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Cost allocation effect of corporate social responsibility on market performance in the context of corporate life cycle

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Abstract
Along with the increasing population in Indonesia, energy consumption in Indonesia will also be increase in the future. This has a serious impact, especially on the environment, so that companies in the industrial sector tend to be required to carry out their social responsibility. The purpose of this study was to determine the effect of the company's life cycle as a moderator of the effect of corporate social responsibility cost allocation on market performance. This research is a quantitative research conducted in the industrial energy sector on the Indonesia Stock Exchange for the 2017-2021 period with a total sample used of 90 observational data. The data analysis technique used is moderated regression analysis (MRA) using the E Views application. The results of this study indicate that CSR cost allocation has a positive effect on market performance and the company's life cycle does not affect CSR cost allocation on market performance. This research is expected to be able to add references, information and insights related to the effect of CSR cost allocation on market performance. The company is expected to pay attention to the allocation of CSR costs carried out by the company. Investors can pay attention to the company's CSR cost allocation before making investment decisions. Companies that have CSR fund allocations affect to better market performance.
Keywords: Cost Allocation, Corporate Social Responsibility, Corporate Life Cycle, Market Performance.

INTRODUCTION

CSR is the application of the triple bottom lines (profit, people, planet) in the form of company concern in setting aside part of its profit (profit) for the benefit of human and environmental development, as well as CSR being carried out on an ongoing basis based on proper and professional procedures (Nurharli, 2018). CSR provides many benefits for companies, including provide a distinctive, good, and ethical corporate image in the public which will later achieve customer loyalty so that it affects market performance. Corporate social responsibility integrates with market performance, where market performance is good without social responsibility towards the environment and society will not make a company that is able to grow sustainably.

The rapid industrial development also has a negative impact, especially regarding environmental problems that arise as a result of industrial waste generated by a company. In addition, industrial companies that do not utilize natural resources inefficiently create conditions where natural resources are increasingly limited, especially non-renewable natural resources. The more limited natural resources and the declining carrying capacity of the environment, the demand to develop an environmentally friendly industry or what is often referred to as a green industry is an important issue. This is the duty of the government and the business world in encouraging healthy economic growth while taking into account environmental factors.

The idea of a green industry is an industry that is environmentally sound, harmonizes development with the preservation of environmental functions, and prioritizes the efficiency and effectiveness of the use of resources in a sustainable manner. Meanwhile, it is not impossible to give incentives to encourage the green industry movement. According to MC Williams and Siegel (2001), corporate sustainability will be guaranteed if the company pays attention to the social and environmental dimensions. Based on the 2014 Sustainability and Responsibility Investment report in Hasan and Habib (2017) it is explained that SRI assets have grown by 76 percent since early 2012 to a total of $6.57 trillion. However, it is inversely proportional to the conditions in Indonesia where according to the Conference on Corporate Governance and Responsibility it was found that companies in Indonesia have a low quality of social responsibility or corporate social responsibility (CSR).

It is suspected that the quality of social and environmental responsibility is still low, one of which is caused by the lack of comprehensive understanding of the concept of social and environmental performance. The lack of company interest in implementing sustainable business practices through CSR is because they think that implementing CSR will only burden the company's costs and reduce shareholder profits. If it becomes a production burden, inevitably the company must raise the price of goods to cover these costs. However, this method is considered to be less elegant and wise, so many companies do not carry out CSR activities or their implementation is just a formality.

Brigham and Houston (2011) in signal theory explains management's perception of company growth in the future, which will affect the response of potential investors to the company. The signal is in the form of information that explains management's efforts to realize the owner's wishes. This information is considered as an important indicator for investors and business people in making investment decisions. Information related to the allocation of CSR funds that has been submitted by the company and received by investors, will be interpreted and analyzed beforehand whether the information is considered a positive signal (good news) or a

negative signal (bad news) (Jogiyanto, 2010). If the information is positive, it means that investors will respond positively and be able to distinguish between quality companies and those that are not, so that the stock price will be higher and the company's value will increase. However, if investors give a negative signal it indicates that investors' desire to invest is decreasing which will affect the decline in company value. With regard to CSR disclosure, companies that disclose CSR transparently are considered to give a positive signal to investors.
Ismail (2009) in his research stated that implementing CSR can reduce a company's operating costs. This is because after the implementation of CSR, the company will reduce costs for product marketing and replace them with CSR costs. Even though the CSR costs incurred were originally the company's responsibility costs for the surrounding environment, it cannot be denied that these CSR activities will later affect the company's promotional activities and will ultimately increase the company's sales. Therefore, the company will reduce the cost of promoting its products which will affect the reduction of the company's operating costs, which will have an impact on improving the company's financial performance (Yunita, 2013).
Research conducted by Mardiandari and Rustiyaningsih (2013) and Yudharma et al. (2016) found that the allocation of CSR costs in the form of employee welfare costs and community costs has a significant positive effect on the company's financial performance. Spending welfare costs will make employees more loyal to the company so that employees will be more productive because they feel cared for by the company and increased company productivity will cause sales of the company's products to increase and will affect profits (Yudharma et al., 2016). Furthermore, Mardiandari and Rustiyaningsih (2013) state that costs for the community such as donations result in the company attracting more public attention and the public will sympathize with the company, so that people do not think that the company is not only busy making profits but also that the company cares about the environment. surroundings and will attract people to buy products and help companies sell company products.
Investor reaction is a picture of the market performance of the company. good environmental performance and financial performance by a company can bring positive responses from investors, as well as an increase in stock price developments from time to time, and vice versa. Investors will doubt the company if the company's environmental performance is poor, and stock price fluctuations fall in the market. Companies that disclose social responsibility will be more attractive to investors because these companies do not only focus on earning profits, but also pay attention to environmental and social issues (Almilia & Wijayanto, 2007). Based on this description, the hypothesis formulated in this study is as follows:

H1: CSR cost allocation has a positive effect on market performance.
The inconsistency of the results of previous research related to the allocation of CSR costs on market performance has made the current researcher interested in conducting another study, but this research is focused on the effect of CSR cost allocation on market performance by adding the company's life cycle as a moderating variable. In contingency theory it is explained that there is no best way to achieve compatibility between organizational and environmental factors to obtain good performance for an organization. This theory explains that there is more than one strategy that maximizes profitability and market position, and more than one leadership style used to achieve organizational goals. Each path is not equally effective in all conditions where certain organizational actions or responses are more appropriate than others, depending on the situation (Zeithaml et al., 1988). It can be concluded that contingency theory is a management theory especially as a behavioral theory which states that there is no certain way to manage a corporation or company, or to make decisions in an organization. Instead the optimal course of action depends (depends) on the internal and external situation.
Hasan and Habib's research (2017) examines the relationship between the corporate life cycle and corporate social responsibility (CSR). The resource base and competitive advantage allow mature companies to invest more in CSR-related activities than companies at other stages of the company's life cycle. CSR itself reflects how environmental performance is shown through the implementation of social responsibility given by the company.
Companies in implementing CSR, an important thing that must be considered by a company is to determine at which stage the company is in its life cycle. The company life cycle is the process of company development through several linear and sequential stages (Bhaird, 2010). Based on the life cycle concept, a company's life cycle has four stages, namely start-up, growth, maturity, and decline. At the start-up stage, the rate of increase in profits and sales is still slow because the company is still at the stage of introducing the products it sells and net income at this stage still tends to be negative. The second stage is growth, where the company experiences growth in sales levels and net income earned is greater. The next stage is maturity, where the level of sales is at the peak level and the level of liquidity is high. The final stage is decline, where the company's profitability and net income decrease.
At the mature stage that can strengthen the relationship between CSR cost allocation and company performance, because at this stage companies can improve their CSR implementation (Purwaningsih & Aziza, 2019). This is because during the mature stage, the company has a competitive advantage and greater resources than other stages. Therefore, the corporate life cycle variable used in this study is focused on the

mature stage as a moderating variable. The novelty of this research is that there are still rare studies related to CSR cost allocation methods and their impact on financial performance. Bearing in mind that the implementation of CSR in Indonesia in particular still does not have clear guidelines regarding the nominal amount of funds that should be allocated and the proper allocation method. Based on this description, the hypothesis formulated in this study is as follows:

H2: Corporate life cycle moderates the effect of CSR cost allocation with a positive effect on market performance.

Researchers chose energy sector companies as samples to simultaneously see how energy sector companies pay attention to the environment, bearing in mind that the energy industry is one of the highest emitters in Indonesia and dominantly shows continuous increase. It is known that for several years the emissions produced by companies in the energy sector tend to increase. This has a serious impact, especially on the environment, so that companies in the industrial sector tend to be required to carry out their social responsibility. Considering that the energy sector companies are the highest emitters.

The research framework for explaining the relationship between variables in this study is as shown in Figure 1 below.

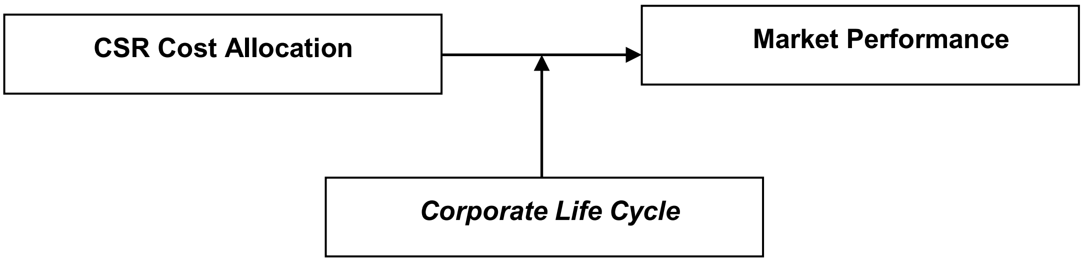

Figure 1. Research Framework

METHODS

This study uses quantitative data in the form of annual financial reports for energy industry sector companies listed on the Indonesia Stock Exchange for the 2017-2021 period obtained on the Indonesia Stock Exchange's website, namely www.idx.co.id. Based on the criteria in this study, the number of companies selected as research samples was 18 companies with 90 observed data. The financial report data used are the value of total assets, total equity, outstanding shares and related company cash flows. Regarding the share price data for each company, it was obtained from the website www.finance.yahoo.com. This research technique is Moderated Regression Analysis (MRA) using E Views.

The dependent variable in this study is market performance. Market Value Added (MVA) as a measure of market-based company financial performance. The MVA calculation is done by calculating the market value or company value minus the invested capital (Aggerholm & Trapp, 2014), written mathematically as follows:

MVA= (Number of shares x market price) – Total Equity

The independent variable in this study is CSR cost allocation. The allocation of CSR costs is the total funds spent to carry out corporate social responsibility. CSR is the result achieved by the company as seen from the reciprocal activities that have been carried out by the company towards society and the environment. In this study, the proxy used to measure CSR cost allocation is the CSR cost ratio. Mathematically, the CSR cost ratio can be calculated using the following formula (Pyo and Lee, 2013):

$$CSR\ Expenditure\ Ratio = \frac{Total\ CSR\ Expenditure}{Total\ Aset}$$

The moderating variable in this study is the corporate life cycle. The researcher uses a corporate life cycle proxy based on Dickinson (2011) which captures different corporate life cycle stages. Classification of sample companies into different corporate life cycle stages based on cash flow patterns using the following code:

(1) Introduction: if OANCF < 0, IVNCF < 0 and FINCF > 0 then given code 1
(2) Growth: if OANCF > 0, IVNCF < 0 and FINCF > 0 then given code 2
(3) Mature: if OANCF > 0, IVNCF < 0 and FINCF < 0 then given code 3
(4) Decline: if OANCF < 0, IVNCF > 0 and FINCF - or 0 then given code 4
(5) Shake-out: if it is not included in the other four stages then it is classified in the shake-out stage by giving code 5

The MRA model used to test the research hypothesis is.

$$Y = \alpha + \beta_1X_1 + \beta_2X_2 + \beta_3X_1X_2 + e\ldots\ldots\ldots(1)$$

RESULTS

Descriptive analysis is used to show the condition of the data in this study. The following is a summary of the results of the descriptive analysis of the dependent variable, namely market performance and the independent variable, namely CSR cost allocation, the moderating variable, namely the corporate life cycle.

Table 1. Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Market Performance	90	49,025	63,401	56,421	3,297
CSR Cost Allocation	90	-12,618	-2,396	-7,736	2,393
Corporate Life Cycle	90	1,000	5,000	3,144	1,223

Source: *Data processed, (2022)*

The standard deviation of the CSR cost allocation variable shows a value of 2.393. The standard deviation value which is higher than the mean value indicates that the distribution of information quality data is uneven. As for market performance and corporate life cycle variables, both have a standard deviation value that is lower than the average value, which means that the two variables have a normal distribution of data.
The model significance test in this study was carried out through 3 stages. The first stage is the Chow Test, followed by the Hausman Test and the Lagrange Multiplier Test. The results of the model significance test in this study are as follows:

Table 2. Model Significance Test

Test		*Rule of Thumb*	Results	Decision
Chow Test	FEM vs CEM	*Cross-section Chi-square Prob* *(α<0.05 = Fixed effect model, α>0.05= Common effect model)*	0,005	FEM
Hausman Test	FEM vs REM	*Cross-section random Prob.* *(α<0.05 = Fixed effect model, α>0.05= Random effect model)*	0,028	FEM

Source: *Data processed, (2022)*

The results of the Chow test in this study show a probability value greater than 0.05, so the exact model used is the Fixed Effect Model (FEM). The results of the Hausman test in this study indicate that the probability value is greater than 0.05, so the model used is the Fixed Effect Model (FEM). Based on the results of the Chow test and Hausman test, researchers can conclude that the panel data regression model used is the Fixed Effect Model (FEM) to analyze the data in this study.

The following table shows the results of the Fixed Effect Model (FEM) panel data regression analysis with the Moderated Regression Analysis test used to analyze the t test, F test and Coefficient of Determination Test (R2).

Table 3. Hypothesis Test

Variables	Coefficient	t-Statistics	Prob.
C	61,205	21,090	0,000
CSR Cost Allocation	0,790	2,127	0,037
Corporate Life Cycle	0,479	2,029	0,046
CSR Cost Allocation_ *Corporate Life Cycle*	-21,053	-0,992	0,325
Adjusted R-squared		0,500	
F-statistics		5,466	
Prob(F-statistics)		0,000	

Source: *Data processed, (2022)*

Based on the calculations in Table 3, it shows that this research model has a calculated F value of 5.466 and a probability value that is smaller than 0.05, namely 0.000. So it can be concluded that the CSR cost allocation variable, the corporate life cycle, and the interaction variable between the CSR cost allocation and the corporate life cycle simultaneously are significant explanations for the dependent variable, namely market performance.

The independent variable CSR cost allocation has a coefficient value of 0.790 with a t-count of 2.127 which is greater than the t-table of 1.663 and a probability value of 0.037 <0.05. This means that the CSR cost allocation has a significant positive effect on market performance, which means that an increase in CSR cost allocation will improve market performance. The results of this study are in line with research conducted by Mardiandari and Rustiyaningsih (2013); and Yudharma et al., (2017).

Signaling theory or signaling theory was first put forward by Spence (1973) which explained that the sender (owner of the information) gives a signal or signal in the form of information that reflects the condition of a company that is beneficial to the recipient (investor). According to Brigham and Houston (2011) signal theory explains management's perception of company growth in the future, which will affect the response of potential investors to the company. The signal is in the form of information that explains management's efforts to realize the owner's wishes. This information is considered as an important indicator for investors and business people in making investment decisions.

Based on signaling theory, CSR disclosure contains information that makes it easy for investors to make decisions and can provide certainty and security for investors to invest in the capital market (Dewi et al., 2014). Companies that disclose social responsibility will be more attractive to investors because these companies do not only focus on earning profits, but also pay attention to environmental and social issues (Almilia & Wijayanto, 2007). Companies that carry out CSR activities also have a good image in the community and can increase trust so that people are more loyal to the company. CSR activities can also have an impact on employees, whereby spending on welfare will make employees more loyal to the company so that employees will be more productive because they feel cared for by the company and increased company productivity will cause sales of the company's products to increase and will affect profits (Yudharma , et al., 2016) and its market performance.

The results of this study indicate that the interaction variable CSR cost allocation and corporate life cycle has a coefficient of -21.053 with a t-count of -0.992 which is smaller than the t-table of 1.663 and a probability value of 0.325 > 0.05. These results indicate that the corporate life cycle variable cannot moderate the effect of CSR cost allocation on market performance. The company life cycle or corporate life cycle is a process of company development through several linear and sequential stages (Bhaird, 2010). A company has four cycle stages, namely start-up, growth, maturity, and decline.

The corporate life cycle is unable to moderate the effect of CSR fund allocation on market performance. It is possible that CSR activities can provide direction for companies in using company resources to meet stakeholder needs. CSR also does not only focus on maximizing shareholder value, but can balance the interests of all different stakeholders. Companies that carry out CSR activities are considered to have a responsibility towards the surrounding environment and have a good image and reputation in the community. This can provide protection for the company when the company has poor performance and reduce the negative assessment of shareholders. Based on this, CSR activities need to be carried out by companies throughout the company's life cycle, so that it can be said that the company's life cycle does not moderate the effect of CSR fund allocation on market performance. The direction of negative results indicates that the corporate life cycle does not significantly weaken the effect of CSR fund allocation on market performance. These results contradict the slack resource theory which states that companies will only use funds for sustainable activities when they have good financial conditions (Waddock & Graves, 1997).

CONCLUSION

This study aims to obtain empirical evidence regarding the effect of CSR cost allocation on market performance which is moderated by the corporate life cycle. Based on the results of empirical testing and discussion, several conclusions are obtained, namely the allocation of CSR costs has a positive effect on market performance. This shows that the higher the cost of CSR owned by a company, the higher its market performance. Meanwhile, the corporate life cycle does not moderate the effect of CSR cost allocation on market performance.

The results of this study are expected to be able to provide empirical evidence regarding signaling theory. The results of this study indicate that the allocation of CSR funds can increase market performance while the corporate life cycle is not a moderating variable because it cannot significantly strengthen the effect of CSR fund allocation on market performance. Companies that carry out CSR activities can also reduce negative ratings from investors when the company has poor performance. Therefore, companies must pay attention to the allocation of CSR funds and disclose CSR activities carried out in order to provide a positive signal to investors.

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