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Green Accounting, Firm Size, and Profitability: Evidence from Indonesia Green Awards

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ABSTRACT

This study examines whether green accounting practices and firm size affect the profitability of Indonesian Green Award (IGA) recipients, especially those listed on the Indonesia Stock Exchange (IDX). Signalling theory states that companies should use environmental practices and business size to send positive signals to stakeholders in order to improve financial performance. Secondary data from business financial statements was used in this quantitative analysis. 15 businesses were chosen via purposeful sampling, yielding a total of 45 observations. Descriptive statistics, multiple linear regression, classical assumption tests, and hypothesis testing (such as t-tests, F-tests, and the coefficient of determination) were all part of the data analysis process. This study found that return on assets (ROA), a measure of profitability, is not significantly impacted by firm size or green accounting. With an R-squared of 0.062, these two independent variables account for just 6.2% of the variation in profitability. Therefore, both hypotheses are rejected. According to this study, environmental costs and business size are unreliable indicators for the Indonesian capital market. Therefore, in order to boost profitability, corporate management shouldn't rely only on asset size or environmental evaluations.

Keywords: *Firm Size; Green Accounting; Indonesia Green Awards; Profitability*

1. INTRODUCTION

Profitability levels are one of the main indicators used to assess a company's ability to manage resources and generate profit. For investors and stakeholders, profitability shows a company's financial performance and serves as a basis to evaluate the company's sustainability prospects. However, a company's focus on generating profit faces increasingly complex challenges because their operations can impact the environment. Therefore, companies need to consider the social and environmental impacts of their business activities, not just chasing profit. As a result, expectations for companies are shifting from simply making profit to striving

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for a balance between the two. This shift in focus is becoming more relevant with developments in business practices in Indonesia. Capital market and financial sector regulations in Indonesia have included the implementation of sustainable finance principles. Through POJK No. 51/POJK.03/2017, the Financial Services Authority (OJK) regulates the implementation of sustainable finance for financial service institutions, issuers, and public companies. This includes fulfilling social and environmental responsibilities as well as submitting sustainability reports. Under this framework, sustainability is now seen as more than just a voluntary company initiative. It's increasingly becoming part of corporate governance and reporting for public companies.

In this situation, green accounting is the right approach because its main goal is to include environmental elements in business decision-making and accounting processes. The outcome is expected to provide a broader picture of business performance. Green accounting can serve as a form of corporate transparency, showing stakeholders that the company is environmentally responsible. According to signalling theory, companies can communicate information about their environmental commitments to external parties to reduce information asymmetry. Companies that consistently pay attention to the environment can build a positive reputation and gain trust from stakeholders, which can ultimately help the company's performance.

The company receives recognition for their environmental performance. Companies that carry out various programs and initiatives related to social responsibility and environmental management can receive the Indonesia Green Awards (IGA). This shows that sustainability practices at the company level are becoming more diverse and include concrete programs beyond just reporting.

Source : Data processed by the researcher, 2026

Chart 1.1 Profitability level of IGA-winning companies listed on the IDX in 2022-2024

This phenomenon is clearly seen among the recipients of the Indonesia Green Awards listed on the Indonesia Stock Exchange from 2022 to 2024. According to research data, fifteen companies in the sample produced 45 observations showing very different levels of profitability, measured through Return on Assets (ROA). The average ROA was 6.25%, but it ranged from -12.15%

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to 33.60%. As a result, some companies received awards for their environmental commitment but still recorded negative ROA. Other companies managed to generate quite high ROA. This phenomenon shows that there is a difference between perceptions of financial performance and environmental performance.

This situation shows the existence of a 'gap,' which is the difference between the field conditions expected empirically and those expected theoretically. According to Signalling Theory, recognition of environmental performance and green accounting should provide a positive signal to investors and stakeholders because it shows the company's commitment to sustainability. The variation in asset values (ROA) among companies that have received IGA indicates that a good environmental signal does not always mean high profitability. This raises the question of whether the use of green accounting has actually resulted in economic gains shown in the company's profitability, or if it's just a way to fulfill environmental and social responsibilities.

In terms of profitability, company size is an important component besides green accounting. Companies with larger assets usually have more resources, more access to funding, and greater operational capacity to carry out environmental programs. According to signalling theory, company size can indicate how stable and strong a company is. However, having large assets doesn't always mean high efficiency; companies with big assets can face operational burdens, maintenance costs, and unproductive assets, all of which can lower the return on assets.

Previous research on the effect of company size and green accounting on profitability has continued to show inconsistency (mixed results). Studies by Himawan et al. (2025) and Hadriyani and Dewi (2022) found a positive effect, while studies by Kusuma and Anggraini (2023) and Kholmi and Nafiza (2022) showed that green accounting does not have a significant impact. This issue is becoming increasingly important. The relationship between company size and profitability is also inconsistent. Studies by Sukanti and Rahmawati (2023) and Luckieta et al. (2021) indicate that company size has a positive effect on profitability. On the other hand, due to high operational costs and unproductive assets, research by Sugianto and Meirisa (2023) and Nuraini and Suwaidi (2022) found that company size does not significantly affect profitability. The differing results suggest that further research is needed. To resolve this difference, this study takes another look at the relationship between green accounting and company size on profitability. Specifically, it analyses companies listed on the Indonesia Stock Exchange that have received the Indonesia Green Awards.

The urgency of this research is to determine whether there is a correlation between a company's financial performance and environmental commitment recognized by the Indonesia Green Awards. The research results can provide information to investors that environmental awards should not be the sole basis for assessing a company's financial prospects. For management, the findings can serve as an evaluation on whether the environmental expenditures made have been managed strategically and can provide long-term benefits. However, this study needs to broaden the discussion about the relationship between company characteristics, financial performance, and environmental information, especially

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regarding public companies in Indonesia, for the advancement of accounting knowledge.

To bring something new, this study looks into several companies that have certain characteristics, for example, companies that received the Indonesia Green Awards and were listed on the Indonesia Stock Exchange during 2022–2024. This study is different from previous research, which usually uses samples based on specific industry sectors, such as mining, manufacturing, pharmaceuticals, or non-cyclical consumer goods. In this study, the sample focuses on companies that share similar characteristics based on their recognition of environmental initiatives. This method allows the study to explore whether there is a correlation between business profitability and externally recognized environmental commitment.

The next novelty lies in this research's effort to combine three interrelated things: green accounting practices as a representation of a company's environmental concern, company size as an internal characteristic, and profitability projected with Return on Assets (ROA) as a measure of financial performance efficiency. Therefore, the study can more accurately examine whether environmental performance recognition aligns with financial performance achievement and the effectiveness of environmental signals in the capital market.

This study is intended to help develop signalling theory by examining whether recognition of environmental performance and green accounting can act as relevant signals to the market in the context of Indonesian public companies. In addition, the results are expected to add to the literature on the relationship between environmental accounting practices, company size, and profitability in firms that have received recognition for their environmental performance. Practically, this study is expected to be useful for company management as a reference in managing costs and environmental programs so they can not only fulfil their social and environmental responsibilities but also generate greater profits. For investors, this study can serve as a consideration that environmental awards and company asset size should be analysed alongside other financial indicators before making investment decisions.

2. LITERATURE REVIEW AND HYPOTHESES

Signalling Theory

According to signal theory, company management usually has more complete information about internal conditions, performance, and business prospects compared to external parties. This is known as asymmetric information. It is expected that reliable signals can shape a more positive perception, boost public trust, and reduce the risk of negative capital market assessment.

In sustainability, environmental management practices like using green accounting and participating in the Indonesia Green Awards (IGA) can be seen as green signals that show an organization's ethical commitment and social responsibility. However, signalling theory doesn't guarantee that a short-term profitability boost will be immediately followed by every positive signal. That's why signaling theory is used in this study to figure out whether environmental

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commitment signals and business scale are logically responded to by the capital market, so it's reflected in profitability ratios.

Profitability

Profitability shows a company's ability to generate profits over a certain period. This ability is usually used to measure a company's performance, indicating that the business is doing well (Sukanti and Rahmawati, 2023). One of the most common tools used to determine profit-generating ability is ROA. ROA is a financial ratio that helps understand how effectively a company generates net profit using all of its assets, serving as an important factor in attracting investor interest among shareholders. Therefore, the more assets a company has (ROA), the better its profitability and performance.

Green Accounting

Green accounting is an accounting method that integrates environmental costs into a company's accounting system by identifying, measuring, recording, and reporting them (Lako, 2018, as cited in Sundari and Sulfitri, 2022). Cohen and Robbins (2011) state that green accounting includes economic benefits not only from resource efficiency but also direct operational costs caused by environmental impacts. Organizations try to meet the Triple Bottom Line principle by implementing public accountability to address operational externality issues. If managing green accounting can improve production process efficiency, reduce the risk of regulatory fines, and enhance the company's reputation in the eyes of consumers, then implementing green accounting can help generate financial profits. However, if the costs for environmental programs and CSR are allocated inefficiently or generate economic profits, that will be a problem.

Company Size (Firm Size)

The number of operations, complexity, and economic resources a company has are shown by its size. To reduce significant data uncertainty, accounting and finance experts usually use the natural logarithm of total assets to project a company's size. Total assets show management's operational ability to generate revenue. From a signal perspective, the number of assets a company owns shows its strength and stability in facing economic turbulence. However, having a large asset base doesn't always mean high efficiency. Big companies often face bureaucratic complexities, heavy asset maintenance responsibilities, and the risk of unproductive assets. Growing in size can potentially lower the return on assets ratio if improvements in management efficiency aren't matched by adding more assets.

Synthesis of the Crisis and Causes of Inconsistent Findings

Through a critical review of previous studies, the inconsistencies in the empirical findings above can be explained by three main factors: Research that uses qualitative disclosure indices (like sustainability ratings or CSR scores) to measure green accounting tends to capture reputation perceptions, so it more often shows a positive relationship. On the other hand, studies that use quantitative monetary cost

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ratios (like the CSR cost-to-profit ratio) measure the actual burden on financial statements, which directly reduces current profits.

Environmental expenses are cash allocations during the current period, but economic benefits like improved brand reputation, customer loyalty, and reduced regulatory risk take time to accumulate. As a result, the time lag effect applies. Empirical tests that have a short time frame, usually between one and three years, often only look at costs, without considering long-term financial benefits.

Operational characteristics and asset management efficiency largely depend on the size of the company. Business scale can boost ROA for entities that can turn added assets into revenue. On the other hand, for entities with high operational costs, adding assets will increase maintenance expenses and put pressure on profitability.

Hypothesis Development

The Effect of Green Accounting on Profitability

According to Signalling Theory, using green accounting, which is proxied through environmental costs or CSR, is a positive signal sent by management to show the entity's social and environmental concern. Clear environmental information disclosure can reduce information asymmetry and make stakeholders trust the company. A good reputation can boost social legitimacy and give the company an edge in the market. Signalling Theory predicts that the market and stakeholders will respond positively to green signals, even though short-term spending might be reduced due to environmental costs. The signals sent by companies that win Indonesia Green Awards (IGA) are stronger because of external recognition. Environmental spending can increase profitability (ROA) if the green accounting allocation is well managed to improve operational efficiency and the company's image.

A review of previous literature shows that the impact of green accounting on profitability is still sparking academic debate because the research results are inconsistent (mixed results). Studies by Himawan et al. (2025), Hadriyani & Dewi (2022), Meiriani et al. (2022), Fitrifatun & Meirini (2024), and Wulandhari & Machdar (2025) found that implementing green accounting can increase transparency, reduce information asymmetry, boost corporate reputation, and improve operational efficiency. Ultimately, this can enhance financial returns.

Most researchers have found conflicting results. According to studies conducted by Kusuma & Anggraini (2023), Kholmi & Nafiza (2022), Tino & Sudana (2025), and Hasanah & Widiyati (2023), green accounting doesn't have a significant impact on profitability. According to these studies, the market still views the environmental costs incurred by companies as short-term operational expenses that reduce profit rather than as strategic investments.

H_1: The implementation of green accounting has a positive effect on profitability

The Effect of Company Size on Profitability

Similar inconsistencies were also found in testing the relationship between company size and profitability. Studies conducted by Luckieta et al. (2021), Sukanti

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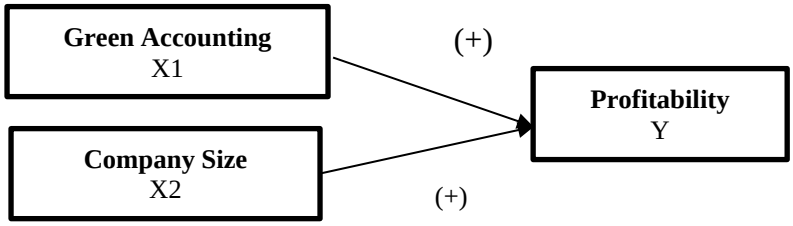
& Rahmawati (2023), and Fitrifatun & Meirini (2024) show that company size benefits profitability. The main opinion of this group is that large-scale businesses can optimize profit achievement by taking advantage of economies of scale, capital efficiency, and production capacity.

On the other hand, studies conducted by Sugianto & Meirisa (2023) and Nuraini & Suwaidi (2022) found that business size doesn't have a significant impact on profitability. The results show that asset size doesn't always guarantee productivity, especially in cases where companies have operational inefficiencies or a high proportion of non-productive assets.

By proxying the size of a company with the natural logarithm of total assets, we can see how much resource capacity a company has. In signalling theory, a large company size indicates stability, operational certainty, and the entity's ability to handle business risks. Companies with more assets have a greater chance of achieving economies of scale, optimizing production processes, and gaining easier access to funding. Large-scale companies can be more flexible in allocating funds for sustainability initiatives and operations due to their massive resource capacity. They can do this without disrupting the company's financial stability. When these assets are managed effectively, the organization's size will boost operational efficiency and net profit accumulation. Ultimately, this will increase ROA value.

H_2: The implementation of company size has a positive effect on profitability

Conceptual Framework



Source: Data processed by the researcher, 2026

Gambar 2.1 Conceptual Framework

3. RESEARCH METHODS

This study uses a quantitative approach with numerical data to measure objective variables. Quantitative data is data in the form of numbers or can be converted into numbers through measurement (Sugiyono, 2023). This method is used to evaluate research assumptions and to see if there are statistical relationships between several variables. How green accounting and company size affect a company's profitability is studied in this research using a quantitative approach.

Population dan Sampling

This study covers companies that received the Indonesia Green Awards (IGA) and are listed on the Indonesia Stock Exchange from 2022 to 2024. The

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number has increased each year, with 23 companies in 2022, 27 companies in 2023, and 28 companies in 2024.

The previously established standards shaped the purposive sampling methodology used to select the samples for this research. For this study, the following criteria were used:

No	Sample Selection Criteria	Number of Companies
1	The initial population of companies receiving IGA that are the subject of the study (3 years)	78
2	Companies that are not listed on the IDX during the observation period (3 years)	15
3	A company that doesn't provide complete data/reports needed for the research (3 years)	18
Total observations (15 companies × 3 years)		**45**
Selected company sample		**15**

A total of 15 companies were chosen as the research sample based on the established criteria. Over three years, each company received a total of 45 observations. From a statistical adequacy perspective, these 45 observations meet the minimum requirement for multiple regression analysis with two independent variables. Considering Roscoe's guidelines (Sugiyono, 2023), which state that a reasonable sample size for most research ranges from 30 to 500, and the general rule for multivariate research that requires a minimum sample size of 10 times the number of independent variables (Hair et al., 2019), the 45 findings in this study can be considered sufficient to produce stable regression coefficient estimates.

Data Collection Techniques

The secondary data used in this research are financial statements, annual reports, and sustainability reports of companies obtained through the official website of the Indonesia Stock Exchange (www.idx.co.id) and each company's official website.

Variables and Operational Definitions

Green Accounting

The measurement of green accounting in this study is proxied using environmental costs calculated based on the ratio of environmental costs to net profit after tax. The measurement of these environmental costs refers to Handayani et al., (2024), who use the comparison of costs allocated for environmental programs with net profit after tax. The full formula is as follows:

$$GA = \frac{CSR\ Expense}{Net\ Income\ for\ the\ year}$$

This proxy was chosen because it is the only quantitative indicator consistently available across company financial reports for the 2022–2024 period.

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Company Size

The amount of assets a company owns can determine how big or small the company is. Big companies are usually considered to have a lot of resources to support their operations and business environment. This study determines the size of a company by using the natural logarithm of the total assets. According to research by Ibrahim et al. (2025), the following formula is used to assess the size of a company:

$$SIZE = ln\ (Total\ Assets)$$

Profitability

Profitability is a company's ability to make money. In this study, profitability is measured using Return on Assets (ROA), a ratio that shows how effectively a company uses its assets to earn profits. A high ROA indicates that the company is effective in making profits (Kasmir, 2019, as cited in Novika and Siswanti, 2022). According to the research by Ibrahim et al. (2025), the formula used is as follows:

$$ROA = \frac{Net\ Income}{Total\ Assets} \times 100\%$$

Data Analysis Techniques

Descriptive statistics are used to show data through the mean, standard deviation, maximum, and minimum values of each variable. Before testing the hypothesis, the researcher performs a classical assumption check. Data normality is tested using the one-sample Kolmogorov-Smirnov test. If the data's significance value is greater than 0.05, the data is considered normal. To evaluate multicollinearity, tolerance and VIF values are used. If the tolerance value is higher than 0.10 or the VIF value is less than 10, the variable does not show symptoms of multicollinearity (Perdana, 2016: 47). Raharjo (2019) states that the Glejser test can be used to measure heteroskedasticity. Homoskedasticity is recognized if the significance is greater than 0.05. According to Ghozali (2018), multiple linear regression analysis is used to assess the impact of independent variables on the dependent variable. All statistical analyses in this study were performed using IBM SPSS Statistics version 26.

The data structure of this study combines cross-sectional (15 companies) and time-series (3 years) dimensions, making it conceptually similar to panel data. However, pooled cross-sectional multiple linear regression was employed because of the relatively small sample size (45 observations), the study's objective to examine the overall effects of the variables rather than firm- or year-specific effects, and the fulfilment of all classical regression assumptions (normality, multicollinearity, and heteroskedasticity). Following Ghozali (2018), the regression model includes profitability (ROA) as the dependent variable, Green Accounting (GA) and Company Size (SIZE) as independent variables, α as the constant, β as the regression coefficients, and ε as the error term. Hypotheses were tested using the t-test for partial effects and the F-test for simultaneous effects at a 5% significance level, while the coefficient of determination (R^2) was used to assess the explanatory power of the model.

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4. DATA ANALYSIS AND DISCUSSION

Descriptive Statistics

All the variables studied have data characteristics that are described using descriptive statistical analysis. Company size (SIZE) and green accounting (GA) are the two independent variables, while profitability, measured using ROA, is the dependent variable. Before analysis, the ROA variable was transformed using the square root (SQRT) to normalize the data distribution and reduce potential heteroskedasticity. The minimum, maximum, mean, and standard deviation values for each variable were calculated based on 45 observations conducted during 2022-2024.

Tabel 4.1 Descriptive statistical test results

	N	Minimum	Maximum	Mean	Std. Deviation
GA	45	-,0065	2,3024	,189953	,4730889
Size	45	9461,000	1992983,000	370810,4000	575402,4835
ROA	45	-,1215	,3360	,062536	,0592330
Valid N	45				

Source: *Output* SPSS 2026, data processed by the researcher, 2026

Based on 45 studies conducted during 2022–2024, the green accounting (GA) variable averaged 0.19, with a value range from -0.0065 to 2.3024, and a standard deviation of 0.4731. The standard deviation being higher than the mean, 0.4731 compared to 0.19, shows that the GA data distribution is quite high, indicating there is significant variation in CSR costs relative to current-year profits among companies. This suggests that corporate environmental commitment is not uniform across companies when measured based on Corporate Social Responsibility (CSR) expenditures.

With an average of 370,810, a range from 9,461 to 1,992,983, and a standard deviation of 575,402, the company size (SIZE) variable shows a very high level of variability. This condition shows that the research sample includes companies ranging from small to large in size. This extreme variation needs to be considered because it can affect the results of tests on the effect of company size on profitability. On the other hand, the profitability variable (ROA) has an average value of 6.25% or 0.062536, with a range from -12.15% (-0.1215) to 33.60% (0.3360) and a standard deviation of 0.0592. A standard deviation fairly close to the average indicates that the variation of ROA among companies is quite moderate. Interestingly, even though all companies in the sample received the Indonesia Green Awards, some companies experienced losses (negative ROA up to 12.15%). This supports the argument that being eco-friendly does not always guarantee good financial performance. Therefore, evaluating the impact of green accounting and company size on ROA is important because the variability of these three variables is relatively high.

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Classical Assumption Test

Table 4.2 Classical Assumption Test Result

Classical Assumption Test	Result			Description
Normality Test (Kolmogrov-Smirnov)	Asymp. Sig. (2-tailed) = 0,200			The residual data is normally distributed, so the normality assumption in the regression model is met
Multicollinearity Test (VIF)		**Tolerance**	**VIF**	There are no signs of multicollinearity among the independent variables in the regression model
	GA	0,957	1,045	
	Size	0,957	1,045	
Heteroskedasticity Test (Glejser)		**Sig.**		There is no heteroscedasticity in the regression model. So, the homoscedasticity assumption is met.
	GA	0,351		
	Size	0,135		

Source : *Output* SPSS 2026, data processed by the researcher, 2026

Based on the findings from the classical assumption tests, it's proven that the analysis model used in this study meets all the requirements. The normality test using the One-Sample Kolmogorov-Smirnov Test showed an Asymp. Sig. (2-tailed) value of 0.200, which is above 0.05. This indicates that the residual data in the regression model is normally distributed, so the normality assumption is fulfilled. Meanwhile, the multicollinearity evaluation shows that all independent variables (company size and green accounting) have a tolerance value of 0.957 (greater than 0.10) and a VIF of 1.045 (less than 10). These values indicate that there's no significant linear correlation between the independent variables, which means the regression model is free from multicollinearity. Then, the heteroskedasticity test using the Glejser method showed that the green accounting variable had a significance value of 0.351 and the company size variable had a significance value of 0.135, both of which are above 0.05. Therefore, the homoscedasticity assumption is met, and the regression model does not show heteroskedasticity. After all the classic assumption tests are completed, the regression model used in this study can be applied for the stage of testing the research assumptions.

Hypothesis Testing

Table 4.3 Hypothesis Testing result

Hypothesis Testing	Result			Description
Coefficient of Determination (R^2)	**R**	**R Square**	**Adjusted R Square**	The ability of the independent variable to explain the variation in the dependent variable is only 6.2% (or 1.6% after
	0,248	0,062	0,016	

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				adjustment), while the remaining 93.8% is explained by other variables outside the research model.
Uji F (Simultaneous)	**Model**	**f**	**Sig.**	Simultaneously, the Green Accounting variable and Company Size do not have a significant effect on profitability (ROA)
	Regression	1,343	0,272	
Uji t (Partial)	**Model**	**t**	**Sig.**	Partially, both independent variables don't have a significant effect on profitability (ROA).
	GA	0,035	0,972	
	Size	-1,596	0,118	

Source : *Output* SPSS 2026, data processed by the researcher, 2026

The results of the hypothesis testing can be explained based on the table. The R-squared (R^2) value is 0.062 or 6.2%, and the adjusted R^2 value is 0.016 or 1.6%. The R value (multiple correlation coefficient) is 0.248, which indicates the combined correlation level of the independent and dependent variables.

Next, in the simultaneous F test, the F value obtained was 1.343 with a significance level of 0.272. In the partial t test, the green accounting (GA) variable got a t value of 0.035 with a significance of 0.972, and the company size (Size) variable got a t value of -1.596 with a significance of 0.118. Both significance values are above 0.05.

This modest explanatory power does not necessarily undermine the validity of the model. Ozili (2022) argues that in social science research, an R-squared between 0.10 and 0.50 is broadly acceptable, since the goal of most social science modelling is to test whether specific predictors have a measurable effect rather than to fully predict organizational or human behaviour. Viewed from this perspective, the low R-squared and the non-significant F-test obtained in this study are consistent with the inherently noisy nature of firm-level profitability data, where numerous unobserved factors, such as industry cycles, management quality, and capital structure, compete for explanatory power alongside green accounting and company size.

Multiple Linear Regression

Table 4.4 Multiple Linear Regression test results

Multiple Linear Regression	
Model	**B**
(Constant)	0,257
GA	0,001
Size	-3,673E-8

Source : *Output* SPSS 2026, data processed by the researcher, 2026

The multiple linear regression equation is:

$$ROA = 0{,}257 + 0{,}001GA - 3{,}673E\text{-}8SIZE$$

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According to the results of the multiple linear regression analysis, this equation was obtained: ROA = 0.257 + 0.001 Green Accounting - 3.673E-8 Company Size. The constant value of 0.257 indicates that the profitability level is estimated at 25.7% if both independent variables are set to zero. The green accounting coefficient of 0.001 (positive) indicates that increasing green accounting by 1 unit will increase ROA by 0.001 units. However, the company size coefficient of -3.673E-8 is negative, so increasing company size by 1 unit will result in a decrease in asset value (ROA) by -3.673E-8 units. Since the t-test and F-test results are not significant, this regression equation cannot be used to predict profitability.

Discussion

The Impact of Green Accounting on Profitability

The test results for the first hypothesis (H_1) show that the implementation of green accounting, measured by the ratio of CSR costs to current year profits, does not have a significant effect on the profitability (ROA) of companies that won the Indonesia Green Awards (IGA) for the 2022-2024 period (t = 0.035; sig. 0.972 > 0.05). Therefore, H_1 is rejected. This finding indicates that the allocation of funds for environmental and social activities, at least for the population of award-winning companies, is not yet strong enough to statistically drive an increase in asset efficiency.

Scientifically, the failure of green accounting to impact ROA can be explained through three main factors. First, from the perspective of cost proportion and consistency. Even though the average CSR-to-profit ratio reaches 19%, the very high standard deviation (47.3%) shows that environmental cost allocation is highly volatile across companies and years. This fluctuation creates uncertainty in the eyes of investors. Companies with high GA ratios don't always see profit increases, and vice versa, making it hard for the market to form consistent expectations between environmental spending and financial performance. Second, the structure of environmental costs reported by most companies is still dominated by philanthropic or charitable CSR activities (like donations or community aid) and hasn't been massively integrated into core operational expenses such as energy efficiency, waste recycling, or emissions reduction. Environmental investments that are reactive and separate from the production process tend to be seen as an extra cost that cuts short-term profits, rather than a strategic investment that creates long-term value (Lako, 2018, as cited in Sundari and Sulfitri, 2022). Third, the effectiveness of signals really relies on credibility and standardized disclosure. Unlike the PROPER rating from the Ministry of Environment, which comes with clear sanctions and public stigma (like the black rating), the Indonesia Green Awards (IGA) are given by various organizations with different criteria. This lack of standardization makes it hard for investors to tell apart companies that genuinely practice eco-efficiency from those just doing greenwashing with minimal disclosures.

From the perspective of Signalling Theory, this finding shows that environmental cost signals are not yet effective in the Indonesian capital market. In the context of this study, the ratio of CSR costs to average profit is only 19% and is very volatile, so this figure might still be considered too small and inconsistent to

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serve as a basis for significant changes in investment decisions. Moreover, the Indonesian capital market, which is still dominated by retail investors with a short-term orientation (reflected in the high frequency of daily stock trading), tends to respond more to net profit and dividend signals than to non-financial signals like environmental costs. In other words, the signal sent by green accounting gets 'drowned out' by the more dominant financial signals.

These results are consistent with the studies by Kholmi & Nafiza (2022) and Kusuma & Anggraini (2023), who also found that green accounting doesn't have a significant impact on profitability in the manufacturing sector. The results of this study align with the findings of Sparta & Reska (2022) which stated that environmental cost does not affect financial performance because the average environmental cost relative to a company's net profit is only 1.5%, so market players do not respond to the size of these environmental costs. However, this finding contrasts with the study by Himawan et al. (2025), which found a positive effect. Unlike the findings of this study, Nurlia, Adiyanti, & Ardi (2026) found that green accounting has a significant impact on company profitability in the basic materials sector listed on the Indonesia Sharia Stock Index (ISSI). This difference is likely due to differences in industry sectors, time periods, and sample characteristics used. The difference is likely due to variations in proxies and time periods. Himawan et al.'s research used more specific environmental costs (waste treatment costs) during the post-pandemic period, whereas this study used broader CSR costs covering the economic recovery period of 2022–2024. This shows that not all types of environmental spending have the same impact on financial performance, and the effect of green accounting is highly contextual depending on industry type, operational definitions, and macroeconomic conditions.

This pattern is not unique to the Indonesian context. Vij (2020), studying mandatory CSR disclosure among firms listed on the Emirates Securities Market of the United Arab Emirates, similarly found that financial performance was not a significant driver of the extent of CSR disclosure, suggesting that in several emerging markets the link between environmental and social spending and firm-level financial outcomes remains weak or inconsistent. This cross-country pattern reinforces the argument that CSR-linked environmental costs are not yet reliably priced into profitability by capital markets outside a handful of highly regulated jurisdictions.

The Impact of Company Size on Profitability

The results of the second hypothesis (H_2) test showed that company size (SIZE) does not have a significant effect on profitability (t = -1.596; sig. 0.118 > 0.05). The negative regression coefficient (-3.673E-8) is statistically insignificant, so H_2 is also rejected. This finding indicates that the size of a company's total assets does not guarantee better profit performance, at least in the sample of IGA-winning companies.

Scientifically, this insignificance can be explained by the phenomenon of diseconomies of scale and structural inefficiencies in large companies in Indonesia. Companies with massive total assets often face high bureaucratic complexity, large fixed asset maintenance costs, and organizational inertia in responding to market

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changes. As a result, an increase in assets is not followed by a proportional increase in operating income, which in turn pressures the ROA ratio. Moreover, the variation in company sizes in this research sample is very extreme, ranging from the smallest asset of IDR 9.46 billion to the largest of IDR 1.99 trillion. This very wide range indicates that the relationship between size and profitability is not linear; mid-sized companies are often more agile and efficient in utilizing their assets compared to large conglomerates.

From the perspective of Signalling Theory, a company's size should serve as a signal of stability and resource capacity. Large companies are considered capable of surviving economic shocks and having easier access to funding. However, the findings of this study reveal that size is not a signal of efficiency. Investors in the Indonesian capital market, especially institutional investors, are now becoming more careful in analysing operational financial ratios like asset turnover and operating margin rather than just looking at total gross assets. The size signal becomes ambiguous because large assets can reflect large debt (if funded by borrowing) or idle, unproductive assets. Thus, the size signal loses its strength because it does not directly show management's ability to generate profits from the assets they manage.

This finding supports the research results of Nuraini & Suwaidi (2023) and Sugianto & Meirisa (2023), who also concluded that company size does not affect profitability in the Indonesian capital market. This indicates that in the era of modern capital markets, investors value the quality of asset management (quality of earnings) more than the quantity of the assets themselves. Implicitly, these results also suggest that large companies that receive environmental awards do not necessarily have synergy between their sustainability strategy and financial operational strategy.

This result also echoes findings outside the IGA sample. A study of Indonesian firms examining firm size, profitability, and ESG disclosure found that company size had no significant effect on ESG-related outcomes, even though profitability itself was a significant factor in that model. Taken together with the present study, this suggests that in the Indonesian market, a company's scale of assets does not consistently translate into stronger sustainability-linked signalling or profitability outcomes, reinforcing the view that qualitative aspects of asset management outweigh sheer asset size as a determinant of financial performance.

5. CONCLUSION AND SUGGESTION

This This research reaches two main conclusions based on the analysis of data and discussions conducted on fifteen companies that won the Indonesia Green Awards (IGA) and are listed on the Indonesia Stock Exchange from 2022 to 2024. Profitability (ROA) is not significantly affected by the implementation of green accounting, which is proxied by the ratio of CSR costs to current year profits. The results show that, in the population of businesses receiving environmental awards, the allocation of funds for environmental and social activities is not yet enough to improve asset efficiency in the short term. In other words, environmental costs are

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still considered period costs, which directly reduce net income, while economic benefits such as energy efficiency and improved reputation require more funding to achieve. Similarly, profitability is not significantly affected by company size, as measured by the natural logarithm of total assets. Because increasing assets often comes with complex operating costs, high depreciation expenses, and the potential for idle assets, scaling up assets does not automatically guarantee a business's ability to generate profit.

The two independent variables demonstrate a limited capacity to explain variations in profitability when evaluated simultaneously. This suggests that unobserved factors outside the model such as macroeconomic conditions, corporate strategies, operational efficiency, and capital structure exert a far more substantial influence on financial performance. Therefore, within the scope of the analysed population and timeframe, green accounting practices and firm size do not serve as primary determinants of profitability.

Beyond addressing these empirical findings, the results carry meaningful theoretical and practical implications. Theoretically, the lack of statistical significance indicates that non-financial signals in emerging capital markets like Indonesia are often overshadowed by short-term financial information noise, reaffirming that voluntary environmental disclosures are predominantly perceived as short-term operating expenses (cost view) rather than value-creating investments (investment view). Practically, profitability cannot be enhanced merely through philanthropic CSR spending or asset expansion. Instead, corporate management must integrate green practices directly into core production processes to drive long-term eco-efficiency, investors should focus on fundamental financial metrics alongside environmental indicators, and regulators (OJK and IDX) are encouraged to standardize and strengthen the credibility of sustainability reporting criteria to curb greenwashing.

Suggestions

Based on the study's conclusions and empirical limitations, several recommendations are proposed. For future researchers, it is recommended to develop a multidimensional green accounting index that incorporates direct environmental performance indicators, such as energy efficiency, carbon emissions reduction, and waste recycling rates. Future studies should also consider extending the observation period to a longer timeframe to capture potential lagging effects of environmental practices on financial performance. For corporate management, environmental expenditures should be strategically reallocated from predominantly charitable CSR initiatives toward integrated green technologies, such as energy-efficient machinery and waste recovery systems, which can directly improve operational efficiency, reduce costs, and enhance Return on Assets (ROA). For investors and financial analysts, investment decisions should be supported by rigorous fundamental analysis that considers asset turnover, operating margins, and cash flows rather than relying solely on firm size or environmental awards as indicators of corporate quality or investment risk. Finally, regulators and policymakers, particularly the Financial Services Authority (OJK) and the Indonesia Stock Exchange (IDX), are encouraged to establish clearer and more verifiable standards for environmental cost disclosure and strengthen the evaluation

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criteria for environmental awards to improve transparency, reduce information asymmetry, and ultimately enhance the efficiency of the capital market.

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