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ABSTRACT

The purpose of the study was to evaluate the effects of environmental audit practices on profitability among tea processing factories currently operating in Kisii County. The study used descriptive research design. This study was carried throughout the six tea factories in Kisii County. The target population for the study was all the 145 employees in finance department who consisted of auditors, accounts staffs procurement officers in 6 tea processing factories in Kisii County. Survey approach was preferable because the population was small to allow the use of a sample. A five point likert scale self-administered structured questionnaire was used to collect primary data and also secondary data of the factories on their financial reports and statements was used. Validity was assured by supervisors and research experts while reliability was assured by consistency in administering the research instrument. The data collected was analyzed using descriptive statistical measures of central tendency such as mean and percentages and measures of relationship using multiple regression technique. The information arising from analyzed data was presented in tables and figures. The study found that effective environmental audit systems resulted to improved profitability. The study concluded that there was a positive and significant relationship existed between environmental audit and profitability. The study recommended for better audit policies to be put in place to halter those failed to comply with environmental audit practices.

Key Words: *environmental audit, Profitability*

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INTRODUCTION

Environmental audit states that: it is a duty of every audit to account, preserve and improves the natural environment. A number of regulatory initiatives, in a trial for environmental protection with economic development have been brought by the government. The company act requires that environmental discloser to be made through the director's report but there is no requirement for quantification of the said information (Yakhou & Dorweiler 2014),

Environmental audit is mainly at firm level. This audit attempts to assess an entity's responsiveness to environmental responsibilities. This does require application of the auditing concepts to control environmental impact brought by firms' activities. It involves a review to ensure organizational consideration in wider responsibility towards those that are directly or indirectly affected by its decisions (Agbiogwu, 2014).

Environment audit affects quality of financial reporting. Therefore the there is need to analyze environment audit in factories. The environment audit on the profitability of factories has not been clearly established. Thus, the study aims to determine how environment audit affects sales volume, sales revenue, and market share and share price (Okoye & Ngwakwe, 2014).

Environmental laws have been evaluated compliance cost using internal audit and profitability tools in companies. The compliance cost has influenced profitability tools which affected compliance audit. The companies that apply compliance cost using internal audit tend to have low profitability level, being less profitable. The compliance cost using internal audit is approached by turnover, assets investments and profitability of the companies (Osisioma & Enahoro, 2016).

Profitability is an important element of organization's growth and sustainability. Tea processing factories make use of profitability to pay bonuses, dividends

payoff to shareholders and in making capital investment. According to Pearce and Warford (2013) profitability is the capability to generate incomes from all its business lines (ROE and ROA) of which management is charged with the responsibility to maximize. In attempt to attain the targeted profits, the management must ensure that costs have been minimized and revenue is maximized.

Statement of the Problem

Environmental audit when put in place result to an increase in profitability of tea processing factories. Despite having Environmental audit put in place with the intervention of the government policy, profitability of tea processing factories has been declining. This was evidenced by financial reports of 2013/2014 up to 2016/2017 indicated that profits have been declining in some factories. Ogembo tea factory's financial reports for 2014-2017 indicated profit margins as 5.3%, 3.5% 2.9% and 2.6% respectfully. This is as a result of high operational costs, low prices or non-disclosure of some costs and revenues as required by the international accounting standards (Ogembo tea factory's financial reports for 2014-2017).

Sada, P. O. (2018) studied environmental audit practice and Firm Profitability, an Empirical Analysis of Selected Firms Listed in Bombay Stock Exchange, India. The objective of this study was to establish whether there is any significant relationship between environmental audit and profitability of selected firms listed in India. The data for the study were collected from annual reports and accounts of 14 randomly selected listed companies in Bombay Stock Exchange in India. The data were analyzed using multiple regression models. The study did not analyze the budgetary allocation, compliance to environmental law, environmental disclosure, nor did it focus on environmental audit practices of environmental accounting and their effects on profitability as the current study will do. Magara,

Aming'a and Momanyi (2015) studied the impact of environmental accounting practices on financial performance of corporate organizations in Kisii County. The study emphasized on environmental information, environmental evaluation, compliance of environmental laws and tracking of environmental cost savings. The study used a sample size of 49 employees. The study failed to focus on budgetary allocation, auditing and disclosure practices on profitability. This study aims to evaluate the effects of environmental audit practices on profitability of tea factories in Kisii County.

Objective of the Study

The general objective of the study was to evaluate the effects of environmental audit practices on profitability among tea processing factories currently operating in Kisii County.

LITERATURE REVIEW

Theoretical Literature Review

The study adopted Stakeholder theory which begins with the assumption that values are necessarily and explicitly a part of doing business. Stakeholder theory was proposed by Milton Friedman in 1970 who argued in favor of maximizing financial return for shareholders. Adams, Hill and Roberts, (2018) adopted the theory to explain capitalistic perspective clearly considers the firm owned by and operated for the benefit of the shareholders. He says 'there is one and only one social responsibility of business - to use its resources and engage in activities designed to increase its profits so long as it stays within the rules of the game, which is to say, engages in open and free competition without deception or fraud (Shield, Beloff and Heller, 2016).

This theory holds that management should run the business to maximize cash flow to shareholders in maximizing revenue, minimizing cost, and reducing risk. One way to reduce cost is by externalizing it through environment audit. A way to increase revenue is to sell products that have a greater cost to

society than is covered in the costs of the product, such as cigarettes or sport utility vehicles (Deegan, 2012) in financial accounting theory. Australia, McGraw Hill Australia Pty Ltd. It asks managers to articulate the common sense of the value they create, and what gets its main stakeholders together. It also pushes managers to be vibrant about how they like to do business, precisely what types of associations they want and need to make with their stakeholders to deliver on their purpose (Wei & Roger, 2018). The theory is relevant to this study because, besides trying to maximize the profits for the owners, they disclose to other stakeholders on the effect of their activities to profitability.

Empirical literature

Werhane and Freeman (2015) examined the effects of environmental audit and economic sustainability as facilitation on company profit measures in Nigeria. Two Samples are drawn from dominant cement companies out of three functional companies quoted on the Nigerian stock exchange. Data content were reviewed through qualitative and quantitative reports of the companies from 2009-2016 and values were assigned from 1-5 based on the level of disclosure. The analysis technique used is the multiple regressions. Research results indicate that companies are negligent of adhering to environmental and regulatory laws, this contributed to decrease in employee life expectancy and profit. The study therefore recommended among others that Government through it relevant agencies, should incorporate environmental audit report as a statutory requirement for Cement Company's enlistment in the Nigeria stock exchange.

Yakhou and Dorweiler (2014) assessed the effect of environment audit on the profitability of pharmaceutical companies in Iran. The research aimed to investigate the effectiveness of R& D costs on the profitability of pharmaceutical companies. A sample size of 20 large and multinational worldwide pharmaceutical companies was selected. Single-

variable Regression model was used to analyze the results. The study found that environmental audit, disclosure and budgetary control on profitability. Therefore, the study recommended that environmental accounting practices to be examined in factories profitability.

Hammeed, Hasbullah and Norani (2014) investigate the diminishing effect of environmental audit on the relationship between sustainable environmental law in manufacturing companies and firm performance in Malaysia. The study employed mail survey questionnaire distributed to a sample of 63 companies. Their result revealed that environmental regulation only moderates the relationship between sustainable environmental auditing practice and environmental performance. It was recommended in the study that policy makers should revisit environmental regulation framework to provide better support to companies.

Razeed (2017) examine environmental auditing specifically in the context of social and environmental disclosures by corporate entities. The study finds that environmental audit is carried out to show the relationship between the audit company's, society and stakeholders groups of interest. It was therefore, recommended that accounting profession should formulate and implement standard policy for environmental accounting disclosure. As opposed to positive and negative relationship existing between cements industry and host community. The studies therefore recommend control measures to stem proliferation of vector-based diseases and adoption of cleaner production technology

Owolabi (2017) examined the effect of environmental audit practices on financial reporting. The study aimed to examine the effect of environmental audit practices on financial reporting. The study used correlations analysis and components analysis to analyze primary data from the questionnaire. The findings showed that offers a lot of environmental

audit provides information, ranging from social to environmental issues; and given that business financial performance is linked, in part, to an enterprise's ecological performance, interested party are increasingly giving more attention to environmental issues in an enterprise.

METHODOLOGY

The study used descriptive research design to assess the effects of environmental audit practices on profitability of tea factories. Kothari (2017) argues that descriptive design is appropriate in describing the current situation of phenomenon. The target population for the study was all the employees in finance department who consisted of auditors, procurement and accounts staff in 6 tea processing factories in Kisii County and consisted of 145 employees. Census approach gave everyone in the target population an opportunity to participate in the study. Census approach was preferable because the population was small to allow the use of a sample. Census approach gave everyone in the entire population an opportunity to participate in the study.

A five point likert scale self-administered structured questionnaire was used to collect primary data and also secondary data of the factories from their financial reports and statements were used. For consistence, the researcher reviewed the financial statements for the factories 5 year (2014-2018) to get the trend of the performance. According to Kimani (2014) on the advantage of using the secondary data is that it is easily available and it is cost effective.

The data collected was analyzed using descriptive statistical measures of central tendency such as mean and percentages. Correlation and Multiple linear regression models were used

FINDINGS

Environmental Audit

The respondents were asked to indicate the extent to which they agreed or disagreed to statements

regarding the adoption of environmental audit and its effect on firm profitability. Respondents were asked a number of questions on the scale of 1-5 where 5 represented larger extent (strongly agreed) and 1 to small extent (strongly disagreed).

The results in table 1 showed the means and SD of aspects of environmental audit tested in the study to

showed the extent to which they affected profitability of tea factories. A mean of 3-5, showed that the respondents agreed with the aspect or the aspect in question had been adopted while a mean of 1-2 means the aspect had not been adopted or the respondent failed to agree with the aspect or it had been adopted to a small extent.

Table 1: Environmental audit

Environmental audit variables	N	Mean	Std. Deviation	Min	Max
Availability of environmental management systems is used as a cost control measure to avoid losses	97	2.16	1.352	1	5
Program assessment enhances profitability	97	2.29	1.392	1	5
Quality of the reported data through quality controls	97	2.57	1.471	1	5
Long term commitment to improve processes by responsible personnel with adherence to Government policy leads to profitability	97	2.59	1.505	1	5
Availability of environmental management systems with Government policy is used to avoid losses	97	2.95	1.530	1	5
Long term commitment to improve processes by responsible personnel leads to profitability	97	3.00	1.220	1	5
Quality controls with Government policy increases profitability	97	3.02	1.472	1	5
Program assessment through Government policy enhances profitability	97	3.02	1.521	1	5
Proper enhancement of Processes with Government policy increases profitability	97	3.37	1.509	1	5
Effective Environmental management systems with Government policy increases profitability	97	3.72	1.405	1	5
Valid N (listwise)	97				

Source: (Field data 2019)

The study revealed that the following aspects of Environmental audit or factors had been adopted: Effective Environmental management systems with Government policy increased profitability was ranked best with a mean of 3.72 followed by Proper enhancement of Processes with Government policy increased profitability, Program assessment through Government policy enhanced profitability, Quality controls with Government policy increased profitability, Long term commitment to improved processes by responsible personnel led to profitability.

However the results indicated that Availability of environmental management systems with Government policy was used to avoid losses, Long term commitment to improve processes by responsible personnel with adherence to Government policy led to profitability, Quality of the reported data through quality controls, Program assessment enhanced profitability, and lastly Availability of environmental management systems was used as a cost control measure to avoid losses did not feature as an important of environmental audit practice that affected profitability as their

means were below 3. All the SDs was 1-point above the mean thus the dispersion was minimal.

The study conducted multiple linear regression analysis in the independent variables; Budgetary Allocation, Environmental disclosures, Compliance to

law Environmental audit and dependent variable profitability. The study used enter method by SPSS where all variable were edited and entered. Table 2 showed regression model, it was shown by R = 0.699, an indication that the relationship between the dependent and independent variable was strong.

Table 2: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.699 ^a	.488	.295	138281960.6771370

a. Predictors: (Constant), Environmental audit

The R square of .488 implied that a change in a unit of environmental audit practices resulted to a variation of profitability by 48.8%. The rest of profitability (51.2%) was determined by other variables outside the scope of study. Thus, the audit practices and

profitability on firms is enhanced by efficiency in environmental accounting (Malik, 2018). The analysis of variance (ANOVA) was used to test the significance of the model fitness.

Table 3: ANOVA^a

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	428105461595289 470.000	4	107026365398822 304.000	5.597	.001 ^b
	Residual	764876025948530 050.000	40	191219006487132 48.000		
	Total	119298148754381 9520.000	44			

a. Dependent Variable: Profitability

b. Predictors: (Constant), Environmental audit

The results showed that the predictors were determined at F (5.597, Sig. 0.001 at 5%. This implied that there was statistics significant effect between environmental audit practices and profitability as shown. The P-value 0.001<0.05 implied that the regression model was statistically significant to

predict the results. Thus it should hold to determine the effect of environmental audit on profitability of tea factories.

The study conducted multiple linear regression analysis in the independent variables using regression coefficients. Table 4 presented the results.

Table 4: Regression Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.689	.776		1.318	.005
	Environmental audit	.670	.529	.678	2.381	.022

a. Dependent Variable: Profitability

The results shown from unstandardized regression coefficients in table 4 led to the regression equation below:

$$Y = .689 + .670X_1$$

The constant associated with environmental accounting practices indicated positive change in profitability (ROE)

increased by 68.9%. However, the control of other independent variables showed that an increase by a unit of Environmental audit increased profitability by 67.0% on profitability.

CONCLUSION AND RECOMMENDATION

The study sought to establish effect of environmental audit on the profitability of tea processing factories in Kisii County. The descriptive results indicated that the adoption of effective environmental management systems caused an increase in profitability while environmental management systems were not used or not adopted as cost control measure to avoid losses. Correlation analysis indicated there was a positive and significant correlation between environmental audit and profitability. In relation to regression analysis, it was indicated that an increase by a unit in environmental audit increased profitability by .67. The moderating role of government policy in the relationship between environmental audit and profitability resulted that, a unit increase in environmental audit led to .136

The study sought to establish effect of environmental audit on the profitability of tea processing factories in Kisii County. The study concluded that adoption of effective environmental management systems when moderated by government policy caused an increase in profitability. The study also concluded that there was a weak positive but significant relationship between environmental audit, and profitability. Further the study concluded that; the relationship between environmental audit and profitability of tea processing factories was positive hence the stated null hypothesis was rejected.

The study recommended that environmental management audit systems were to be employed to cost control to enhance profitability or avoid losses of tea processing factories. Finally other studies to be done on other environmental accounting practices not covered in the present study.

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