SIMBA

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THE EFFECT GREEN ACCOUNTING , AND *GREEN INTELLECTUAL CAPITAL ON FIRM PERFORMANCE*

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Abstrak

Penelitian ini bertujuan untuk menguji secara empiris pengaruh green accounting, dan green intellectual capital terhadap firm performance. Populasi dalam penelitian ini adalah perusahaan sektor Consumer Non-Cyclicals yang telah go pulic dan menerbitkan laporan keuangan serta laporan keberlanjutan di Bursa Efek Indonesia pada periode 2021-2024. Penentuan sampel menggunakan metode purposive sampling. Terdapat 117 sampel perusahaan. Hasil penelitian menunjukkan bahwa green accounting berpengaruh terhadap firm performance, green intellectual capital tidak berpengaruh terhadap firm performance.
Kata Kunci: ***Firm performance, Green accounting, green intellectual capital***

Abstract

The study aims to empirically test the influence of green accounting and green intellectual capital on firm performance. The population in this study are Non-Cyclical Consumer sector companies that have gone public and published financial reports and sustainability reports on the Indonesia Stock Exchange in the period 2021-2024. The sample determination used a purposive sampling method. In this study, there are 117 sample companies. The results of the study indicate that green accounting has an effect on firm performance, green intellectual capital has no effect on firm performance
Keywords: Firm performance, Green accounting, green intellectual capital

A. INTRODUCTION

Environmental isssues are currenly a social issue that receives little public attention. The numerous environmental problems in Indonesia indicate that companies perceptions of the environment remain quite low (Santika et al., 2023). With the repaid development of the business environment, fierce competition and

changes in verious industries in development countries, businesses around the world are continously striving to improve their working conditions (Ahadiani et al., 2024). The desired expactation of business competition can help companies achieve their goals, both long and short term, so that they can improve the company's image.

The continue improvement of corporate performance, which impacts the environment, is inextricably linked to human intervention in profit-making. A common environmental problem resulting from business operations in Indonesia is the disposal of production waste that does not follow environmental sustainability procedures (Bellamy et al., 2023). Companies are not only required to pursue financial profit, but alsi to consider environmental aspects.

Green accounting emerged as a business strategy to integrate environmental factors into the financial reporting and analysis process (Tuti & Sisdianto, 2024). Green accounting is the practice of reducing, mitigatin, and addressing environmental damage from business operations. By using green accounting, business can increase transparency and accountability in water resource use and reduce negative environmental impacts.

Green accounting help businesses identify environmental cost, such as carbon emissions, weste management, which were previously often criticized in financial reposrt (Safitriana et al., 2025). The implementation of green accounting not only reduces environmental risks, but also creates new oportunities for business through increased efficiency in the use of resources and environmentally friendly products (Tuti & Sisdianto, 2024). Company that implement green accounting tend to be bettes known to investors and the general public because they can manage their business effectively.

In addition to green accounting, green intellectual capital is also important because it is an indespensable factor influancing the growth and success of any business (Aprilian et al., 2024). Green intellectual capital suports a company's internal knowladge, innovation, and expertise, focused on developing practical business practices and environmental friendly products. Business with highly

developed intellectual capital can leverage information to create a lasting competitive advantage (Zaldin & Husein, 2024). Effective management of green intellectual capital can strengthen a company's ability to compete and maintain environmental sustainability, there suporting long term company performance by invreasing investor and customer trust (Sohu et al., 2024).

Pervious research has laid the foundation forthis research. The results of research by Nuraini & Andrew, (2023), Sirait et al., (2024), Gustari et al., (2024), Nurdinnaufaldy & Bayangkara, (2024) show that green accounting has an effect on firm performance. meanwhile, research conducted by Kelly & Henny, (2023), Masliyani & Murtanto, (2022) has the result that green accounting has no effect on increasing firm prformance. The results of research by Sohu et al., (2024) Zaldin & Husein, (2024) revealed capital has an effect on firm performance. meanwhile, research by Sukirman & Dianawati, (2023), Majidah & Aryanty, (2022) shows that green intellectual capital has no effect on firm performance.

Therefore, this study aims to empirically examine whether green accounting and green intellectual capital can influence firm performance.

B. Theoretical Study and Hypotesis Development

1. Stakeholder theory

This study is based on "stakeholder theory" because stakeholders are also interested in other information regarding company activities, including environmental information. In line with this, Green Accounting and Green Intellectual Capital on firm performance can improve the achievement of stakeholder interests because they can impact the organization. Without their support or explicit support, an organization will cease to operate.

2. Dependent Variable

Firm performance

Firm performance is a measure of a company's ability to achieve its business goals, which can be seen from the results of its operational activities and financial performance over a certain period of time (Rahma

& Murdiyanto, 2023). Firm performance encompasses verious factors, such as productivity, effectiveness, daily resource utilization, profitability, and the company's market value (Nissa et al., 2025). Firm performance is often defined as the result of a company's ability to utilize its workforce to produce high-quality output, both I the form of profits and growth in the company's value in the capital market (Cahyonugroho et al., 2024). Firm performance measurement can be done using various indicators, one of which is ROA (Isnaini, 2024). Firm performance can be measured using:

$$\text{ROA} = \frac{LABA\ BERSIH}{TOTAL\ ASET}$$

3. Independent Variables

Green Accounting

Green Accounting refers to environmental awareness, which focuses on business operations and management and factors related to the environmental impact of business operations(Kakarika & Harti Budi Yanti, 2025). According Gustinya (2022) *Green Accounting* is a technique that involves analysis, reduction, effort, and summary of information regarding an object, transaction, event, and the impact of economic, social, and community activities as well as the environment and the corporation itself in one accounting information package that can be useful for user in analyzing and developing both economic and non-economic decisions. Green Accounting can be measured using dummy methode (Naibahi et al., 2024). The criteria are: if a company includes an ISO 14001 certificate in its sustainability report, it will be given a scroe of 1 (one). However, if it does not include this compenent, it will be given a score of 0 (zero).

H1. Green accounting has an effect on firm performance

Green Intellectual Capital

Green Intellectual Capital can be defined as an intangible asset encompassing information resources, innovation, and knowladge that play a vital role in

enhancing a company's competitiveness while maintaining environmental sustainability(Putra et al., 2024). Green Intellectual Capital has three indicators: Green Human Captal, Green relational Capital, and Green Structural Capital. Mohd et al., (2019) Green Intellectual Capital can be measured using:

$$\text{GIC} = \frac{JUMLAH\ ITEM}{JUMLAH\ INDIKATOR} \text{ X } 100\%$$

H2. Green Intellectual Capital has an effect on firm performance

4. Control Variables

Firm Sise

This research used the control variables of firm size. Company size is often used as a control variable because companies of different operational characteristics, cost structure, and managerial efficiency, which can ultimately effect ROA and generate higher profits than smaller companies. Hutabarat, (2024) Firm Size can be measured using:

Firm Size = Ln (Total Aset)

C. Research Methods

The quantitative approach used in this study aims to determine whether green accounting and green intellectual capital influence company performance. one objective of this study is to determine which variables and how they influence the dependent variable. This study uses secondary data collected from the annual financial reports and sustainability reports of company in the non-cyclicals consumer sector listed on the Indonesia stock exchange for the 2021-2024 period. These reports can be accessed through each company's website and the IDX (www.idx.co.id). The research sample was selected using purposive sampling.

D. Results and Discussion

1. Description Data

The research used secondary data, namely financial reports and sustainability reports from 2021-2024. The population in this study was company consumer non-cyclicals listed on the Indonesia stock exchange. This study used purposive sampling, covering 129 companies from 2021-2024. The sample included:

Table 1. Sample slection

Panel A : Sample selection process Sample selection process	Number of Observations
Number of initial observations 2021-2024	516
Reduced: Not Available Sustainability Report	116
Reduced: Not Available LK	0
Total observations are used	400
Panel B : Sample distribution by year Year	**Number of Observations**
2021	83
2022	96
2023	113
2024	108
Total	400

2. Descriptive statistics

Descriptive statistics are used to calculatite data that provides a description of the data, which can be seen from the average value (mean), standard deviation,maximum, minimum. The variables described in this study are green accounting, green intellectual capital, as independent variable, firm performance as e dependen variable, and company size as control variable. The results of the descriptive statistical analysis are as follow:

Table 2. Descriptive statistics.

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
X1_GA	400	.00	1.00	.3300	.47080
X2_GIC	400	.67	1.00	.9744	.08835
Y_FP	400	-.69	.94	.0471	.11596
C1_FS	400	14.08	31.02	23.2783	5.44819
Valid N (listwise)	400				

Based on the table above, the green accounting variable has a minimum value of 0,00 with a maximum value of 1,00, an average of 0,3300 and a standard deviation of 0,47080. The green intellectual capital variable has a minimum value of 0,67 with a maximum value of 1,00, an average of 0,9744 and a standard deviation of 0,08835. The firm performance variable has a minimum value of -0,69 with a maximum value of 0,94, an average of 0,0471 and a standard deviation of 0,11596. The Firm size variable has a minimum value of 14,08 with a maximum value of 31,02, an average of 23,2783 and a standard deviation of 5,44819.

3. Normality test

The Normality test is used to assess and test the regression of independent and dependent variables to determine whether the data distribution is normal or not. The normality test produces a normal residual value if the asymp Sig. (2-tailed) is 0,05. The results of the normality test using Kolmogorov-Smirnov method in this study are as follows:

Table 3. Normality test

One-Sample Kolmogorov-Smirnov Test			Unstandardized Residual
N			334
Normal Parameters[a,b]	Mean		.0000000
	Std. Deviation		.12949829
Most Extreme Differences	Absolute		.039
	Positive		.036
	Negative		-.039
Test Statistic			.039
Asymp. Sig. (2-tailed)			.200[c,d]
Monte Carlo Sig. (2-tailed)	Sig.		.660[e]
	99% Confidence Interval	Lower Bound	.648
		Upper Bound	.672

a. Test distribution is Normal.
b. Calculated from data.
c. Lilliefors Significance Correction.
d. This is a lower bound of the true significance.
e. Based on 10000 sampled tables with starting seed 1314643744.

The Kolmogorov-Smirnov statistical test value which is an outlier, has an Asymp Sig.value of 0,200, which is above the significance level of 0,05.

So it is concluded that the esiduals are normally distributed.

4. Multicolinearity test

Table 4. Multicolinierity test

Coefficients[a]				
Model		Collinearity Statistics		Kesimpulan
		Tolerance	VIF	
1	(Constant)			
	X1_GA1	.945	1.058	Tidak terjadi Multikolinieritas
	X2_GIC1	.971	1.029	Tidak terjadi Multikolinieritas
	C_FS1	.966	1.036	Tidak terjadi Multikolinieritas
	a. Dependent Variable: Y_FP1			

As see in the table above, the tolerance value is greater than 0,10, and the VIF values for all independet variables are below 10,00. Thus, it can be concluded that three is no multicollinearity problem among the independent variable.

5. Heterocedasticity test

Table 6. Heteroskedaticity test

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	.241	.094		2.561	.011
	X1_GA1	-.002	.010	-.012	-.215	.830
	X2_GIC1	-.094	.091	-.057	-1.030	.304
	C_FS1	-.010	.008	-.073	-1.302	.194
a. Dependent Variable: ABS_RES						

The table above shows that the glejser test for measured incentives for all factors shows a sig value > 0,05. Therefore, it can be concluded that the regression model does not experience symptoms of heteroscedasticity.

6. Autocorelation test

Table 7. Autocorelation test

Model Summary[b]					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.214[a]	.046	.037	.05335	1.983
a. Predictors: (Constant), C_FS1, X2_GIC1, X1_GA1 b. Dependent Variable: ABS_RES1					

Based on the resukts of the autocorrelation test, the results obtained were DW= 1,983, DU= 1,6518, (4-Du) = 2,234. So it can be concluded that DU<DW<(4-Du)

7. F test

Table 8. F test

ANOVA[a]			
Model		F	Sig.
1	Regression	3.850	.010[b]
	Residual		
	Total		
a. Dependent Variable: Y_FP1 b. Predictors: (Constant), C_FS1, X2_GIC1, X1_GA1			

From the ANOVA test orF test above, the calculated F is 3,850 with a significance value of 0,010<0,05. Therefore, together, the independent variables green accounting, green intellectual capital, and the control variables firm size have a significant influence on the dependent variable firm performance.

8. t test

Table 9. t Test

Coefficients[a]			
	Model	T	Sig.
1	(Constant)	3.147	.002
	X1_GA1	2.844	.005
	X2_GIC1	-1.238	.217
	C_FS1	-1.110	.268
a. Dependent Variable: Y_FP1			

It can be seen in the table that the sig value of green accounting is 0,005 and green intellectual capital is 0,217. This means that green accounting

has an effect on firm performance and green intellectual capital has no effect on firm performance.

9. Determination Coefficient

Table 10. R^2

Model Summary[b]				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.184[a]	.034	.025	.13009

a. Predictors: (Constant), C_FS1, X2_GIC1, X1_GA1
b. Dependent Variable: Y_FP1

The table above shows the adjusted R2 coefficient of detemination (R2) of 0,025. This indicates that the independnent variables, green accounting and green intellectual capital, have a 25% influence on firm performance. the remaining 75% is influenced by factors outside the model not identified in this study.

E. Conclusion and suggestions

Conclusion

The results obtained through the t-test show that (1) green accounting has an effect on firm performance, (2) green intellectual capital cannot influence firm performance. this research has limitations, namely the lack of modification of the measurement of assessment indicators on the variables, and the research period is four years.

Suggestions

Future researchers can modify the indicator assessments for the green accounting and green intellectual capital variables, conduct broader observations by extending the research period, and incorporate sectoral changes into the research. They can also use primary data in the form of questionnaires distributed to the research subjects, thereby strengthening the research results and extending the analysis beyond the scope of the study.

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