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Effect of Corporate Environmental Disclosure on Financial Performance of Firms Listed at Nairobi Securities Exchange, Kenya

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Abstract: Corporate environmental disclosure entails reporting on the impact of company activities on the natural environment such as waste management, recycling, carbon management, emission, pollution, wetland and wildlife conservation. Conventional accounting systems are limiting since they fail to directly address sustainability concerns. They have failed to address economic growth against social and environmental needs in order to balance the different needs of various stakeholders. Sustainability has become a major pillar of today's business activities. This study consequently aimed at assessing the effect of corporate environmental disclosure on financial performance of listed firms at the Nairobi Securities Exchange, Kenya. This study made use of longitudinal secondary data from the annual reports and financial statements of listed companies at the Nairobi Securities Exchange. Content analysis of sampled listed companies' annual reports was undertaken to examine environmental disclosure practices. A checklist of environmental disclosure items and categories was developed and environmental disclosure indices computed. Casual research design was employed to determine the cause-effect relationship between corporate environmental Disclosure and financial performance. Target population of the study was 61 listed companies. Purposive sampling was employed in selecting firms that have been listed for entire period of study and whose annual reports are available at the Nairobi Securities Exchange. This resulted into a sample size of 32 listed companies. Coefficient of Skewness was used to test the normality of data. Homoscedasticity and auto-correlation assumptions of the regression model were tested using scatter plots and Durbin Watson test. Linear regression model was used to determine the casual relationship between environmental disclosure and financial performance. The overall model was found to be significant with $F=8.514$, P-value <0.05. The predictor variable explained 47.7% of changes in financial performance. Firm size and leverage have no effect on environmental disclosure. Findings reveal that environmental disclosure with P-value <0.05 has a positive significant effect in the mean financial performance. The study recommends that firms should engage in environmental disclosure because it leads to increased financial performance. The study would be useful to the government and also managers to ensure policies are put in place to ensure present generations meet their needs without compromising the ability of future generations to meet theirs. The study also forms basis for further research and adds knowledge to existing body.

Keywords: Corporate Environmental Disclosure, Financial Performance, NSE, Kenya

1. Introduction and Background

Corporate environmental disclosure entails reporting on the impact of organizations' activities on the natural environment. Such activities include, waste management, recycling, carbon management, emission, pollution, wetland and wildlife conservation among others. There has been an increasing need for information by various stakeholders and hence transparency in the company's reporting. This has led to increased popularity of corporate sustainability disclosure (Hossain, Islam, & Andrew, 2006). Climate change, clean technology, 'going green', sustainability are topics high on the agenda of boards and management of most corporations and the need to integrate their sustainability agenda in their operational strategies (KPMG 2012). Sustainability has become a major pillar of today's business activities. There is increased stakeholder awareness of sustainable business development as way of increasing financial performance in the long run. There has been numerous seminars and workshops for example the Brundtland report (1987), The Rio Earth Summit (1992 &2012), Kyoto protocol (2008) designed to integrate sustainability concept in the daily operations of organizations (KPMG 2012).

Corporate Sustainability disclosure is becoming more and more popular and the listed companies in Kenya are adopting it. This can be demonstrated by the society's level of awareness that has increased as a result of rising level of education, global warming, climate change, the rapidly evolving technology and thirst for information (Sidorova & Gurvitsh, 2012). This therefore makes stakeholders to demand more information from companies hence, forcing companies to actively participate in sustainable reporting. Sustainability disclosure by Kenyan companies is totally voluntary. Some listed companies in Kenya started integrating sustainability information in their annual reports from the year 2010.

The empirical studies reveal contrasting researchers view on the association between financial performance and Corporate Social responsibility. Controversies about the link have however been debated since the mid-1970s and still have not resulted in a consensus (Samy, Odemilin, & Bampton, 2010). Balabanis, Philips, and Lyall, (1998), and Neu, Warsame and Pedwell (1998) indicate that profitability is significant and positively associated with environmental disclosure. However, other studies report that no significant association between a company‘s profitability and its level of environmental disclosure (Stavropoulos, Efthymios, & Despina, 2011; Ponnu & Okoth, 2009) found no association between profitability and CSR. A significant proportion of previous research revealed that there is an adverse relationship between CSR and financial performance due to the additional costs associated with high investments in social responsibility. It is the belief that those profit opportunities forgone by investing in CSR will depress the profit of the organization (Samy, Odemilin, & Bampton, 2010)

Stavropoulos, *et al.*, (2011) argue that when profitability is high and the company achieves a high margin of profit, the managerial groups may be motivated to disclose more information in order to show off good reputation to the consumers, shareholders, investors and other stakeholders. On the other hand, if the profitability is low or the company suffers losses, they may disclose less information in order to cover the reasons for such losses or declining profits. It is therefore motivating to study the effect of sustainability disclosure on financial performance (Stavropoulos, *et al.*, 2011).

ROE was used by the researcher as the dependent variable representing profitability for a period of five years, of the selected 20 listed firms which is calculated as the ratio of the net income (income after tax) and equity capital. ROE measures the profitability of a company by revealing how much profit a company generates with the funds invested by shareholders. The researcher will adopt a time frame of five years as used by (Samy *et al.,* 2010) to smooth the effects of managerial manipulation and disparate accounting policies.

Conventional accounting systems are limiting since they fail to directly address sustainability concerns. Conventional accounting systems tend to prioritize profit maximization goals and ignore social and environmental concerns.

Statement of the Problem

It is probable that sustainability disclosure impacts on financial performance of a firm in the long run. The reporting is voluntary in Kenya but companies are engaging in it either to enhance reputation, increase their brand visibility, show their commitment for concern on community, environmental protection or employee welfare. Sustainability disclosure is becoming popular unlike in the past when companies included a general statement about community involvement in their annual reports. Studies conducted on effect of sustainability disclosure on financial performance yielded either a negative, neutral or positive association thus indicating inconsistent results. In addition, many studies have focused on developed markets as opposed to emerging markets. Although some firms have committed to investments in Corporate Sustainability Programs through the allocation of more resources, other companies have resisted. This could, at least in part, be because of the debate on whether a corporation should go beyond maximizing the profit of its owners as the only social responsibility of business, to being accountable for any of its actions to the environment and society. The question of what really motivates sustainability initiatives and reporting becomes principal. The integration of sustainability programs in the operational strategies of companies is a new reporting practice in Kenya but there has been increased adoption among the listed firms. However, the value of the practice is still unknown. Previous studies have focused on the effect of firms' characteristics and level of sustainability disclosure but this study employs a different approach of, considering themes of sustainability disclosure and their effect on financial performance. The extent to which corporate sustainability disclosure leads to improved financial performance among listed companies still remains contentious. This study therefore seeks to determine the effect of sustainability disclosure on financial performance of listed companies at the NSE.

2. Theoretical Background

2.1. Emergence of Environmental Disclosure

Sustainability disclosure started gaining momentum from the year 2000 and has steadily grown since then. The emergence of corporate environmental disclosure can be traced back in the 1960's when there was a rising degree of affluence, education, diversity and individualism and the society wanted that business entities be accountable for their actions (Uwaloma, 2011) More so, there was a rise in environmental hazards such as Bhopal disaster and oil spills. Corporate social disclosures were an important way for companies to communicate to shareholders that they were responding to this increased concern about their social and environmental impact. 'Corporations dominate all aspects of our lives. Their power affects the quality of life, food, water, gas, electricity, seas, rivers, environment, schools, hospitals, medicine, news, entertainment, transport, communications and even the lives of unborn babies.… Unaccountable corporate power is damaging the fabric of society, the structure of families, the quality of life and even the very future of the planet*'(*Mitchell & Sikka, 2005).

2.2. Corporate Environmental Disclosure

According to Deloitte Touche Tohmatsu International (1993) there are two types of disclosures namely mandatory disclosures and voluntary disclosures. However Uwaloma (2011) suggested another type of disclosure. The Involuntary disclosure.

Mandatory Disclosure is whereby companies disclose sustainability information as per requirement of the legal rules and regulations of the country (Uwaloma, 2011). However, environmental disclosure is not mandatory in Kenya. Voluntary Disclosure is whereby Companies disclose environmental information on voluntary terms. They are not obligated by law to disclose as is a practice in Kenya. They do this from pressures from financial institutions, investors, and the community at large. Culture of the organization may also influence such disclosures as may be the preference of dominant management and CEOs. Organizations do this as a way remaining legitimate in the eyes of the society as there may be benefits to be reaped.in the long run (Eltaib, 2012).Involuntary Disclosure is a type of disclosure that goes against the will of the company. Permission has not been granted by the company against such disclosure a good example is the lead expose in Mombasa. This disclosure is done by the media, civil society groups, and green groups' activists as a result of the detrimental actions of the company toward the society or environment (Uwaloma, 2011). It is mainly exposed after the adverse action has occurred.

3. Materials and Experiments

3.1. Environmental Disclosure

Many companies in Kenya attempt to disclose the measures they take in environmental protection for instance, Air emission information. Water discharge information, Solid waste disposal information. Environmental policies; Conservation of natural resources, Recycling plant of waste products, Installation of effluent treatment plant, Anti-litter and conservation campaign; Land reclamation and forestation programs.

H_{01}*There is no significant difference in the mean financial performance of NSE listed firms with high or low environmental disclosure ratings.*

3.1.1. Environmental Costs

Environmental costs are costs that the organization incurs to prevent, monitor and report environmental impacts (KASNEB, 2014). US EPA (1995) defines five tiers of environmental costs namely; convectional, hidden, contingent, image and relationship and societal. These costs are broadly divided into two: private costs and societal costs. Private costs are borne by the firm whereas societal costs are borne by the society.

3.1.2. Private Costs

Convectional costs are costs of capital equipment, raw materials and supplies. The costs of using raw materials, utilities, capital goods, and supplies are usually addressed in cost accounting and capital budgeting, but are not usually considered environmental costs. However, decreased use and less waste of raw materials, utilities, capital goods, and supplies are environmentally preferable, reducing both environmental degradation and consumption of natural resources.

Hidden Costs refer to the results of assigning environmental costs to overlooking future and contingent costs. There are several types of environmental costs that may be potentially hidden from managers: First are the upfront environmental costs, which are incurred prior to the operation of a process, system, or facility. These can include costs related to siting, design of environmentally preferable products or processes, qualifications of suppliers, evaluation of alternative pollution control equipment, and so on. Whether classified as overhead or R&D, these costs can easily be forgotten when managers and analysts focus on operating costs of processes, systems, and facilities. Secondly, we have the regulatory costs from activities such as monitoring and reporting of environmental activities and emissions, cost for searching for environmentally responsible suppliers and ongoing cost of cleaning contaminated land (KASNEB, 2014).

Contingent Costs are environmental costs that are not certain to occur in the future but depend on uncertain future events. They are cost that may or may not be incurred at some point in the future. For example, the cost that is involved in remediating future spills (KASNEB, 2014).

Image and Relationship Costs are less tangible costs because they are incurred to affect subjective perceptions of management, customers, employees, communities, and regulators. This category can include the costs of annual environmental reports community involvement activities and costs expended voluntarily for environmental activities (KASNEB, 2014).

3.1.3. Societal Cost

These are costs that organization impose on others for which they may not be held legally responsible and which cannot be compensated for in the legal system (KASNEB, 2014). For instance, damage caused to a river because of polluted waste water discharge, or to ecosystems from solid waste disposal or to asthmatics because of air pollutant emissions are all examples of external costs for which an industry often does not compensate (Uwaloma, 2011).

3.1.4. Analysis of Environmental Costs

Environmental costs can be analyzed as relating to prevention, appraisal, internal failure and external failure activities (KASNEB 2014). Prevention activities are activities that solve environmental problems before they occur or convert problems into opportunities. Cost of prevention activities are investment costs as they minimize future cost outlays and provide long-lasting benefits. Appraisal activities are activities that monitor the levels of environmental impact, for instance, auditing supplier performance, inspecting processes and products and measuring damage. Internal failure activities are activities that correct mishaps/ breakdowns noticed in appraisal activities. These costs include, cost of cleaning the plant after spillage, occupational health and safety claims of employees. External failure activities are activities which occur when resolution and remediation efforts fall outside the organization management. They include costs of cleaning polluted sites, fines and penalties for environmental damage and reduction of profits as a result of reputational injury (KASNEB, 2014). Environmental disclosure may result in long term sustainability of the firm as there is decreased wastage and improved efficiency hence resulting into low costs.

3.2. Moderating Variables

The company size and the level of Debt to Equity ratio moderates the relationship between corporate sustainability disclosure and financial performance.

3.2.1. Size

Sales/turnover, market capitalization, number of employees, total assets have been used as proxies for size. Previous research finding note that there is a significant relationship between size and the level of environmental disclosure (Amiruddin, 2007). (Fitriasari, 2011, Aburaya, 2012) have used size as control variable. There are several reasons in the literature that attempt to support this positive association. According to Stavropoulos *et al.*,(2011), the cost of accumulating and generating certain information is greater for small firms than large firms. Small companies may not be able to afford such costs from their resource base Larger companies might have sufficient resources to afford the cost of producing information for the users of annual report. Secondly, the agency cost is higher for large firms because shareholders are widespread and in that way, disclosing more information reduce the potential agency cost. Large companies have market based incentives to disclose more information voluntarily to protect the firm values as non-disclosure may be misinterpreted (Ponnu *et al.*, 2009). The level of significance of the moderation was tested.

H_{02} There is a positive relationship between size and environmental disclosure

3.2.2. Leverage

In accounting, debt/equity hypothesis forecasts that the higher the firm's debt/equity ratio, the more likely managers use an accounting method that increases income. This means, managers will choose accounting policies that shift reported profits from future periods to current period (Watts *et al.*, 1990) It is argued that when a firm is making a large use of debt, a monitoring problem arises between stockholders and creditors (Setyorini *et al.*, 2012). Consequently, the involved firms may solve this drawback by increasing the level of voluntary disclosure (Setyorini *et al*, 2012). Finance theory suggests that agency cost of debt are higher for firms with large proportion of debt capital structure and demand for information increases as the firm debt increases. According to Sengupta (1998), he provides evidence that higher quality disclosure may be associated with higher leverage. The level of significance of the moderation was tested.

H_{03} There is a positive relationship between leverage and environmental disclosure

3.3. Financial Performance

Financial performance is the general measure of how well a firm uses its resources to generate profits. It was measured using accounting measures of profitability. A company should earn profits in order to survive and grow over a long period of time (Pandey, 2005). Profits are essential but it would be wrong to assume that every action initiated by a corporation should aim at profit maximization to the detriment of environment, employees and society (Pandey, 2005). Return on Equity measure was used to evaluate the financial performance.

Return on Equity

The return on Equity measures the return earned on the common stockholders' investment in the firm (Gitman, 2007). The higher the return the better of are the owners. ROE is the most important ratio in financial analysis. According to Pandey (2005), the earning of a satisfactory return is the most desirable objective of a business and the ratio of the net profit to owner's equity reflects the extent to which this objective has been accomplished. This ratio is of great importance to present as well as future shareholders and to management whose core duty is maximizing owners' wealth. Without profits, a firm could not attract outside capital and more so even investors (Gitman, 2007). ROE is calculated as follows

3.4. Methodology

The study employed casual research design. The design is applicable because it reveals the cause and effect relationship between variables (Cooper *et al.,* 2011). The design was therefore employed to determine the effect of sustainability disclosure on financial performance of listed companies in Kenya. Purposive sampling was used to select only those companies that have been listed for the entire period of study

(2009-2013) and whose annual reports were available at the Securities Exchange. Firms that did not meet this criteria were excluded. A checklist instrument outlining the criteria for identifying disclosures was designed in order to codify the sustainability information contained in the annual reports. An extensive review of prior studies was undertaken to develop a list of items that may be voluntarily disclosed by a firm. A disclosure index was developed for each of the independent variables to help measure the quantity and quality of sustainability disclosure. Three procedures were undertaken in order to develop the disclosure indices. First, a checklist of sustainability disclosure items was constructed as a measuring instrument by selecting the relevant informational items to be included in the checklist. Second, a coding process will carried out to assign each sustainability informational item in the annual report to one of the checklist items using predetermined decision rules. Third, quantity scores were calculated for each disclosure category from which disclosure indices were computed to permit further analysis. Through these procedures, both the validity and reliability was tested.

4. Results

H_{01}There is no significant difference in the mean financial performance of NSE listed firms with high or low environmental disclosure ratings

Table 1. *Correlation between Environmental Disclosure and Financial Performance.*

	ROE	ENVIRONMENT
ROE Person correlation	1	0.711
Sig. (One tailed)		.000
N	32	32
Environment	0.711	1
Sig. (one tailed)	.000	
N	32	32

Correlation significant at the 0.05 (1-tailed)

The correlation coefficient was found to be 0.713 with p value 0.000<0.05 which was found to be statistically significant at 5% significant level. This therefore suggests a strong positive relationship between ROE and Environmental disclosure. This indicates that increase in environmental disclosure will result to improved financial performance. There will be reduction in waste and improved efficiency and effectiveness in firms operations.

Therefore, the null hypothesis was rejected and this implied that there is a statistically significant relationship between environmental disclosure and financial performance. There is a significant difference in the mean financial performance of NSE listed firms with high environmental disclosure ratings compared to those of low environmental disclosure ratings. This may be attributed to companies able to find out environmental costs that were often hidden and presented as overheads to the management in the traditional accounting system. This invariably allows management to identify opportunities for cost savings. This in the long run, helps to visualize an image of the company as having a moral obligation to account for its environmental activities. This finding is consistent with Uwaloma (2011) who noted a significant relationship exist between firms operating performance and the extent of corporate environmental disclosure for the selected firms in Nigeria.

H_{02} There is a positive relationship between size and environmental disclosure

The correlation coefficient was .062 with p value of .368 which was found not to be statistically significant at 5% significant level. This therefore suggests that there is a weak though positive relationship between Total Assets which is a proxie for size and disclosure. These results are in conformance with the findings of Ponnu et al (2009) which revealed that in Kenya, a firm's financial status (for example liquidity, revenue and profitability) has no significant influence on its CSR disclosure. Additionally, also with the finding of an earlier study by Barako, Hancock and Izan (2006). In their study they found that liquidity, profitability and type of external audit firm do not have a significant influence on the level of voluntary disclosure by companies in Kenya. I concur with Ponnu (2009), who noted that Kenyan firms are relatively smaller in size as compared to international standards of big firms.

H_{03} There is a positive relationship between leverage and environmental disclosure

The correlation coefficient was found to be 0.09 with p value of 0.480 which was found not to be statistically significant at 5% significance level. This therefore suggests that there is a weak though positive relationship between Leverage and Disclosure. The study is in conformance to (Amiruddin, 2007) who found there is no significant relationship between leverage and disclosure.

5. Discussion

The study found out that environmental disclosure has a significant effect on financial performance. This may be attributed to the fact that companies are able to find out environmental costs that were often hidden and presented as overheads to the management in the traditional accounting system. This invariably allows management to identify opportunities for cost savings, hence increase in efficiency and effectiveness and reduction of waste. More so, facilitating the implementation of the environmental strategy; greater awareness of broad environmental issues throughout the organization; ability to clearly convey the corporate message internally and externally; improved all-round credibility from greater transparency; ability to communicate efforts and standards among others.

6. Conclusion and Recommendation

Based on the findings of the study, the following recommendations were made which may be useful to the stakeholders, such as accountants, auditors, company management, investors, financial analyst, lobby groups, community members and the regulatory bodies responsible for setting standards.

i. Consequently, this research calls for a more proactive effort from policy makers and other standard setting organizations on the need to introduce a standard framework for the mandatory disclosure of corporate environmental information. This effort will yield to a great extent a higher level of environmental disclosure; in addition to bringing about standardization in the environmental disclosure design. This will eventually enhance comparability and make it easier for investors to determine which companies are more socially responsible. The government should enact a green tax policy that is targeted towards inspiring firms to adopt green technologies and cleaner production techniques so as to create a pollution -free environment.
ii. Corporations should incorporate EMS (Environment Management Systems) for environment performance evaluation and measurement. This will enhance environmental disclosure and hence improved financial performance. From the findings, the mean disclosure of environment ranked the least at 9% implying that most companies don't disclose information pertaining to the environment. Regulations should be put in place to ensure firms in Kenya comply with ISO 14031 standards. This will enhance consistency in presentation and also comparability among the firms. This is based on the authors finding of diversity in presentation among firms.

7. Suggestions for Further Research

The author makes the following suggestions for further research in view of the limitations of this research;

i. Research should be conducted on non-listed firms which are dominant in Kenya as opposed to listed firms in order to have a large sample size and hence better predictability of the results.
ii. Future researchers should consider other forms of corporate communication apart from annual reports for instance, corporate websites, and stand-alone reports among others. Annual reports provided limited information.

References

[1] Cooper, D., & Schindler, P. S. (2011). *Business Research methods.* New Dehli: Mc Graw Hill.

[2] Eltaib, E. E. (2012). *Environmental accounting Disclosures of Australian Oil and gas companies.* Unpublished masters thesis: University of Wollongong.

[3] Gitman, j. (2007). *Principles of Managerial Finance.* New Dehli, India: Pearson Education.

[4] Hossain, M., Islam, K., & Andrew, J. (2006). Corporate social and environmental disclosure in developing coutries: evidence from Bangladesh. *Asian Pacific Conference.* University of Wollongong.

[5] KPMG. (2012). *Sustainability reporting-What you should know.* KPMG.

[6] Mitchell, A., & Sikka, P. (2005). *Taming The Corporation.* Essex,UK: Association for Accountancy and Business Affairs.ISBN 1-902384-09-1.

[7] Neu, D., Warsame, H., & Pedwell, K. (1998). Managing Public ImpressionsEnvironmental Disclosures In Annual Reports",. *Accounting, Organizations and Society*, 23(3): 265-282.

[8] Pandey, I. (2005). *Financial Management.* New Delhi: Vikas Publishing House.

[9] Ponnu, C. H., & Okoth, M. O. (October, 2009). Corporate Social Responsibility disclosure in Kenya: The Nairobi Securites Exchange. *African Journal of Business Management,* Vol.3 (10), pp. 601-608.

[10] Samy, G., Odemilin, M., & Bampton, R. (2010). Corporate social responsibility: a strategy for sustainable business success. An analysis of 20 selected British companies", Corporate Governance: *The international journal of business in society*, Vol. 10 Iss 2 pp. 203-217.

[11] Sidorova, I., & Gurvitsh, N. (2012). Survey of sustainability reporting integrated into annual reports of Estonian companies for the years 2007-2010: based on companies listed on Tallinn Stock Exchange as of October 2011. *2nd Annual International Conference on Accounting and Finance (AF 2012)* (pp. 26-34). Tallinn, Estonia: Tallinn University of Technology.

[12] Stavropoulos, A., Efthymios, G., & Despina, G. (2011). The Relation Between Firm Size and Environmental Disclosure. *International Conference On Applied Economics – ICOAE.* Thessaloniki, Greece: University of Macedonia, Egnatias 156.

[13] United States Environmental Protection Agency US EPA. (1995). *An Introduction to Environmental Accounting as a Business Management Tool: Key Concepts and Terms.* EPA 742-R-95 001 June.

[14] Uwaloma, U. (2011). *Corporate environmental reporting practices. A comparative study of Nigeria and South African firms.* Covenant University, Ota, Ogun state: Unpublished phd thesis.