were already contaminated in those areas. (Ibemgbor, 2011).

However, B. Field and M. Field (2001), have done tremendous work on the economics of natural resources and in this instance explored the approach of benefit-cost analysis through discounting of future based input and output values of environmental projects and activities. According to B. Field and M. Field in their study, measuring benefits-costs analysis has been essentially through regulatory Evaluation Impact Assessment (EIA) study on environment.

Previous Study

Quite number of studies has been carried out on environmental sustainability accounting on companies in different countries. In a paper on difference between corporate sustainability performance and tangible business performance: evidence from Oil and Gas Industries by Lee, Pati and Jondgae (2011). The purpose of this study was to empirically examine the effect of corporate sustainability efforts on the business performance of the firm. Using a reliable data set, namely PSI, published by the Roberts Environmental Center, we studied the effect of social performance of a firm with respect to accounting-based and market-based performance as well as sustainable growth rate (SGR) in crude oil production and petroleum refining industries.

Particularly, this study explored the directions and magnitudes of the operational relationships between key strategic factors.

Utilizing hierarchical regression analysis, the study explored the nature of a firm’s economic performance with respect to various dimensions of performance measures such as accounting (OPROA, OPROE, OPROI) and market-based (Tobin’s Q, market value, sustained growth rate). Although the focus of this study was on the significant relationships between the CSP measured in terms of PSI and TBP, it also explored how other business strategic factors, such as firm size, manufacturing cost efficiency; capital intensity, debt leverage, and labor productivity are linked to the firm’s economic performance.

In another study by on Sustainability and Firm Performance: A Case Study of Japanese Electronics Companies by CORTEZ, et al (2011). This study explores the impact of environmental innovations on financial performance of Japanese electronics companies following the growing literature linking corporate social performance with profitability. Using sample electronics companies listed in the

Tokyo Stock Exchange, this industry case study focuses on the global manufacturing leaders as they play a significant role in advancing environmental reporting due to their supplier networks and subsidiaries. We initially investigate if sustainability performance of electronics companies positively impacts financial performance following the resource-based view perspective.

Alternatively, we explore if environmental performance is facilitated by financial performance in prior years following the theory on slack availability of resources.

Probably the key contribution of our study to literature is the qualification of earlier conceptualizations that financial performance measured in profits, assets and shareholders’ equity reinforces investments in social performance that is measured in environmental cost. In the case of Japanese electronics companies, they may not be profitable yet revenue generation and risk minimization matter as a benefit of sustainability performance.

Our findings point to risk minimization efforts of electronics companies in spite of declining profitability. Their sustainability performances are justified by the legitimacy granted to them as socially responsible that translates into improved revenue generation.

In another line of the study by Stefan Schaltegger and Marcus Wagner (2006) on managing and measuring the business case for sustainability; *capturing the Relationship between Sustainability Performance, Business Competitiveness and Economic Performance.* This introduction provides an overview of the subject of this book, namely how to manage the business case of sustainability. After providing a basic structure of how environmental and social management link to economic success through a number of pathways, various theoretical, empirical and normative approaches to analyze the subject are introduced. Subsequently, the basic link between sustainability performance, competitiveness and economic success is discussed, introducing an inversely U-shaped relationship as a generic case. The chapter then presents the logical corollary of how to measure sustainability performance, business competitiveness and economic success conceptually and empirically, before introducing a framework for the interaction of factors explaining the relationship of sustainability performance and competitiveness.

In A Similar Study By Joseph Fiksel, Jeff Mcdaniel And Catherine Mendenhall (1999) On Measuring Progress Towards Sustainability Principles, Process, And Best Practices. The intent of this paper is to provide both a conceptual understanding of the state of the art, and a survey of best practices across several industries, thus creating a pragmatic foundation for establishing a customized sustainability measurement process within any company. The paper is based upon Battelle's experience in developing and implementing performance measurement processes for a variety of industrial clients, including several leaders in the sustainability movement. In particular, the performance measurement process is based on the results of a multi-year program sponsored by the Electric Power Research Institute (EPRI).

The paper concludes that some important lessons can be learned from the companies that are already tackling the challenge of measuring and reporting their path towards sustainability. A review of publicly available data shows that

The Body Shop, BP Amoco, Collins & Aikman Floorcovering, Monsanto, and Volvo are applying the four principles and following most of the measurement steps. For example, all of these companies:

_ Measure and report the three dimensions of sustainability: economic, environmental, and societal.

_ Report their efforts to conserve resources and create value.

_ Consider the entire life cycle of their products and services, rather than concentrating exclusively on their core operations.

_ Track both leading and lagging indicators.

_ Have a clearly articulated sustainability policy.

_ State how company activities can hinder or enable sustainability, and how the company intends to improve performance.

_ Measure and report innovative metrics that is relevant to their organization's program.

Finally, one of the dominant themes that emerge from these similarities and differences is the continued focus of sustainability measurement on the environmental dimension. This focus is a legacy of historical practices, and continues to occupy most of the attention of external stakeholders. As mentioned earlier, the practice of societal reporting is relatively new and being led by a few path breaking companies, including The Body Shop.

With regard to economic performance measurement, financial reporting is well established but generally focused on business performance as defined by generally accepted accounting practices (GAAP) and driven by the finance organization. In contrast, environmental reporting among large corporations is usually the responsibility of the environmental, health and safety organization. An important step in moving toward triple bottom line integration will be the recognition that economic impacts need to be addressed through a life cycle accounting framework that extends beyond traditional financial boundaries.

In a study on Global trends in sustainability performance management: A report from the Economist Intelligence Unit Sponsored by SAP (2010). In just over ten years, corporate sustainability reporting has shifted from voluntary to the vital.

According to CorporateRegister.com, an independent reference source, fewer than 500 companies issued sustainability reports in 1999. That number is now close to 3,500, reflecting the growing trend among companies worldwide to issue reports demonstrating their commitment to environmental and social targets along with traditional fi nancial ones.

According to KPMG's most recent International Survey of Corporate Sustainability Reporting, in 2008 close to 80% of the world's 250 largest companies issued sustainability reports, compared to the 50% who did so in 2005. (KPMG refers to this group as the G250, drawn from the 2007 Fortune Global 500 list). The results of this survey also point to the fact that sustainability reporting, while widely adopted by large companies in Europe for several years has become a mainstream practice in the US.

Sustainability reports, often called corporate social responsibility or even integrated reports, now contain more detailed performance metrics and reflect the priority companies have given to measuring and managing the impact of their operations. Global standards have played an important role in the development of sustainability reporting and performance management. For example, over 1,000 companies globally have adopted the Global Reporting Initiative's third generation, or G3, standards since their launch just four years ago. These standards make reporting more open and accountable, and provide a universal framework for disclosure.

Many factors are driving the current momentum for sustainable corporate performance. Companies themselves understand the many benefits of sustainable operations, and now respond to a wider range of stakeholders who demand new forms of accountability.

The paper examines the new world of sustainability reporting, and the complex web of stakeholders, governments, customers, NGOs, employees, suppliers and even the companies themselves. It focuses, in particular, on the demands for new kinds of transparency. As a result, benchmarks of corporate performance are changing drastically.
The paper concludes that the landscape of sustainability-performance management is changing rapidly as legislation emerges and companies adopt new practices and structures to communicate their emphasis on integrated reporting.
Regulations and standards are moving from voluntary to mandatory, and stakeholder demands are for increased accountability and transparency. Supply-chain and product life-cycle evaluations are an emerging trend.
Companies have come to realize the benefits of a sustainability policy that once clearly developed and implemented balances multiple reporting goals. The evolution of the integrated approach will be the future trend in corporate operations, and the accompanying improved performance measures will be a key tool in demonstrating the tangible benefits.
In a related study on environmental management accounting and firm performance by Sayedeh et al (2011). This paper aims to have a comprehensive review on the relationship between environmental management accounting and firm performance and also explores the role of innovation and competitive advantage as two effective mediator variables in this relationship. This study presents a comprehensive picture of this path process which has previously been partially discussed in the literatures. Finally, this paper suggests a framework for future research on how EMA lead to firm performance through innovation and competitive advantage.
In conclusion, we present a conceptual model of EMA and firm performance by innovation and competitive advantage as two mediator variables as follow, as a basic for the future research:

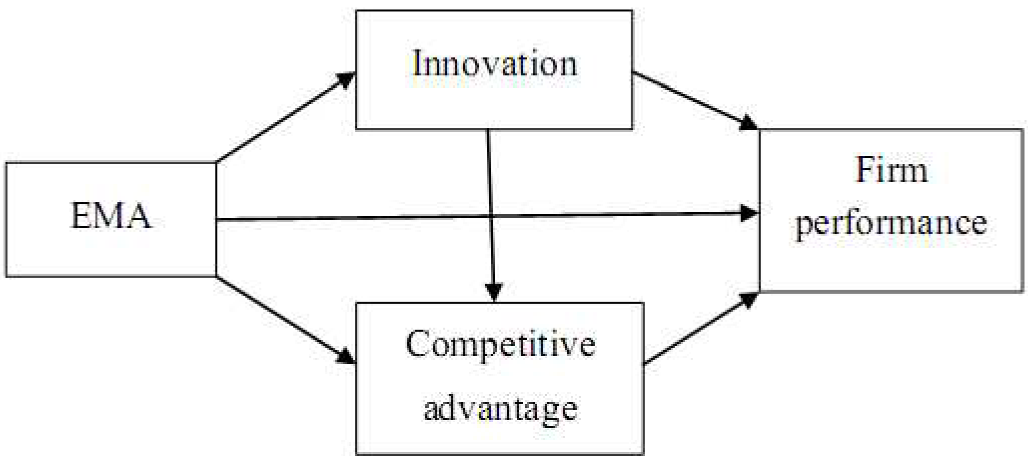

Figure1: Conceptual framework of EMA and firm performance.

In a Paper Writing By *Faboyede (2011)* On Environmental Protection And Sustainability Reporting: Extensible Business Reporting Language (Xbrl) Interactive Data To The Rescue.
The study discovered that there is an inevitable path globally towards the adoption of SBR using XBRL in order to improve financial reporting. This is not yet the case when it comes to social and environmental sustainability reporting. According to the Global Reporting Initiative (GRI) (GRI, n.d.), which is a multi-stakeholder global alliance that has been responsible for developing the world‟s most authoritative sustainability reporting guidelines, much of the reporting is still print-based and specific to the particular reporting entity; hence there is an immediate need for research which will seek to explore and develop a new frontier of Sustainability Reporting that embraces and fully utilizes a digitized system of reporting allowing information from individual reporting entities to be aggregated at regional and national levels.
It concludes that the assurance about a company‟s financial projections and nonfinancial information (customer satisfaction, employee retention, or environmental reporting) and the integrity of the information itself through XBRL would enhance the effectiveness and efficiency of resource allocation, increase income and welfare, as well as achieve the objective of an environmentally sound management which encompasses increasing eco-efficiency, reducing environmental impact, and increasing company value added. It thus recommends that Nigeria and the developing countries should embrace the XBRL technology as they cannot afford to be left behind by the fast spreading current worldwide future reporting standard.

(S&c 2) In a study of Asaolu et al (2011) on Sustainability Reporting in the Nigerian Oil and Gas Sector. The paper assesses sustainability reporting in the Nigerian Oil and Gas sector. Content analysis was used on data sourced from the annual reports of selected oil companies to identify the extent to which their reporting has been in line with global best practices.

In Conclusion the study found out significant variations in sustainability reporting disclosures with no support by any known local regulation.

(ii) While multinationals reported extensively in line with global best practices in their global reports, their local affiliates did not report locally on the same issue

(iii) Multinationals also differed in their mode of reporting which resulted in a lack of comparison from one company to another.

(iv) Multinationals operating in Nigeria fared badly in their Environmental and Social reporting indicators which may partly explain the upsurge in criticism and unrest that characterized their operations in the last decade.

Thereby recommends that Since multinationals operating in the Nigerian Oil and Gas sector have not been adhering to international best practices on the issue of sustainability reporting, the paper recommends a mandatory localized sustainability reporting framework in line with international best practices as practiced in countries like France, Germany and South Africa for companies operating in the Oil and Gas sector of the economy in view of the criticality of the sector to the economic wellbeing of the Nigerian State.

(s&c 5)In a another related study on Sustainability Reporting's Role in
Managing Climate Change Risks and
Opportunities by Ann Brockett and Zabihollah Rezaee (2010).the paper based on the In the post-2007–2009 global financial crisis era, financial information no longer satisfies the needs and demands of a broad range of stakeholders. Global companies are facing growing pressure—internally and externally— to manage their impacts on global sustainability issues effectively and to
disclose relevant information about their business sustainability (BS) practices

Business sustainability (BS), which originally was viewed as a question of corporate governance, has now emerged as a central, multifaceted theme of the twenty- first century. It is now the responsibility of corporate boards and managers to focus on BS by creating enduring value for shareholders and managing the interests of other stakeholders, including creditors, employers, suppliers, government, and society at large. BS and corporate accountability is all about adding value in all areas of EGSEE matters and events. Many public companies now voluntarily manage measure, recognize, and disclose their commitments, events, and transactions relevant to EGSEE.

In another study on the relation between sustainability performance and financial performance of firms by Weber et al, (2005). The study examined the sustainability performance of 100 companies. Using the GRI framework as the point of departure, the relation between sustainability drivers, sustainability outcomes, and financial performance was the topic of investigation.

The sample consisted of companies that were representative for the MSCI with respect to country, sector, and size. 72% of the companies published a report on their environmental, social or sustainability performance, which can be argued to be indicative of a willingness on the part of companies to present their environmental, social or sustainability performance to their stakeholders (Elkington *et al.*, 1997; Nitkin *et al.*, 1998).

Yet the question remains as to whether or not these reports do in fact deliver the information needed to support decision making for responsible investors? Do those reports really show a fair picture of firms´ sustainability work and its outcomes for both sustainable development and financial success? This general question, posed by the editors of this special issue, Cerin and Dobers, was tested using the following two specific questions:

1. Do companies that perform well in terms of sustainability reporting also perform well with respect to sustainability outcomes?
2. Do companies that perform well on sustainability issues also perform well with respect to their financial performance?

The present research demonstrated, with respect to the first question, that sustainability reporting in the fields of environmental, social and economic reporting did indeed lead to good performance with respect to the sustainability impacts in those three fields.

However, this result did not apply for the field of corporate governance. Taken together, these results suggest that those companies implementing environmental, economic or social policies, strategies and operations contribute to the corresponding sustainable development areas. Thus, companies take their responsibility vis-à-vis the sustainable development into account by decreasing their negative environmental impacts through the implementation of environmental policies, strategies and operations, as called for by

Bazin et al. (2004). This holds also for the social field, suggesting that companies respect the social dimension of the way in which they conduct their business (Faucheux *et al.*, 2003). For the economic dimension – composed of impacts such as the amount of taxes paid or the amount of sponsoring for social projects and organizations – similar significant relations were found. However, it is interesting that no relation was found between corporate governance policies, strategies, and operations, and corporate governance outcomes. There could be two reasons for this. Firstly, corporate governance outcomes are looked upon differently in the GRI framework than in general. The outcome items were "number of countries that are problematic with respect to the environmental and social responsibility" and "percentage of independent non-executive directors in the board". Secondly, some studies (Gompers *et al.*, 2003) indicate that an improvement in corporate governance has greater influence on the financial performance of a company than the absolute level of corporate governance performance.

Thus, we were able to show that good performers with respect to their sustainability performance are able to positively influence sustainable development in contrast to bad performers. The implications are that investing in companies with good sustainability performance measured by the GRI framework will have a positive contribution to sustainable development. Thus those companies are not only performing sustainability management for image building (Cerin, 2004).

Regarding the second question, significant relations between sustainability performance and financial performance could be found. Thus, it seems that not only does it pay to be green (Hart *et al.*, 1996), but that it also pays to be sustainable, as also demonstrated in many other studies (Dasgupta *et al.*, 2002; Hart, 1995; King *et al.*, 2000; Klassen *et al.*, 1996; Schaltegger *et al.*, 2000; Steger, 2000, 2004).

However, in order to exploring these relations it seems to be important to not only choose the right sustainability indicators, but the right financial indicators as well. The exploratory analysis using TR as the financial indicator revealed no significant relation with sustainability performance. The reason for this could be that there are too many other important influences on the total return of a company share (Cerin *et al.*, 2001) or that shareholder do not integrate sustainability performance into the price of company shares as suggested by Schaltegger et al. (2000).

Nevertheless, the present study was able to demonstrate significant effects of sustainability policies, strategies and operations on both sustainability impacts and financial performance. This is consistent with the findings of Judge *et al* (1998), whose results also showed that it made sense to analyze the non-financial performance of companies based on GRI guidelines. Thus, using analyses similar to those performed, rating systems could be created that rate companies on the basis of their economic, environmental, social and corporate governance performance with these ratings being used to predict their financial performance.

Methods of Data Analysis

The method of analysis for this study is the use of simple correlation analytical technique specifically the Pearson Product Movement Correlation co-efficient which is computed to establish a relationship between sustainability environmental accounting and corporate productivity in enhancing economic performance. The study makes use of primary and secondary sources. The questionnaires was distributed to twenty five (25) respondents from finance sections of the two manufacturing companies and this was judgmentally selected from the two selected companies; Innoson Nigeria Plc, Nnewi and Nigerian Bottling Company Plc Enugu.

Data will be tested using the Pearson Product Movement Correlation Co-efficient PPMC is represented below as:

$$r = \frac{\sqrt{n\varepsilon xy - \varepsilon x\ \varepsilon y}}{Vn\ \varepsilon x^2 - (\varepsilon x)^2\ (n\varepsilon y)^2 - (\varepsilon y)^2}$$

To test for its significance we use:

$t = r\sqrt{n\text{-}2/1\text{-}r^{2.}}$ Decision criteria, where tc < tx, accept Ho, reject H1

Data Presentation and Analysis

The data utilized for this study consists of the questionnaires collected from the respondents of the two companies under the study.

Hypothesis 1						**Hypothesis 2**					
Qs	**X**	**y**	**xy**	**x^2**	**y^2**	**Qs**	**X**	**y**	**xy**	**x^2**	**y^2**
1	15	8	120	225	64	1	12	11	132	144	121
2	12	10	120	144	100	2	15	9	135	225	81
3	19	4	76	361	16	3	18	5	90	324	25
4	13	11	143	169	121	4	13	10	130	169	100
5	15	7	105	225	49	5	20	4	80	400	16
Total	**74**	**40**	**564**	**1124**	**350**	**Total**	**78**	**39**	**567**	**1262**	**343**

Source: Field survey, 2012 Source: Field survey, 2012

Hypothesis 1:

$$r = \frac{5(564)-(74)(40)}{\sqrt{5(1124)-(74)^2\ 5(350)-(40)^2}}$$

$$= \frac{2820-2960}{\sqrt{(144)(150)}}$$

$$= \frac{-140}{\sqrt{21600}}$$

r= **-.952**

Hypothesis 2:

$$r = \frac{5(567)-(78)(39)}{\sqrt{5(1262-(78)^2\ 5(343)-(39)^2}}$$

$$= \frac{2839-3042}{\sqrt{(226)(194)}}$$

$$= \frac{-207}{\sqrt{43844}}$$

r=-.989

Test of Hypotheses using correlation coefficient r at level of significance.

$$t = -.952\sqrt{\frac{5-2}{1-(-.952)^2}}$$

$$t = -.952\sqrt{31.9}$$

$$= -.952(5.65)$$

t= **-5.38**

$$t = -.989\sqrt{\frac{5-2}{1-(-.989)^2}}$$

$$t = -.989\sqrt{136.4}$$

$$= -.989(11.67)$$

t= **-11.54**

Decision: since the two calculated value is greater than the table (-5.38>-2.35, -11.54>-2.35), we reject null hypotheses and uphold the alternative hypotheses which stated that there is relationship between sustainable environmental accounting and increase in corporate productivity to enhance corporate growth and there is a relationship between sustainable environmental accounting and economic performance of a corporate organization.

Conclusion and Recommendations

This paper has attempted to appraisal the impact of sustainability environmental accounting in enhancing corporate productivity and economic performance. This study reviewed various forms including journal papers, articles and other relevant materials. Based on this, it has discovered that there is relationship between sustainable environmental accounting and increase in corporate productivity to enhance corporate growth and there is a relationship between sustainable environmental accounting and economic performance of a corporate organization. The need for sustainability awareness is becoming an imperative, as global pressures intensify. This according to Fiksel, McDaniel and Mendenhall, (1999) "The world population will soon surpass six billion, while concerns about climate, water, land, and habitat preservation continue to mount. Rapidly developing economies around the world are creating growing markets for goods and services. These conditions are creating opportunities for companies to fundamentally change how they engage suppliers, operate facilities, and service customers. In addition to new technologies, new production methods, and new management systems, these companies will need a new language to communicate their performance goals and progress".

Recommendations

1. Sustainable environmental cost accounting which is committed to improving organizational performance and which has effectively contributed to the development of firms should be persistently enforced.

2. Accounting regulatory bodies like Institute of Chartered Accountants of Nigeria (ICAN) and the Nigerian Accounting Standards Board (NASB) should introduce sustainable environmental cost accounting and reporting standards that will take care of environmental/sustainability information dissemination.
3. Indigenous and multi-national firms should ensure that strict policies as regards environmental accounting are adhered to, to enable stable organizational performance.

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