

## **The Relationship between Corporate Social Responsibility Practices and Financial Performance of Firms in the Manufacturing, Construction and Allied Sector of the Nairobi Securities Exchange**

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### **Abstract**

*Literature provides conflicting results on the relationship between corporate social responsibility (CSR) practice and firm financial performance with some studies showing a positive relationship (Waddock & Graves, 1997; Cheruiyot, 2010), others negative (Cordeiro & Sarkis, 1997; Wagner et al, 2002) and still others showing that there is no relationship between the two variables (McWilliams & Siegel, 2000; Aragon & Lopez, 2007). It is with this background that this study sought to establish the relationship between corporate social responsibility practice and financial performance of firms listed in the manufacturing, construction and allied sector of the Nairobi Securities Exchange. Although the study was meant to be a census survey, non-availability of complete data for some of the companies resulted in only 10 out of the 14 companies in the sector being studied. Secondary data was obtained from the audited financial reports of the companies for the period from 2007 to 2011. Corporate social responsibility score was obtained using content analysis of reports of the companies on various components of corporate social responsibility as reported in their audited financial reports. A multiple regression model was established to determine the relationship between the two variables. Control variables of manufacturing efficiency and capital intensity were also introduced in the regression model. The results indicated the existence of a relationship between the independent variables (corporate social responsibility score, manufacturing efficiency and capital intensity) used in the model and the dependent variable (return on assets) with a correlation coefficient of 0.870. The results of the study also showed that there was an insignificant positive relationship between corporate social responsibility practice and financial performance. Financial performance and manufacturing efficiency was found to have a significant linear inverse relationship.*

**Key Words:** Corporate Social Responsibility; Financial Performance; Manufacturing, Construction and Allied Sector; Nairobi Securities Exchange

### **Introduction**

Corporate Social Responsibility (CSR) concept emphasizes community participation by business enterprises. It proposes that a private firm has responsibilities to society that extend beyond making a profit. It is the obligation of the firm's decision makers to make decisions and act in ways that recognize the relationship between the business and society. It is therefore important for a business to continue in its commitment to behave ethically and contribute to economic development while improving the quality of life of the work force and the surrounding community at large. This can be achieved through the various CSR activities that the business chooses to engage in for the benefit of its stakeholders (such as employees, suppliers, shareholders, government, community/society and customers). Bowen (1953) defines social responsibility of businessmen as to the obligation of businessmen to pursue those policies, to make decision or to follow those lines of action which are desirable to society.

Finance theory differs on who the firm should be responsible to in the course of its business. According to stakeholder theory, firms possess both explicit and implicit contracts with various constituents, and are responsible for honoring all contracts (Freeman, 1984). As a result of honoring these contracts, a company develops a reputation that helps determine the terms of trade it can negotiate with various stakeholders. While explicit contracts legally define the relationship between a firm and its stakeholders, implicit contracts have no legal standing and are referred to in the economic literature as self-enforcing relational contracts. Since implicit contracts can be breached at any time, Telser (1980) argues that they become self-enforcing when the present value of a firm's gains from maintaining its reputation (and, therefore, future terms of trade) is greater than the loss if the firm reneges on its implied contracts. This theory, therefore predicts a positive relationship between CSR and corporate financial performance (CFP). However, stakeholder theory has acquired opponents from various areas including classical economics, industrial relations and management. Sternberg (1997) for example, argues that the principles of stakeholder theory undermine the property rights of the owners of the company, compromise the mechanism of the free market, destabilize the operations of governments and thus subvert the very nature of capitalism.

According to the social contracts theory, businesses must not just act in a responsible manner because it is in their commercial interest, but because it is how society expects the business to behave. Society is a series of social contracts between members of society and society itself (Gray *et al*, 1996). Managers are therefore expected to take decisions in an ethical manner. Donaldson and Dunfee (1999) developed an integrated social contracts theory as a way for managers to use their discretion to make decisions but to ensure their decisions do not have negative effects on others. Businesses are expected therefore, to provide some support to the community under given circumstances. Since the contract is not written, businesses only get to feel its consequences when they fail to do what is expected.

Several studies have been carried out on the relationship between CSR and CFP resulting in different conclusions. Klassen and McLaughlin (1996) studied 14 manufacturing sector firms to conclude that environmental management can play a positive role in improving corporate financial performance. In exploring the linkages between environmental performance and financial performance with respect to the market value, Konar and Cohen (2001) argued that a firm with a better environmental performance has a significant positive impact on its market value. Fauzi (2009) did a research on firms listed on the New York Securities Exchange (NYSE) to determine the relationship between CSR and corporate financial performance. Using a sample of 101 companies listed at the NYSE and a regression model with financial performance as the dependent variable and CSR index as the independent variable, he found that CSR has no effect on CFP. He however found that leverage (a control variable in the model) has a moderating effect on the interaction between CFP and CSR.

Cheruiyot (2010) carried out a research to establish the relationship between corporate social responsibility and financial performance of firms listed at the Nairobi stock exchange. This was a cross sectional study of all the 47 listed companies in the NSE's main segment as at 31 December 2009. Using regression analysis he sought to establish the relationship between the CSR index and financial performance measured in terms of the Return on assets, return on equity and return on sales. His conclusion was that there was a statistically significant relationship between CSR and financial performance. Obusubiri (2006) in a study on CSR and portfolio performance also found a positive relationship between CSR and portfolio performance. He attributed this relationship to the good corporate image that comes with CSR making investors prefer such companies implying that good CSR behavior has a reputational benefit for the practicing firm.

The firms listed at the NSE are classified into different sectors based on the nature of their activities and operations including agricultural, commercial and services, Banking, Insurance, Investment and the manufacturing, Construction and allied sector among others. This study was based on the manufacturing, construction and allied sectors which had 14 companies as at 31 December 2011. The sector is affected by the need to be socially responsive and especially consider the environmental component of CSR due to the wastes and other emissions produced during the manufacturing process. The Kenyan government has enacted laws and regulations on environmental policies with the National Environmental Management Authority (NEMA) as its principal agent in supervising matters relating to the environmental management and implementing environmental policies. Companies in the manufacturing, Construction and allied sector undergo inspection and audit by NEMA regularly to ensure they observe the laid down policies.

## **Research Problem**

Sustainability has become an important domain for business researchers in the current decade due to the imperative that businesses must create values for their stockholders while simultaneously meeting their social responsibility obligations in order to make a sustainable world (Joo et al, 2010). The notion of engaging beyond compliance is ethically desirable, even if, it takes away resources from a firm's immediate needs (Joo et al, 2010). The empirical analysis of the relationship between CSR and corporate financial performance has yet to provide a convincing causal link between the two variables. There are studies that argue that it is not in the best interest of shareholders for a firm to be involved in CSR practice. Griffin & Mahons (1997) for example concluded that the relationship between CSR and CFP could be positive, neutral, and negative. They mapped studies on the relationship between CSR and CFP for the periods of 1970s (16 studies), 1980s (27 studies), and 1990s (8 studies), totaling around 51 articles. In the 1970s, out of 16 studies, 12 revealed a positive direction of the relationship between CSR and CFP. Similarly in 1980s and 1990s, the positive direction had been accounted for 14 out of 27 studies and seven out of eight studies, respectively. Negative results were supported by one study in the 1970s, 17 studies in the 1980s, and three studies in the 1990s while four studies in the 1970s and five studies in the 1980s provided inconclusive findings.

CSR is considered to be influenced by the institutional environment in which companies operate (Gilbert, 2008). The manufacturing, construction and allied sector in Kenya are affected by various concerns about CSR practice. Some of the issues include the need to save energy considering energy consumed by these firms during their production process, avoiding of waste and recycling. The sector is also affected by labour intensive processes with short term contracts for staff (casual labour), high accident rates and occupational health and safety. Also facing this sector are concerns about health effects of processes on residents and quality of products. These concerns are all part of the component of CSR practices which include responsibility to environment, human resource, community involvement, consumers and products.

The relationship between corporate social responsibility and a firm's financial performance has been studied in Kenya but results of these studies do not appear conclusive. Nkaiwatei (2011) for example, studied the relationship between social accounting practice and profitability in the oil industry in Kenya and found that financial performance was one of the factors that determine CSR practice in the OIL industry. Wanjala (2011) studied factors that influence corporate social responsibility in commercial banks in Kenya and found that profitability was one of the factors that influence CSR practice in banks. Mutuku (2005) established that there is no relationship between CSR and financial performance. Whereas many studies have been done on CSR in general, none has been done in the manufacturing, construction and allied sector. This study therefore sought to answer the following questions: What are the CSR activities undertaken by firms in the manufacturing, construction and allied sector of the NSE? What is the effect of corporate social responsibility practice on performance of firms operating in the manufacturing, construction and allied sectors? And how is the relationship between CSR and CFP affected by efficiency and capital intensity of the firm?

## **Objectives of the Study**

The general objective of this study was to establish the relationship between the practice of corporate social responsibility and firm financial performance in the manufacturing, construction and allied sector of the Nairobi Securities Exchange. The specific objectives were:

1. To establish the type of CSR activities undertaken by the manufacturing, construction and allied sector companies.
2. To establish the effects of CSR activities on financial performance.

## **Research Methodology**

### **General Background and Population of the Study**

This study used a correlational descriptive survey research design. Descriptive designs explain phenomena as they exist and are often used to obtain information on the characteristics of a particular problem or issue while correlational studies establish relationships between various variables. The study population was made up of all listed public companies classified under the manufacturing, construction and allied sector of the Nairobi Securities Exchange.

There were 14 companies listed under the manufacturing, construction and allied sector of the NSE as at 31 December 2011. A census survey was carried out due to the small size of the population. According Cooper & Schindler (2003) a census is feasible when the population is small and necessary when the elements are quite different from each other. However complete data was not available for four of the companies and therefore only ten were studied. The NSE was selected as it provides an accessible, comprehensive listing of companies in Kenya and a means to set a boundary around the population drawn.

### **Instrument and Procedure**

Secondary data was obtained from audited financial reports and other publications by the companies including information from the company websites for five years from 2007 to 2011. In any study of CSR it must be recognized that communication is a central aspect of social interaction (Weber, 1990). The ability of companies to convey their intentions and actions to the societies in which they are located is recognized as being integral to the relationship between business and society. The use of websites to disseminate company information serves this purpose. Websites are a form of secondary data and have some distinct advantages over other data sources for research purposes (Gilbert, 2008).

### **Data Analysis Techniques**

Data collected was edited, coded and classified into different components to facilitate a better and efficient analysis. CSR practice has different components and for the purpose of this study, components for environmental concerns, community involvement, employee concerns, product/customer concerns and others were used to analyze CSR practice. Others constitute all those other activities of CSR which cannot be attributed to any of the identified categories. Content analysis was used to determine the score for CSR based on the number of sentences dedicated to each component of CSR in the company's annual report. The total CSR score was obtained by adding the scores for the five components of CSR.

Regression analysis was then used to test the relationship between CSR practice and CFP. CSR was the independent variable while CFP was the dependent variable. Other independent variables considered in the model include efficiency (Cost of sales/Total sales) and capital intensity (Total assets/Total sales) which were used as control variables. The relationship was explained by the following regression model;

$$F = \alpha_0 + \alpha_1 x_1 + \alpha_2 x_2 + \alpha_3 x_3 + e$$

Where:

F- Financial performance (as measured by Return on Asset (ROA))

$\alpha_0$ - Constant

$x_1$ - CSR score

$x_2$ -Efficiency,

$x_3$ - Capital intensity

$\alpha_i$ - a constant (coefficient) of various elements

e- the error term

The Statistical Package for Social Sciences (SPSS) version 18 was used to analyze the data collected. The coefficient of determination, R squared, measure was used to test the significance of the regression model in explaining the relationship between CSR practices and CFP. R squared is a measure of goodness of fit and shows the percentage variance in the dependent variable that is explained by the independent variable(s). The higher the R squared the better the model. The P-Value and the t-test were used to test the individual significance of the predictor variables used in the study.

### **Results of Research and Discussions**

The study used regression and correlation as a tool of analysis to determine the existence of the relationship between the practice of corporate social responsibility and corporate financial performance. The study was guided by the following three research questions;

- i. What are the CSR activities undertaken by firms in the manufacturing, construction and allied sector?
- ii. What is the effect of corporate social responsibility practice on performance of firms in the manufacturing, construction and allied sector of the NSE?

iii. How is the relationship between CSR and CFP affected by efficiency and capital intensity of the firm?

### Type of CSR Activities Undertaken by the Firms

Firms listed under the manufacturing, construction and allied sector of the NSE are involved in different components of CSR activities and also at different levels. Overall however, most CSR activities undertaken by these firms are targeted at community welfare, followed by staff welfare and environmental concerns, as shown in table 1 below. The least undertaken activities are those targeted at the products and consumers.

**Table 1: Total CSR Activities per Component (2007 – 2011)**

Company	Community	Environment	Staff	Product/Customer	Other
BAT	51	88	137	1	8
Carbacid	7	11	13	6	8
EABL	162	87	152	23	18
Mumias sugar	67	30	80	6	11
Unga	48	16	40	6	5
ARM	55	42	29	8	18
Bamburi	229	118	110	9	50
Crown Berger	87	61	62	8	4
E. A Cables	30	10	23	15	6
EA Portland	127	38	78	4	26
ALL	863	501	724	86	154

Source: Computed from Audited Financial Reports

### Return on Assets (Net Income/Total Assets)

The ROA for each company was computed and the results presented in Table 2 below. From this table its evident that ROA for companies in this sector fluctuates significantly ranging from as low as – 2% to a high of 27.6%. EABL with an average ROA of 23.4% seems to be one of the best performers over the five year period while Unga ltd with an average ROA of 5.43% has the worst performance.

**Table 2: Return on Assets (Net Income/Total Assets)**

	Company	2007	2008	2009	2010	2011	Average
1	BAT	0.1495	0.1650	0.1402	0.1589	0.2253	0.1678
2	Carbacid	0.1420	0.1379	0.1863	0.2033	0.1737	0.1686
3	EABL	0.2420	0.2762	0.2403	0.2300	0.1813	0.2340
4	Mumias Sugar	0.1169	0.0858	0.0921	0.0858	0.0834	0.0928
5	Unga	0.0359	0.0785	0.0333	0.0466	0.0773	0.0543
6	ARM	0.0936	0.0793	0.0532	0.0649	0.0561	0.0694
7	Bamburi	0.1839	0.1209	0.2171	0.1591	0.1749	0.1712
8	Crown Berger	0.0490	0.0145	0.0464	0.0686	0.0696	0.0496
9	E. A Cables	0.1300	0.1520	0.0835	0.0407	0.0630	0.0939
10	EA Portland	0.0855	0.0591	0.1522	-0.0236	0.0415	0.0629

Source: Computed from Audited Financial Reports

### Corporate Social Responsibility (CSR) Score

Content analysis was used to determine the score for CSR based on the number of sentences dedicated to each component of CSR in the company's annual report. The total CSR score was obtained by adding the scores for the five components of CSR. Table 3 below is a summary of these scores. From this table its apparent that Bamburi Cement had the highest average score of 103 followed closely by EABL with a score of 88. Carbacid had the lowest score of 9 followed by E.A. Cables with a score of 17.

Appendix 1 and 2 shows the production efficiency and capital efficiency respectively

**Table 3: Total CSR Score**

	Company	2007	2008	2009	2010	2011	Average
1	BAT	63	79	58	42	43	57
2	Carbacid	17	9	7	5	7	9
3	EABL	133	125	74	60	50	88
4	Mumias sugar	32	36	41	34	51	39
5	Unga	16	11	32	32	24	23
6	ARM	22	22	28	27	53	30
7	Bamburi	82	130	113	103	88	103
8	Crown Berger	65	55	52	33	17	44
9	E. A Cables	14	17	19	22	12	17
10	EA Portland	25	89	45	50	64	55

Source: Computed from Audited Financial Reports

### Regression Analysis

The regression equation established was as follows:

$$\text{Firm Financial performance} = 0.357 + 0.001X_1 - 0.395 X_2 - 0.020X_3$$

Both efficiency and capital intensity were inversely related with firm financial performance while CSR had a direct relationship with firm financial performance. The regression coefficients shows that  $\alpha_0$  (the value of firm financial performance when capital intensity, CSR score and efficiency were all rated zero) is equal to 0.357. The model also shows that, for every one unit increase in CSR, firm financial performance increases by 0.001 units ( $\alpha_1 = 0.001$ ). For every one unit decrease in efficiency, firm financial performance increases by 0.395 units ( $\alpha_2 = -0.395$ ) and for every one unit decrease in capital intensity, firm financial performance increases by 0.020 units ( $\alpha_3 = -0.020$ ). Since efficiency was computed as Cost of Sales/Total Sales then a high ratio would mean that the company is being inefficient and therefore the inverse relationship found in this study is expected and justifiable.

Using P-Values to test on the individual significance; a predictor variable is said to be linearly related with the response variable if its P-Value  $< 0.05$  (5% significance level). The findings in table 4 show that only efficiency has a significant linear relationship with firm financial performance. The implication of this study would be that firms in the manufacturing and construction sector would have to put more emphasis on reducing the ratio of cost of sales to sales (efficiency) in order to increase financial performance.

**Table 4: Regression Results**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig. (P-Value)
		B	Std. Error	Beta		
1	(Constant)	0.357	0.147		2.430	0.051
	CSR score	0.001	0.001	0.347	1.329	0.232
	Manufacturing efficiency	-0.395	0.153	0-.839	-2.579	0.042
	Capital intensity	-0.020	0.032	-0.220	-0.632	0.551

### Test of Multi-Collinearity

A correlation matrix was used to check on the concept of multi-collinearity, that is if there is a strong correlation between two predictor variables (correlation coefficient  $> 0.8$ ). In a situation where two predictor variables have a correlation coefficient greater than 0.8, then one of them must be dropped from the model. As shown in table 5, none of the variables is strongly correlated with each other. Thus a model of three predictor variables (Capital intensity, CSR score, and efficiency) could be used in forecasting of financial performance among manufacturing, construction and allied sector companies listed at the NSE during the period 2007-2011.

**Table 5: Predictor Variables Correlation Matrix**

		Financial performance	CSR score	Efficiency	Capital intensity
Pearson Correlation	Financial performance	1.000			
	CSR score	.538	1.000		
	Efficiency	-.736	-.129	1.000	
	Capital intensity	.211	-.377	-.470	1.000

**Goodness of Fit Test**

The study further used correlation coefficient (r) to check on the magnitude and the direction of the relationship between the independent and dependent variable. Coefficient of determination (the percentage variation in the dependent variable being explained by the changes in the independent variables) and P- value were used to check on the overall significance of the model. Correlation coefficient of 0.870 indicates a strong positive correlation between the dependent and independent variables. On the other hand coefficient of determination ( $R^2$ ) of 0.758 shows that 75.8% of the variation in the firm performance (ROA) is explained by the changes in Capital intensity, CSR score, and efficiency, leaving only 24.2% unexplained. The regression model obtained for this study can therefore be used to forecast financial performance fairly. The adjusted R square of 63.7% also shows that the model is a fair estimate of the relationship between the variables. The P-Value of 0.028 is less than 0.05, which shows that there is a significant relationship between the dependent and independent variables used in the study. Table 6 shows this summary.

**Table 6: Model Summary**

Model		R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
						R Square Change	F Change	df 1	df 2	Sig. F Change (P-Value)
Dimension	1	.870 <sup>a</sup>	0.758	0.637	0.03846	0.758	6.256	3	6	0.028

**ANOVA Test**

Analysis of Variance (ANOVA) consists of calculations that provide information about levels of variability within a regression model and form a basis for tests of significance. It provides a statistic for testing the hypothesis that  $\beta_i \neq 0$  (there is a significant relationship between the response and predictor variables), against the null hypothesis that  $\beta_i = 0$  (there is no significant relationship between the response and predictor variables). Correlation exist between the response and predictor variables if P-value < 0.05. As shown in table 7, P-Value = 0.028 < 0.05 indicated that there is enough evidence to support the alternative hypothesis, that there is a significant linear relationship between financial performance and Capital intensity, CSR score and Efficiency.

**Table 7: ANOVA**

Model		Sum of Squares	df	Mean Square	F	Sig. (P-value)
1	Regression	0.028	3	0.009	6.256	0.028 <sup>a</sup>
	Residual	0.009	6	0.001		
	Total	0.037	9			

a. Predictors: (Constant), Capital intensity, CSR score, manufacturing efficiency

b. Dependent Variable: Financial performance (ROA).

**Conclusions**

The study used regression analysis to establish the relationship between financial performance and CSR practice of firms listed in the Manufacturing, Construction and allied Sector of the NSE. Efficiency and capital intensity of the firms were also included as control variables in the model. One major finding of the study is that there is a strong relationship between the independent variables (CSR practice, efficiency and capital intensity) used in the model and the dependent variable (ROA).

The correlation coefficient of 0.870 indicates a strong positive correlation between the dependent and independent variables taken together. However on the analysis of the relationship between the individual independent variables and financial performance, the results showed that only efficiency (Cost of sales/Sales) had a significant inverse relationship. Whereas CSR score was found to have a positive relationship with financial performance this was not significant. Capital intensity was also found to have an inverse relationship with financial performance which was not significant.

Another objective of this study was to establish the type of CSR activities implemented by companies in the Manufacturing, Construction and allied Sector of the NSE. The study established that most firms in the manufacturing, construction and allied sector of the NSE are involved in different components of CSR practice. CSR practices associated with staff, the community and environment were found to be practiced by all firms throughout the period of study though at different levels. Overall, most CSR activities undertaken by these firms are targeted at community welfare followed by staff welfare and then the environment. The least undertaken activities are those targeted at the products and customers.

CSR practice is important and is practiced by firms in the manufacturing, construction and allied sector of the NSE. Considering the findings that CSR practice does not have a significant relationship with firm performance, firms should not incur high costs on CSR with the hope of improving financial performance but rather for some other sustainability reasons. Firms should enhance efficiency in the manufacturing process so as to improve financial performance as there is a significant linear relationship between the two variables. Efficiency in the model was computed as the ratio between the cost of sales and sales therefore the firms should strive to reduce the cost of sales so as to improve their financial performance.

The CSR activities that are targeted at the community welfare are more popular and firms should engage in these activities if they are to be in line with what their competitors are doing. Involvement of the community in issues that concern them is of importance because the company is able to address relevant concerns and support from the community. Staff welfare was also found to be practiced by all companies with 724 sentences included in the audited financial reports for the period studied. Protection of the environment is also important for companies in the manufacturing and allied sector. Companies should report all their CSR activities in the financial reports as these may help to improve their reputation.

### **Recommendations for Further Research**

In this study only companies listed in Manufacturing, Construction and allied Sector of the NSE were considered. It is recommended that a similar study may be undertaken using a bigger population of companies in the same sector including those that are not listed in the NSE. A similar study can also be conducted for other sectors of the NSE which have not been covered by earlier studies. The study will however need to identify the relevant control variables given the sector selected for further studies.



## References

- Aragón-Correa, J.A., & Rubio-López, E.A., (2007). Proactive Corporate Environmental Strategies: Myths and Misunderstandings. *Long Range Planning*, 40(3), 357-381.
- Bowen, H.R. (1953), *Social Responsibilities of the Businessman*, Harper & Brothers Publishers, New York, NY.
- Cheruiyot, F. K. (2010). The relationship between corporate social responsibility and financial performance of companies listed at the Nairobi Stocks Exchange, *Unpublished MBA Thesis*, University of Nairobi.
- Cordeiro, J.J., & Sarkis, J. (1997). Environmental proactivism and firm performance: evidence from security analyst earnings forecasts. *Business Strategy and the Environment*, 6(2), 104-114.
- Cooper R. D. and Schindler P. (2003). *Business Research Methods*, Eighth Edition, Tata McGraw-Hill Publishing Company Limited.
- Donaldson, T., Dunfee, T.W. (1999), *Ties That Bind*, Harvard Business school press, Boston, MA
- Fauzi, H (2009), Corporate Social and Financial performance: Empirical evidence from American companies. *GMJ*, 3, Iss Jan – June 2009.
- Freeman, R.E. (1984), *Strategic Management: A Stakeholder Approach*, Pittman, Boston, MA
- Gilbert, V. E. (2008) *An insight into Corporate Social Responsibility in Kenya*; MA Thesis University of Nottingham.
- Gray, R.H., Dillard, J., & Spence, C. (1996), Social accounting as if the world matters: an essay in postalgia and a new absurdism, *Public Management Review*, 11(5), 545-73.
- Griffin, J.J., & Mahon, J.F. (1997), The corporate social performance and corporate financial performance debate”, *Business and Society*, 36, 5-32.
- Jooh, L., Niranjana, P., Roh, J. J. (2010) *Relationship between Corporate Sustainability Performance and tangible Business Performance: Evidence from oil and gas industry*. ISBIT, 3, sp. Iss. 3 January 2011.
- Klassen, R.D. & McLaughlin, C.P. (1996), The impact of Environmental Management on Firm Performance, *Management Science*, 42, 1199-214.
- Konar, S., & Cohen, M. A. (2001). Does the Market Value Environmental Performance? *The Review of Economics and Statistics*, 83(2), 281-289.
- McWilliams, A. & Siegel, D. (2000), Corporate Social Responsibility and Financial Performance: correlation or misspecification? *Strategic Management Journal*, 21(5), 603-9.
- Mutuku, K. (2005) The relationship between corporate social responsibility & Financial performance, A case of Publicly Quoted Companies in Kenya, *Unpublished MBA Thesis*, University of Nairobi.
- Nkaiwatei, A. O. (2011). Relationship between Social Accounting Practices and Profitability: The case of oil industry in Kenya, *Unpublished MBA Thesis*, University of Nairobi.
- Obusubiri, M. M. (2006). A study of Corporate Social Responsibility and Portfolio Performance at the Nairobi Stocks Exchange, *Unpublished MBA Thesis*, University of Nairobi.
- Sternberg, E. (1997). The defects of stakeholder theory. *Corporate Governance: An International Review*, 5(1), 3-10
- Telser, L. G. (1980). Theory of self-enforcing agreements. *Journal of Business*, 53(1): 27-44.
- Waddock, S.A. & Graves, S.B. (1997), The corporate social performance: financial performance link, *Strategic Management Journal*, 18 (4), 303-19.
- Wagner, M., Van, P. N., Azomahou, T., & Wehrmeyer, W. (2002). The relationship between the environmental and economic performance of firms: an empirical analysis of the European paper industry. *Corporate Social Responsibility and Environmental Management*, 9 (3), 133-146.
- Wanjala, D. N. (2011). Factors influencing the Practice of Corporate Social Responsibility by commercial banks in Kenya, *Unpublished MBA Thesis*, University of Nairobi.
- Weber, R. P. (1990), *Basic Content Analysis*, Sage, Newbury Park, CA.

**Appendix 1: Production Efficiency-**

	<b>Company</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>Average</b>
1	BAT	0.4864	0.4507	0.4701	0.7812	0.7772	0.5931
2	Carbacid	0.3867	0.4077	0.3375	0.3435	0.3999	0.3751
3	EABL	0.4488	0.4652	0.4964	0.5052	0.5085	0.4848
4	Mumias sugar	0.6523	0.6432	0.7179	0.6862	0.6550	0.6709
5	Unga	0.8994	0.8518	0.9030	0.8941	0.8731	0.8843
6	ARM	0.6395	0.6375	0.6395	0.6481	0.6785	0.6486
7	Bamburi	0.5322	0.5430	0.6394	0.6574	0.7216	0.6187
8	Crown Berger	0.6396	0.6524	0.6368	0.6174	0.6609	0.6414
9	E. A Cables	0.6744	0.6570	0.5871	0.7160	0.7435	0.6756
10	EA Portland	0.6995	0.6709	0.6867	0.7839	0.7671	0.7216

Source: Computed from Audited Financial Reports

**Appendix 2: Capital Intensity**

	<b>Company</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>Average</b>
1	BAT	0.5878	0.5912	0.6708	0.8214	0.6828	0.6708
2	Carbacid	2.9565	3.1245	2.4896	2.4387	3.0203	2.8059
3	EABL	1.2024	1.0236	1.0414	0.9933	1.1073	1.0736
4	Mumias sugar	1.1550	1.1839	1.2332	1.1777	1.4679	1.2435
5	Unga	0.4843	0.5038	0.4780	0.4394	0.4320	0.4675
6	ARM	1.1605	1.3418	2.0082	2.7772	2.5078	1.9591
7	Bamburi	0.9371	1.0272	1.0706	1.1863	0.9327	1.0308
8	Crown Berger	0.6396	0.8153	0.7306	0.7266	0.6448	0.7114
9	E. A Cables	0.9271	0.7746	1.2602	1.2536	1.0043	1.0439
10	EA portland	1.3961	1.2594	1.4879	1.2794	1.3302	1.3506

Source: Computed from Audited Financial Reports