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Green Accounting and Firm Value

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ABSTRACT

Objective - The environment is one of the more interesting issues to discuss, especially if it relates to companies' accounting issues. This study was conducted to determine the effect of green accounting implementation on firm value.
Methodology/Technique – Firm value is measured using Tobins-Q, and green accounting is measured by ratings based on PROPER. Multiple regression analysis was used, and 35 manufacturing companies were sampled in this study.
Findings - The results of this study show that green accounting can increase firm value. Companies that apply green accounting have a higher firm value because information about environmental costs is additional information for stakeholders when making decisions. If the company does not incur environmental costs, it is considered bad for investment.
Novelty - Green accounting is still new, so this study was conducted to provide an overview of green accounting and firm value. Companies implementing green accounting will increase their firm value and help preserve the environment. It is hoped that Indonesian accounting organizations will develop standards regarding green accounting.
Type of Paper: Empirical.
JEL Classification: F64, L50, M14, Q52, Q56
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1. Introduction

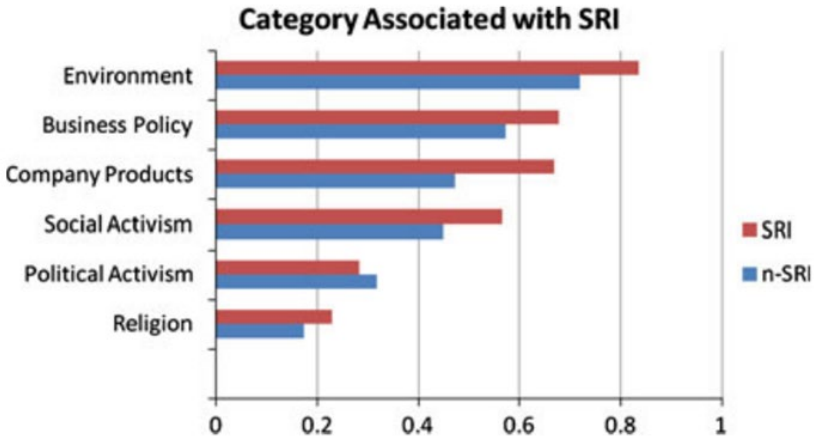
Investors are one source of company funding. To attract the attention of investors, the company will try to increase its value of the company by increasing profits as much as possible so that investors will buy more stock from the company. The increase in corporate profits is followed by the rise in excessive use of resources and high production activities, causing environmental damage such as increased pollution and waste disposal, leading to increased environmental problems. Awareness of climate change and global warming causes changes in aspects that companies must meet to increase corporate value. These aspects are known as the 3Ps, which include Profit (economic aspect), People (social aspect), and Planet (environmental aspect). Changes in this aspect show that the company does not only aim to seek maximum Profit but also keeps an eye on the welfare of society and preserves the environment. Changes in this aspect encourage the employment of CSR (Corporate Social Responsibility).

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Corporate social responsibility is a corporate responsibility scheme to society and the environment as part of the company's operations. For example, tree-planting activities, producing environmentally friendly products, building public facilities for rural areas, making donations, etc.

Besides causing changes in company operations, climate change also causes changes in investment decisions. This change is known as "green investment" or "social responsibility investment." Social Responsibility Investment is the behavior of investors in investing in companies with due regard to the environment, social, and corporate governance (Blancard & Monjon, 2012); (Berry & Junkus, 2013). Companies not paying attention to these aspects will not be an option in the investor's portfolio. Not all investors implement Social Responsibility Investment, but based on research by Berry & Junkus (2013) it shows that investors who implement Social Responsibility Investment and do not have the same view regarding the impact of company operations on environmental problems. This can be seen from the results below.



SRI N = 1,761		non-SRI N = 3,035	
Environment	84%	Environment	72%
Business Policy	68%	Business Policy	57%
Company Products	67%	Company Products	47%
Social Activism	57%	Business Policy	45%
Political Activism	28%	Political Activism	32%
Religious values	23%	Religious values	17%

Investor awareness of the environment, encourages companies to incur costs to reduce the impact of environmental damage due to company operations. The costs incurred for this activity must be recorded and presented in the company's financial statements. This activity is called green accounting. Green accounting is an accounting activity (recognition, measurement, recording, and reporting) for events or activities related to the company's environment and social responsibility (Lako, 2018). Risal et al. (2020) explained that green accounting includes elements of environmental costs in a company's financial statements. The application of green accounting is expected to give information associated with the company's efforts to lower the encounter of environmental pollution and environmental destruction and become reporting to increase firm value.

In Indonesia, the application of green accounting is assessed using a company performance improvement assessment program (PROPER) made by the Ministry of environment. This program was created to increase company awareness of the need to carry out environmental preservation in a sustainable manner. The higher the company's performance value for environmental preservation, the higher the company's value in the eyes of investors. This study aims to obtain empirical evidence of the effect of implementing green accounting in

Indonesia on the importance of manufacturing companies registered in Indonesia. Manufacturing companies were chosen because the operating activities of manufacturing companies tend to impact the company negatively, and some manufacturing companies have received a good rating from the PROPER program. This research is expected to encourage other companies to apply green accounting properly to increase corporate value through environmental preservation. There is still little research on green accounting, especially in Indonesia, and this motivates the research. This study's problem is whether applying green accounting can increase firm value. This study aimed to obtain evidence of the effect of green accounting on firm value.

2. Literature Review

Stakeholder Theory

Stakeholder theory was put forward by Freeman (1984), which shows that company management formulates and implements business strategies to meet the needs of stakeholders. Stakeholders are shareholders, employees, consumers, vendors, and the public for the company's sustainability. Companies are no longer seeking profits to increase the profits of owners and shareholders but can benefit other stakeholders. Benefits that can be provided include environmental preservation and community activities.

This theory provides a dynamic strategic framework for dealing with environmental changes so that companies can adapt to these changes (Freeman & John, 2010). Such as the changes that have occurred in the company's goals which were initially only looking for Profit, now it has changed with the existence of the 3P concept, which is not only Profit that companies are looking for, but company operations must also pay attention to environmental and social conditions. Companies that provide more benefits for stakeholders can increase the company's value, leading to investment decisions in the company (Parmar et al., 2010).

Legitimacy Theory

Legitimacy theory states that companies operate on society's social interests, norms, and values (Suchman, 1995). Burlea and Popa (2013) explain that companies report information about social and environmental activities to fulfill a social contract that can enhance company goals. This is because stakeholders will invest more in companies prioritizing social and environmental interests. Companies that lack legitimacy will receive a lousy view of the company, decreasing company value (Li et al., 2017).

If stakeholders disagree with company actions related to society and the environment, the company will face legitimacy pressure consisting of regulatory, normative, and cognitive pressure (Fields et al., 1983). Regulatory pressure comes from the government, normative pressure comes from consumers, and cognitive pressure comes from competitors. For example, if a company pollutes the environment, investors will relinquish their ownership in the company, there will be sanctions from the government, consumers will no longer buy the company's products and other things that can have a negative impact on the company (Li et al., 2017)

Green Accounting and Firm Value

Green accounting is an activity of recognizing, measuring, recording, reporting, and disclosing economic, social, and environmental related events in company reporting for decision-making for users (Lako 2018), Ulupui et al. (2020) stated that green accounting is a measurement made by companies to combine environmental costs and operational costs which can be used for decision making. Gonzalez & Mendoza (2021) added that green accounting treatment is the same as accounting treatment for company commercial transactions, however, in green accounting, companies must present the results of environmental preservation

actions carried out in the company's financial statements. Green accountants can provide information for external and internal parties related to the company's efforts to deal with environmental problems and report company obligations related to environmental issues in the company's financial reports (Chasbiandani et al., 2019).

The application of green accounting can have a positive impact on company value. Agustia et al., (2019) stated that by implementing green accounting, company value would increase because reporting on company activities in reducing the impact of environmental damage can improve company performance and image. This is in line with the research results of Mabruroh & Anwar (2022), Asiaei et al. (2022), Hamidi, (2019), Chasbiandani et al. (2019) which state that the application of green accounting can increase company value. With the implementation of good green accounting, the company shows that it cares about environmental preservation and with a change in shareholder orientation, causing the company to contribute more to environmental preservation so that its value will be much better. Based on the theory of stakeholders and legitimacy, companies that carry out green accounting mean that they provide benefits to stakeholders, and the company's actions in preserving the environment contained in company reports are an attraction for stakeholders in decision-making. Based on the explanation above, the hypothesis are:

H1: *Green Accounting has a positive effect on firm value*

3. Research Methodology

This study uses manufacturing companies listed on the Indonesia Stock Exchange for 4 years, from 2017 to 2020. 35 companies were selected as research samples obtained using a purposive sampling method. To test the hypothesis, multiple regression and additional non-parametric tests are used to see the difference in the value of companies that apply green accounting properly, as seen in the PROPER rating, and those that do not include PROPER. Firm value is used as the dependent variable, and green accounting as the independent variable.

3.1 Definition Operation

Firm value in this study is measured using Tobin's Q with the formula:

$$\boldsymbol{Tobin's\ Q = \frac{(market\ value\ of\ equity + book\ value\ of\ debt)}{book\ value\ of\ total\ assets}}$$

Green accounting can be measured by the PROPER rating according to the Indonesian Ministry of environment based on the Regulation of the Minister of Environment and Forestry No. 1 of 2021 as follows:

PROPER Rating	Description
Gold	Very Obedient
Blue	Better
Green	Obedient
Red	Not Obedient
Black	Disobedient

The company gets a gold rating; it is given a value of 5, Blue a value of 4, Green a value of 3, Red a value of 2, and a black value of 1.

In this study, there are 3 control variables, company size measured using the logarithm nature of total assets; leverage assessment using the proportion of debt to equity, with the formula:

$$\text{Leverage} = \frac{\text{Total Debt}}{\text{Total Equity}}$$

Profitability that assesses using the ratio of return on assets, with the formula:

$$\text{Profitability} = \frac{\text{Net Income}}{\text{Total Asset}}$$

The research framework shows below:

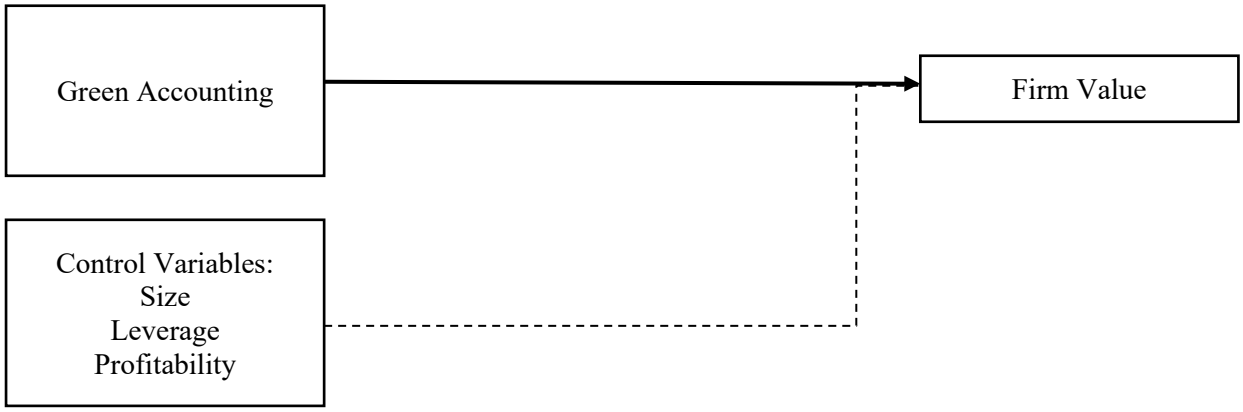


Figure 1. Research framework

4. Results

Tables 1,2, and 3 below describe the descriptive statistic and hypothesis result.

Table 1 Descriptive Statistic

	N	Minimum	Maximum	Mean	Std. Deviation
FIRM VALUE	140	0.4159	14.4146	2.3117	2.4948
GREEN ACCOUNTING	140	2	4	3.0857	0.4998
ROA	140	0.9209	-2.6409	0.0795	0.2693
DER	140	0.0831	2.8998	0.4425	0.3598
SIZE	140	26.889	32.2714	29.3864	1.4269

Table 2 Distribution of PROPER Rating

Rating	Sample	Percentage
Gold	0	0%
Blue	104	74%
Green	24	17%
Red	12	9%
Black	0	0%

Table 2 shows that about 74% of the sample got a blue rating from the PROPER rating, which shows that the sample companies used have implemented green accounting properly, but 9% of the sample need to apply and pay more attention to the environment.

Table 3 Hypothesis Result

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Constanta	-5.606938	4.155451	-1.349297	0.1795
Green Accounting	1.088592	0.479306	2.271181	0.0247*
ROA	3.767891	0.781457	4.821622	0.0000***
LEV	1.514687	0.595581	2.543210	0.0121**
SIZE	0.122155	0.165305	0.738969	0.4612
F-Statistic		9.167751		
Prob		0.000001		

*** Significant level 1%, 5% and 10%

Table 3 shows that companies that apply green accounting properly will have a higher firm value than companies that do not. These results are consistent with Agustia et al. (2019), Mabruroh & Anwar (2022), Asiaei et al. (2022), Hamidi, (2019), Chasbiandani et al. (2019). Companies implementing green accounting will have higher firm value due to the company's concern for environmental problems that are being faced, so the company's image will increase according to stakeholders (Chasbiandani et al., 2019). Presentation and disclosure of environmental costs in financial reporting can attract the attention of stakeholders. If the company does not incur environmental charges in financial reporting, then the company is considered not good for investment. To see whether the firm value of companies that apply green accounting is different from those that do not apply green accounting properly, a non-parametric test is performed with the following results:

Table 4 Non-parametric test result

	TOBINS Q
Mann-Whitney U	11839.000
Wilcoxon W	39805.000
Z	-4.595
Asymp. Sig. (2-tailed)	.000

	N	Mean Rank
Not apply	236	168.67
Apply	140	221.94
Total	376	

The result shows that the firm value of the company applying green accounting has a different value than companies that do not adequately use green accounting. When a company applies green accounting correctly will have a higher firm value.

5. Conclusion

This research aim is to get empirical evidence of green accounting's effect on firm value. The sample used in this study is 35 companies with 4 years research period, and the result shows that green accounting positively affects firm value, which means green accounting can increase firm value. Companies that report and disclose environmental costs get a good image from stakeholders to increase the company's value. Presentation and disclosure of environmental costs in financial reporting can attract the attention of stakeholders. If the company does not incur environmental changes in financial reporting, then the company

is considered not suitable for investment. This research also provides an overview of the differences between companies that implement green accounting well and those that have not implemented it well. Companies that implement green accounting have a better value than those that have not. This research contributes to companies implementing green accounting so that company value increases and can help in environmental preservation. It is hoped that Indonesian accounting organizations will develop standards regarding green accounting so that all companies can apply the same standards.

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