Corporate Social Responsibility and Performance: A Case Study of Mining Companies in Ghana

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Abstract
Corporate Social Responsibility (CSR) has become very important in recent years, especially its impact on business operations. Using mining companies in Ghana as a case study, this study investigates the extent to which CSR activities engaged by companies relate to their performance.Content analysis is used in measuring the CSR activities of mining companies in Ghana. The study reveals a positive relationship between return on equity and all the CSR variables(environmental management systems, employee relations and community performance). Net profit margin relates positively with CSR activities such as environmental management system and employee relations whilst return on asset was found to have a positive relationship with only oneemployee relations. Mining companies should be engaged in CSR activities that positively impact on financial performance since this eventually translate into creating value for host communities.
Keywords: corporate social responsibility, mining companies, financial performance.

1.0 Introduction

The motives for Corporate Social Responsibility (CSR) are not often questioned as it is supposedly seen as the right thing to do. It has also become an operational norm for firms and is used as the benchmark of a firm's level of ethical behaviour. The future approach of firms and directors to CSR could be dependent on the relationship between CSR reporting and performance. When the relationship is positive it may encourage companies to report on more CSR activities that they undertake. In other words, a negative relationship might encourage the company to have a second look at reporting CSR. Using large scale mining companies in Ghana, as a case study, the objective of this study is to ascertain whether there is any relationship between CSR activities and financial performance. In this study, we measure financial performanceusing return on equity (ROE), return on assets (ROA) and net profit margin (NPM). Our proxies for CSR activities include environmental management systems, employee relations and community performance.

Over the decades, the many studies that have empirically examined the correlation between CSR activities and financial performance has resulted in contradictory findings (Marom, 2006). Whilst some researchers found a negative relationship, others found a positive relationship and some found no relationship. Studies such as Joyner and Payne (2002), Popeck (2006), Deegan (2002) and PricewaterhouseCoopers (2002) study identified positive relationship between the value of a firm and it level of CSR reporting. With the case of Popeck (2006), the study concluded that companies would be more willing to report CSR if it had available resources to do so. According to the study, firms are motivated to provide social and environmental disclosure because it is likely to improve their financial performance. In the view of Deegan (2002), companies provide information to show investors and other stakeholders that they are trustworthy. In the case of PricewaterhouseCoopers (2002), the importance of CSR to their company revealed that majority of managers felt these disclosures were essential to their company's continued profitability. Companies' CSR activities conducted could have a positive effect on their financial performance (Orlitzky*et al,* 2003; Bird *et al.,* 2007) whilesproviding goodwill for a firm in the long run (Soloman and Hansen, 1985). Environmental protection, good relationship with government, and ease of access to financial institutions are some advantages associated with engaging in CSR activities.

In spite of the forgoing studies, Setiawan and Darmawan (2011) stated that the argument on whether CSR affects the financial performance is still inconclusive (see Griffin and Mahon, 1997 and Margolis *et al*, 2007). Some previous studies revealed that CSR could have a negative effect on the financial performance (Johnsen and Gjoelberg, 2009) due to the fact that companies pay additional cost for the CSR activities such as making donations, establishing production process with environmental protection, and developing the community development (Mc Guire*et al.,* 1988; Bragdon& Marlin, 1985). Little research exists on the CSR and financial performance in Ghana as far as the mining companies are concerned (Arthur et al., 2017). Furthermore, it is hard to find a research that investigates the relationship between CSR and performance of companies in the economy of Ghana especially in the mining sector using panel data technique. This paper seeks to contribute to the existing body of work in this area by examining the extent to which corporate social responsibility contributes to financial performance of large mining companies in Ghana.

One of the policy implications of this study is that if the CSR activities have a positive effect on the financial performance of the company, it should encourage the companies to embark on more of the existing CSR activities and less if the CSR has negative effect on the financial performance. It will assist companies to evaluate the ineffective CSR activities on the financial performance (Setiawan&Darmawan, 2011). This study will help in designing the appropriate policy for the mining companies in particular and other companies in general who are involved in CSR activities. It will also assist government of Ghana in the formulation and implementation of CSR regulations.

The remainder of the paper is organised as follows. The next section discusses the literature review. Data description and methodology used in this study are explained in section three. The fourth section presents results and analyses and the conclusions are presented in the final section.

2.0 Literature Review

2.1 CSR Policy and Practices in Ghana

Corporate Social Responsibility is the term used to describe a company which conduct its business in a socially acceptable manner, and holds itself responsible for its effects on the environment and its stakeholder. Therefore, CSR measures the impact a company's activity has within and outside the organisation (European Commission, 2001). It is the actions in which the firms take into account their involvement in the social activities as well as mitigate the effects of their business on the community and natural environment. In the view of McWilliams and Siegel (2001), CSR is defined as the actions that appear to further some social good, beyond the interest of the firm and that which is required by law. There are two main areas that CSR activities are done, namely, inside and outside the company. Within the company, they include human resources, health and safety and the management of environmental impacts and natural resources. Outside the company, they include host communities, suppliers, consumers, human rights, and the environment (European Commission 2001).

One of the main reasons why companies disclose CSR activities is that companies have accepted that they have a responsibility to a large range of stakeholders in society and therefore report on their CSR activities (Parket and Eilbirt, 1975). The other argument is that there are payoffs such as better public relationship, increased product recognition, increased employee motivation, an increased labour pool, and ultimately increased long term profitability to organisations that report CSR (Parket and Eilbirt 1975). Since CSR is the action strategy of the firms and has the consequence on the cost, CSR might affect the firm financial performance. Furthermore, the CSR conducted by the firm can also lower the social risk and may benefit firms in the long run. Whether CSR might be an advantage or disadvantage for the firms may be depended on how effectively CSR activities are applied by the companies.

In Ghana, as in many countries, companies are not mandated by law to implement CSR activities in the country. The CSR activities are undertaken more in response to moral convictions rather than legal obligations. CSR has evolved slowly from a traditional concept of business philanthropy to the adoption of formal practices, policies and programs in large companies in a number of key sectors. Even though few companies have adopted and internalize practices of CSR in a formal way, many companies in Ghana, particularly large enterprises, are doing everything possible to be socially responsible. The government of Ghana have influence these companies to appreciate CSR by putting in place legislation that defines minimum standards for business performance in terms of policies, laws, practices and initiatives framework. Some of these legislations include constitutional provisions, local government laws and requirements for environmental impact assessments contained in an Act of Parliament. CSR practices have also been encouraged by the government by providing incentives to companies undertaking such activities by granting tax incentives for example to firms that donate for charitable purposes and for sports.

According to Ofori and Hinson (2007), those companies who have some international connection adopt better social responsibilities than the indigenous Ghanaian firms with no international connections. The findings from their studies claimed that the internationally connected companies are more strategic, moral and ethical in their approach to CSR. The indigenous companies and the internationally connected counter parts are rather concentrated on a few select areas such as education, safety, environmental damage, healthcare and consumer protection (Ofori and Hinson, 2007). In the view of Ofori (2006) indigenous companies do not adopt good corporate practices. But Ofori (2007) found that companies that are quoted on the Ghana Stock Exchange are very much aware of their societal obligations and therefore make effort to address most of the concerns raised by their major stakeholders. Most companies in Ghana are aware of the importance as well as the need to adopt CSR practices (GTZ, 2009). On the other hand, it seems companies are straddling several divides and sometimes appear that the CSR is not strategically and haphazardly done. According to SRC Consult (2010), 50% of respondents of the studies they conducted in Ghana pay heed to global CSR agreements like the UN Global Compact, whilst others follow local Ghanaian initiatives like the Ghana Business Code. According to the studies, the main rationales for CSR practices by such companies are to improve the image of the business and engage in socioeconomic development for the key stakeholders.

In Ghana, companies' CSR concepts revolve around a few major areas: health, cash donations (philanthropy), education, environment, capacity building, company products (philanthropy), and events sponsorship (philanthropy). Some of the factors that motivate CSR selection and design by most companies in

Ghana according to SRC (2010) include the needs, interests and expectations of beneficiary communities, companies' resource requirements, and CSR policy and frameworks and guidelines. However, it was realised that although all companies do some form of sustainability reporting but not all companies assess the impact on their CSR practices. One of the main hindrances identified by SRC Consult (2010) is the inadequate allocation of company funds and human resources towards CSR practices by some companies. The study also lamented that many requests from stakeholders, impeded the companies' ability to fully meet the needs of beneficiaries, lack of a sufficiently good insight into the need to be met, and lack of a clear fit between the company's CSR policy and the beneficiary request/need. The companies are then forced to split their resources amongst many competing demands of the stakeholders.

2.2 The Concept of Accountability

Accountability has been defined by Gray et al. (1991) simply as explaining or justifying what is being done currently and what is planned through the giving of information. Accountability involves, therefore, the giving of information and for that matter providing a report to the stakeholders. According to Gray et al. (1991) organizations are accountable to society at large for their actions and therefore are required to account for the extensiveness to which they complied with the law. They contend that this condition reflects, to a substantial extent, on the distribution of information in general and accounting information in particular among the organization and the individuals, groups and parties in the society.

In their accountability model, Gray et al. (1991; 1996) hypothesise a simple two-way relationship between an accountee and accountor. The accountee, who they call the 'principal', is the 'shareholder' whereas the accountor, who they call the 'agent', would be a 'director' of the organisation in the conventional financial accounting context. In the light of this, it can be deemed that society consists of series of individual social contracts' between members of the society and the society itself that assigns responsibility and right to information. It is also considered that society that determines accountability. The forgoing accountability definitions imply, therefore, that there are three constituents with respect to the idea of accountability namely: (1) the duty to provide an account by those who are accountable (i.e. the provision of information). (2) the responsibility of those who are held accountable for actions and perhaps their consequences: (3) the provision of an account of actions and perhaps their consequences to the accountee (Principal) which might serve as a basis for judgement and assessment by such an accountee, and may affect their decisions.

Many social accounting scholars have proposed that disclosure on social and environmental issues is one of the means through which accountability functions are performed by the organisation because a lot of information is transmitted to a wide variety of stakeholders regarding organisations' social and environmental impacts (Gray, et al., 1996; Unerman, 2000; Adams, 2004; O'Dwyer, et al., 2005; Bouten et al., 2011). Therefore, to perform accountability function, however, these disclosures need to demonstrate corporate acceptance of a company's social and environmental responsibility (Adams, 2004). It is true that companies are increasingly disclosing corporate social responsibility information (Archel et al. 2008; Gray et al., 2001; Adams, 2004; Bouten et al., 2011), but the question is whether these information they are disclosing is adequate and the kind of impact they have on the stakeholders (Hopwood, 2009).

There is an increasing awareness over the issue of corporate accountability and the need for sustainability reporting. In the 1970s, with a clear increase in non-financial information disclosure, the limitation of the 'decision usefulness' approach became clearer. As a result academics sought an alternative to the decision usefulness approach and considered the role of corporate accountability. Conceptually, accountability is a more sophisticated version of stewardship (Gray et al., 1991, p.3), which recognises that companies should have a responsibility to contribute to social welfare as well as a responsibility to serve the owners' interests. In any democratic system, all companies should be accountable not only to their owners but also to society-at-large (Gray et al., 1991) as all individuals have rights to information (Stanton, 1997).

Companies remain unclear about a number of decisions on information disclosure. For instance, the decision on what information categories to disclose is not straightforward nor is the decision on 'who determines the terms of accountability' and 'to whom the accountability is held'. There are differing views on when accountability is due. Tricker (1983) and Stewart (1984) argue that unless the principal can enforce the accountability then there is no accountability, whereas Gray et al., (1996) takes a different view and argue that accountability can exist even if it is not enforceable. This demonstrate why sometimes companies fail to provide information even when they are forced but do provide when they are not forced or obliged to do so. This means that accountability is not necessarily reflected by information disclosure. In this case it could be explained that in a democratic society companies are under moral obligations to fulfil certain tasks that are expected of them. The fact that certain interested groups do not have the power to demand information shouldn't prevent them from securing information that they need. It should rather be disclosed on grounds of rights to information by referring to the natural and moral rights but not only to the legal requirements.

Organisations have used accounts to disclose information to their stakeholders. Currently, such 'accounts' are predominantly financial and are geared towards the most powerful stakeholders (Gray et al., 1996). Information reported by companies should not be made for the benefit of only the most powerful stakeholders but must address issues of interest to a wide range of stakeholders. In the absence of legal and regulatory requirements for CSR disclosure, the way companies predominately concentrate on financial information and disclose CSR information on voluntary basis, suggest that companies do not discharge their accountability to their society. They disclose information for reasons other than discharging their accountability to their society. One of such reason may be the financial performance of the company reporting on the CSR activities.

2.3 Stakeholder Theory

The stakeholder theory is concerned with how a firm creates value for stakeholders through the integration of business and societal factors (Freeman 1984). Garriga and Melé (2004) think it is necessary for firms to detect and respond to social demands if they want to achieve social legitimacy. To capture the multiple dimensions of this managerial theory, Freeman and Velamuri (2006) proposed the term company stakeholder responsibility, to extend the stakeholder approach to value creation to all businesses, and to stress that its business is inseparable from ethics.

In order to summarise the various approaches of stakeholder theory it is necessary to consider the assumptions that underline it. Firms are systems that interact with the external environment on a continual basis. The external environment is divided into groups, stakeholders that affect firms and who are affected by firms' operations (Freeman, 1984). Clarkson (1995) believes that stakeholders have a moral, legal or presumed claim on the firm and are able to affect the decisions it makes. Stakeholders are usually treated as resource providers, risk bearers or as firms and residual claimants (Jones 1995). Due to firm's relationship with some stakeholders CSR can contribute to profit.

Although management research places emphasis on internal stakeholders, secondary stakeholders that do not have a formal contractual relationship with a firm or direct legal authority over the firm, such as the public, community activists, public institutions and non-governmental organizations are increasingly coming to the focus of researchers because of their ability to put pressure on firms (Eesley and Lenox, 2006), by imposing operational costs (e.g., public relation expenses) or losses of intangible resources (e.g., trust and reputation). It is assumed that the interests of all stakeholders have intrinsic value as no set of interests is considered more important than others (Freeman and Wicks, 2003). Also, in stakeholder theory a central feature of the organization is its morals and values. According to Donaldson and Preston (1995), these assumption defines stakeholder theory's normative foundation where each stakeholder's viewpoint is considered on its own basis. The stakeholders of one firm are the same for another and the relationship between firms and stakeholders vary. Stakeholder theory involves the nature of these relationships in terms of processes and outcomes for the firm and its stakeholders. Although stakeholders' interests are normatively legitimated, firms try to balance often conflicting, costly interests. The overall logic is that CSR strengthens firm's relationships with stakeholders, decreases transaction costs and improves financial performance. According to King and Lenox (2000), CSR can reduce operating costs and create opportunities and act as a buffer from disruptive events. CSR can be viewed as an investment which can result in sizable financial returns, in addition to any benefits that might accumulate to society.

2.4 Legitimacy Theory

Clarke and Gibson-Sweet (1998) argue that the legitimacy theory can also be used to explain the relationships of CSR reporting and financial performance of a company. They add that social and environmental disclosures result from crises that have occurred and are used to manage a firm's reputation and to show that they are committed fixing problems. This theory suggests that a company that does not manage its reputation will experience a decline in sales. Clarke and Gibson-Sweet (1998) tested whether this theory is used by companies and found that legitimacy theory encouraged companies to engage and report on CSR activities. Deegan (2002) describes legitimacy theory as a "system-oriented theory" and argues that CSR is essential for a firm's survival because a bad reputation can lead to boycotts by consumers and ultimately bad financial performance.

2.5 Financial Performance Measures

Financial performance has been commonly used by researchers over the years as having an association to CSR. Previous findings suggest that the disclosure of CSR information is associated with the overall corporate performance. Corporate performance is measured using either accounting-based measures (e. g. gearing, return on investment and return on assets) or market-based measures (e. g. systematic risk, market return and dividend yield). According to McGuire, Schneeweis and Hill (1986), accounting-based measures are more commonly used by previous studies than market-based measures as they are more easily available from annual reports and from different data sources. One of the shortcomings of accounting-based measures is that it reflects historical aspects of firm performance (McGuire et al, 1986). Secondly, they are prepared using accounting conventions, which are subjective and, therefore, prone to risk of bias and managerial manipulations (McGuire et al, 1986). Finally, accounting-based measures should be adjusted for risk, industrial affiliation and other variables (Ullmann, 1985). On the other hand, market-based measures are less open to bias or managerial manipulation and do not rely on past performance. In view of that, investors can use them to elevate their perception of a company's ability to generate future economic earnings (McGuire, Sundgren and Schneeweis, 1988). However, the main demerit of market-based measures is that performance is viewed from investors' viewpoints and ignores other stakeholder groups (McGuire et al, 1988).

In this study, our decision to use accounting-based performance measures is premised on a number of reasons. Firstly, accounting-based performance measures represent different performance aspects, which are of interest to different stakeholder groups, rather than using market-based measures, which reflect only the interests of the investors. Secondly, the disclosure of CSR information is likely to be based on a decision that was taken by a company a while ago and is therefore as a result of the past performance. In consideration of this, it would be more suitable to use accounting-based performance measures. Different ratios can be used as accounting-based performance measures. There is a range of financial ratios that present various aspects of a company's financial performance but we adopted return on equity (ROE), return on assets (ROA) and net profit margin (NPM). The main reason is that there is no specific set of ratios used by all the analysts and researchers to present different aspects of corporate performance (Courtis and Laurent, 1979).

ROE and CSR disclosure has been studied by many researchers internationally over the years (Kemp, 2001; Utaminingtyas and Ahalik, 2010) but few studies have been done on relationship between CSR and the company profitability especially in developing countries (Kemp, 2001). Several profitability measures have been used in disclosure literature to measure a firm's profitability (Dainelli et al., 2013). A more reliable measure of profitability is the use of an extended period (Hackston and Milne, 1996). In this study the five-year average return on equity (EBIT/total equity) is used as one of the measures for performance (Burgwal and Vieira, 2014). This is because the most used capital return which measures the "net profit on equity" is the most widespread index (Cahan et al., 2005; Chau and Gray, 2010; Chavent et al., 2006; Lim et al., 2007, Owusu-Ansah, 1998). This is followed by the "net profit on total assets" (Cahan et al., 2005; Eng and Mak, 2003; Wang et al., 2008). There are few previous studies that have investigated the association between ROA and the CSR disclosure (Bouten et al., 2012; Parsa and Kouhy, 2001; Lu and Abeysekera, 2014). Studies by Orlitzky et al. (2003) and Bird et al. (2007) found that CSR practices adopted by companies could have a positive effect on their efficiency of activities. This is because companies with a higher level of disclosure have been attributed to have a better image and therefore, are regarded by stakeholders such as investors, lenders and banks as a lower risk company.

As noted above, in measuring financial performance a variety of financial performance measures have been used, from investor returns to accounting returns or a combination of the two (Margolis and Walsh, 2003). Over the years CSR activities have been examined to prove that they result in favourable rate of return (Barnett, 2007). Studies that have found negative impact of CSR activities on financial performance consider CSR practices as unnecessary costs that creates competitive disadvantage as resources could be used to improve firm efficiency (Barnett 2007). Some deem it the role of governments and public sector organizations to tackle society's problems not that of firms. According to Jenson (2001), when a firm carries out CSR activities there is risk that its objectives become unclear due to managers and directors facing governance challenges of trying to achieve multiple goals simultaneously. This argument is not supported by studies that concluded that there is a positive relationship between CSR and economic performance. For instance it is reported by Orlitzky et al. (2003) that firms are able to manage the expectations of their social context of reference and that firms that answer the expectations of stakeholders have lower transaction costs. Barnett (2007) states that trust in a firm is improved and is better placed to face competition.

Even though there is a general positive attitude towards CSR, periodic reviews have suggested that studies are intrinsically flawed and reinforce the tension surrounding the business case for CSR (Barnett 2007). The lack of a universal measure for social performance and its effect on financial performance may be due to the method used to evaluate social results. Rowley and Berman (2000) state that many studies assume that it is impossible to prove the business case for CSR even if theory is ingenious, terminology is clear, data is accurate. Ionescu-Somers and Steger (2005) suggest that results may be inconsistent because the relationship between social and economic performance is complex and contingent to many factors at the team, firm and industry levels. Also,Utaminingtyas and Ahalik (2010) investigated the relationship between corporate social responsibility and earning response coefficient using cross-section data. They found that there is a significant effect of CSR on the earning response coefficient. In contrast, Johnsen and Gjoelberg (2009) in their research found that CSR could have a negative effect on the firm financial performance. In this regard, it can be argued that the relationship between CSR and company's performance is still inconclusive (Margolis et al., 2007).

3.0 Research Method

The main aim of this research is to establish the relationship that exists between CSR and financial performance of mining companies in Ghana. To ensure CSR is measured accurately, content analysis is used in this research (Bowman and Haire, 1975) to collect CSR scores or information. Weber (1988) defines content analysis as "a method of codifying the text (or content) of a piece of writing into various categories depending on selected criteria." Researchers such as Guthrie and Parker (1990) and Gray et al. (1995) found the use of content analysis in CSR research to be empirically applicable. To ascertain the CSR scores unit analysis of words, sentence and pictures are the methods usually used (Deegan and Gordon, 1996). According to Weber (1988), counting sentences is reliable and accurate measurement technique. Milne and Adler (1999) argued that sentences are used "for coding and measurement because they provide complete, reliable and meaningful data for further analysis". Tsang (1998) suggests that this is because sentences describe meanings whilst words do not always carry the meaning that they are counted for. The measurement of CSR scores in terms of words was justified by maintaining the greater detail (Deegan and Gordon, 1996; Mahadeo et al., 2011). According to Zeghal and Ahmed (1990), words are the smallest unit of measurement and can be expected to provide the maximum strength to the study. The amount of disclosure (per theme and per company) is measured using a volumetric word count. Word counts are seen to be an appropriate reflection of the importance that companies attach to the level of CSR (Campbell et al., 2006; Gray et al., 1995a; Ratanajongkol et al., 2006; Wilmshurst and Frost, 2000; Mahadeo et al., 2011) and have been found to be highly correlated to other measures, such as sentences or percentage of pages (Islam and Deegan, 2008, p. 859). One of the criticism of using words as a basis for measurement is that, it is considered to be ambiguous measure, leaves the researchers pondering which individual word is CSR and which is not, therefore, the possibility remains that disagreement between different coders could be quite serious (Hackston and Milne, 1996, p.84). Furthermore, Milne and Adler, (1999) argued that individual word alone cannot provide a sound basis for CSR without a sentence or sentences for context. Word as a unit of measurement has the advantage of giving a detailed description of CSR with more accuracy (Zeghal and Ahmed, 1990).

The case study approach and the reliance on annual reports and sustainability reports over a period of five years is a method similar to that used by Ekatah et al. (2011). To improve accuracy Guthrie *et al*. (2004) suggested that all documents containing CSR information issued by a firm should be used to reduce the difficulty of identifying all CSR scores. In the view of Guthrie *et al.* (2004), annual reports hold important information as managers can signal significant issues through reporting. This assertion is supported by Adams and Harte (1998) where they stress on theimportance of the corporate annual report to be potential influential in this regard. In this research content analysis is carried out by converting each companyannual report from PDF format into word format. With the use of the 'Find Function' a search for different keywords and related terms associated with CSR is made. A list of each searched keyword created will show its occurrence in the annual report. Only CSR keywords that are related will be counted and recorded on a spreadsheet to ensure the accuracy of content analysis. The essence of this is to reduce the problem highlighted by Tsang (1998) of words not carrying the meaning for which they are counted.

In order to measure the performance of mining companies in Ghana, profitability ratios were used. This is because ratios allow for year to year comparisons to be made by using the figures on a company's statement of financial position. Therefore, net profit margin (NPM), return on assets (ROA) and return on equity (ROE) are used to calculate financial performance as adopted by Griffin and Mahon (1997). The use of different profitability ratios provides different insights into the financial performance of a company. The NPM is used by analysts to determine whether a business is making progress and it is net profit as a percentage of sales/ revenue (Elliot and Elliot 2008). ROE is calculated by taking a year's worth of earnings and dividing them by the average shareholder's equity for that year (Elliot and Elliot 2008). The ROA is an indicator of how profitable a company is relative to its assets. It gives an idea as to how efficient management is at using its assets to generate earnings and is calculated by dividing a company's annual earnings by its total assets multiply by hundred.

3.1 Model Specification

To investigate the relationship between CSR disclosure and firm performance, using the panel data technique, the regression model is represented as follows:

$$LnPer = \beta_0 + \beta_1 \, lnEMS + \beta_2 \, lnER + \beta_3 \, lnCP + \varepsilon$$

Where $LnPer$ represents the financial performance measured by ROE, NPM and ROA and $\beta_0 + \beta_1 \, lnEMS + \beta_2 \, lnER + \beta_3 \, lnCP + \varepsilon$ represent the transformed values of the CSR measure. β_0 is the intercept, andβ_1 , β_2 and β_3 are the slope coefficients of the regression line, and ε is the random error term. The random error term is assumed to be independently distributed of each other error terms and to have zero mean and constant variance. The slope coefficients for the regression of each disclosure variable on the characteristics within the period and the t-values for the two sided test are presented in the various tables that follow. A robust regression model was performed and the results presented in Table 3 for dependent (ROE, NPM and ROA) and independent variables (environmental management system, employees relation and community performance) for ten mining firms for five years from 2008 to 2012.

4.0 Results and Discussion

This section of the study is devoted to presenting the results of the analysis performed on the data collected to test the propositions made in the study and answer the research questions. The analyses were carried out with the aid of the STATA (12). It also reveals the type of relationship that exists between ROE, NPM and ROA from 2008 and 2012 for ten top mining companies in Ghana. Descriptive statistics data employed in the analysis are shown in Table 1. The mean, standard deviation, minimum and maximum values for the three measurements of CSR and performance measures are provided.

Table 1: Descriptive

Variable	Mean	Std. Dev.	Min	Max
ROE	10.79902	.7015388	9.573037	12.01567
NPM	4.717834	.6217834	3.850147	5.96614
ROA	8.362568	1.028352	5.07517	10.00969
EMS	4.71209	1.075799	-1.60943	5.129485
ER	6.181317	.4467618	3.157	6.520621
CP	1.110945	1.250712	-2.52572	2.338917

Table 2 shows a Pearson correlation analysis on all the variables in order to determine the degree of relationship among them. ROE is significantly correlated to community performance ($p<5\%$ level). Similarly, NPM is also significantly correlated to system for employee relations at 10% significant level. These results suggest that as corporate social responsibility increases organisation earnings increases.

Table 2: Correlation

	ROE	NPM	ROA	EMS	ER	CP
ROE	1.0000					
NPM	0.9284	1.0000				
	0.0000					
ROA	0.5980	0.5246	1.0000			
	0.0000	0.0001				
EMS	0.2160	0.2245	-0.0084	1.0000		
	0.1320	0.1070	0.9539			
ER	0.1403	0.0546	0.0601	-0.0535	1.0000	
	0.3310	0.7063	0.6786	0.7119		
CP	0.3582	0.1733	0.1760	0.0335	0.0312	1.0000
	0.0106	0.2288	0.2215	0.8172	0.8299	

Table 3 presents summary of regression model with the value of R-square 0.1897 represents the correlation between ROE and the CSR variables. The R^2 which indicates the explanatory power of the independent variables is 0.1897. This means that 18.9% of the variation in ROE is explained by the independent variables. The R^2 value as revealed by the result is quite low which means that about 79.1% of the variation in the dependent variable is unexplained by the model, denoting a weak relationship between the explanatory variable and ROE. The fitness of the model can also be explained by F-ratio (F) and according to Andy (2000), "a good model should have a large F-ratio (greater than one at least)". From Table 3, F-ratio in the model are 9.24, which is significant at $p<0.0001$. This means that there is significant evidence to infer that at least one of the explanatory variables is linearly related to ROE and the model seems to have some validity.

Table 3: Regression Analysis of Return on Equity

Model	Coef.	Std. Err.	t	P>t	[95% Conf. Interval]	
EMS	.1381764	.0360862	3.83	0.000	.0655386	.2108142
ER	.1944571	.0477978	4.07	0.000	.0982452	.2906691
CP	.2212144	.0819987	2.70	0.010	.0561595	.3862692
Constant	8.564498	.561653	15.25	0.000	7.433949	9.695047
Number of obs.						50
F(3, 46)						9.24
Prob> F						0.0001
R-squared(Adjusted R-squared)						0.1897
Root MSE						.65177

Table 4 shows the results of the coefficients of regression model with NPM. The standard error of the estimate explains how representative the sample is likely to be of the population. The R-square value, which indicates the explanatory power of the independent variables, is 0.0817. This means that 8% of the variation in NPM is explained by the independent variables (EMS, ER and CP). It can therefore be concluded that the R-square value is quite low since about 92% of the variation in the dependent variable is unexplained by the model, denoting a weak relationship between the explanatory variables. The t-values for environment management system, employee relations and community performance, are 4.89, 2.03 and 1.09 respectively. These values are also significant at p-values < 0.05 and 0.10 with the exception of community performance (p-value>0.05). It can be inferred from the results that apart from community performance extra expenditure made on, environment management system and employee relations increases the NPM of the company. It can also be seen from the Table 4 that the F-ratio is 8.11, which is significant at p < 0.05. This suggests that at least one of the explanatory variables is linearly related to NPM.

Table 4: Regression Analysison Net Profit Margin

Model	Coef.	Std. Err.	t	P>t	[95% Conf. Interval]	
EMS	.1284984	.0262788	4.89	0.000	.075602	.1813949
ER	.081498	.0400712	2.03	0.048	.0008388	.1621573
CP	.0854992	.0787809	1.09	0.283	-.0730785	.2440768
Constant	3.4933	.5149636	6.78	0.000	2.456732	4.529868
Number of observations						50
F (3, 46)						8.11
Prob> F						0.0002
R-squared						0.0817
Root MSE						.61497

Table 5 shows the results of the coefficients of regression model with ROA as dependent variable. The t-values for environment management system, employee relations and community performance are -0.14, 2.08 and 1.39 respectively. Out of three CSR variables only employee relations has a statistically significant impact on ROA with the remaining two CSR variables having no statistically significant impact on ROA.

Table 5: Regression AnalysisonReturn on Asset

	Coef.	Std. Err.	t	P>t	[95% Conf. Interval]	
EMS	-.0108464	.0779389	-0.14	0.890	-.1677292	.1460365
ER	.1436243	.0690194	2.08	0.043	.0046955	.2825531
CP	.1243118	.0892452	1.39	0.170	-.0553295	.3039531
Constant	7.485707	.691408	10.83	0.000	6.093975	8.877439
Number of obs.						50
F(3, 46)						1.69
Prob> F						0.1816
R-squared						0.0341
Root MSE						1.0431

The results of this research supports the findings of Orlitzky et al. (2003), Bird et al. (2007), Davis (1975) and Soloman& Hansen (1985) who suggest that CSR activities conducted by firm could have a positive effect on financial performance of a company. This is because companies with a higher level of CSR disclosure have been attributed to have a better image and therefore, are regarded by stakeholders such as investors, lenders and banks as a lower risk company. Environmental protection, good relationship with government, and easy access to financial institutions are some advantages associated with adoption of CSR activities. The findings is also in agreement with studies such as Joyner and Payne (2002), Popeck(2006), Deegan (2002) and PricewaterhouseCoopers (2002) where they identified positive relationships between the value of a firm and itslevel of CSR reporting. Also,Utaminingtyas and Ahalik (2010) investigated the relationship between CSR and earnings response coefficient using cross-section data where it was concluded that there is a significant effect of CSR on the earnings response coefficient.

The findings of this research support the legitimacy theory view that companies that extract natural resources would attempt to legitimize its activities by carrying out and reporting CSR activities to its stakeholders. This is in line with the proposal by Deegan (2002) that for a company to survive it needs to legitimise its activities, and that a bad reputation can reduce its profit. Due to the devastation mining activities have on the environment, employees and communities around the catchment area, mining companies are exposed to public scrutiny and negative publicity. This means the relationship that exists between CSR and performance is an important one as such companies need to protect its reputation. It is clear from the results that through the reporting of CSR activities their profit increases as it gains a positive corporate image, employee motivation increases, and community acceptance as the company is perceived with a positive attitude.

Even though there is a general positive attitude towards CSR, periodic reviews have suggested that studies are intrinsically flawed and reinforce the tension surrounding the business case for CSR (Barnett, 2007). Studies that have found negative impact of CSR activities on financial performance consider CSR practices as unnecessary costs that creates competitive disadvantage as resources could be used to improving firm efficiency (Barnett 2007). Further, Johnsen and Gjoelberg (2009) in their research found that CSR could have a negative effect on the firm financial performance. In this regard, it can be argued that the relationship between CSR and company's performance is still inconclusive (Margolis et al., 2007).Some previous studies revealed that CSR could have a negative effect on the financial performance (Johnsen &Gjoelberg, 2009) with some reasons the fact that companies pay additional cost for the CSR activities such as making donation, establishing production process with environmental protection, and developing the community development (Mc Guire et al., 1988; Bragdon& Marlin, 1985).

5.0 Conclusion and Implication

This research investigates the relationship between CSR and performance of mining companies in Ghana. Previous empirical evidence provided mixed results on the relationship between CSR reporting of companies and profitability. The results have been wide-ranging, with several studies finding positive relationships while others found negative relationships or no relationship. This study uses performance ratios, net profit margin, ROE and ROA. This research could be helpful to managers who are considering increasing their CSR activities or reporting to uplift the performance of their companies. Mining companies in Ghana and its competitors should continue to invest in CSR as this research shows it provides a good return. However for companies who are considering investing in CSR disclosures, they should be aware that the exact financial contribution of engaging in CSR is difficult to identify and measure. Since this study focused solely on mining companies in Ghana, generalising findings to other companies in other sectors, or countries should be done with caution due to distinctive political, social, and economic factors. Another limitation is that the use annual CSR reports and annual reports only may result in an incomplete picture of MCGs disclosure practices since the exclusion of documents such as pamphlets, advertising and environmental reports may include CSR related information (Unerman, 2000). This research is limited to five years of data; future research could look into the relationship of performance over several decades to provide a trend analysis of changes in CSR and performance over a longer number of years.

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