FACTORS AFFECTING THE ADOPTION OF ENVIRONMENTAL ACCOUNTING PRACTICE BY FIRMS LISTED AT NAIROBI SECURITIES EXCHANGE

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CITATION: Ndung'u, P. K., & Muturi, W. (2018). Factors Affecting The Adoption Of Environmental Accounting Practice By Firms Listed At Nairobi Securities Exchange. *International Journal of Economics and Finance*. Vol. 7 (5) pp 1 – 11.

ABSTRACT

The study sought to establish the factors affecting the adoption of environmental accounting practice in corporate organization listed at Nairobi Securities Exchange. This study adopted descriptive research design and the target population of the study was 65 listed firms at Nairobi Securities Exchange from which a sample of 195 respondents was selected using purposive sampling where three employees were selected from each firm. The employees were managerial staff in top management level, middle managers and supervisory employees. The study findings indicated that most Kenyan firms were embracing environmental accounting and reporting though they did not follow any guideline when reporting. Results further indicated that management commitment, non-compulsory disclosure, sustainability focus and employee competency influenced adoption of environmental accounting practices. The study concludes that there has been improvement in adoption of environment accounting reporting practices among the listed companies. This may have been attributed to by the fact that the stakeholders are more concerned with the environment issues and are going for the companies that are going green. The study recommends that NSE could consider the standardization of environmental disclosure and to develop requirements for it. This could improve the significance given to this subject by managers and the members of the public who are investors of these companies. This would be one way to benchmark outstanding stock markets in more developed countries and would have a positive contribution to the economic growth of Kenya.

Key Words: *Enviromnetal Accounting Practice, Management Commitment, Sustainability Focus, Employee Competence, Non-compulsory Disclosure*

1.1 Introduction

Environmental issues have emerged in recent decades as a major aspect of the discussion in the problems of economic growth and development. Such issues have taken, inter alia, the form of global warming; atmospheric, soil and water pollution caused by industrial activities; and the quick decline of forest areas, noise pollution and chemical wastes being dumped into oceans and rivers (Dutta and Bose, 2008). All these problems are generally associated with industrialization and economic growth; but is it a necessary condition of economic growth that the environment has to suffer? Jasch (2003) opined that this is not so, where the prospects of sustainable development are in sight. Consequently, the pursuit of sustainable development as an object of policy is now much in vogue; and governments of different countries have long been engaged in setting up regulatory, voluntary, incentive-based, informational and cooperative instruments of policy geared towards promoting sustainable development (Li, 2001). This policy trend has heightened concern about environmental accounting theory and practice worldwide.

The emergence of corporate environmental reporting has been an important development, both for better environmental management and overall corporate governance (Banerjee, 2002). Global awareness of stakeholders on corporate environmental performance has already made traditional reporting redundant. Corporate houses run into the risk of loss of faith of their stakeholders, if in future, environmental performance information is not included in their main stream reporting (Swift, 2001). Gradually, environment is becoming a much more urgent economic, social and political problem. Accountants, as the basic custodian and light bearers of economic development can no longer shut their eyes to the effect of environmental issues on business management, accounting, auditing and disclosure system.Protection of environment and the potential involvement of accountant is becoming a common subject of discussion among the accountant all over the world (Pramanik, Shil, & Das, 2007). Accountants are expected to take a proactive role in the environmental protection process with the advent of liberalization, remove of trade barriers makes it logical that the costs of environmental degradation due to industrial activities should be internalized in corporate account to the extent possible, that is why environmental accounting and reporting therefore is of paramount importance today (Pellegrino & Lodhia, 2012).

1.2 Problem Statement

The movement towards environmental reporting has therefore become particularly apparent within both the developed and developing nations due to demands from stakeholders and other interested parties for information regarding corporate social environmental responsibility (Gray, Bebbington& Walters, 1993; Elkington, 1997 and Guthrie, Suresh & Leanne, 2006). Williams (1999) in his study observed that investors and other stakeholders are demanding more for the disclosure of company's environmental information. This is because of their concerns about the magnitude of costs and liabilities associated with environmental issues and also, its impacts on various investors' decisions and the activities of other stakeholder groups. A problem therefore arises where insufficient environmental information is disclosed to enable users make meaningful investment decisions. In other words, where the information that is provided is less than users' requirements, an expectation gap therefore arises.

Little more than a decade ago, any scholar wishing to review the literature concerned with accounting and the natural environment would have been faced with a relatively straightforward task. Beyond the few significant and seminal papers (Dierkes and Preston, 1977; Ullman, 1976) environmental issues tended only to surface as one of the themes within the social accounting and reporting literature (Gray et al., 1996; Mathews, 1997). The change in the last ten years has been little short of phenomenal. Despite the high priority on environmental accounting given by other countries and researchers, factors affecting adoption of environmental accounting have not been researched. In Kenya, environment accounting practice has been on slow pace thus little or no written report has been done on the same. A few studies have been done on social and corporate accounting but little attention has been directed to environmental accounting in Kenyan context. For instance: Bassey, Effiok and Eton (2013) conducted a study on the impact of environmental accounting and reporting on organizational performance and found out that environmental cost has satisfied relationship with firm‘s profitability, Mohamed and Faouzi (2014) examined the effect of corporate environmental disclosure on the cost of equity capital in Tunisia and found out that investment in practices corporate environmental disclosure contributes substantially to reducing firms' cost of equity. Jerotich (2013) carried out a research to establish the relationship between corporate social responsibility and financial performance of firms in the Manufacturing, Construction and Allied Sector of the Nairobi Securities. It can thus be concluded from the findings of the above researches that there is a growing interest in researching about various issues in social and environmental accounting and reporting. It is based on this that this study aimed to find out the factors affecting the adoption of environmental accounting practice in corporate organization

1.3 Research Objectives

i. To establish effect of management commitment on adoption of environmental accounting practice in firms listed at Nairobi Securities Exchange

ii. To determine the effect of non-compulsory disclosure on adoption of environmental accounting practice in firms listed at Nairobi Securities Exchange

iii. To evaluate the effect of sustainability focus on adoption of environmental accounting practice in firms listed at Nairobi Securities Exchange

iv. To assess the effect of employee competency on adoption of environmental accounting practice in firms listed at Nairobi Securities Exchange

2.0 Research Methodology

This study adopted a descriptive design. The choice of the descriptive survey research design was based on the fact that in the study, the research was interested on the state of affairs already existing in the field and no variable would be manipulated. The target population for this study comprises of all 65 companies listed in Nairobi Securities Exchange (NSE). For the purpose of the study the sampling frame consisted of 65 listed firms and the sample was purposively sampled and as a result 195 employees from the listed companies were sampled. According to Mugenda and Mugenda (2003) purposive sampling is a sampling technique that allows a researcher to use cases that have required information with respect to the objectives of the study.

The study utilised primary data that was collected through administration of structured questionnaires to the 195 employees. The collected data was then analsyed using a multiple linear regression model that linked the independent and dependent variables as indicated in the model specification illustrated below;

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$$

Where;

Y = Adoption of Environmental Accounting practices

X_1 = Management Commitment

X_2 = Non-compulsory Disclosure

X_3 = Sustainability Focus

X_4 = Employee Competency

β_0 = the constant term

β_ii= 1….4 measure of the sensitivity of the dependent variable (Y) to unit change in the predictor variables X_1, X_2, X_3 and X_4. ε = is the error term which captures the unexplained variations in the model.

3.0 Results and Discussions

3.1 Response Rate

Representativeness refers to how well the sample drawn for the questionnaire research compares with the population of interest (Saunders, Lewis & Thornhill, 2007). To establish the representativeness Table 1 below shows the response rate attained after questionnaires had been administered. The study achieved a 78% response rate which was considered adequate when benchmarked with the recommendations of Saunders, Lewis and Thornhill (2007) who suggested a 30-40% response rate, Sekaran (2003) who also suggested that the response rate should be in excess of 30%, while the recommendation of Mugenda and Mugenda (2003) suggested that the response rate should be above 50%. Given that the recommendations by the different scholars cited above, was exceeded the data collected was then considered adequate for analysis.

Table 1: Response Rate

Response rate	Frequency	Percent

Returned	153	78%
Unreturned	42	22%
Total	195	100%

3.2 Regression Analysis

In order to establish the statistical significance of the independent variables on the dependent variable (adoption of environment accounting practices) regression analysis was employed. Table 2 shows that the coefficient of determination also called the R square is 0.683. This means that the combined effect of the predictor variables (management commitment, non-compulsory disclosure, sustainability focus and employee competency) explains 68.3% of the variations in adoption of environment accounting practices. From the model summary table below, adjusted R^2 was 0.674 which indicates that the combined effect of predictor variables (management commitment, non-compulsory disclosure, sustainability focus and employee competency) explains 67.4% of variations in adoption of environment accounting practices.

The correlation coefficient of 82.6% indicates that the combined effect of the predictor variables has a strong and positive correlation with adoption of environment accounting practices. This also meant that a change in the drivers (management commitment, non-compulsory disclosure, sustainability focus and employee competency) has a strong and positive effect on adoption of environment accounting practices.

Table 2: Regression Model Fitness

Indicator	Coefficient
R	0.826
R Square	0.683
Adjusted R Square	0.674
Std. Error of the Estimate	0.34552

Prior to estimation of the regression model the goodness of fit was performed and the results are presented in the Table 3 below where the results indicated that the overall model was significant, that is, management commitment, non-compulsory disclosure, sustainability focus and employee competency are good joint explanatory variables for adoption of environment accounting practices (F = 79.654, p-value<0.05). The findings imply that all the predictor variables were statistically significant in explaining changes in adoption of environment accounting practices.

Table 3: Goodness of Fit Model

Indicator	Sum of Squares	df	Mean Square	F	Sig.
Regression	38.037	4	9.509	79.654	0.000
Residual	17.669	148	0.119		
Total	55.705	152			

Table 4 displays the regression coefficients of the independent variables. The results reveal that management commitment is statistically significant in explaining adoption of environment accounting practices (beta=0.162, p value 0.025). The findings imply that an increase in management commitment by one unit leads to improved adoption of environment accounting practices effectiveness by 16.2%. The study findings are in agreement with those of Sarah, Carol and Prem (2013) who conducted a study on the mediating effects of the adoption of an environmental information system on top management's commitment and environmental performance and found out that top management commitment to environmental sustainability was associated with the adoption of a sophisticated internal environmental information system

Regression results indicate that non-compulsory disclosure and adoption of environment accounting practices had a positive and significant relationship (beta=0.197, p value 0.036). The findings imply that an increase in non-compulsory disclosure practices by one unit leads to improved adoption of environment accounting practices effectiveness by 19.7%. The study findings are consistent with those of Cho et al. (2012) who found out that the amounts disclosed are mostly immaterial leading the authors to suggest that disclosure of capital expenditures information is not motivated by the need for regulatory compliance but rather a discretionary decision made by firms' management. Cho et al.,further studied the association between the information disclosed and future environmental performance to understand the firms' motivation to disclose environmental capital information. The study suggested that a positive association between disclosure and future performance implies that the disclosure is used to signal the firm's strategy to deal with pollution issues and improve its environmental performance.

Results further indicate that sustainability focus and adoption of environment accounting practices was positive and significant (beta=0.219, p value 0.012). The findings imply that an increase in sustainability focus by one unit leads to improved adoption of environment accounting practices by 21.9%. Results are in line with those of Okeyo (2004) who carried out a study on the rationale and factors that determined the levels of corporate social responsibility (CSR) among firms in Kenya. The research found out that firms in Kenya exhibited high levels of involvement in CSR. This high level of involvement was mainly driven by the use of CSR as a long term strategy. Similarly, Oduol (2009) surveyed the social accounting and reporting practices adopted by the mobile phone service providers in Kenya. and concluded that all the companies in the mobile phone services industry participated in social responsibility activities and had put in place to systematically channel their contributions to the communities in which they operated. He further observed that what was reported was what would be regarded as good news and that social reporting practices were generally not accounted for separately but were seen just as an extension of the conventional accounting system.

Finally, the results indicate that employee competency has a significant relationship with adoption of environment accounting practices (beta=0.176, p value 0.005). The findings imply that employee competency was statistically significant in explaining adoption of environment accounting practices. The results are in tandem with those of Mihret and Yismaw (2007) who concluded in their study that internal audit office constantly face the problem of low technical staff proficiency and high staff turnover, which would limit it capacity to provide effective service to management. Unegbu and Kida (2011) found in their study that, internal audit can effectively carry out their duty in the public sector if there are enough internal audit personnel with required competencies.

Table 4: Regression Coefficients

Variable	Beta	Std. Error	t	Sig.
Constant	1.148	0.172	6.683	0.000
Management Commitment	0.162	0.071	2.267	0.025
Non-Compulsory Disclosure	0.197	0.093	2.117	0.036
Sustainability Focus	0.219	0.086	2.547	0.012
Employee Competency	0.176	0.062	2.844	0.005

4.0 Conclusions

The study concludes that there has been improvement in adoption of environment accounting reporting practices among the listed companies. This may have been attributed to by the fact that the stakeholders are more concerned with the environment issues and are going for the companies that are going green. Global awareness of stakeholders on corporate environmental performance therefore has changed the way the firms were behaving earlier on since they have to be environment friendly. The management support is the most influencing factor among the factors that contribute to the variation of adoption of environment accounting and reporting practices and this obviously crucial factor to the effective implementation. For any change to take place in an organization, the management should be in the forefront giving directions and being the team leaders to make the change management a success. The study concludes that non-compulsory disclosure was statistically significant in explaining adoption of environment accounting and reporting practices. This implies that firms that disclose more information voluntarily enjoy the benefits of cheaper funds from capital markets which consequently translate to higher investment returns, a position confirmed by the findings from this research. The study concludes that sustainability focus was a key driver in adoption of environmental accounting practices, this is because firms that are environmentally responsible enhanced their brand image and reputation such that the consumers were drawn to those organizations. The study also concluded that employee competency was statistically significant in explaining adoption of environmental accounting practices in the listed firms at NSE.

5.0 Recommendations

In respect to the conclusions made in the study, it is evident that there is a positive relationship between management commitment and environmental accounting practices. Top managers must therefore enhance adoption and learn to practice environmental accounting and reporting practices; this may increase the reputation of their companies and therefore increase their financial performance. More so, adequate steps/efforts should be put in place to encourage companies to imbibe the culture of corporate environmental audit. This process (corporate environmental audits) systematically assesses how well a company's environmental management practices conforms to green production goals and help diffuse green production practices throughout the organisation.

This research recommends that since the findings from the study indicate that there is significant relationship between non-compulsory disclosure and adoption of environment accounting practices, managers in organizations should disclose information voluntarily not only for the purposes of obtaining cheaper capital but also because voluntary disclosure of information increases transparency and accountability in annual reporting.

The NSE could consider the standardization of environmental disclosure and to develop requirements for it. This could improve the significance given to this subject by managers and the members of the public who are investors of these companies. This would be one way to benchmark outstanding stock markets in more developed countries and would have a positive contribution to the economic growth of Kenya. The firms should also impact their employees with sufficient knowledge for using the new system which would lead to ease of adoption an implementation and in furtherance enhance better information flow for effective accounting decision making.

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