THE RELATIONSHIP BETWEEN CORPORATE SOCIAL RESPONSIBILITY PRACTICES AND FINANCIAL PERFORMANCE OF FIRMS IN THE MANUFACTURING, CONSTRUCTION AND ALLIED SECTOR OF THE NAIROBI SECURITIES EXCHANGE

By

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DECLARATION

I, the undersigned, declare that this research project is my own work and has never been presented in any other university or college.

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This research project has been submitted for examination with my approval as the University Supervisor.

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May God abundantly bless and reward you all.

DEDICATION

I dedicate this project to my parents Mr. Silvester Kiptanui Sawe and Joyce W. Kiptanui for making me understand the value of education since I was a small child. Your inspiration and guidance has made me what I am today and your trust and belief in me gives me the strength and confidence to achieve even more in life.

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ABBREVIATIONS

CSR – Corporate Social Responsibility

CFP – Corporate Financial performance

CSP – Corporate Social performance

CMA – Capital Markets Authority

CRI – Corporate Reputational Index

NEMA – National Environmental Management Authority

NSE – Nairobi Securities Exchange

NYSE – New York Securities Exchange

ROA – Return on Assets

ROE – Return on Equity

ABSTRACT

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. The relationship between corporate social responsibility practice and firm financial performance has been studied in the past but results of these studies do not appear conclusive. Accordingly the 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 companies listed at the Nairobi Securities Exchange. The specific objectives were to establish the effects of corporate social responsibility activities on financial performance and to also establish the corporate social responsibility activities undertaken by firms in the sector. This study is important because corporate social responsibility practice is important and fundamental to the sustainable operations of firms, good financial performance is also important for sustainability of any firm.

This study was meant to be a census but due to the non-availability of complete data for some of the companies, the research covered 10 out of the 14 companies in the sector. Secondary data was obtained from the audited financial reports of the companies for the period from 2007 to 2011. The score for corporate social responsibility practice was obtained using content analysis of reports of the companies on various components of corporate social responsibility as reported in their audited financial reports. Control variables for manufacturing efficiency and capital intensity were also introduced in the regression model so as to establish whether these variables had an effect on the relationship between corporate social responsibility and financial performance. The data collected was analyzed using descriptive statistics and regression analysis.

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 relationship which was inverse.

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CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

The notion of CSR is most commonly associated with philanthropy at present. Companies make donations to help alleviate social problems, justified by the belief that companies should 'give something back' to the societies in which they operate. Unfortunately there is a "tradition of companies using philanthropy as a respectable means of buying off stakeholders to accept their operating practices" (Hopkins, 2007). Corruption is a major obstacle to achieving CSR in Kenya. (Gilbert, 2008). However, the trajectory of CSR has been influenced by civil society organizations campaigning against poor labour practices and environmentally damaging production processes in the export sectors, such as cut flowers, horticulture and textiles (Kiviutu and Fox, 2005). Though, government regulations to ensure socially responsible behavior remain limited, in some cases, corporations "seek to control or otherwise capture regulators in ways that bend them toward the will of the corporations they are supposed to oversee" (Campbell, 2007). It is therefore apparent that different regulatory systems can produce different forms of CSR practices to different sectors of the economy.

Accordingly companies engage in social responsibility practices that are relevant to their interests, operations, and actions" (Wood, 1991). As such, there is reason to believe that CSR will vary between industries. Considering the above, companies will need to be conscious of their interests even as they come up with the CSR strategies of companies. Different industries deal with certain unique issues that are industry specific and as such issues of CSR will also affect them in the same way. Businesses need to fit into the societies they find themselves in and be able to adapt to be sustainable. Given the differences in societies and their concerns then even their views of CSR are also likely to differ. Companies should therefore be able to match their interests with the societal expectations on CSR to be successful.

1.1.1 Corporate Social Responsibility Practice

The CSR concept emphasizes community participation by business enterprises. The concept of social responsibility 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.

To be able to address corporate social responsibility effectively, firms should identify their stakeholders and what they expect from the firm. Some of the firm's stakeholders include employees, suppliers, shareholders, government, community/society and customers among others. There are different views on who the firm should be responsible to in the course of its business. According to Friedman (1970) "There is one and only one social responsibility of business which is 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 engage in open and free competition without deception or fraud". Caroll (1979) on the other hand devised a four part model of corporate social responsibility which is economic, legal, ethical and philanthropic responsibility.

Under the economic CSR, a firm should produce goods and services of value to society so that the firm may repay its creditors and stockholders, ensure employees are safe and are paid fairly and that customers buy quality products at a fair price. Legal responsibility is defined by governments through enacted laws that management is expected to obey. A firm must follow the laws of the country in which it is based as well as any internal moral views or objectives that the firm has set. It is the baseline for operating within society. Ethical responsibility requires firms to follow generally held beliefs about how one should act in society. Ethics defines what is good for the firm and for society and establishes the nature of duties that the firm owes to itself and others in society. It relates to doing what is right, just and fair. Philanthropic responsibility relates to discretionary behavior to improve the lives of others e.g. charitable donations, sponsoring sports and health days among many others. Many companies produce a CSR report explaining how it complies with the law. The private sector especially should take on the obligations deriving from the impact of the organization's activities and operations on society, the workforce, the environment and human rights (José-Manuel et al, 2008).

CSR is a "set of management practices that ensures the company maximizes the positive impacts of its operations on society" (Jamali and Mirshak, 2006). McWilliams and Siegel (2001) define CSR practice as operating in a manner that meets and even exceeds the legal, ethical, commercial and public expectations that society has of business. Corporate social responsibility practice affects firms in many positive ways because through the activities the firms undertake, they are able to be known more and may grow in future. Stakeholders can help make or bring down a firm and therefore the need for firms to consider stakeholder's interest as they make strategies to achieve the firm's goals. The firm should then come up with various CSR practices (activities) that meet the expectations of the various stakeholders depending on their influence and capacity.

1.1.2 Financial Performance

Corporate financial performance is defined as the extent to which a firm achieves it economic goals or financial viability (Price & Mueller, 1986). Financial performance can be measured through the use of both accounting based and market based measures. Accounting based measures use accounting information and use ratios that include Return on Assets, Return on equity among others. Market based measures of financial performance include the Tobin Q which measures the ratio of the market value to replacement value of the firms total assets.

1.1.3 The Relationship between CSR Practice and Financial Performance

A firm's ability to profit from social responsibility depends upon its stakeholder's influence capacity. Corporate social responsibility is important and fundamental to the sustainable operations of corporations. Similarly financial performance is undoubtedly fundamental to the continuing operating of any corporation. The most important point is that what the stakeholders are concerned about in developing economies is financial performance. Investors are easily able to get excess returns in emerging markets so they do not take into account long-term sustainability and corporate responsibility in these markets. (Aras, Aybars, & Kutlu, 2010).

José-Manuel et al (2008) and others showed that overall, the corporate practices associated with social responsibility in Spanish firms show a positive and significant impact on the rate of sales growth. The analysis emphasizes the role played by corporate actions concerning human resources and the public disclosure of the different responsibilities assumed by corporations through a code of ethics in increasing sales volume. (José-Manuel et al, 2008). Although there is an orientation towards the attainment of social welfare owing to the fact that several CSR practices do not affect firm performance, this orientation exist side-by-side with the search for competitor differentiation and improving the firm's image, which imply economic advantages associated with returns and profits via increases in sales from year-to-year. (José-Manuel et al, 2008).

1.1.4 Manufacturing, Construction and Allied Sector at the NSE

The firms listed at the NSE are classified into different sectors based on the nature of their activities and operations. The NSE is currently classified into the Agricultural, commercial and services, Banking, Insurance, Investment and the manufacturing, Construction and allied sector among others. This study will be based on the manufacturing, construction and allied sectors which had 14 companies as at 31 December 2011. The manufacturing, construction and allied sector are also affected by the need to be socially responsive and especially the environmental component due to the wastes and other emissions during the manufacturing process. The government has enacted laws and regulations on environmental policies. The National Environmental Management Authority (NEMA) is the principal agent of the government 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.

Licensing of a company by NEMA shows that they are responsible in their management of waste and other environmental issues.

Manufacturing sector also employs a lot of staff for whom they have to be socially responsible for in terms of ensuring that they work in a safe environment free of injury and other accidents, and that should it never the less occur there are structures to ensure staff are properly taken care of. This is also a component of social responsibility practice. Environmental and employee safety are more or less regulated but there are also others components of CSR which are not necessarily regulated.

The Capital Markets Authority is the Government Regulator charged with licensing and regulating the capital markets in Kenya. The Nairobi Securities Exchange is licensed and regulated by the Capital Markets Authority. It has the mandate of providing a trading platform for listed securities and overseeing its member firms .The NSE through the CMA ensures that all listed companies publish their financial reports quarterly and this ensures continuous monitoring of the firms. In July 2011, the Nairobi Stock Exchange Limited changed its name to the Nairobi Securities Exchange Limited. The change of name reflected the strategic plan of the Nairobi Securities Exchange to evolve into a full service securities exchange which supports trading, clearing and settlement of equities, debt, derivatives and other associated instruments.

1.2 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 meet their social responsibilities in order to make a sustainable world. (Jooh et al, 2010). The notion of engaging beyond compliance is ethically desirable, even if, it takes away resources from a firm's immediate needs (Jooh et al, 2010).

There are studies that argue that it is not in the best interest of shareholders for a firm to be involved in CSR practice. Inconclusive and inconsistent results infuse uncertainty in understanding the issues, making it difficult for managers to make the right decisions pertaining to their commitments to investments in the environment and other sustainability efforts that a firm spends resources beyond compliance (Friedman, 1970). Fauzi (2009) refers to Griffin & Mahons (1997) findings that CSP and CFP could be positive, neutral, and negative. Griffin and Mahon (1997) had mapped the relationship between CSP 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 CSP and CFP. Similarly in 1980s and 1990s, the positive direction had been accounted for 14 out of 27 studies and 7 out of 8 studies, respectively. Negative results were supported by 1 study in the 1970s, 17 studies in the 1980s, and 3 studies in the 1990s. 4 studies in the 1970s, 5 studies in the 1980s, and no finding in the 1990s 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 environment, human resource, community involvement, consumers and products.

The relationship between corporate social responsibility and a firm's economic performance has been studied in the past but results of these studies do not appear conclusive. Performance of different sectors is affected by unique factors and is why this study seeks to study a specific sector (Manufacturing, construction and allied) as opposed to all companies in the NSE. This was one of the recommendations in a study done by Cheruiyot (2010). Nkawitei (2011) also 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 corporate social responsibility and 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 none has been done for the manufacturing, construction and allied sector. This study therefore sought to answer the following questions; what is the effect of corporate social responsibility practice on performance of firms operating in the manufacturing, construction and allied sectors? And what are the CSR activities undertaken by firms in the manufacturing, construction and allied sector of the NSE? And how is the relationship between CSR and CFP affected by efficiency and capital intensity of the firm?

1.3 Objectives of the Study

The objective of this study was to establish the relationship between the practice of corporate social responsibility and firm performance in the manufacturing, construction and allied sector of companies listed at the NSE. The specific objectives were:

1.3.1 Specific Objectives

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.

1.4 Value of the Study

Many studies have been done on the relationship between CSR activities and firm performance and have given different results. This study seeks to add to the available knowledge in the topic but with emphasis on the relationship between CSR and firm performance for a given industry or sector.

This study will be important especially for firms in the manufacturing, construction and allied sector as it will inform their decisions in terms of whether to involve themselves in CSR activities in the hope of improving financial performance or not. It will also give the type of CSR activities that their peers are involved in and the resulting effects.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter reviews studies that have been done in the past in the area of corporate social responsibility and even its relationship with firm performance. The chapter also discusses relevant theories in the area of CSR practice which include the stakeholder theory and corporate social performance theory. Various measures of financial performance and CSR are also explained with a clear identification of the measures to be used for this study and how they will be computed.

2.2 Theoretical framework

2.2.1 Stakeholder Theory

The traditional definition of a stakeholder is "any group or individual who can affect or is affected by the achievement of the organization's objectives" (Freeman, 1984). Friedman (2006) states that the organization itself should be thought of as a grouping of stakeholders and the purpose of the organization should be to manage the interests, needs and viewpoints of stakeholders. This stakeholder management is thought to be fulfilled by the managers of a firm. The managers should on the one hand manage the corporation for the benefit of its stakeholders in order to ensure their rights and the participation in decision making. Stakeholders include Customers, employees, local communities, suppliers, distributors and shareholders.

Normative Stakeholder theory contains theories of how managers or stakeholders should act and should view the purpose of organization, based on some ethical principle

(Friedman, 2006). Another approach to the stakeholder concept is the descriptive stakeholder theory, which is concerned with how managers and stakeholders actually behave and how they view their actions and roles on the other.

Management should ensure they balance the multiple claims of conflicting stakeholders (Freeman, 1997). The value of the firm is to create wealth or value for its stakeholders by converting their stakes into goods and services (Clarkson, 1995). Stakeholder theory is based on two ethical principles,"Principle of corporate rights and the principle of corporate effects". The principle of corporate rights means that the corporation and its managers may not violate the legitimate rights of others to determine their future. Principal of corporate effects on the other hand is about responsibility for consequences. Corporations and its managers are responsible for the effects of their actions on others. (Mele, 2006). Therefore stakeholder theory supports the need for corporate social responsibility by corporations.

2.2.2 Corporate Social Performance Theory

Bowen (1953) explained that social responsibility of businessmen refers to the obligation of businessmen to pursue those policies, to make decision or to follow those lines of action which are desirable to society. In the 1970s new directions appeared in the field of business and society relationship. These were as a result of increased protests about capitalism and business growing social concerns that led to increased government regulations, procedures and formal requirements (Mele, 2006). One of the requirements was the adaptation of corporate behavior to social needs and demands including being proactive. (Mele, 2006)

In 1979 Caroll introduced the concept of corporate social performance, and later in 1985 Wartick and Cochran extended Caroll's approach suggesting corporate social involvement rests on the principles of social responsibility, proves of social responsiveness and policy issues of management. In 1991 Wood gave the basic model of corporate social performance which includes institutional, organizational and individual CSR, the process of corporate social responsiveness and outcomes of corporate behavior.

When it applies to the institution it is known as the principle of legitimacy which states that "society grants legitimacy and power to business and that those who don't use it well tend to lose it. Under the organization CSR, a business should adhere to the standards of performance, law and existing public policy. Individual CSR has to do with the managers exercising discretion in their decision making to ensure socially responsible outcomes. Firms therefore need to be more proactive in publishing reports on their economic, social and environmental performance for their CSR activities to be known.

2.2.3 Social Contracts Theory

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.

In 1999 Donaldson and Dunfee developed an integrated social contracts theory as a way for managers to use their discretion to make decisions but to ensure the effects of their decisions do not have negative effects on others. The community therefore expects the business to provide some support to the community under given circumstances. The contract is not written as contracts are generally known, but it is a ‘silent’ agreement. The business only gets to feel the consequences when they fail to do what is expected. It is a societal expectation. This theory can be linked to gaining and maintaining legitimacy as explained by Suchman (1995) in the legitimacy theory.

2.3 Measures of Corporate Social Responsibility Practice

Different methods have mainly been used by prior studies for the measurement of CSR (McGuire et al, 1988). The first method is the expert evaluation of corporate policies. The accuracy of this method depends on the access of the investigator to the full scope of activities of the firm and the expertise of the investigator (Abbott and Monsen, 1979).

Another method of CSR measurement is content analysis of annual reports and other corporate documents. Weber (1990) defines content analysis as “a set of procedures to make valid inferences from text. This consists of the evaluation of the area dedicated to social responsibility in documents published regarding companies (Cheruiyot, 2010). The use of content analysis presupposes the acceptance of the hypothesis that social disclosure is a good proxy of corporate social performance. (Ullman, 1985)

Another measure of CSR is the use of reputational measures. These are ratios worked out by researchers or specialized journals based on their judgment and definition of Social performance. Using the information they calculate a score on the goodwill associated with the reputation of the company, this is called the fortune measure (Cheruiyot, 2010). In America there is an annual classification of American companies based on the corporate reputational index (CRI). This is not yet the case in Kenya. The use of the CRI to measure corporate social responsibility performance assumes that reputation as perceived by third parties is a good proxy of responsible behavior by companies. It also assumes that reputational measures are not influenced by a company's good financial performance. Were this not to be the case then this would not be a good measure of the relationship between CSR and Financial performance (Cheruiyot, 2010).

All of these different measurement methods and approaches produce different results. The last important point related to CSR and financial performance measurement concerns data collection and reliability of the sample. Mostly CSR data relies on company reporting activity that can be manipulated and/or misreported. (Aras et al, 2010)

For the purpose of this study content analysis was used where the rating for the CSR was based on the number of sentences dedicated to each component of CSR in the company's annual report and other publications including the website. A similar measure was used by Fauzi (2009).

2.4 Financial Performance Measures

Previous researchers have used one or only a few measures to assess financial performance based on convenience to the researcher and in terms of ease in getting data for analysis (Cheruiyot, 2010). Financial performance can be measured through the use of both accounting based and market based measures. In cases where accounting information is used then accounting ratios are employed. An example of the accounting measures include, Return on Assets (ROA) and Return on Equity (ROE).

ROA is an indicator of how well a firm has done in using its total assets to generate profit. It can be broken down to both profitability ratio and asset turnover. ROA is obtained by dividing net income by the average total assets (Net Income/Average Total Assets). ROE measures a firm's ability to maximize shareholders wealth based on the book value of shareholders equity. It is measured as Net Income/Average shareholders' equity. The ROA was used as the measure of financial performance in this study.

2.5 Empirical Review

Several studies have been carried out on the relationship between CSR and CFP resulting in different conclusions. Some studies showed a positive relationship, (Waddock & Graves, 1997; Cheruiyot, 2010) others negative (Cordeiro & Sarkis, 1997; Wagner et al 2002) and while still another group concluded that there was no relationship between the two variables, (McWilliams & Siegel 2000; Aragon Correa & Rubio Lopez 2007.

Klassen and McLaughlin (1996) studied 14 manufacturing sectors to conclude that environmental management can play a positive role in improving the 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 the firm's market value which is a good predictor of the firm's expected future profitability (Tobin's Q).

Fauzi (2009) did a research on firms listed on the New York Securities Exchange (NYSE). The objective of his study was to address the relationship between CSP/CSR and Financial performance. Using a sample of 101 companies on the NYSE, he used a regression model with financial performance as the dependent variable and CSR index as the independent variable. He also included a control variable of company size and leverage to see if these variables could have any effect on the relationship between CSR and CSP. His findings were that CSR has no effect on CFP under both slack resource and good management. Slack resource theory posits that a company should have a good financial position to contribute to CSP since CSP needs funds to conduct. Good management theory on the other hand posits that CSR comes first because having a good reputation will make it easier for the company to get a good financial position. He however found that leverage has a moderating effect on the interaction between CFP and CSR.

Cheruiyot (2010) carried out a research whose objective was 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 firms listed in the NSE's main segment as at 31 December 2009 which comprised of 47 listed companies. 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. In this study conducted for a period of five years from 2004 to 2008, he concluded that there was a statistically significant relationship between CSR and financial performance.

There have been conflicting findings on the relationship between CSR and firm performance, Obusubiri (2006) in a study on CSR and portfolio performance found out that there was a relationship between CSR and portfolio performance. He found that companies that were ranked high in CSR performed better than their counter parts that ranked low. Possibly it could be because of the good image that comes with being known for the good things that a company does which makes investors prefer them because of the good reputation. Good CSR behavior has a reputational benefit for the practicing firm.

2.6 Conclusion

The different studies reviewed showed conflicting findings on the relationship between CSR practice and CFP. Some showed a positive relationship, others negative and others no relationship. This area needed further study so as to arrive at a conclusion, possibly the differences could be as a result of the various CSR concerns that affect specific industries or sectors. This study therefore sought to consider the manufacturing and construction sector of the NSE which had not been studied before.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This section explains the design that was used for the research and the population of the study. The chapter also explains how data was collected and the techniques that were used for analysis so as to provide the required results.

3.2 Research Design

This study used regression analysis as it explains the relationship between CFP and CSR practice by the firms. A regression study aims at investigating the existence of an association between two or more quantitative variables. Descriptive statistics were also used to explain the other variables. Descriptive research portrays an accurate profile of persons, events or situations (Robson, 2002).

3.3 Population of the Study

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. The study was carried out on all the listed companies in the sector with the exception of 4 for which the data was incomplete. Therefore, there was no need for sampling. According Cooper & Schindler (2007) a census is feasible when the population is small and necessary when the elements are quite different from each other. 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.

3.4 Data Collection

Secondary data was obtained from audited financial reports of the companies for the last five years from 2007 to 2011 and other publications by the companies including information from the company websites. 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) Due to both time and financial restraints, this was of great advantage. Companies are unlikely to overstate their CSR as it could cause them great reputational damage.

3.5 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. The score for CSR is 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. This method of CSR measurement is known as content analysis. A similar measure was used by Fauzi (2009).

Regression analysis was 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;

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

Where:

F- Financial performance (ROA)

α_o- Constant

x_1- CSR score

x_2- Efficiency,

x_3- Capital intensity

α - a constant/the proportion of various elements

e - the error term

The Statistical Package for Social Sciences (SPSS) version 18 was used to analyze the data collected and descriptive statistics determined for frequencies and percentages for the various variables and components of CSR practice. The results obtained from SPSS are presented in tables and graphs as appropriate.

The R square measure was used to test the significance of the regression model in explaining the relationship between CSR practices and CFP. R square is a measure of how well a regression line approximates real data points. It shows the percentage variance in a variable that is explained by a model. The higher the R square the better the model. The P-Value and the t-test was used to test the individual significance of the predictor variables used in the study.

CHAPTER FOUR: DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

The research objective was to establish the relationship between the practice of corporate social responsibility and firm financial performance in the manufacturing, construction and allied sector of companies listed at the NSE. This chapter presents the analysis and findings with regard to the objective and discussion of the same. The data was collected from manufacturing, construction and allied sector companies listed at the NSE during the period of study which is from 2007 to 2011. The findings are presented using coefficients, frequency distributions, mean and standard deviations.

4.2 Data Analysis

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

i. What is the effect of corporate social responsibility practice on performance of firms in the manufacturing, construction and allied sector of the NSE?
ii. What are the CSR activities undertaken by firms in the manufacturing, construction and allied sector?
iii. How is the relationship between CSR and CFP affected by efficiency and capital intensity of the firm?

4.2.1 Descriptive Statistics

As shown in table 4.1, financial performance had a mean of 0.1164 with a standard deviation of 0.06380, CSR score had a mean of 46.56 with a standard deviation of 30.38608, manufacturing efficiency had a mean of 0.6314 with a standard deviation of 0.13533 and Capital intensity had a mean of 1.2091 with a standard deviation of 0.69072. There is high variability in the variables as shown by the values of the standard deviation.

Table 4.1 Descriptive Measures

Variables	Mean	Std. Deviation
Financial performance	0.1164	0.06380
CSR score	46.5600	30.38608
Manufacturing efficiency	0.6314	0.13533
Capital intensity	1.2091	0.69072

4.2.2 Regression Analysis

The study used Unstandardized Coefficients to come up with the regression equation for the purposes of forecasting. The specific model was of the form;

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

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 α_o is equal to 0.357, which is the value of firm financial performance when capital intensity, CSR score and efficiency were all rated zero. The model also shows that, for every one unit increase in CSR, firm financial performance increases by 0.001 units (α_1=0.001). For every one unit decrease in efficiency, firm financial performance increases by 0.395 units (α_2=-0.395) and for every one unit decrease in capital intensity, firm financial performance increases by 0.020 units (α_3=-0.020). Since efficiency was computed as Cost of Sales/Total Sales then a high measure would mean that the company is being inefficient and therefore the inverse relationship found in this study is expected and therefore justifiable.

Using P-Values to test on the individual significance; a predictor variable is said to be linearly related with the response variable if it's P-Value<0.05. The findings in table 4.2 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 4.2 Regression coefficients

Model		**Unstandardized Coefficients**		**Standardized Coefficients**		**Sig.**
		B	**Std. Error**	**Beta**	**t**	**(P-Value)**
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

4.2.3 Correlation Analysis

4.2.3.1 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 > 0.5). In a situation where two predictor variables have a correlation coefficient > 0.5, then one of them must be dropped from the model. As shown in table 4.3, 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 4.3 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

4.2.3.2 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 4.4 Model Summary

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

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

4.2.3.3 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 4.5, 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 4.5 ANOVA[b]

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

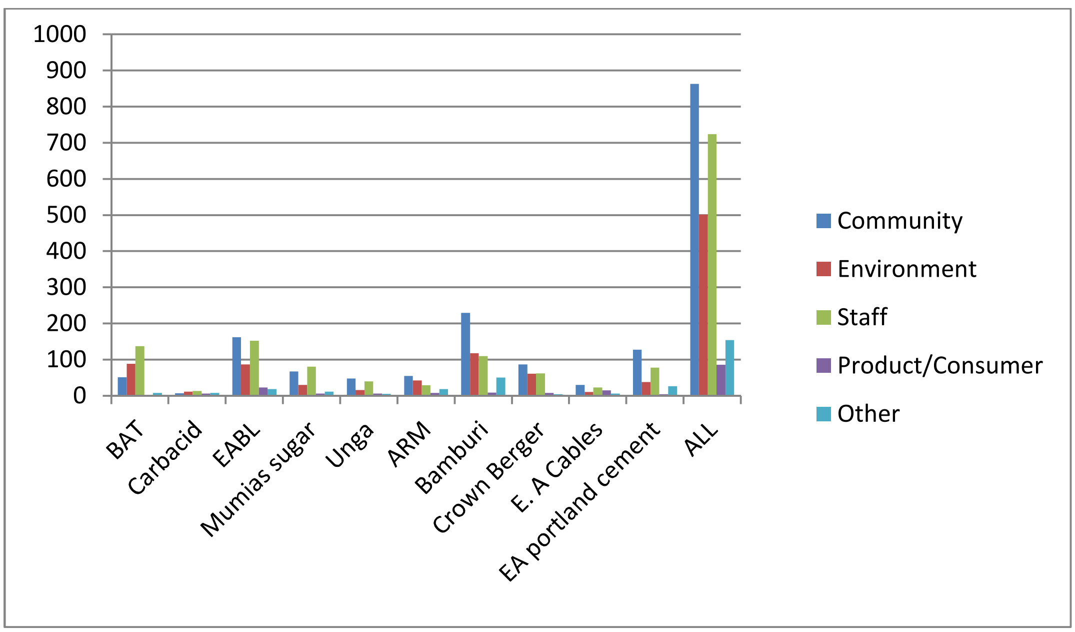
a. Predictors: (Constant), Capital intensity, CSR score, manufacturing efficiency

b. Dependent Variable: Financial performance (ROA).

4.6 Type of CSR Activities Undertaken by the Firms

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 the community followed by the staff and the environment as shown in Figure 4.1. The least undertaken activities are those targeted at the products and consumers.

Figure 4.1: Total CSR Activities Undertaken by Firms (2007 – 2011)



X Axis – Number of sentences on Component of CSR per company

Y Axis – CSR Score (Number of sentences on CSR in Audited Financial Reports)

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter covers the findings of the study and gives a conclusion or the implications of the findings. Also included are the limitations of the study which shows what the researcher was not able to do and how this may have affected the research findings. Finally there is a recommendation for further studies which guide future scholars on what to do to improve or add knowledge to what has been covered by this study.

5.2 Summary

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 firm 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. 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 linear relationship which is inverse. 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 the community followed by the staff then the environment. The least undertaken activities are those targeted at the products and customers.

5.3 Conclusion

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 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.

5.4 Limitation of the Study

The study used secondary data and therefore the accuracy may not be guaranteed. Another challenge encountered during the study was non availability of complete data for some of the companies that were considered for the study. This forced the researcher to drop some of the companies from the study which resulted in a study of 10 out of the 14 companies in the sector. This study therefore covered 71% of the companies listed in the manufacturing, construction and allied sector of the NSE as at 31 December 2011. A much bigger sample may change the results of the study.

There are also no rating agencies for the practice of CSR in Kenya and therefore the study came up with its own scores using content analysis. A standard measure of CRS could result in more comparable variables and results across studies.

5.5 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

Abbott, W.F. & Monsen, R.J., (1979). On the measurement of corporate social responsibility: self-reported disclosures as a method of measuring corporate social involvement, *The Academy of Management Journal, 22,* 501-15.

Aragón-Correa, J.A, & Rubio-López, E.A., (2007). Proactive Corporate Environmental Strategies: Myths and Misunderstandings. *Long Range Planning, 40(3),* 357-381.

Aras, G., Aybars, A., & Kutlu, O. (2010), Managing corporate performance: Investigating the relationship between corporate social responsibility and financial performance in emerging markets, *International Journal of Productivity and Performance Management, 59,* 229 – 254

Bowen, H.R. (1953), *Social Responsibilities of the Businessman,* Harper & Brothers Publishers, New York, NY.

Campbell, J.L. (2007), Why Would Corporations Behave in Socially Responsible Ways? An Institutional Theory of Corporate Social Responsibility, *Academy of Management Review, 32,* 946-967.

Carroll, A.B. (1979), A three-dimensional conceptual model of corporate performance, *The Academy of Management Review, 4 (4),* 497-505.

Carroll, A.B. (1991), The pyramid of corporate social responsibility: toward the moral Management of organizational stakeholders, *Business Horizons, 34*, 39-48.

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.

Clarkson, M. (1995), A stakeholder framework for analyzing and evaluating corporate social performance, *Academy of Management Review, 20,* 92-117.

Cochran, P.L., & Wood, R.A. (1984), Corporate social responsibility and financial performance*, The Academy of Management Journal, 27*, 42-56.

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.

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

Friedman, M., & Friedman, R. 1962. *Capitalism and Freedom*. Chicago: University of Chicago Press.

Friedman, M. (1970), The corporate social responsibility is to increase its profits, *New York Times Magazine*, September 13, 32-33, 122-6.

Friedman, A.L. and Miles, S. (2006). *Stakeholders: Theory and Practice*, Oxford

University Press.

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.

Hopkins, M. (2007) The Planetary Bargain: *Corporate Social Responsibility Matters*, London: Earthscan Publications.

Jamali, D., & Mirshak, R. (2006), Corporate Social Responsibility (CSR): theory and practice in developing country context, *Journal of Business Ethics, 72*, 243-62.

Jooh, L., Niranjan, 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.

José-Manuel, P.L., Isabel, G.Á., Isabel, M. G. S., & Luis, R. D. (2008), Social responsibility in Spain: Practices and motivations in firms, *Management Decision, 46,* 124 –1271.

Kivuitu, M., & Fox, T. (2005) *How can Corporate Social Responsibility Deliver in Africa?* Insights from Kenya and Zambia, Perspectives on Corporate Responsibility for Environment and Development, No. 3, London: IIED

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.

McGuire, J.B., Sundgren, A. & Schneeweis, T. (1988), Corporate social responsibility and firm financial performance, *The Academy of Management Journal, 31(4),* 854-72.

McWilliams, A. & Siegel, D. (2000), Corporate Social Responsibility and Financial Performance: correlation or misspecification? *Strategic Management Journal, 21(5),* 603-9.

McWilliams, A. & Siegel, D. (2001), Corporate Social Responsibility: A theory of the firm perspective, *Academy of Management Journal, 26*, 117-27.

Mele, D. (2006). *Mainstream Theories in normative Corporate Social Responsibility*. An analysis from catholic social thought.

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.

Price, J. L. & Mueller, C. W. (1986). *Absenteeism and turnover of hospital employees*, Greenwich, IT: JAI Press.

Roberts, R. W., Mahoney, L. (2004). Stakeholder Concept of the Corporation: Their Meaning and Influence in Accounting Research, *Business Ethics Quarterly, 14/3*, 399-431.

Suchman, M.C. (1995), Managing legitimacy: Strategic and institutional approaches: *Academy of Management review, 20,* 571-610,

Ullmann, A.A. (1985), "Data in search of a theory: a critical examination of the relationships among social performance, social disclosure, and economic performance of US firms, *The Academy of Management Review, 10 (3),* 540-57.

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.

Wartick, S.L., & Cochran, P.L. (1985). The evolution of the corporate social performance model, *The Academy of Management Review, 10 (4),* 758-69.

Weber, R. P. (1990), *Basic Content Analysis,* Sage, Newbury Park, CA.

APPENDICES

Appendix A: List of Firms in the Study

Manufacturing and Allied Sector

1. B.O.C Kenya Ltd.
2. British America Tobacco Kenya Ltd
3. Carbacid Investments Ltd
4. East Africa Breweries Ltd
5. Mumias Sugar Co. Ltd
6. Unga Group Co. Ltd
7. Eveready East Africa Ltd
8. Kenya Orchards Ltd
9. A Baumann Co. Ltd

Construction and Allied Sector

10. Athi River Mining ltd
11. Bamburi Cement Ltd
12. Crown Berger ltd
13. East Africa cables Ltd
14. East Africa Portland Cement Ltd

Appendix B: CSR Score Computation

Company Details	Community Involvement	Environmental Concerns	Employee Concerns	Product/Customer concerns	Other	Total Score On CSR
B.O.C Kenya						
B.A.T Kenya						
Carbacid Investment						
E. A B. L						
Mumias Sugar						
Unga Group						
Eveready E. A						
ARM						
Bamburi						
Crown Berger						
E.A. Cables						
E.A Portland						

Total score Per Component						

*A score is made up of a sentence on the component of CSR

Appendix C: 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 cement	0.0855	0.0591	0.1522	-0.0236	0.0415	0.0629

Source: Computed from Audited Financial Reports

Appendix D: 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: Audited Financial Reports

Appendix E: Efficiency

	Company	2007	2008	2009	2010	2011	Average
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 F: Capital Intensity

	Company	2007	2008	2009	2010	2011	Average
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

Appendix G: 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

Computed from Audited Financial Reports