

ANALYSIS OF FACTORS AFFECTING SUSTAINABLE DEVELOPMENT INFORMATION DISCLOSURE AT MINING ENTERPRISES LISTED ON THE VIETNAM STOCK MARKET

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Abstract

The article analyzes the factors affecting the level of information disclosure. Sustainable development news at mining companies listed on Vietnam's stock market. Data are collected from financial statements, annual reports, and management reports of 30 mining companies listed on the Vietnamese stock market from 2017 to 2021. This study uses the analysis method. descriptive statistics, correlation matrix analysis and panel data regression model estimation to analyze the factors affecting the level of sustainable development information disclosure in mining enterprises listed on the Internet. Vietnam stock market. The analysis results show that the level of sustainable development information disclosure in mining enterprises listed on the Vietnamese stock market has a positive relationship with the size of the enterprise, the number of members and the number of members. Board of Directors, and State ownership ratio. The results will be the basis for stakeholders to take appropriate measures and actions to promote the publication of sustainable development reports in the near future.

Keywords: sustainability report, listing, mining enterprises.

1. Introduction

In recent years, the pressure and information needs of stakeholders have changed significantly. This change comes from changes in social goals and negative impacts of business activities on the living environment. This places requirements on sustainable business practices in the enterprise. Sustainability issues are increasingly focused on businesses, corporations and stakeholders. Sustainability is demonstrated through economic sustainability (such as growth, budget contributions, payments to shareholders...), social sustainability (such as gender equality,

commitment to zero the use of child labor, forced labor, occupational safety, contributions to the community ...) and environmental sustainability (such as emission, wastewater, waste treatment policies, policies energy saving ...). Current reality shows that, in addition to financial information, businesses also have to report on sustainable development activities. Sustainability reports complement financial statements, to provide complete information about the business in relation to its stakeholders when conducting business. Sustainability reports are information about a company's

sustainability commitments and activities to fulfill these commitments.

In Vietnam, from January 1, 2016, listed companies began to publish information related to sustainable development in their annual reports. However, the level and manner of information disclosure of enterprises is not as expected. Specifically, the research results of Pham (2016) show that although the situation of making sustainability reports of enterprises has progressed, the level is still sketchy and not up to standards.

The mining industry in Vietnam is one of the key industries and is prioritized to meet the needs of other industries. However, due to the operating characteristics of the industry, the activities of mining companies have been having significant impacts on the environment, making the issue of social responsibility of mining enterprises increasingly heating up. The transparent publication of sustainable development reports of mining enterprises is really necessary, contributing to improving the image and reputation of the company with domestic and foreign partners. However, the level of disclosure of sustainable development information for mining companies listed on the Vietnamese stock market is not the same, due to the influence of many factors inside and outside the enterprises. Therefore, the author conducts this study with the aim of reviewing and evaluating the factors affecting the level of sustainable development information disclosure in mining companies listed on the Vietnamese stock market.

2. Literature Review

Agency theory, this theory states that the conflict of interests between one party is the owner and the other is the agent is obvious. Therefore, the employer will establish specific mechanisms to control the activities and powers of the agent, to ensure that the agent's activities will serve the interests of the employer (Jensen & Meckling, 1976).

Signaling theory, this theory considers information disclosure as a signal to the market to reduce information asymmetry, optimize financial costs and increase business value. (Baiman & Verrecchia, 1996). This reduces the cost of accessing capital for businesses, thereby

increasing the level of investment, leading to the development of the economy, more jobs, and better quality of life.

The theory of public administration costs (Political theory), according to this theory, businesses will voluntarily increase the disclosure of information to reduce costs related to taxes and fees as well as gain some benefits. certain benefits (subsidies or government support activities).

The cost of ownership theory, which holds that there are several costs associated with the benefits of disclosure. 2 common types of expenses: the first is gathering and disclosing information; The second is the costs arising from information that competitors and some stakeholders use to adversely affect the company. (It doesn't have to be a monetary cost - it could be reputation, it could be a decrease in the value of the company...).

Sustainable economic development is the goal of many countries. Therefore, the company's announcement of sustainable development has received a lot of attention from stakeholders and researchers. There are quite a few studies on sustainable development information disclosure, related studies are summarized as follows:

Research on factors affecting the level of sustainable development information disclosure in different types of businesses Various industries such as banks, listed companies, agribusinesses, etc. The studies can be mentioned as Meek, Roberts, & Gray (1995), Huafang & Jianguo (2007), Ghanaweer & Kunon (2018). , Ho and Yekini (2014), Hoang Cam Trang et al (2019). The research results show that factors such as industry, business size, profitability, ownership structure, etc. have a significant influence on the level of information disclosure for sustainable development in enterprises.

Meek, Roberts, & Gray (1995) studied the factors affecting the level of voluntary disclosure and built a list of voluntary disclosures based on surveys in the US, UK and some other countries. Europe country. This result proves that the level of voluntary information disclosure is different between business lines of enterprises. Although the study had significant results, one limitation

showed that the explanatory level of R² was at 14% to 46%.

Research by Haniffa & Cooke (2002) also shows a positive relationship between foreign ownership ratio and sustainable disclosure level of Malaysian listed companies. The larger the foreign-invested companies, the more information they need to disclose. Chambers et al. (2003) studied corporate sustainability reports in seven Asian countries through an analysis of the websites of the top 50 companies. The results show that, out of the seven Asian countries selected, very few 100% domestic firms disclose sustainability information, while foreign-owned firms from the UK and Japan tend to reveal more sustainability information. The seven-country average is 41%, much lower than UK-invested firms (98%) and Japanese-invested firms (96%).

Huafang & Jianguo (2007) conducted a survey on 559 listed companies in China in 2002, the calculation of the index measuring the degree of voluntary disclosure is similar to previous studies. The results show that ownership of major shareholders and listing status of foreign shareholders are two variables related to voluntary disclosure. The remaining variables have low or no relationship.

Barako (2007) investigated the influence of corporate governance attributes, ownership structure and firm characteristics on voluntary disclosure of different types of information. The results show that the disclosure of all types of information is influenced by the corporate governance attributes, ownership structure and characteristics of the company. In particular, the results also show that the size and companies in the agricultural sector have a significant relationship with voluntary disclosure of all 4 types of information disclosure.

Research by Fathi (2013) shows the positive impact of a number of factors such as board size, the participation of members in board of directors (BOD) meetings and the presence of Big4, the duality of the Chairman of the Board of Directors and the General Director to the extent of voluntary disclosure.

The authors Ho and Yekini (2014) conducted a survey of 20 enterprises on the Vietnamese stock market for 3 years and gave the following

research results: financial leverage, debt ratio have an impact on public performance. economic, environmental and social information disclosure.

Truong Nam Hong (2019) showed that enterprise size, foreign ownership ratio, financial leverage, profitability, and operating time of enterprises have an influence on the level of disclosure. sustainable development in agricultural enterprises listed on Vietnam's stock market.

Authors Pham and Do (2015) find that the state ownership factor has a negative relationship with the level of sustainable information disclosure of an enterprise. The reason is that state-owned enterprises often have little incentive to maximize profits or do not put profit as the top goal because reinvested capital is guaranteed by the state. Therefore, these entities will not voluntarily disclose information to enhance business value and attract more investment capital. Vu's study (2012) also found an adverse relationship between state ownership and sustained disclosure levels. Since state ownership is public property and there are no specific individual owners, the lack of specific rights leads to owners losing control leading to corruption and weak corporate governance. Leaders will act in their own interests rather than in the interests of shareholders.

3. Research method

3.1. Data and research samples

The data used in the research are all collected from the financial statements and annual reports of 30 mining companies listed on the Vietnamese stock market in the period from 2017 to 2018. year 2021. Financial information of listed companies is obtained from <http://finance.vietstock.vn>. Sustainability information is published and taken from annual reports, sustainability reports and corporate governance reports published on the Websites of the 30 companies in the sample. The research sample includes 30 mining companies listed on the Ho Chi Minh City Stock Exchange (HOSE) and the Hanoi Stock Exchange (HNX) and has a total of 150 observations for the period 2017-2021.

3.2. Measuring Research Variables

Measuring Dependent Variables (DIS) – Level of Sustainable Development

Disclosure To assess sustainability disclosure in the annual report, the author has created a list of information on sustainability including 60 criteria based on the Sustainability Reporting Manual for Vietnamese Companies issued by the State Securities Commission and

the International Finance Corporation, and the standard GRI Sustainability Report published by the Global Sustainability Standards Board. The writer has adjusted a number of criteria suitable for the mining industry in Vietnam and then established a list of 32 criteria to determine the index of disclosure of information on sustainable development.

$$DIS = \frac{\sum_{i=1}^n d_i}{n}$$

Table 1. Measurement of Independent Variables Variable

Symbol	Variable Name	Measure
ROA	Profitability	Profit after Tax/Total assets
LV	Financial leverage	Total liabilities/Total assets
SIZE	Firm size	Log (total assets)
NUMBER	Number of Board	Total Board members
FRO	Foreign ownership	Ratio of shares owned by foreign individuals /organizations
SO	State ownership	Ratio of shares owned by the state/Total number of shares
GR	Revenue growth rate	(Total revenue this year – Total sales last year)/ Total sales last year

3.3. Analytical methods

The author uses quantitative research methods with the support of statistical software Stata15. With the characteristics of panel data, the authors have carried out tests to check the validity of the model and verify the important compliance with assumptions such as: no autocorrelation, constant variance, multiple collinear.linear regression method is applied with the following model:

$$DIS = \beta_0 + \beta_1 ROA + \beta_2 LV + \beta_3 LEV + \beta_4 SIZE + \beta_5 NUMBER + \beta_6 FRO + \beta_7 SO + \beta_8 GR + e$$

To analyze the factors affecting the level of information disclosure Sustainable development in mining enterprises listed on

Vietnam's stock market, the author uses descriptive statistical analysis, correlation matrix analysis and regression model estimation. In the method of regression model estimation using panel data can be done through three methods, namely least squares, fixed effects model and random effects model. To choose a suitable model, the authors performed Hausman test, Breusch-Pagan test. In the next step, the author will use quantitative methods to overcome the defects of the model selected as the result for the study.

4. Results and discussion

4.1. Descriptive Statistics

Table 2. Descriptive Statistics of Variables

Variable	Obs	Mean	Std	Min	Max
ROA	150	0.0257	0.0578	0.1531	0.2067
LV	150	0.4568	0.2685	0.0164	0.9216
SIZE	150	27.3941	1.4595	24.2243	30.9893
NUMBER	150	6.0667	1.6575	5	15
FRO	150	3.9304	5.1168	0	21.32
SO	150	28.7522	30.92	0	98.2
GR	150	86.3427	497.427	-94.4105	4881.3
DIS	150	1.7605	0.1328	1.23	1.97

Table 2 presents the basic descriptive statistics of the independent variable and the dependent variable. Table 2 shows that the average sustainable development disclosure score is 1.7605, and ranges from 1.23 to 1.97. Firm sizes range from 24,2243 to 30,9893, showing that the sizes of firms in the sample are quite similar. The indicator reflecting the

profitability of the company (ROA) has a negative minimum value, indicating that at least one company in a year has negative profit after tax. This shows that in the period 2017-2021, the business performance of mining enterprises is quite different.

4.2. Correlation coefficient matrix

Table 3. Correlation coefficient matrix among variables in the model

	DIS	ROA	LV	SIZE	NUMBER	FRO	SO	GR
DIS	1							
ROA	-0.1577	1						
LV	0.1354	-0.0673	1					
SIZE	0.3850	-0.1062	0.4525	1				
NUMBER	-0.0931	-0.2206	-0.0952	0.1107	1			
FRO	0.1215	0.2319	-0.0361	0.1684	-0.0952	1		
SO	0.5697	-0.1425	0.3840	0.4540	-0.1625	0.0654	1	
GR	-0.0865	0.0330	-0.1723	-0.0478	-0.0921	-0.0927	-0.0948	1

Table 3 shows the correlation coefficient between the dependent variable with the independent variables and between the independent variables. The correlation coefficient between the independent variables is not greater than 0.8, so there is no multicollinearity between the variables (Cohen, 1988). The variables of profitability, revenue growth, number of BOD members are negatively correlated with the level of information disclosure for sustainable development, while the variables of enterprise

size, foreign ownership rate, state ownership rate, financial leverage are positively correlated with the level of information disclosure for sustainable development.

4.3. Regression results

Table 4 presents models describing regression results and test results when choosing suitable models.

Table 4. Regression results

Variable	VIF	DIS			
		POLS	FEM	REM	FGLS
ROA	1,15	-0.238	-0.0293	-0.00732	-0.0199
LV	1,42	-0.0916*	0.104	0.0317	-0.0311
SIZE	1,60	0.0208**	0.0221	0.0200	0.0290***
NUMBER	1,19	-0.0611	0.0265***	0.0251***	0.00866**

FRO	1,15	0.00143	-0.000258	0.000317	0.00617
SO	1,43	0.00220***	0.0678*	0.00222**	0.00183***
GR	1,07	-0.0000154	0.0000032	0.0000033	-0.0000026
Cons		1.208***	-0.0924	0.982**	0.888***
N	150				
Breusch-Pagan test		chi2(1) = 17.07 Prob > chi2 = 0.0000			
Hausman test			chi2(6) = 34.36 Prob>chi2 = 0.0000		
Wald test			chi2 (29) = 20964.65 Prob>chi2 = 0.0000		

* p<0.05, ** p<0.01, *** p<0.001

Test results Multicollinearity shows that, the variance magnification factor VIF is <10, the model does not have multicollinearity phenomenon. The largest VIF index is 1.60, indicating that the possibility of multicollinearity is negligible. The Breusch-Pagan test shows that the model has heterogeneity (p-value <5%). Therefore, the Pool OLS model is not suitable. Hausman test for p-value = 0.000 < 0.05 rejects Ho, so using fixed effects model (FEM) to analyze factors affecting financial risk of enterprises. listed industry. After selecting the FEM model as a suitable model, the authors test the model's defects by Wald's test. The results obtained prob>chi2 = 0.000 < 0.05 show that the FEM model has defects. To overcome the defect, the author uses the feasible GLS estimate (FGLS). The corrected model results show that the prob values of independent variables such as enterprise size and state ownership rate have p < 0.001, these are the factors that have the greatest impact on the level of disclosure. Sustainable development information at listed mining companies. Firm size and state ownership are positively correlated with the level of sustainability information disclosure. The number of members of the Board of Directors has p < 0.01, showing that this factor is also positively related to the level of information disclosure for sustainable development. The remaining factors including profitability, financial leverage, foreign ownership ratio, revenue growth rate have no correlation with the level of sustainable development information disclosure in the countries. listed mining enterprises (p-values of these factors are all > 0.1).

5. Conclusions and recommendations

The study shows empirical evidence on the level of sustainability information disclosure in mining companies listed on the stock market. Accordingly, the state ownership rate is found to be closely related to the level of sustainable development information disclosure in mining enterprises listed on the stock market.

Firm size has a positive influence on the level of sustainability information disclosure with p < 0.00, which is consistent with the research results of Meek et al. (1995), Fathi (2013)), Truong Nam Hong (2019). The larger the enterprises, the higher the level of sustainability information disclosure. This also shows that stakeholders have greater expectations and requirements for large-scale enterprises, which is an opportunity but also a pressure for this enterprise. Therefore, in order to attract and maintain the advantages and position of enterprises, administrators need to focus on investing appropriate resources for the publication of sustainable development information. In particular, it is necessary to propagate and raise awareness of environmental protection and social responsibility for managers at all levels in the enterprise as well as all employees. Performing social and community responsibilities is the best way for businesses to improve their image, reputation and bring economic efficiency to them.

The number of members of the Board of Directors positively affects the level of sustainability information disclosure, this result is similar to the research results of Barako (2007). The Board of Directors is accountable to shareholders for the operation of the

business. In addition, the Board of Directors is responsible for monitoring the behavior of the Board of Directors to ensure that its actions do not violate the interests of the company, interests of shareholders. Large companies with a large number of board members will disclose more complete sustainability information than companies with a small number of board members. The publication of sustainability reports will help businesses control and reduce costs, emphasize the relationship between financial activities and non-financial activities, help businesses develop strategies to improve brand value. brand.

The state ownership ratio is positively correlated with the level of sustainable development information disclosure. This result is contrary to the study of Pham and Do (2015), Vu (2012), This empirical evidence partly shows that the publication of sustainable development reports of mining enterprises has a significant influence from mechanisms and policies of the State, besides the publication of the report will help businesses gain external recognition, gain public and investors' trust on the sustainable development of the business. .

Publishing sustainability reports helps businesses build trust, reach consumers, and promote their brands. Besides, it also helps businesses transmit information to shareholders, investors and management agencies. This is the basis for business managers to have more motivation in publishing sustainability reports in the near future. Along with that, it is a source of information for State agencies to have appropriate policies in promoting enterprises to publish sustainable development reports./.

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