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The Effect of Green Accounting Implementation and Profitability on Deferred Tax Assets in Property and Real Estate Companies (2023–2024)

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This study investigates the relationship between green accounting, profitability, and deferred tax assets (DTA) in property and real estate companies listed on the Indonesia Stock Exchange during the 2023–2024 period. The objective is to determine whether environmental accounting practices and financial performance influence the recognition of deferred tax assets. A quantitative approach is employed using secondary data derived from published financial statements, with multiple linear regression applied to test both partial and simultaneous effects of the independent variables on DTA. The results reveal that green accounting does not have a statistically significant effect on DTA, as indicated by a significance value of 0.605 and a beta coefficient of 0.247. Similarly, profitability, proxied by Return on Assets (ROA), shows no significant effect, with a significance value of 0.105 and a beta coefficient of 0.012. Simultaneous testing further confirms that both variables do not significantly explain variations in DTA, reflected in an F-value of 1.402 and a significance level of 0.249. In conclusion, the findings suggest that deferred tax asset recognition is primarily driven by fiscal factors, such as temporary differences and tax loss carryforwards, rather than by green accounting practices or profitability levels.
Keywords: Green Accounting, Profitability, Deferred Tax Asset

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1. Introduction

The development of the business environment requires companies to present financial statements that are accurate, transparent, and relevant for decision-making. Financial statements play an important role as they serve as a basis for investors, creditors, and other stakeholders in assessing a company's condition and future prospects. In this context, the quality of the information presented must be carefully considered, including information related to taxation and corporate sustainability [1] ; [2].

One of the accounts that reflects the relationship between accounting and taxation is the deferred tax asset. This arises due to differences between accounting income and taxable income, as well as the potential tax benefits that can be utilized in future periods. Therefore, the recognition of deferred tax assets is not only related to tax regulations but also involves management's judgment in generating future taxable income [3];[4].

The discussion of deferred tax assets becomes particularly relevant in the property and real estate sector, as this sector is characterized by asset-intensive operations and relatively long business cycles. These conditions increase the likelihood of timing differences in the recognition of revenues and expenses between accounting and tax reporting, thereby raising the potential for temporary differences. Consequently, the value of deferred tax assets in companies within this sector may vary depending on their accounting policies and financial conditions [5];[6].

In addition to fiscal factors, green accounting is also considered to be related to deferred tax assets. Green accounting is understood as a form of corporate responsibility in identifying, recording, and disclosing environmental-related activities in corporate reporting [5];[7]. The implementation of this concept may encourage the recognition of environmental costs, provisions, or liabilities, which potentially create differences between accounting and tax treatments.

On the other hand, profitability is also an important factor to examine, as it reflects a company's ability to generate earnings. Companies with strong profitability generally have greater opportunities to utilize future tax benefits, making them more likely to recognize deferred tax assets. Conversely, low profitability may lead to more conservative recognition of deferred tax assets due to uncertainty regarding the realization of future taxable income [8];[9].

Furthermore, attention to environmental and sustainability aspects has been increasing in corporate reporting practices in Indonesia. Companies that aim to demonstrate environmental commitment tend to enhance the disclosure of sustainability activities and environmental costs in their reports [10];[6]. Based on these conditions, the relationship between green accounting, profitability, and deferred tax assets is important to be examined in this study. This research analyzes the effect of green accounting and profitability on deferred tax assets. The findings are expected to contribute to the accounting literature, particularly in relation to sustainability reporting, profitability, and deferred tax assets, as well as to provide a better understanding of the factors associated with the recognition of deferred tax assets.

Research Questions

1. Does green accounting affect deferred tax assets?
2. Does profitability affect deferred tax assets?
3. Do green accounting and profitability simultaneously affect deferred tax assets?

This study is expected to contribute to the literature on deferred tax assets, green accounting, and profitability, as well as to enhance the understanding of factors associated with the recognition of deferred tax assets in companies.

2. Literature Review and Problem Statement

Green Accounting

Green accounting is part of accounting practices that incorporate environmental aspects into the recording process. Through this approach, companies not only focus on financial information but also on activities related to environmental impact and sustainability responsibility [6];[11]. Its implementation indicates that companies have begun to position environmental issues as part of their reporting policies and decision-making processes, rather than merely as supplementary information [12];[13].

In this study, green accounting is measured using the Global Reporting Initiative (GRI) index [14]. The variable value is obtained by comparing the number of environmental indicators disclosed by the company to the total indicators used. A higher level of disclosure reflects a greater extent of green accounting implementation within the company [4];[15].

Profitability

Profitability reflects a company's ability to generate earnings. It is an important measure, as companies that are capable of generating profits tend to have greater opportunities to meet their obligations and utilize tax benefits in future periods [4];[16]. Therefore, profitability is used to assess a company's ability to support the realization of future fiscal benefits.

In this study, profitability is measured using Return on Assets (ROA). This ratio indicates a company's ability to generate net income through the utilization of its resources [4];[17].

Deferred tax assets

Deferred tax assets represent assets arising from deductible temporary differences, tax loss carryforwards, or other tax benefits that may be utilized in future periods [18]. The recognition of these assets is not only influenced by tax regulations but also by management's judgment regarding the likelihood that the company will generate taxable income in the future [19].

In this study, deferred tax assets are positioned as the dependent variable, as their value is presumed to be associated with the company's financial condition and the accounting treatments applied.

The Effect of Green Accounting Implementation on Deferred Tax Assets

The relationship between green accounting and deferred tax assets can be observed from how companies recognize environmental-related costs and liabilities. When these elements are recorded in financial statements but receive different tax treatments, timing differences may arise, which subsequently affect deferred tax accounts. In this context, green accounting practices are not only associated with sustainability disclosure but also potentially linked to accounting and tax consequences [19]

However, this effect does not always occur directly. In many companies, green accounting is still more evident as part of environmental reporting rather than as a primary basis for the recognition of deferred tax accounts. Therefore, changes in deferred tax assets are often more influenced by fiscal factors, such as temporary differences and corporate tax policies, rather than the extent of environmental disclosure [19]. Based on these considerations, the relationship between green accounting and deferred tax assets remains relevant to be empirically tested in property and real estate companies
H1: Green Accounting Implementation Affects Deferred Tax Assets.

The Effect of Profitability on Deferred Tax Assets

Profitability is associated with a company's ability to generate earnings, making it a relevant variable in the discussion of deferred tax assets. Companies that consistently generate profits are generally considered to have greater opportunities to utilize tax benefits in future periods. Therefore, the level of profitability may influence management's confidence in recognizing deferred tax assets appropriately [8];[20]

However, high profitability does not necessarily lead to an increase in deferred tax assets. The recognition of this account still depends on the existence of sufficient fiscal bases, such as deductible temporary differences or tax benefits that can be utilized in the future. This implies that profitability may support the recognition of deferred tax assets, but it is not the sole determinant of their value[3]. The effect of profitability on deferred tax assets still needs to be empirically tested in property and real estate companies.
H2: Profitability affects deferred tax assets.

The Effect of Green Accounting Implementation and Profitability on Deferred Tax Assets

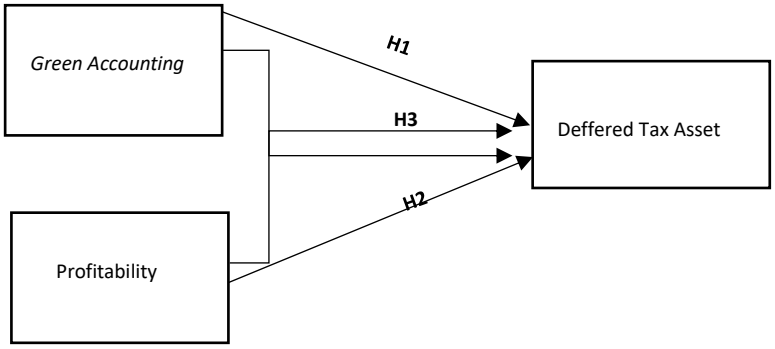
Green accounting and profitability are considered two factors that potentially relate to deferred tax assets. Green accounting is associated with the recognition and disclosure of environmental activities that may have accounting and tax consequences, while profitability reflects a company's ability to realize future tax benefits. The combination of these two factors may theoretically provide insight into a company's condition in recognizing deferred tax accounts [8].

Nevertheless, this simultaneous relationship may not be strong across all companies. In practice, the value of deferred tax assets is often more influenced by a company's fiscal structure, transaction characteristics,

and management policies in utilizing tax benefits. Therefore, although green accounting and profitability can conceptually be linked to deferred tax assets, their combined effect still needs to be empirically tested, particularly in the property and real estate sector, which has distinct accounting and tax characteristics [2];[21].

H3: Green accounting implementation and profitability affect deferred tax assets.

Figure 1. Conceptual Framework



3. Method

This study employs a descriptive quantitative approach using secondary data derived from the annual financial statements of property and real estate companies listed on the Indonesia Stock Exchange (IDX) for the 2023–2024 period. The dependent variable in this study is deferred tax assets, while green accounting and profitability are positioned as independent variables. The indicators used include the deferred tax asset ratio, the Global Reporting Initiative (GRI) environmental disclosure index, and Return on Assets (ROA) as a proxy for profitability. Data processing is conducted systematically using multiple linear regression analysis and descriptive statistics.

Table 1. Sampling Criteria

No	Description	Total
1.	Property and Real Estate Companies Listed on the Indonesia Stock Exchange (IDX) for the 2023–2024 Period	93
	Companies Analyzed in the 2023–2024 Period	93
	Total Sample over 2 Years (2 × 93)	186

Data Collection Technique

To meet the requirements of quantitative analysis and hypothesis testing among variables, this study utilizes data from the financial statements and sustainability reports of property and real estate companies listed on the Indonesia Stock Exchange (IDX) for the 2023–2024 period (Pintauli, 2023; Marisya & Sukma, 2020). These publicly available official documents provide the necessary information to measure the research variables accurately.

Table 2. Operational Definitions and Measurement of Variables

Variable	Indicator	Sub Indicator
Green Accounting	Accounting practices that include the measurement and disclosure of environmental activities in corporate reporting ([22]	GRI INDEX = Jumlah Indikator yang Diungkapkan / 91 Indikator GRI G4
Profitabilitas	A company's ability to generate profit from the assets utilized during a specific period [23]	ROA = Net Income/ Total Asset
Deffered Tax	A deferred tax asset resulting from deductible	DTA = Aset Pajak

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Variable	Indicator	Sub Indicator
Asset	temporary differences between accounting profit and taxable profit, which may be utilized for tax benefits in future periods [24]	Tangguhan / Total Aset

4. Results and Discussion

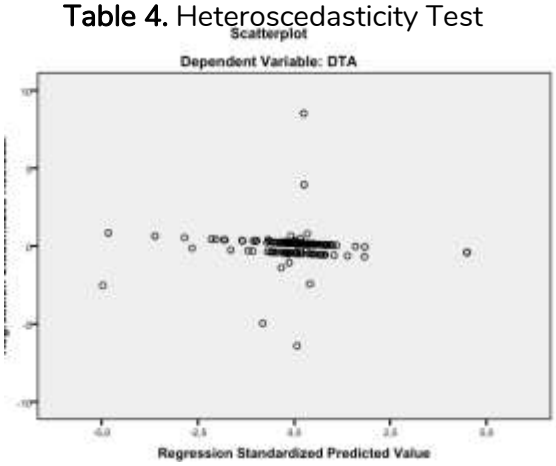
Table 3. Normality Test

No	Description	Value
1	N	186
2	Mean	0.0000000
3	Std. Deviation	159.055.032
4	Most Extreme Differ	0,202083333
5	Most Extreme Differ	0,202083333
6	Most Extreme Differ	-0.243
7	Test Statistic	0,202083333
8	Asymp. Sig. (2-tailed	0.000

The residuals of this research model are not normally distributed, as the Asymp. Sig. (2-tailed) value in the Kolmogorov-Smirnov test is only 0.000. This value fails to exceed the minimum significance threshold of 0.05.

Heteroscedasticity Test

Table 4. Heteroscedasticity Test



The assumption of homoscedasticity is met in this model, as indicated by the scatterplot, where the points do not form any specific geometric pattern (such as waves or narrowing). Since the residuals are evenly distributed around the zero line, it can be concluded that there are no signs of heteroscedasticity

Multicollinearity Test

Table 5. Multicollinearity Test

	B	S.E	BETA	TOLERANCE	VIF
Constant	-.288	0.147			
Green Accounting	.128	0.247	0.38	0.994	1.006
ROA	-.020	0.012	-0.120	0.994	1.006

Dependent Variabel DTA

Based on the Tolerance (> 0.10) and VIF (< 10) parameters, the independent variables in this study (ROA and Green Accounting) do not indicate any multicollinearity issues. The data show a Tolerance value of

0.994 and a VIF value of 1.006, which means that the regression model meets the classical assumption requirements and is suitable for hypothesis testing.

Table 6. Descriptive Statistics

	N	Min	Max	Mean	Std. Dev.
Green accounting	186	0.00	1.00	,3537	0.47819
ROA	186	-37.63	54.72	2.0971	9.51269
DTA	186	-10.47	13.32	-.2856	1.60269

Descriptive analysis was conducted to examine the distribution of the variables Green Accounting, ROA, and Deferred Tax Asset (DTA). The Green Accounting values ranged from 0.00 to 1.00, with a mean of 0.3537, indicating that the level of environmental disclosure among the sample companies is still relatively low. The ROA variable ranged from -37.63 to 54.72, with a mean of 2.0971, suggesting that companies' ability to generate profit varies widely. Meanwhile, DTA ranged from -10.47 to 13.32, with a mean of -0.2856, indicating that deferred tax asset values among the sample are quite diverse. Overall, the three variables exhibit a fairly wide data distribution.

Table 7. T test

Variable	Koefisien Beta	T	Sig	Description
Constant	.147	-1.959	.052	<0.05
Green Accounting	.247	.518	.605	Hipotesis ditolak
ROA	.012	-1.628	.105	Hipotesis ditolak

Since the significance values of Green Accounting (0.605) and ROA (0.105) are above 0.05, both variables do not have a significant effect on Deferred Tax Asset. Consequently, hypotheses H1 and H2 are not supported

The Effect of Green Accounting on Deferred Tax Assets

Green Accounting does not have a significant effect on DTA, although the relationship is positive. This indicates that deferred tax assets are more determined by technical tax aspects (such as timing differences and tax loss carryforwards) rather than the company's environmental activities. Changes in the level of Green Accounting disclosure do not directly affect the value of DTA.

The Effect of Profitability on Deferred Tax Assets

ROA does not have a significant effect on DTA, meaning that a company's profitability level is not a determinant of the magnitude of deferred tax assets. This condition suggests that fiscal variables and differences between accounting and tax regulations play a stronger role in influencing DTA than the company's profitability.

Table 8. F Test

Model		Df	Mean Square	F	Sig.
1	Regression	2	3.585	1.402	.249
	Residual	183	2.557		
	Total	185			

The rejection of the third hypothesis (H3) is based on the F-test results, which show a value of 1.402. With a significance level of 0.249, which is above the 0.05 threshold, it can be concluded that the combination of Green Accounting and profitability variables does not collectively provide a significant contribution to Deferred Tax Asset.

The Effect of Green Accounting and Profitability on Deferred Tax Asset (DTA)

The simultaneous test indicates that Green Accounting and profitability are not able to explain changes in Deferred Tax Asset among the sample companies. This suggests that the combined effect of these two variables on DTA remains limited.

The magnitude of Deferred Tax Asset (DTA) appears to be more influenced by fiscal factors that are not covered in this study. These factors include loss carryforwards, timing differences between accounting and tax recognition, and tax management strategies. Consequently, understanding deferred tax assets in the sample companies would be more accurate if examined from a fiscal perspective rather than merely considering profitability levels or the extent of environmental disclosure.

Coefficient of Determination Test

Table 11. Coefficient of Determination Test

	R	R Square	R Square Adjusted
1	.123[a]	.105	.004

Approximately 89.5% of the variation in Deferred Tax Asset is influenced by factors beyond the scope of this study, considering that the obtained R^2 value is only 10.5%. These results indicate that the combination of Green Accounting and profitability has limited predictive power. Future researchers should consider other determinants that are more specific to the formation of deferred tax assets, such as fiscal aspects and tax management policies.

5. Conclusion

This study concludes that Green Accounting does not have a significant impact on Deferred Tax Asset (DTA), indicating that the extent of environmental disclosure is not a determinant of DTA magnitude. Similarly, profitability was found to have no significant effect on DTA, suggesting that profit levels are not a key factor in recognizing deferred taxes. Collectively, the two independent variables also do not show a significant influence on DTA. To improve the explanatory power of the model, future research may include additional variables closely related to fiscal aspects of the company. Moreover, the measurement of DTA and Green Accounting can be diversified to provide a more robust and accurate representation.

For DTA, in addition to using ΔDTA/DTA-1, it can be measured as a ratio to total assets or earnings before tax (EBT) to assess the proportion of DTA relative to company size and financial performance more contextually. Alternatively, DTA can be calculated as a part of total deferred taxes (DTA + DTL) or transformed logarithmically to reduce the influence of outliers and skewed data distribution, thereby stabilizing regression analysis.

For Green Accounting (GA), measurement can be expanded to better reflect the quality and depth of corporate practices. Future researchers may use ESG (Environmental, Social, Governance) scores from external rating agencies or perform weighted content analysis to evaluate the completeness, consistency, and transparency of disclosures. Additionally, creating an internal GA index based on specific indicators, such as energy management, emissions, waste, and sustainability policies, can be used to capture the effect of GA more comprehensively. Binary measurement (GA = 1 if specific criteria are met, GA = 0 if not) can still be applied when disclosure data is limited.

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