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Determinants of the Level of Sustainability Reports of Mining Companies in Ghana

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Abstract

The aim of the study is to examine the determinants of the level of sustainability report of mining companies in Ghana in the absence of regulatory and statutory requirements. This study hypothesises that the level of sustainability reports is correlated with the size, growth rate, and profitability, efficiency, gearing ratio, working capital, age and the complexity of the company. Fifty sustainability reports of 10 large scale mining companies in Ghana were used from the period of 2008 to 2012. With the use of content analysis the study finds that there are significant effects of corporate size, profitability (positive), gearing, working capital and complexity of MCGs (negative) on the level of Sustainability Report whilst no significant effects of growth rate, efficiency and the age of the company are found in spite of the increasing level of the report. Again, the significance of the model provides evidence that stakeholder theory is an appropriate foundation for empirical analyses of corporate sustainability reporting. The results of the empirical test have several policy implications for the practitioners in Ghana and other developing countries. The recommendations can be applied to other companies such as manufacturing, banks, investment and insurance which are also actively involved in sustainability reports. The study provides strong evidence that future research in this area can move forward with the application of stakeholder theory to empirical corporate sustainability reporting research.

Keywords: sustainability reporting, characteristics, mining companies, Ghana

INTRODUCTION

Mining companies are in general have been encouraged to widen their scope or level of accountability by many groups including the governments, Non-Governmental Organisations (NGOs) and other stakeholders through preparation of sustainability reports (Lozano & Huisingh, 2011; Lozano, 2013). In spite of many literatures on the term corporate sustainability reporting there appears to be no universally accepted definition of the term. According to Roca and Searcy (2012) the World Business Council for Sustainable Development (WBCSD) define sustainable development reports as public reports by companies to provide internal and external stakeholders with a picture of the corporate position and activities on economic, environmental and social dimensions" (WBCSD, 2002). It is also defined as a report which contains qualitative and quantitative information on how the company has managed to improve its economic, environmental and social effectiveness and efficiency in the reporting period and integrate these aspects in a sustainability management system (Daub, 2007; Roca & Searcy, 2012). There are many forms with various level of disclosure and medium of reporting. The most common forms are integrated annual report and stand-alone sustainability reports.

The trends in sustainability reports level have been an active area of research (Kolk, 2003, 2004) over two or three decades (Gray, 1997). In the view of Brown, de Jong, & (2009a) there has been an increase in the scope of the reports, a broadening of potential target audiences, an increase in integration with financial reports, and sharpened regional differences in reporting and verification practices (Roca & Searcy, 2012). However, there is relatively little information available on what really determine the level or scope of these reports by mining companies in Ghana especially where it is not mandatory (Ayadi, 2007). The Global Reporting Initiative (GRI) has provided a set of voluntary guidelines for SR which is widely used. One of the key strengths of the GRI has been to help popularize a multi-stakeholder process in sustainability reporting (Brown et al., 2009). Many studies have argued that the level of SR depend on certain corporate characteristics such as corporate size, growth, profitability, gearing, working capital, efficiency, age, and complexity without a definite conclusion (Gray, Kouhy & Lavers, 2001; Cormier & Magnan, 2003; Al-Tuwaijri, Christensen & Hughes, 2004; Cormier, Manan, & Van Velthoven, 2005; Aerts & Cormier, 2009; Bouten, Everaet, & Roberts, 2012; Burgwal & Vieira, 2014). Although sustainability reports has been the subject of substantial academic accounting research since two or three decades, literature does not possess an overall coherence (Gray, Kouhy, & Lavers., 1995). The inconclusive nature of the relationships between the corporate characteristics and the level of sustainability

reports make it difficult to claim that there is any unique and/or stable relationship between them (Para & Kouhy, 2001). In literature, a small number of studies examine explicitly the determinants of the level of sustainability reports and this has been attributed the voluntary reporting nature of sustainability reports. According to Gray & Bebbington (2001) an organisation might voluntary report information's for many reasons such as to develop corporate image, to legitimise current activity, to distract attention from other areas, to discharge accountability, to forestall legislation.

The stakeholder theory is one of the theories often used by many researchers in the system-oriented framework in sustainability reporting literature (Freeman 1984; Steurer, 2006; Smith, Read, & López-Rodríguez, 2010). One reason for this frequent use is that the theory focuses on the effect of the activities of companies on all the stakeholders (Smith, Read, & López-Rodríguez, 2010). Freeman's (1984) defined stakeholder as ''any group or individual who can affect or is affected by the achievement of the organization's objectives" (1984, p.157). Proponents of theory believe that although the corporation has the responsibility of increasing the share value of its investors, it should also take into consideration the numerous others who have a stake in its existence (Freeman, 1984; Deegan, 2002; Smith, Read, & López-Rodríguez, 2010). Therefore, to restrict stakeholders only to shareholders would be inadequate and short-sighted. Stakeholder theory has been applied to analytical and empirical analyses of the firm and the environment in which it operates. Stakeholder theory has been hampered by almost exclusive analysis of stakeholders from the perspective of the organisation. Freeman (1984) justified consideration of stakeholders for their contribution to the strategic management of firms. The study is also made to test empirically whether a stakeholder theory analysis of the determinants of the level of sustainability reporting in mining companies in Ghana is still relevant.

Research objectives and questions

In the light of the fact that there are no regulatory requirements for the preparation of sustainability reports by companies in general and mining companies in Ghana in particular, it is very necessary to assess the level of their sustainability reports to ascertain the determinant of the level. The paper measured the level of disclosure using the number of words (Deegan & Gordon, 1996; Gray et al., 1995; Guthrie & Parker, 1989; Hackston & Milne, 1996; Milne & Adler, 1999; Neu, Warsame, & Pedwell, 1998; Patten, 2002; Burgwal & Vieira, 2014). It is more interesting to examine these measures due to the fact that it is highly unlikely for companies to

provide adequate information to meet the information requirements of their stakeholders. In view of this the main objective of the study is;

to find out whether the level of disclosure in sustainability reports depend on factors such as size, growth rate, profitability, efficiency, gearing, working capital, age and complexity of the MCG referred to as corporate characteristics.

It will be quite interesting, for example, to know whether the content of their various SRs differ in relation to the size of the MCG. In effect the study seeks to answer the following research questions;

1. *Is there is any effect of corporate size on the level of sustainability reports.*
2. *Is there is any effect of corporate growth rate on the level of sustainability reports.*
3. *Is there is any effect of corporate profitability ratio on the level of sustainability reports.*
4. *Is there is any effect of corporate efficiency ratio on the level of sustainability reports.*
5. *Is there is any effect of corporate gearing ratio on the level of sustainability reports.*
6. *Is there is any effect of the working capital ratio on the level of sustainability reports.*
7. *Is there is any effect of the age of the company on the level of sustainability reports.*
8. *Is there is any effect of the complexity of the company on the level of sustainability reports.*

Therefore, this study develops and empirically tests a model of determinants (corporate characteristics) on the level of sustainability reports of mining companies in Ghana. Lack of sufficient theoretical support for designed to explain sustainability report leads to inconsistent and more contradictory results (Ayadi, 2007). This study is also designed to test the ability of stakeholder theory to explain this practice. The study made some significant contributions to the body of academic knowledge in sustainability reporting practices by assisting in broadening the understandings of determinants of the level of sustainability report by mining companies in Ghana in the absence of any legal or regulatory requirements. The study indicated that inadequate disclosures of information have great impact on the decision making ability of the stakeholders. This will help policy makers in their direction as to what influence the level of sustainability report. Concentration on the economy of Ghana, which as a developing country, may constitute a balancing effort and may make it possible to transfer some of the resulting insights to other developing countries. The recommendations can also be applied to other companies such as manufacturing,

banks, investment and insurance although care must be taken in such generalisations.

LITERATURE REVIEW

There are few studies that have examined explicitly the determinants of the level of sustainability reports. The level of sustainability reports is defined here as the volume of sustainability information in terms of words covered in the sustainability reports. Many studies have concluded that there has been a rise in the level of sustainability report in recent times (Gray, 2001). An organisation might voluntary disclose information for many reasons such as development of corporate image, to legitimise current activity, to distract attention from other areas, to discharge accountability, to forestall legislation (Gray & Bebbington, 2001: Ayadi, 2007). Some studies have explored the relationships between social and environmental disclosures and corporate characteristics (Gray et al., 1995; Gray, 2001). Though some argue that companies disclose sustainability information to justify their actions but what actually determine the level has not been extensively researched especially mining companies in Ghana. As compared to most countries, companies in Ghana are also under no regulatory requirements to prepare SR, hence, only few companies prepare sustainability reports. The corporate characteristics is defined here as corporate size, growth, profitability, gearing, working capital, efficiency, age, and complexity (Gray, 2001; Cormier & Magnan, 2003; Al-Tuwaijri et al., 2004; Cormier et al., 2005; Aerts & Cormier, 2009; Bouten, Everaet, & Roberts, 2012; Burgwal & Vieira, 2014).

Size of a company

The size of a company has been of interest to many researchers and has been classified as one of the characteristics of company and could be regarded as having a relationship with the level of sustainability reports. According to Burgwal and Vieira (2014) the most commonly used measures are number of employees, total assets, sales volume, or an index rank (Fortune 500). In this study however, the researcher uses sales/revenue as the appropriate indicator for the measurement of size (Gray, 2001; Chau & Gray, 2010,). The main reason is that most companies are classified according to the amount of revenue that can be made within certain period of time. A positive relationship between the size of a company and the level of its disclosure, is explain to mean that size affects voluntary financial disclosure by influencing the magnitude of agency costs (Dainell,i Bini, & Giunta, 2013; Watson, Shrives, & Marston, 2002). Therefore the study hypothesizes that mining companies in Ghana size is positively related to the level of sustainability report.

Growth rate

Growth rate measured in terms of the extent of a firm's asset and investment in Research and development (Artiach et al., 2010). There are many factors that can affect a company that is on the verge of growth namely, the loyalty of new customers, the acceptance of the communities around, the commitments and satisfaction of the employees, the trust of new suppliers and creditors. Research and development will bring about product and process innovation which can lead to improved processes and more effective of doing things (Padgett & Galan 2010; Lourenço & Branco, 2013). This means that firm's growth rate and the level of SR are positively related (Lourenço & Branco, 2013). This brings up the second research question which specifically asks: "Are there any effect of growth rates and the level of SR of mining companies in Ghana?"

Profitability ratio

There are few researches that have studied the relationship between level of sustainability reports and profitability especially in the developing countries (Kemp, 2001). According to Burgwal & Vieira (2014) many previous studies have adopted single year accounting measures or multiple year averages in the measurement. The study adopted return on equity (ROE) method in measuring the profitability which has been widely used in studies such as Lourenco & Branco (2013); Burgwal & Viera (2014); Bouten et al. (2012). The empirical results appear to provide inconclusive evidence on whether the profitability ratio can affect the level of on sustainability reports (Gray, 2001a). Therefore, the third research question is: "Are there any effect profitability on the level of sustainability reports of mining companies in Ghana?"

Managerial efficiency

There are few previous studies that have investigated the association between managerial efficiency (i.e. asset turnover) and the level of sustainability reports (Bouten et al., 2012; Lu & Abeysekera 2014). Studies such as Orlitzky et al. (2003) and Bird, Hall, Momentè, & Reggiani, (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. Therefore, the third research question is: "Are there any effect of managerial efficiency on the level of sustainability report?"

Gearing ratio

Gearing ratio measures the ratio of total debt to equity of a company (Gray, 2001). It is used to measure the level of risk level of a company (Dainelli et al., 2013). The empirical evidence in disclosure literature shows a conflicting result regarding the relationship between the gearing ratio and levels of sustainability reports. Hahn and

Kühnen (2013) stated that the existing empirical results are rather mixed. A high level of indebtedness, leverage, or gearing can be assumed to decrease the ability and flexibility of a company to bear the costs of reporting and/or face the consequences of disclosing potentially damaging information (Cormier & Magnan, 2003; Stanny & Ely, 2008). In line with this study a positive relationship between gearing ratio and the level of sustainability reports is hypothesized (Dainelli et al., 2013).

Working capital ratio

The term working capital is a financial yardstick which represents operating liquidity available to a business (Modi, 2012). It is calculated as current assets minus current liabilities. If current assets are less than current liabilities, an entity has a working capital deficiency, also called a working capital deficit (Modi 2012). A study by Cooke (1989), it was indicated that highly liquid companies are associated with greater levels of disclosure, although Wallace et al. (1994) argued that companies with a low liquidity position might disclose more information to justify their liquidity status. Thus in the light of this there exists a mix relationship between the level of sustainability reports and liquidity of a firm.

The age of a company

The age of a company is defined as the number of years the company has been in operation (Hossain & Hammami, 2009). The extent of sustainability reports may be influenced by the age of the company (Owusu-Ansah, 1998). Many previous studies including Haniffa and Cooke (2002), Glaum and Street (2003) and Hossain (2008) found that there is an insignificance relationship in explaining the level of sustainability reports and the age of a company. In the view of Owusu-Ansah (1998) longer-established firm will tend to disclose more information than more newly-established firm because younger companies may suffer competitive disadvantage if they disclose certain items such as information on research expenditure, capital expenditure, and product development. Secondly, these costs are likely to be more onerous for younger companies than for their older counterparts. Finally, there is a situation that younger companies may lack a 'track record' to rely on for public disclosure and therefore may have less information to disclose or less rich disclosures.

The degree of complexity

The degree of complexity variable is measured by the number of subsidiaries a company has both in host and foreign countries can be used to examine the impact of on the level of sustainability reports (Hossain & Hammami, 2009). In a study by Zarzeski (1996) it was argued that companies with international presence may provide higher levels of disclosure in practices than their domestic counterparts. The

study by Haniffa and Cooke (2002) suggested that structural complexity may be significant in explaining variability in the extent of disclosure. In the same view, according to Depoers (2000), operating in a number of geographical areas including other countries increases the amount of information controlled by such company and therefore will increase the level of sustainability reports. Riahi-Belkaoui (2001) also agree that there are positive association between disclosure and the extent of complexity of the companies. Based on the above arguments, the authors hypothesize the level of sustainability reports being positively associated with the complexity of the firm.

METHODOLOGY

Using content analysis (CA), qualitative information from the Annual reports (AR) was converted to quantitative information by counting the number words (Wilmshurst and Frost, 2000; Milne & Adler, 1999; Deegan, Rankin, & Voght, 2000; Campbell, 2000). The most recent and available data from 2008 to 2012 annual reports regarding the level of sustainability reports practices of Ten commercial mining companies in Ghana were used to provide greater confidence in the results (Campbell, 2000; 2004; Beck et al., 2010; Bouten et al., 2011). One of the main reasons for using the AR according to Bouten et al. (2011) it is used in discharging their accountability functions to communicate with their stakeholders.

The annual reports were collected from the official website of the companies in PDF format and were converted to Microsoft Word files for text analysis. After the cleaning, the texts were put into the Oxford Concordance Programme (OCP) to find the frequency distributions of the number of words appearing in them, a process adopted by Borkowski, Welsh, & Wentzel. (2012). The data were subjected to a descriptive statistics analysis using Data Analysis and Statistical Software (STATA version 12) because of being command-line oriented and allows more efficient organisation and editing of datasets than the Statistical Package for the Social Sciences (SPSS) (Kohler & Kreuter, 2005). To examine multi-collinearity problem, the value inflation factor (VIF) was used to compute for all the independent variables.

RESULTS

Descriptive statistics for the natural log ($\log_e$) of data employed in the analysis and the test of VIF are shown in Table 1. The mean, standard deviation, minimum and maximum values, measures of skewness and kurtosis for the level of SR and all eight company characteristics are provided. The skewness and kurtosis figures are, in most cases, low indicating that the distributions of the (transformed) disclosure

variables are normal. The minimum level (number of words) of the report was 9.57 and a maximum of 12.02 with a mean of about 10.80. These results also reflect that SR increases within the same period as compared with the study of Hackston and Milne (1996). In Table 1, it is also observed that the size ranged from 4.68 minimum to 9.25, maximum with a mean of 7.14 and the VIF of all the predictors are within 10 and less than 2.5. The average VIF (1.45) is approximately 1 and this confirms that collinearity is not a problem as far as this model is concerned (Cameron & Trivedi, 2010).

Table 2 shows the correlation matrix between the dependent and independent variables of the study for all the period under study. Table 2 shows the size of the mining companies in Ghana was noted to be slightly higher correlated with the level of sustainability reports. The growth rate appears to be less correlated with the level of sustainability reports and do not have any significant relationship. According to the results, profitability also have some correlation with the level of sustainability reports (r=0.22 with p-value=0.13). With regards to the efficiency of the mining companies in Ghana and the level of sustainability reports, the results show a positive correlation. The level of sustainability reports showed a positive relationship with capital gearing ratio though with a low degree of correlation. The results from the corporate gearing ratio, age and complexity variables appear insignificantly correlated with the level of sustainability report.

Table 1 Descriptive statistics and value inflation factor test

Variables	Observation	Median	Mean	Standard Deviation	Minimum	Maximum	Skewness	Kurtosis	VIF	1/VIF
Words	50	10.62	10.80	0.70	9.57	12.02	0.25	1.86		
Size	50	7.10	7.14	1.45	4.68	9.25	-0.12	1.49	1.92	0.520635
Growth rate	50	4.31	2.66	0.63	1.39	3.70	-0.15	2.10	1.38	0.727177
Profitability ratio	50	4.95	4.71	1.08	-1.61	5.13	-4.95	27.48	1.07	0.930648
Efficiency ratio	50	1.47	1.11	1.25	-2.53	2.34	-1.87	5.45	1.49	0.669257
Gearing ratio	50	6.21	6.17	0.47	2.94	6.51	-6.43	44.33	1.33	0.754184
Working capital	50	0.72	0.94	1.23	-1.31	3.97	1.10	3.90	1.74	0.574230
Age	50	2.80	2.88	0.84	1.79	4.50	0.63	2.47	1.37	0.730699
Complexity	50	1.95	1.82	0.41	1.10	2.40	-0.37	1.84	1.29	0.772405

Table 2 Correlation matrix between the dependent and independent variables

Variables	Words	Size	Growth rate	Profitability	Efficiency	Gearing ratio	Working capital	Age	Complexity
Words	1.00								
	(0.00)								
Size	0.69	1.00							
	(0.00)								
Growth rate	0.09	0.01	1.00						
	(0.52)	(0.9)							
Profitability ratio	0.22	0.17	0.18	1.00					
	(0.13)	(0.2)	(0.22)						
Efficiency ratio	0.35	0.46	0.11	0.03	1.00				
	(0.01)	(0.0)	(0.44)	(0.82)					
Gearing ratio	0.13	0.24	0.09	-0.05	0.02	1.00			
	(0.36)	(0.0)	(0.55)	(0.72)	(0.90)				
Working capital	-0.50	-0.44	0.15	-0.13	-0.02	-0.41	1.00		
	(0.00)	(0.0)	(0.30)	(0.37)	(0.87)	(0.00)			
Age	0.05	0.17	-0.03	0.05	0.20	0.13	0.17	1.00	
	(0.73)	(0.2)	(0.83)	(0.73)	(0.16)	(0.37)	(0.23)		

Complexity	-0.09	0.21	-0.05	0.05	0.02	0.16	-0.12	0.36	1.00
	(0.53)	(0.1)	(0.71)	(0.73)	(0.91)	(0.25)	(0.39)	(0.1)	

Notes: Figures in bracket are the p-values

The question which guides the study is whether the level of sustainability reports is a function of corporate characteristics (size, growth rate, profitability ratio, efficiency ratio, gearing ratio, working capital ratio, age and complexity of mining companies in Ghana), was examined by estimating the following regression model used is shown in equation (1) below:

$$LnSR = \beta_0 + \beta_1 \, lnSize + \beta_2 \, lnGrowth + \beta_3 \, lnProb + \beta_4 \, lnEff$$
$$+ \beta_5 \ln Gear + \beta_6 \, lnWCap + \beta_7 \, lnAge + \beta_8 \ln Complex + \varepsilon$$

Where $LnSR$ represents the level of Sustainability Report and $\beta_1 \, lnSize + \beta_2 \, lnGrowth + \beta_3 \, lnProb + \beta_4 \, lnEff + \beta_5 \ln Gear + \beta_6 \, lnWCap + \beta_7 \, lnAge + \beta_8 \ln Complex$ represent the transformed values of the corporate characteristic of MCG. $\beta 0$ is the intercept and the slope coefficient of the regression line, and ε is the random error term. A robust regression model was performed and the results presented in Table 3 for log number of words of all the eight control variables for the five years from 2008 to 2012. The results indicated that the F-value (26%) of the model is statistically significant at the 5% level. This means that the coefficients on all the eight control variables can jointly explain significant variations in the data and they are significantly different from zero. The results statistically support the significance of the model for example the R-square of 0.631 which implies that independent variables explain 63.1% of the variances. This signifies that the predictors (independent variables) did a good job of predicting the outcome variables and can therefore be concluded that there is a significant relationship between the set of predictors and the dependent variable.

Table 3 shows the results from the regression model of the level of sustainability report (number of words) on the independent variables (corporate characteristics). The empirical evidence derived from the regression model indicates that size is statistically related to the level of sustainability report with significant (p-value= 0.00) positive coefficient. In this case the bigger the size of an mining companies in Ghana the higher the level of information disclosed on the sustainability report. Profitability is also having a positive significant (p-value= 0.02) effect on the level of sustainability report to suggest that profitable companies do present more information than non-profitable companies. As noted from the Table 3 the statistical analysis provide a significant impact of the capital gearing ratio on sustainability information (p-value= 0.02). The effect of gearing ratio on the sustainability report is negative (-0.135) which means that the level of sustainability report is likely to be lower as the gearing ratio becomes larger.

According to the table the effect of working capital on sustainability reports although have a negative coefficient it is highly significant (p-value= 0.01) with the

model. This means it is expected to observe a lower level of sustainability reports when the working capital ratio goes up. Complexity as a corporate characteristic is also negatively significant (p-value= 0.03). It is obvious that the type of relationship with the complexity of the mining companies in Ghana is important in influencing the level of sustainability reports which implies that mining companies in Ghana which has a lot of subsidiaries do not seem to produce high level of sustainability reports.

Table 3 Regression of the characteristics determining the level of SR

					F(8, 41) = 26.04	
					Prob. > F = 0.0000	
					R-squared = 0.6308	
					Root MSE = .466	
					Number of obs. = 50	
Corporate Characteristics	**Co-efficient**	**Std. Error**	**T-value**	**P-value**	**95% Conf. Interval**	
Size	.295387	.0521935	5.66	0.000	.1899806	.4007942
Growth rate	-.24503	.1909844	-1.28	0.207	-.6307309	.1406708
Profitability	.0398905	.0170589	2.34	0.024	..0054393	.0743417
Efficiency	.0537675	.0516319	1.04	0.304	-.0505052	.1580401
Gearing ratio	-.1351121	.0530057	-2.55	0.015	-.2421593	.0280648
Working capital	-.1744234	.0462231	-3.77	0.001	-.2677729	.0810738
Age	.0931138	.0821061	1.13	0.263	-.0727029	.2589305
Complexity	-.515995	.2282023	-2.26	0.029	-.976859	-.0551311
Constant	11.15821	.7990642	13.96	0.000	9.544471	12.77196

On the other hand, only three characteristics according to Table 3 namely the growth rate, efficiency of management and age of the mining company are insignificant in influencing the dependent variable. It is obvious that the type of relationship between them although linear but cannot be said to influence the corporate characteristics.

DISCUSSIONS

According to the results, positive and significant coefficient suggests that size has a direct influence on the level of sustainability report by the mining companies in Ghana. The main reason is that larger mining companies in Ghana can afford increasing costs for voluntary disclosure, since they are able to employ highly skilled individuals and sophisticated management reporting systems as indicated by Depoers (2000). Companies in general and large mining companies in particular, which have a high degree of environmental degradation have the broader society's attention and consequently face the highest degree of social pressure in communicating their activities to their stakeholders (Hossain & Hammami, 2009). Therefore a positive relationship between the size and sustainability report has been confirmed as hypothesized (Depoers, 2000; Haniffa & Cooke, 2002; Eng & Mak, 2003; Hossain & Hammami, 2009). The results also show that corporate profitability ratio has a positive effect on the level of sustainability report and this is also consistent with studies such as Hackston & Milne (1996), and Hossain, Islam, Andrew (2006) as noted earlier. This result, however, is inconsistent with mainstream literature given by Stanny and Ely (2008), Garcia-Sanchez (2008), Monteiro & Aibar-Guzman (2010). One of the reasons of the results for the association between profitability and level of sustainability report could indicate that mining companies in Ghana are convinced of the existence of direct economic results for sustainability reports.

The result revealed a negative coefficient capital gearing ratio and the level of sustainability report. The inverse relationship can be explained to mean that a high level of indebtedness, leverage, or gearing can be assumed to decrease the ability and flexibility of a company to bear the costs of reporting and/or face the consequences of disclosing potentially damaging information which confirm studies made by Cormier and Magnan (2003) and Stanny and Ely (2008). The result is not consistent with the findings in research by Ghazoli (2007) and Dainelli et al. (2013) where it was found that there is a positive effect of gearing on the sustainability information disclosed. In the view of Hahn and Kühnen (2013) the existing empirical results are rather mixed. In this regards Haniffa and Cooke (2005) however, argued that sustainability reporting might be used to legitimize corporate activities toward creditors and shareholders, thus providing incentives to engage in reporting. The results also suggest a statistically negative but significant effect of working capital on the level of sustainability reports to imply that companies with more working capital do not necessarily disclose higher level of sustainability report but rather lower level of disclosure. This is consistent with Wallace (1998) where it was argued that

companies with a low liquidity position disclose more information to justify their liquidity status. The possible reason being that less liquid mining companies in Ghana produces more information to assure their stakeholders of their readiness to meet their obligation when due to reduce unnecessary panic.

Finally, the findings suggest that complexity of the mining companies in Ghana have a negative significant effect on the level of sustainability reports. This is inconsistent with some studies conducted by researchers such as Hossain and Mitra (2004), Hossain and Reaz (2007), Stanny and Ely (2008). Contrary to these studies and reasons given by Zarzeski (1996) that companies which have international presence may provide higher levels of disclosure in practices than their domestic counterparts, mining companies in Ghana with more subsidiaries rather disclose less information in their sustainability report. This may be attributed to the fact that mining companies in Ghana are not mandated to prepare sustainability report to the extent that complexity has not influence on the level of sustainability report. The negative effect of complexity of the mining companies in Ghana on the level of SR also may be due to the fact that the having many subsidiaries in developing countries does not mean more attention are being paid to the social responsibility by these companies. Lack of laws and policies that will mandate the mining companies in Ghana to adhere to the principles and guidelines of GRI to produce adequate sustainability report may be another reason for this inconsistency in the results.

It is also clear that the evidence did not show growth rate as a determinant of the level in sustainability report. This means whether or not a mining company in Ghana grows there will be no effect on the level of information on the sustainability report. This result is inconsistence with studies made by Hossain and Mitra (2004), and Hossain and Reaz (2007) where positive influence of growth on the voluntary disclosure is found. One of the main reasons that can be attributed to these inconsistencies is that the rate of growth might not be large enough to have any serious influence on the reporting practices of mining companies in Ghana. Although in the view of Artiach, Lee, Nelson and Walker (2010), it is more likely that a company with a higher level of growth rate in its asset mix will be able to incorporate sustainability principles into its competitive strategy, but where the mining companies in Ghana are not mandated to disclosure, and thus growth rate will have no effect. This is due to the fact that communities around the mines rather prefer direct benefits than mere increases in sustainability report and this has influenced the level of reporting among these companies.

According to the results there is an insignificant effect of efficiency ratio on the level of sustainability reports. This suggests that the evidence did not show that more efficient mining companies in Ghana disclosed a different level of sustainability report than low efficient ones with the period under consideration or vice versa. This means that the as long as the value of the company is high, shareholders for instance are not perhaps interested to know how the company is run at the top managerial level and management willingness to give information. Another reason may be that mining companies in Ghana are not trying to assure their investors of their sound managerial structures.

According to the results variable of age coefficient is positive but insignificant which suggest that older companies will have no direct influence on the level of sustainability report. The result is consistent with previous studies of Haniffa and Cooke (2002), Glaum and Street (2003) and Hossain (2008) where it was found there are insignificance in explaining the level of disclosure. This is not consistent with the view of Owusu-Ansah (1998) where it was asserted that longer-established firm will tend to disclose more information than more newly-established firm. One of the possible reasons for the results is that most of the mining companies in Ghana were formed through merger or acquisition of existing companies whiles other were form from the scratch to the extent that reporting voluntarily may be a matter of policy. Therefore the age a company may not be a determining factor for reporting.

CONCLUSION AND RECOMMENDATIONS

This study proposes a model of the determinant of the level disclose sustainability report in terms of corporate characteristics. The results of the empirical test are of interest for several reasons. First, the empirical evidence was found to suggest that the size and profitability of the mining companies in Ghana have positive effect on the level of sustainability report. This suggests that larger and profitable mining companies in Ghana disclosed more information in their sustainability report than smaller and less profitable companies which is consistent with earlier studies where it was argued that larger companies are more in the public eye, and therefore are more likely to disclose more information on their sustainability report. Secondly, results appear to explain the existence of negative relationship between working capital ratio and the level of sustainability report by the mining companies. This implies that companies with more working capital do not necessarily disclose higher level of sustainability report but rather less information on sustainability report. It also revealed that highly geared mining companies in Ghana are more likely to provide lesser level of sustainability report. The evidence revealed that the number

of subsidiary a mining companies in Ghana may have, both at home and/or abroad, is likely to affect the level of sustainability report negatively. Thirdly, no association was observed between corporate growth rate, efficiency of management and age of the company on one side and the level of sustainability report.

The significance of the model provides evidence that stakeholder theory is an appropriate foundation for empirical analyses of corporate sustainability report. One of the implications of the study is that concentration on the economy of Ghana, which is a developing country, may constitute a balancing effort and may make it possible to transfer some of the resulting insights to other developing countries (or at least to their researchers). The recommendations can be applied to other companies such as manufacturing, banks, investment and insurance which are also actively involved in sustainability report. The results of this study provide strong evidence that applications of stakeholder theory to empirical corporate social disclosure research can move future research in this area. Various limitations point to the need for more research on the determinants of the decision to disclose stakeholder's reports. Future research can look at the importance of mandatory sustainability reporting to offer another potential stream of research by exploring the benefits and drawbacks, framework initiative to be adopted and the nature of enforcement as well as the institutions to be mandated to execute that. It should also attempt to incorporate a larger sample size to increase the generalizability of the results and should be replicated to test the model in other periods, using different measures.

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