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Research Article

The Influence of Green Accounting on Company Value (Case Study of Companies Winning Asia Sustainability Reporting Awards 2023)

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Abstract

This research aims to analyze and test the influence of green accounting on company value. Green accounting is measured by energy use, water consumption, and emissions. Company value is calculated using Return on Assets (ROA). The research made use of secondary sources such as financial statements and sustainability reports utilizing the exploratory quantitative approach. The population is the company that won the 2023 Asia Sustainability Reporting Awards, consisting of 30 companies. By using the purposive sampling technique, 13 sample data were obtained for this research. The data analysis technique used is Multiple Linear Regression. The research results show that partial energy use has no significant effect on company value, partial water consumption has a significant effect on company value, and partial emissions have no significant effect on company value. Simultaneously, energy use, water consumption, and the resulting emissions influence company value. This study presents several findings that highlight the effect of green accounting on increasing firm value in the 2023 Asia Sustainability Reporting Awards winning companies. These results are expected to make a positive contribution to stakeholders and influence the formulation of policies related to financial information that is relevant to these stakeholders.

Keywords

Green Accounting, Energy Use, Water Consumption, Emissions, Company Value

1. Research Background

Environmental problems are an endless world issue. Covering the problems of water, land, air pollution, producing hazardous solid waste, climate change, loss of biodiversity, and various other environmental issues know no geographical boundaries and pose a serious threat to human safety.

Companies' rampant development and industrial activities are among the biggest contributors to global climate change. Industrial players often ignore the consequences of their actions [6]. This perspective ultimately raises awareness of the importance of protecting nature and the environment.

Concern for managing and reducing the environmental footprint can improve a company's image which in turn can open the door to access to additional capital from investors who have a focus on responsible investing. A good company image will create trust, increase value, and have a positive impact on company performance.

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Company value is one of the key factors before investors entrust their capital to a company [21]. Company value can be demonstrated by measuring performance and asset utilization. The higher the performance measures and asset utilization in achieving profits, the better the company's financial performance [3]. One way is by using Return on Assets (ROA). ROA is one of the most important financial ratios and is most often used to measure company profitability [3].

Table 1. *Return on Assets (ROA) of Winning Companies Asia Sustainability Reporting Awards 2023.*

Company Name		*Return on Asset (ROA)*
AUO Corporation	2019	-5,4%
	2020	0,7%
	2021	14,9%
	2022	-5,4%
Budweiser Brewing Company APAC Limited	2019	5,9%
	2020	3,3%
	2021	5,9%
	2022	5,9%
E Ink Holdings Inc	2019	7,6%
	2020	8,0%
	2021	9,1%
	2022	15,3%
PT Vale Indonesia Tbk	2019	2,6%
	2020	3,6%
	2021	6,7%
	2022	7,5%
Softbank Corp.	2019	-2,6%
	2020	10,9%
	2021	-3,6%
	2022	-2,2%

Source: Annual report of the company concerned (processed, 2024)

During the period 2019 to 2022, company values in various countries experienced quite significant fluctuations, this is illustrated in Table 1. In 2020 and 2021 AUO Corporation, an optoelectronics company from Taiwan experienced an increase in ROA to 0.7% and 14%. However, in the following year, there was a significant decline, returning to the 2019 figure of -5.4%. A similar thing happened to Maybank, a bank network company and financial services group from the neighboring country, Malaysia, which experienced an increase in 2020 from -2.6% to 10.9%. However, in the following year, it decreased again to -3.6%.

Different things happened to the ePaper technology company from Taiwan, E Ink Holdings Inc., and the mining company from Indonesia, PT Vale Indonesia, Tbk. During the period 2019 to 2022, the value of these two companies continues to increase. Increase in company value of E Ink Holdings Inc. respectively by 7.6%; 8.0%; 9.1%; and 15.3% and PT Vale Indonesia, Tbk. respectively 2.6%; 3.6%; 6.7%; and 7.5%. This shows that the company's condition is getting better.

In recent years, pressure from society on companies to pay attention to environmental issues has increased [33]. The Industry is forced to implement environmentally friendly concepts and comply with regulations and environmentally based management accounting practices. This perspective ultimately raises awareness of the importance of protecting nature and the environment. In response to this, the concept of green accounting emerged as an important approach to integrating environmental and economic dimensions.

Green accounting can be said to be a business concept that focuses on efficiency and effectiveness in the use of resources to integrate environmental and social functions [9, 19, 35].

According to the Global Reporting Initiative (GRI), energy is a measure of environmental dimensions that includes all energy consumed by an organization such as fuel, electricity, heating, cooling, or steam.

Apart from energy, water and emissions are also one of the environmental dimensions according to the Global Reporting Initiative (GRI). Water relates to how and where water is taken, consumed, and disposed of in relation to an organization's activities, products, or services as a shared resource. Emissions consist of all emissions that have a significant adverse impact on ecosystems, air quality, agriculture, and human and animal health. Emissions in this case include greenhouse gases, ozone-depleting substances (ODS), nitrogen oxides (NOX), and sulfur oxides (SOX).

Table 2. *Energy Use, Water Consumption, and Emissions Produced by Winning Companies in the 2023 Asia Sustainability Reporting Awards.*

Company		Energy consumption (GJ)	Water consumption (m^3)	Emission produced (tCO_2e)
AUO Corporation	2020	19.305.552	7.835.930	4.483.300
	2021	19.056.415	7.710.920	4.206.500
	2022	16.777.770	6.692.470	3.447.600

Company		Energy consumption (GJ)	Water consumption (m^3)	Emission produced (tCO_2e)
City Development Limited	2020	427.537	3.525.884	18.622
	2021	428.248	3.744.503	20.559
	2022	405.572	4.041.980	18.807
Maybank	2020	180.368	411.983	72.741
	2021	411.688	483.254	68.001
	2022	535.619	786.281	52.311
PT Bank Negara Indonesia Tbk	2020	150.505	193.833	32.374
	2021	137.677	185.115	29.510
	2022	989.477	305.852	295.330
Softbank Corporation	2020	6.049.908	1.330.834	3.742.416
	2021	7.622.132	675.729	9.394.136
	2022	8.204.047	731.594	9.948.568

Source: Annual report of the company concerned (processed, 2024)

Based on Table 2, shows that energy use, water consumption, and the resulting emissions are experiencing an upward and downward trend. The company has not consistently reduced energy use or emissions produced each year.

Every year, various awards are given to companies for their attention to environmental conditions by issuing sustainability reports. One of them is the Asia Sustainability Reporting Awards.

Table 3. *Companies Listed in the Asia Sustainability Reporting Awards.*

Year	Number of Categories	Number of Countries	Number of Companies	The number of companies winning
2020	19	14	99	40
2021	17	16	74	30
2022	17	14	63	25

Source: www.csrworks.com (processed, 2024)

Based on Table 3, it can be seen that in the 2020-2022 period, the number of registered companies continues to decline. There are several factors that can cause this, one of which is that as the number of human needs increases, the greater the production carried out. This has an impact on the amount of industrial pollution increasing so that companies deemed eligible to be listed as finalists in the Asia Sustainability Reporting Awards also decrease.

Previous research conducted by Mildazani et al., 2023 with the title The Effect of Leverage and Green Accounting on Company Value with Financial Performance as a Moderation Variable shows that there is a positive relationship between the implementation of Green Accounting and company value [29]. Apart from that, research by Anggita et al., 2024 with the title The Effect of Annual Report Readability, Carbon Emission Disclosure and Green Accounting Practices on Company Value shows the same results. Green Accounting also has a positive and significant effect on the value of a company [2]. These results indicate that implementing green accounting is the first step that companies can take to avoid environmental problems that companies will face [15].

Part from that, research conducted by Darlis et al., 2024, with the title Green Accounting, Corporate Governance and Firm Value in Southeast Asia Region shows that Green Accounting has no effect on company value [4]. The same results were obtained from research conducted by Hutabarat, 2024 with the title Effect of Green Accounting, Leverage, Firm Size on Firm Value with Profitability as Intervening Variable showing that Green Accounting does not have a clear influence on company value [17].

Based on this background, the author conducted research with the title "The Influence of Green Accounting on Company Value (Case Study of Companies Winning Asia Sustainability Reporting Awards in 2023)".

2. Identify the Problem

Based on the research background, the problem formulation is as follows:

1) How is the energy use of the companies winning The Asia Sustainability Reporting Awards in 2023?
2) What is the water consumption of the companies win-

ning The Asia Sustainability Reporting Awards in 2023?
3) What are the emissions produced by the companies that won The Asia Sustainability Reporting Awards in 2023?
4) What is the company value of the companies winning The Asia Sustainability Report Awards in 2023?
5) What is the influence of energy use, water consumption, and emissions produced partially and simultaneously on the company value of the companies winning The Asia Sustainability Reporting Awards in 2023?

3. Literature Review

3.1. Grand Theory 1 Stakeholder Theory

R. Edward Freeman (1984) put forward the Stakeholder theory about organizational management and business ethics which discusses morals and values in managing an organization. Stakeholder theory is a view of capitalism that emphasizes the interconnected relationships between businesses and customers, suppliers, employees, investors, communities, and other parties who have an interest in the organization. This theory argues that companies must create value for all stakeholders, not just shareholders [26, 28, 31].

3.2. Grand Theory 2 Legitimacy Theory

Legitimacy Theory by Dowlin and Preffer (1975), states that legitimacy is a condition or status that exists when the value model or form of an entity is congruent with the broader value form of the society in which the company is located. The Legitimacy will shift along with changes in the environment and society where the company is located [5, 8, 25, 27].

According to legitimacy theory, businesses must consider the expectations of internal and external stakeholders, which may not always maximize profits but rather involve developing self-regulation and legitimacy [14, 37]. Legitimacy theory suggests that organizations strive to maintain a positive image in the eyes of stakeholders to appear legitimate. By demonstrating a commitment to environmental and social responsibility, companies can build trust and credibility with stakeholders, which can lead to improved relationships, increased customer loyalty, and better financial performance. This can help ensure the long-term survival and success of the business [13].

3.3. Sustainability Report

Sustainability is defined in the Brundtland report. Sustainability is defined as a process of economic growth, environmental protection, and social equality [1]. According to the Global Reporting Initiative, a sustainability report is a report disclosed by a company that contains information regarding social, environmental, and economic performance which is related to the business activities of an entity and has an impact on maintaining the company's survival.

According to the World Business Council for Sustainable Development (WBCSD), sustainability reports provide the following benefits:

1) Provide information to stakeholders (shareholders, government, community, investors, and suppliers) so that it can improve the company's prospects and help achieve transparency.
2) Build and improve the company's reputation through brand value, market share, and long-term customer loyalty.
3) Provides an overview of how the company manages its risks.
4) Used as a reference for enthusiasm in competition.
5) Develop and facilitate the implementation of a better management system for managing environmental, economic, and social impacts.
6) Directly reflects the company's ability and readiness to fulfill shareholder desires for the long term.
7) Help build potential investors' interest in investing in the company by looking at the company's responsibilities regarding social and environmental issues.

3.4. Green Accounting

Green Accounting, is an approach to national financial and welfare reporting that considers environmental costs and benefits. Green accounting is the practice of including information about a company's impact on the environment in financial reports. Stakeholders including governments, banks, and financial reports are updated with companies' efforts to protect the environment [32]. The term "green accounting" refers to a new subfield of bookkeeping that is concerned with the identification, categorization, measurement, calculation, estimation, recording, and disclosure of information about the environment. Information about the environment that is useful for making business decisions is collected and disseminated through the discipline of environmental accounting [16, 19, 32].

Thus, green accounting is a type of accounting that describes efforts to incorporate environmental and social benefits into economic decision-making or business financial results for economic decision-making, which are made in the format of a report package.

According to the Global Reporting Initiative (GRI), one measure of environmental dimensions includes energy which is regulated in GRI 302, water which is regulated in GRI 303, and emissions which are regulated in GRI 305.

The parameters for energy consumption, water consumption, and emissions produced in this study use the values used by the companies included in the research sample.

3.5. Company Value

The main goal of a company according to corporate theory is to maximize the wealth or value of the company [18]. The company has a mission to prosper stakeholders and increase company value by maximizing its financial performance [10].

In this research, company value uses Return on Assets

(ROA). Return on Assets is a profitability ratio used to determine a company's ability to generate profits from income related to sales, assets, and equity based on certain measurements [3, 22, 30].

$$\text{Return on Asset} = \frac{Net\ Profit}{Total\ Asset} \times 100\%$$

4. Review of Previous Research

Research conducted by Sukmadilaga et al (2023), with the title "Does Green Accounting Affect Firm Value? Evidence from ASEAN Countries" The results show that the application of green accounting reporting with the energy consumption dimension has no significant effect on company value, the water consumption dimension has a significant negative effect on the creation of Economic Value Added (EVA), and the emissions dimension has a significant effect at a significance level of 10% in the direction positive towards the creation of EVA [35].

Research conducted by Anggita et al (2024), with the title "The Effect of Annual Report Readability, Carbon Emission Disclosure and Green Accounting Practices on Company Value." The results show that annual report readability, carbon emission disclosure, and green accounting practices have a positive and significant effect on company value [2].

Research conducted by Darlis et al (2024), with the title "Green Accounting, Corporate Governance, and Firm Value in Southeast Asia Region". The results show that green accounting does not have a substantial impact on firm value [4].

Research conducted by Hutabarat (2024), with the title "Effect of Green Accounting, Leverage, Firm Size on Firm Value with Profitability as Intervening Variable". The results show that the impact of green accounting on profitability as an intervening variable is not significant, either directly or indirectly. In the context of business value, it can be observed that profitability has a direct and statistically significant impact [17].

Research conducted by Dianty (2022), with the title "The Effect of Applying Green Accounting on Firm Value and Financial Performance as An Intervening Variable". The results show that there is a positive relationship between the implementation of Green Accounting and company value [7].

Research conducted by Faizah (2020), with the title "Application of Green Accounting to Financial Performance". The results show that green accounting, which is measured through environmental activities, environmentally friendly products, and environmental performance, does not affect financial performance as measured by net profit margin [12].

Research conducted by Indriastuti and Mutamimah (2023), with the title "Green Accounting and Sustainable Performance of Micro, Small, and Medium Enterprises: The Role of Financial Performance as Mediation". The results show that the sustainable performance of MSMEs can be improved through green accounting and financial performance. Apart from that, MSMEs' concern for the environment through green accounting can be an added value for MSME businesses in Central Java, Indonesia [20].

Research conducted by Lindawati et al. (2023), with the title "Analysis of Sustainability Performance, Green Accounting and ESG Disclosure on Firm Valuation". The results show that sustainability performance has a positive effect on company value, while green accounting has a negative effect on company value [24].

Research conducted by Sulistiawati and Dirgantari (2016), with the title "Analysis of the Effect of Implementing Green Accounting on Profitability in Mining Companies Listed on the Indonesian Stock Exchange". The results show that green accounting has no effect on company profitability as measured using net profit margin [36].

Research conducted by Endiana et al. (2020), with the title "The Effect of Green Accounting on Corporate Sustainability and Financial Performance". The results show that the implementation of green accounting and CSMS has a positive relationship with company performance, not only contributing to environmental sustainability but also providing economic benefits for the company [11].

Research conducted by Kholmi and Nafiza (2022), with the title "The Effect of Implementing Green Accounting and Corporate Social Responsibility on Profitability (Study of Manufacturing Companies Listed on the IDX in 2018-2019)". The results show that green accounting has no effect on profitability as proxied by ROE [23].

5. Framework for Thinking and Hypothesis Design

The framework of thinking is depicted in the following scheme:

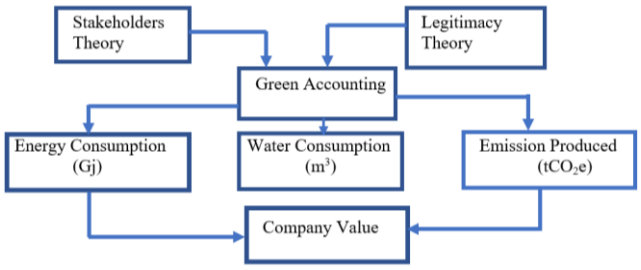


Figure 1. *Framework of research.*

Hypothesis Design

The hypothesis of this research is:

H_1: Energy use has a positive effect on company value.

H_2: Water consumption has a positive effect on company value.

H_3: The resulting emissions have a positive effect on company value.

H_4: Energy use, water consumption and the resulting

emissions (green accounting) partially and simultaneously have a positive effect on company value.

6. Research Methods

6.1. Sampling Techniques

The technique used is a non-probability sampling technique. With the following criteria:

1) Company that won the 2023 Asia Sustainability Reporting Awards.
2) Company that won the 2023 Asia Sustainability Reporting Awards which published consecutive annual reports from 2019-2022.
3) Company that won the 2023 Asia Sustainability Reporting Awards which published sustainability report consecutively from 2018-2022.
4) The company that won the 2023 Asia Sustainability Reporting Awards which includes energy use, water consumption, and emissions produced in consecutive sustainability reports from the 2018-2022 period.

Table 4. *Sample Selection.*

No	Criteria	Amount
1.	Winning company of the 2023 Asia Sustainability Reporting Awards	30
2.	Companies Winning the 2023 Asia Sustainability Reporting Awards did not publish financial Reports in 2019-2022	(1)
3.	Companies Winning the 2023 Asia Sustainability Reporting Awards that did not publish Sustainability Reports in 2018-2022	(9)
4.	The Company that won the 2023 Asia Sustainability Reporting Awards did not present energy uses, water consumption, and Emission in its sustainability report for 2018-2022	(7)
	Total research sample	13

Source: Each company's website (data processed, 2024)

Based on the sample selection criteria, the selected samples were 13 companies with an observation period of 4 years resulting in 52 data. The companies that were used as samples and have met the specified criteria are as follows:

Table 5. *List of research samples.*

No	Company Name	Country
1.	AUO Corporation	Taiwan
2.	Budweiser Brewing Company	Hongkong
3.	City Developments Limited	Singapore
4.	E Ink Holdings Inc	Taiwan
5.	Genpact India Pvt Limited	India
6.	Innolux Corporation	Taiwan
7.	Manila Electric Company	Filipina
8.	Maybank	Malaysia
9.	PT Bank Negara Indonesia (Persero) Tbk	Indonesia
10.	PT Vale Indonesia Tbk	Indonesia
11.	Sinyi Realty Inc.	Taiwan
12.	SoftBank Corp.	Japan
13.	Taishin Financial Holding Co. Ltd.	Taiwan

Source: www.csrworks.com (data processed, 2024)

6.2. Operational Variables

In this research, to determine the types and indicators of variables, operational variables are used. So that hypothesis testing can be carried out correctly, determining the scale is done by measuring each variable with statistical tools.

Table 6. *Operationalization of variables.*

Variable	Principle	Indicator	Scale
Independent Variable: X_1 = Energy use X_2 = Water Consumption X_3 = Emission produces	Green Accounting is a national Financial and welfare reporting approach that considers environmental costs and benefits [32]	Green Accounting = Increasing energy use, water consumption, and emissions produced	Rasio
Dependent Variable: Y = Company Value	ROA is a tool to measure the level of profit or a company's ability to earn profit [34]	Return on Assets = Net Profit / Total assets × 100%	Rasio

6.3. Data Collection Techniques and Instruments

Techniques and data collection come from the annual reports of each company, the analysis is carried out using Microsoft Excel and SPSS Statistics 30 analysis software, then the following tests are carried out:

1) Descriptive Statistics
2) Selection of Statistical Tests
3) Classic Assumption Test
   a. Data Normality Test
   b. Multicollinearity Test
   c. Heteroscedasticity Test
   d. Autocorrelation Test
4) Multiple Linear Regression Analysis

Multiple linear regression analysis is used because there is more than one independent variable relative to the dependent variable and there is no correlation between the independent variables.

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta 3X3 + \varepsilon$$

Y: Company value is proxied by ROA
α: Constant
β_1, β_2: Multiple regression coefficients between each independent variable on the independent variable
X_1: Energy Usage (%)
X_2: Water Consumption (%)
X_3: Emissions Generated (%)
Ɛ: Standard error

5) Correlation Coefficient Analysis
6) Analysis of the coefficient of determination
   a. Hypothesis Test (T-statistical Test)
   b. Hypothesis Test (F Test)

7. Research Results and Discussion

7.1. Data Description

7.1.1. Energy Use in Companies Winning the 2023 Asia Sustainability Reporting Awards

Table 7. *Changes in energy use in companies winning the Asia Sustainability Report Award in 2023.*

No	Company Name	2019	2020	2021	2022
1.	AUO Corporation	-2,1%	-0,2%	-1,3%	-12,0%
2.	Budweiser Brewing Company	-9,8%	-15,7%	-0,1%	-7,9%
3.	City Developments Limited	6,4%	-16,6%	7,1%	-12,7%
4.	E Ink Holdings Inc	-8,7%	1,0%	4,8%	12,2%
5.	Genpact India Pvt Limited	-13,0%	-53,3%	-18,8%	14,8%
6.	Innolux Corporation	2,3%	0,4%	0,9%	-9,6%
7.	Manila Electric Company	3,1%	-5,6%	-1,1%	50,7%
8.	Maybank	9,1%	-8,5%	128,2%	30,1%
9.	PT Bank Negara Indonesia (Persero) Tbk	40,7%	11,0%	-8,5%	618,7%

No	Company Name	2019	2020	2021	2022
10.	PT Vale Indonesia Tbk	-11,3%	33,4%	-6,8%	-6,5%
11.	Sinyi Realty Inc.	-1,4%	10,7%	-6,4%	1,0%
12.	SoftBank Corp.	21,3%	2,2%	26,0%	7,6%
13.	Taishin Financial Holding Co. Ltd.	-20,5%	5,4%	-0,6%	7,6%
Minimum		-20,5%	-53,3%	-18,8%	-12,7%
Maximum		40,7%	33,4%	128,2%	618,7%
Average		1,2%	-2,8%	9,5%	53,4%
Overall Average					15,3%

Source: Each company's website (data processed, 2024)

Based on Table 7, it can be seen the condition of changes in energy use in companies winning the Asia Sustainability Reporting Awards in 2023, shows that there are still many discrepancies found between sustainability claims submitted by companies and actual energy use data. While some companies have shown consistent declines in energy use, a large number have shown fluctuations or even increases. The research results show that there are various trends.

1) Several companies such as AUO Corporation, Budweiser Brewing Company, and Genpact India Pvt Limited have succeeded in reducing energy use significantly and consistently over several years. Data on changes in energy use for the three companies respectively at AUO Corporation was -21.1%; -0.2%; -1.3%; -12.0%, Budweiser Brewing Company at -9.8%; -15.7%; -0.1%; -7.9%, and Genpact India Pvt Limited at -13.0%; -53.3%; -18.8%. This shows a strong commitment to the principles of sustainability, especially in terms of efficient energy use.
2) Most companies such as City Developments Limited, Manila Electric Company, Maybank, PT Bank Negara Indonesia (Persero) Tbk, PT Vale Indonesia Tbk, Sinyi Realty Inc., and Taishin Financial Holding Co., Ltd., show significant fluctuations in energy use. There are years where energy use is successfully reduced but in the following year, there is an increase. For example, data on changes in the company's energy use from 2019 to 2022 respectively at City Developments Limited amounted to 6.4%; -16.6%; 7.1%; -12.7%, Maybank at 9.1%; -8.5%; 128.2%; 30.1%, and Taishin Financial Holding Co. Ltd. by -20.5%; 5.4%; -0.6%; 7.6%. This shows the company's lack of consistency in achieving sustainability principles, especially in terms of efficient energy use.
3) Several companies such as E Ink Holdings Inc. Innolux Corporation, and SoftBank Corp. show an increase in energy use every year. Data on changes in energy use for the three companies respectively at E Ink Holdings Inc. was 1.0%; 4.8%; 12.2%, Innolux Corporation at 2.3%; 0.4%; 0.9%, and SoftBank Corp. by 21.3%; 2.2%; 26.0%; 7.6%. This contradicts the sustainability claims made by the company, especially in terms of efficient energy use.

7.1.2. Water Consumption in the 2023 Asia Sustainability Reporting Awards Winning Companies

Table 8. *Changes in water consumption among companies winning the 2023 Asia Sustainability Reporting Awards.*

No.	Company Name	2019	2020	2021	2022
1.	AUO Corporation	-5,0%	5,2%	-1,6%	-13,2%
2.	Budweiser Brewing Company	3,0%	-10,4%	-2,2%	4,6%
3.	City Developments Limited	9,5%	-33,9%	11,4%	-1,7%
4.	E Ink Holdings Inc	-11,4%	7,3%	1,5%	23,1%
5.	Genpact India Pvt Limited	9,8%	-29,6%	-31,3%	64,7%
6.	Innolux Corporation	-1,6%	-1,3%	16,4%	-14,9%
7.	Manila Electric Company	-9,3%	17,9%	33,0%	-16,4%
8.	Maybank	-9,2%	-11,7%	17,3%	62,7%

No.	Company Name	2019	2020	2021	2022
9.	PT Bank Negara Indonesia (Persero) Tbk	-25,7%	7,7%	-4,5%	65,2%
10.	PT Vale Indonesia Tbk	-37,4%	-4,1%	-9,7%	-1,9%
11.	Sinyi Realty Inc.	-0,4%	10,2%	-4,4%	2,7%
12.	SoftBank Corp.	24,2%	45,0%	-49,2%	8,3%
13.	Taishin Financial Holding Co. Ltd.	-2,8%	-5,3%	-4,5%	13,6%
Minimum		-37,4%	-33,9%	-49,2%	-16,4%
Maximum		24,2%	45,0%	33,0%	65,2%
Average		-4,3%	-0,2%	-2,1%	15,1%
Overall average					2,1%

Source: Each company's website (data processed, 2024)

Based on Table 8, it can be seen that the changing conditions of water consumption show that there are still many discrepancies found between the sustainability claims submitted by companies and actual water consumption data. While some companies have shown consistent reductions in water consumption, a large number have shown fluctuations or even increases. The research results show that there are various trends.

1) Several companies such as PT Vale Indonesia Tbk and Taishin Financial Holding Co. Ltd. managed to reduce water consumption significantly and consistently over several years. Data on changes in water consumption at PT Vale Indonesia Tbk from 2019 to 2022 respectively amounted to -37.4%; -4.1%; -9.7%; -1.9% and Taishin Financial Holding Co. Ltd. during 2019 to 2021 respectively -2.8%; -5.3%; 4.5%. This shows a strong commitment to sustainability principles, especially in terms of water consumption efficiency.
2) Most companies such as AUO Corporation, Budweiser Brewing Company, City Developments Limited, Genpact India Pvt Limited, Innolux Corporation, Manila Electric Company, Maybank, PT Bank Negara Indonesia (Persero) Tbk, Sinyi Realty Inc., and SoftBank Corp show fluctuations significant impact on water consumption. There are years where water consumption is successfully reduced but in the following year, there is an increase. For example, data on changes in the company's water consumption from 2019 to 2022 respectively for Genpact India Pvt. Limited was 9.8%; -29.6%; -31.3%; 64.7%, Manila Electric Company at -9.3%; 17.9%; 33.0%; -16.4%, and Sinyi Realty Inc. by -0.4%; 10.2%; -4.4%; 2.7%. This shows the company's lack of consistency in achieving sustainability principles, especially in terms of water consumption efficiency.
3) E Ink Holdings Inc. shows an increase in water consumption every year. Data on changes in water consumption at E Ink Holdings Inc. over the last 3 years respectively amounted to 7.3%; 1.5%; 23.1%. This contradicts the sustainability claims made by the company, especially in terms of water consumption efficiency.

7.1.3. Emissions Generated by Winning Companies in the 2023 Asia Sustainability Reporting Awards

Table 9. *Changes in emissions produced by companies winning the Asia sustainability reporting awards in 2023.*

No	Company Name	2019	2020	2021	2022
1.	AUO Corporation	57,2%	-75,6%	-6,2%	-18,0%
2.	Budweiser Brewing Company	8,2%	-14,3%	1,2%	-2,3%
3.	City Developments Limited	-0,9%	-16,7%	10,4%	-8,5%
4.	E Ink Holdings Inc	-12,5%	0,7%	18,6%	144,7%
5.	Genpact India Pvt Limited	28,3%	-34,4%	-21,1%	13,7%
6.	Innolux Corporation	-5,9%	-0,4%	15,2%	0,3%
7.	Manila Electric Company	34,0%	26,9%	94,3%	-2,2%

No	Company Name	2019	2020	2021	2022
8.	Maybank	-33,7%	43,9%	-6,5%	-8,4%
9.	PT Bank Negara Indonesia (Persero) Tbk	-0,6%	46,2%	-8,6%	900,8%
10.	PT Vale Indonesia Tbk	-8,3%	13,0%	-8,6%	-16,8%
11.	Sinyi Realty Inc.	61,3%	3,0%	-11,7%	-6,7%
12.	SoftBank Corp.	-15,7%	30,1%	151,0%	5,9%
13.	Taishin Financial Holding Co. Ltd.	-18,6%	-1,1%	-1,8%	7,9%
Minimum		-33,7%	-75,6%	-21,1%	-18,0%
Maximum		61,3%	46,2%	151,0%	900,8%
Average		7,2%	1,6%	17,4%	77,7%
Overall Average					26,0%

Source: Each company's website (data processed, 2024)

Based on table 9, shows that there are still many discrepancies found between the sustainability claims submitted by companies and the actual emissions data produced. Some companies have managed to show consistent reductions in emissions, but a large number of others have shown fluctuations or even increases. The research results show that there are various trends.

1) Several companies such as AUO Corporation and Taishin Financial Holding Co. Ltd. succeeded in reducing the resulting emissions significantly and consistently over several years. Data on changes in emissions produced at AUO Corporation during 2020 to 2022 respectively amounted to -75.6%; -6.2%; -18.0% and Taishin Financial Holding Co. Ltd. during 2019 to 2021 respectively, it was -18.6%; -1.1%; -1.8%. This shows a strong commitment to sustainability principles, especially in terms of reducing emissions.
2) Most companies such as Budweiser Brewing Company, City Developments Limited, Genpact India Pvt Limited, Innolux Corporation, Maybank, PT Bank Negara Indonesia (Persero) Tbk, PT Vale Indonesia Tbk, and Sinyi Realty Inc., show significant fluctuations in emissions resulting from. There are years where the emissions produced are successfully reduced but in the following year, there is an increase. For example, data on changes in emissions produced by the company from 2019 to 2022 respectively for the Budweiser Brewing Company was 8.2%; -14.3%; 1.2%; -2.3%, Innolux Corporation at -5.9%; -0.4%; 15.2%; 0.3%, and Genpact India Pvt Limited at 28.3%; -34.4%; -21.1%; 13.7%. This shows the company's lack of consistency in achieving sustainability principles, especially in terms of efficiency in reducing emissions.
3) Several companies such as E Ink Holdings Inc. Manila Electric Company, and SoftBank Corp. show an increase in emissions produced every year. Data on changes in emissions produced by these three companies respectively at E Ink Holdings Inc. was 0.7%; 18.6%; 144.7%, Manila Electric Company at 34.0%; 26.9%; 94.3%, and SoftBank Corp. by 30.1%; 151.0%; 5.9%. This contradicts the sustainability claims made by the company, especially in terms of reducing emissions.

7.1.4. Company Value of the 2023 Asia Sustainability Reporting Awards Winning Companies

Table 10. *Company Values of companies winning the Asia Sustainability Reporting Awards in 2023.*

No	Company Name	2019	2020	2021	2022
1.	AUO Corporation	-5,4%	0,7%	14,9%	-5,4%
2.	Budweiser Brewing Company	5,9%	3,3%	5,9%	5,9%
3.	City Developments Limited	2,6%	-7,9%	0,5%	5,7%
4.	E Ink Holdings Inc	7,6%	8,0%	9,1%	15,3%
5.	Genpact India Pvt Limited	6,8%	6,3%	7,4%	7,7%
6.	Innolux Corporation	-4,7%	0,4%	12,3%	-7,3%

No	Company Name	2019	2020	2021	2022
7.	Manila Electric Company	6,5%	4,1%	5,0%	5,5%
8.	Maybank	1,0%	0,8%	0,9%	0,9%
9.	PT Bank Negara Indonesia (Persero) Tbk	1,8%	0,4%	1,1%	1,8%
10.	PT Vale Indonesia Tbk	2,6%	3,6%	6,7%	7,5%
11.	Sinyi Realty Inc.	4,0%	4,9%	7,2%	3,6%
12.	SoftBank Corp.	-2,6%	10,9%	-3,6%	-2,2%
13.	Taishin Financial Holding Co. Ltd.	0,7%	0,7%	0,8%	0,5%
Minimum		-5,4%	-7,9%	-3,6%	-7,3%
Maximum		7,6%	10,9%	14,9%	15,3%
Average		2,1%	2,8%	5,3%	3,0%
Overall Average					3,3%

Source: Each company's website (data processed, 2024)

Based on Table 10, several companies have succeeded in showing a consistent increase in company value, but a large number of others have shown fluctuations. The research results show that there are various trends.

1) Several companies such as E Ink Holding Inc and PT Vale Indonesia Tbk have succeeded in increasing company value significantly and consistently over several years. Company value data for 2019 to 2022 respectively for E Ink Holding Inc was 7.6%; 8.0%; 9.1%; 15.3% and PT Vale Indonesia Tbk at 2.6%; 3.6%; 6.7%; 7.5%.
2) Several companies such as Budweiser Brewing Company, Maybank, and Taishin Financial Holding Co. Ltd. show a relatively stable company value. Company value data for 2019 to 2022 respectively for Budweiser Brewing Company is 5.9%; 3.3%; 5.9%; 5.9%, Maybank at 1.0%; 0.8%; 0.9%; 0.9%, and Taishin Financial Holding Co. Ltd. by 0.7%; 0.7%; 0.8%; 0.5%.
3) Several companies such as Genpact India Pvt Limited, Manila Electric Company, PT Bank Negara Indonesia (Persero) Tbk, and Sinyi Realty Inc. show significant fluctuations in company value but is still at a positive ROA value. Company value data for 2019 to 2022 respectively for Genpact India Pvt Limited is 6.8%; 6.3%; 7.4%; 7.7%, Manila Electric Company at 6.5%; 4.1%; 5.0%; 5.5%, PT Bank Negara Indonesia Tbk at 1.8%; 0.4%; 1.1%; 1.8%, and Sinyi Realty Inc. by 4.0%; 4.9%; 7.2%; 3.6%.
4) Several companies such as AUO Corporation, City Developments Limited, Innolux Corporation, and SoftBank Corp. show significant fluctuations in company value with unfavorable conditions in certain years which are characterized by negative ROA values. Company value data for 2019 to 2022 respectively for AUO Corporation is -5.4%; 0.7%; 14.9%; -5.4%, City Developments Limited at 2.6%; -7.9%; 0.5%; 5.7%, Innolux Corporation at -4.7%; 0.4%; 12.3%; -7.3%, and SoftBank Corp. by -2.6%; 10.9%; -3.6%; -2.2%.

7.2. Research Results

This research adopts two data analysis approaches, namely descriptive and inferential. Descriptive analysis presents an overview of data through statistics such as minimum, maximum, average, and standard deviation values. Meanwhile, inferential analysis uses multiple linear regression models to test the relationship between variables. Before the regression model is used, a series of classical assumption tests are carried out, including normality, multicollinearity, heteroscedasticity, and autocorrelation. After the regression model is deemed feasible, simultaneous (F test) and partial (t-test) testing is carried out to see the effect of the independent variable on the dependent variable.

7.2.1. Descriptive Statistics Results

Table 11. *Descriptive Statistical Test Results.*

	N	Min	Max	Mean	Std. Deviation
Energy	49	-53.3%	128.2%	3.718%	24.7883%

	N	Min	Max	Mean	Std. Deviation
Water	49	-49.2%	64.7%	1.046%	21.8727%
Emission	49	-75.6%	151.0%	8.148%	38.9875%
Company Value	49	-7.93%	15.26%	3.2652%	4.76297%
Valid N (listwise)	49				

Source: processed Data SPSS 30, 2024

Based on Table 11, shows that the variable Increasing Energy Use (X1) has a minimum value of -53.3% and a maximum value of 128.2%, with an average value of 3.718% and a standard deviation of 24.7883%. The water consumption variable (X2) has a minimum value of -49.2% and a maximum value of 64.7% with an average value of 1.046% and a standard deviation of 21.8727%. The Resulting Emissions variable (X3) has a minimum value of -75.6% and a maximum value of 151.0% with an average value of 8.148% and a standard deviation of 38.9875%. The Company Value (Y) variable has a minimum value of -7.93% and a maximum value of 15.26% with an average value of 3.2652% with a standard deviation of 4.76297%.

7.2.2. Results of Classical Assumption Testing

(i). Data Normality Test Results

Table 12. *Normality Test Results for Kolmogorov-Smirnov data.*

			Unstandardized Residual
N			49
Normal Parameters [a, b]	Mean		.0000000
	Std. Deviation		4.36849636
Most Extreme Differences	Absolute		.094
	Positive		.057
	Negative		-.094
Test Statistic			.094
Asymptotic. Sig. (2-tailed) [c]			.200[d]
Monte Carlo Sig. (2-tailed)[e]	Sig.		.334
	99% Confidence Interval	Lower Bound	.322
		Upper Bound	.346

a. Test distribution is Normal.

b. Calculated from data.

c. Lilliefors Significance Correction.

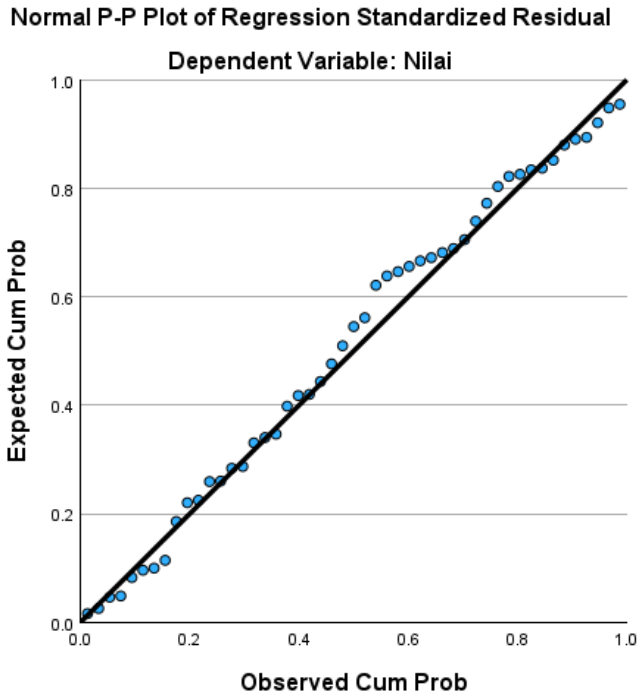
d. This is a lower bound of the true significance.

e. Lilliefors' method based on 10000 Monte Carlo samples with starting seed 1314643744.

Source: processed Data SPSS 30, 2024

Based on the results of the Kolmogorov-Smirnov test in Table 12, the asymptotic significance value of 0.200 is greater than the significance level set at 0.05. This indicates that the residual data in the regression model meets the normality assumption. Thus, data analysis can be continued by testing other classical assumptions.

The results of the normality test via the normal graph P Plot of Regression Statistics can be seen in the image below.



Source: processed Data SPSS 30, 2024

Figure 2. *P-Plot of Regression Statistic.*

Based on Figure 2, the P-P Plot graphic visualization, it can be concluded that this research data meets the assumption of normality. This is characterized by the distribution of data points following the diagonal line, indicating that the data distribution does not deviate significantly from the normal distribution.

(ii). Multicollinearity Test Results

The results of the multicollinearity test in this study are as follows.

Table 13. *Multicollinearity Test Results.*

Coefficients [a]			
Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	Energy	.921	1.086
	Water	.932	1.073
	Emission	.975	1.026

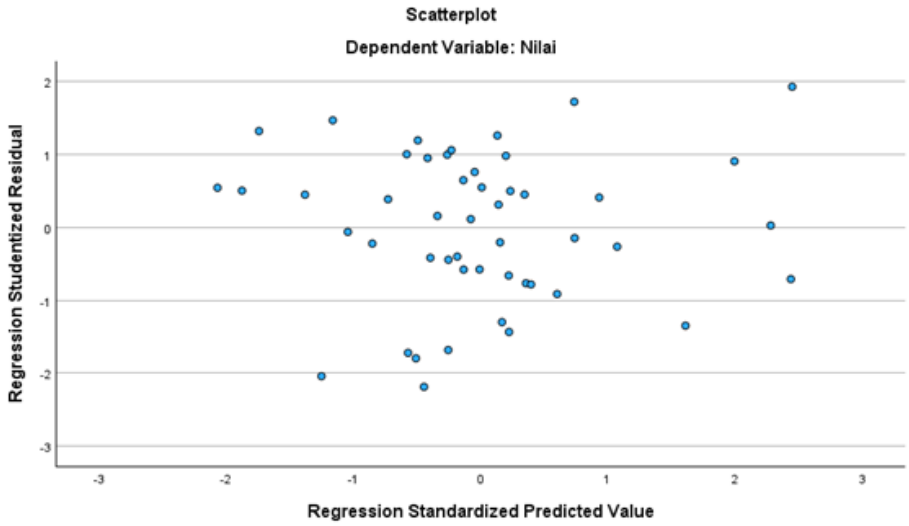
a. Dependent Variable: Company Value

Source: processed Data SPSS 30, 2024

Based on Table 13, it can be seen that the energy use variable has a tolerance value of 0.921; water consumption of 0.932; and the emissions produced are 0.975, of these three variables it can be said to have met the tolerance value, namely more than 0.10. Meanwhile, the VIF value of the energy use variable is 1.086; water consumption of 1,073; and the resulting emissions were 1,026; These three variables have met the VIF value because they are less than 10. So it can be concluded that multicollinearity does not occur.

(iii). Heteroscedasticity Test Results

The results of the heteroscedasticity test are as follows:



Source: processed Data SPSS 30, 2024

Figure 3. *Scatterplot Image Graphics.*

Based on Figure 3, it can be seen that in the scatterplot graph there is no clear pattern or it can be said that the points are spread randomly. So it can be concluded that heteroscedasticity does not occur so it is feasible to predict the independent variable on the dependent variable and can continue the next classical assumption test.

(iv). Autocorrelation Test Results

The results of the autocorrelation test in this study are as follows.

Table 14. Autocorrelation Test Results.

Model Summary [b]					
Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**	**Durbin-Watson**
1	.398[a]	.159	.103	4.51176%	2.179

a. Predictors: (Constant), Emission, Water, Energy

b. Dependent Variable: Company Value

Source: processed Data SPSS 30, 2024

Based on Table 14, shows the results of the autocorrelation test which shows that the Durbin-Watson value is 2.179. This value is then compared with the Durbin-Watson table which has a significance level of 5%, with a total of 49 (n) and a total of 3 (k) independent variables. The Durbin Watson value obtained is explained as follows:

$$dU < dW < 4\text{-}dU; 1.6723 < 2.179 < 4 - 1.6723; 1.6723 < 2.179 < 2.3277$$

From the results of these calculations, it can be concluded that in this study there was no positive or negative autocorrelation with the decision not being rejected, which means this study was free from autocorrelation symptoms.

8. Results of Multiple Regression Analysis

The results of the multiple linear regression test are as follows.

Table 15. Results of Multiple Regression Analysis.

Coefficients [a]						
Model		**Unstandardized Coefficients**		**Standard Coefficients**	**t**	**Sig.**
		B	**Std. Error**	**Beta**		
1	(Constant)	3.130	.663		4.718	<,001
	Energy	-.038	.027	-.198	-1.391	.171
	Water	.072	.031	.333	2.350	.023
	Emission	.025	.017	.202	1.459	.152

a. Dependent Variable: Company Value

Source: processed Data SPSS 30, 2024

Based on Table 15, it can be concluded that the multiple linear regression equation is as follows:

$$Y = 3{,}13 - 0{,}038X_1 + 0{,}072X_2 + 0.025X3 + \epsilon$$

8.1. Correlation Analysis Results

Based on the results of the Pearson Product Moment correlation analysis, they are as follows.

Table 16. Pearson Product Moment Correlation Test Results.

Correlations					
		Energi	Air	Emisi	Nilai
Energy	Pearson Correlation	1	.253	.146	-.084
	Sig. (2-tailed)		.080	.318	.564
	N	49	49	49	49
Water	Pearson Correlation	.253	1	.097	.302*
	Sig. (2-tailed)	.080		.509	.035
	N	49	49	49	49
Emission	Pearson Correlation	.146	.097	1	.205
	Sig. (2-tailed)	.318	.509		.157
	N	49	49	49	49
Company Value	Pearson Correlation	-.084	.302*	.205	1
	Sig. (2-tailed)	.564	.035	.157	
	N	49	49	49	49

*. Correlation is significant at the 0.05 level (2-tailed).

Source: processed Data SPSS 30, 2024

To determine the level of relationship between variables X and Y based on the results of the correlation analysis test above, you can see the following table.

Table 17. Interpretation results from the correlation coefficient test.

Variable X	Correlation coefficient	Coefficient interval	Relationship level
Energy Consumption	-0,084	0,20-0,399	Very low
Water Consumption	0,302	0,20-0,399	Very low
Emission Produced	0,205	0,20-0,399	Very low

Source: processed Data SPSS 30, 2024

Based on Table 17. the results of the interpretation of the partial correlation test above, it can be seen that the relationship between energy use and company value is very low and the correlation coefficient value is -0.084, which shows a negative number, meaning that every increase in energy use will be accompanied by a decrease in company value.

Then, the relationship between water consumption and company value is very low and the correlation coefficient value of 0.302 shows a positive number, meaning that every increase in water consumption will be accompanied by an increase in company value. Meanwhile, the relationship between emissions produced and company value is very low and the correlation coefficient value of 0.205 shows a positive number, meaning that every increase in emissions produced is accompanied by an increase in company value.

8.2. Results of Determination Coefficient Analysis

The value (R^2) lies between 0 and 1 ($0 \leq R^2 \leq 1$). The results of the coefficient of determination analysis test are as follows:

Table 18. Results of the Determinant Coefficient analysis test.

Model Summary [b]				
Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**
1	.398[a]	.159	.103	4.51176%

a. Predictors: (Constant), Emission, Water, Energy

b. Dependent Variable: Company Value

Source: processed Data SPSS 30, 2024

$$Kd = \boldsymbol{R}^2 \times 100\%; = (\mathbf{0},398)^2 \times 100\%; = 15,9\%$$

Based on Table 18, it can be seen that the Adjusted R Square value is 15.9%. This value shows that 15.9% of company value is influenced by the independent variables in this research, namely energy use, water consumption, and emissions produced. Meanwhile, 84.1% of company value is influenced by other factors or variables outside those in this research.

8.3. Hypothesis Testing Results

8.3.1. Partial Hypothesis Test Results (t-Statistic Test)

The results of the t-test can be seen in the following table.

Table 19. Partial Hypothesis Test Results (t-Test).

Coefficients [a]						
Model		**Unstandardized Coefficients**		**Standard Coefficients**	**t**	**Sig.**
		B	**Std. Error**	**Beta**		
1	(Constant)	3.130	.663		4.718	<,001
	Energy	-.038	.027	-.198	-1.391	.171
	Water	.072	.031	.333	2.350	.023
	Emission	.025	.017	.202	1.459	.152

a. Dependent Variable: Company Value

Source: processed Data SPSS 30, 2024

1. Test results on the independent variable energy use

Based on Table 19, it is known that the calculated t-value for the energy use variable is -1.391. The calculated t value is -1.391 < 1.679 or t calculated < t table with a significance of 0.171 > 0.05, so H0 is accepted and Ha is rejected, which means there is no significant influence between energy use and company value. A negative t value indicates that the energy use variable has a relationship in the opposite direction to company value.

2. Test results on the independent variable water consumption

Based on Table 19, it is known that the calculated t-value for the water consumption variable is 2.350. The calculated t value is 2.350 > 1.679 or t calculated > t table with a significance of 0.023 < 0.05, then H0 is rejected and Ha is accepted, which means that there is a significant influence between water consumption and company value. A positive t value indicates that the water consumption variable has a unidirectional relationship with company value.

3. Test results on the independent variable emissions produced

Based on Table 19, it is known that the calculated t-value for the resulting emission variable is 1.459. The calculated t value is 1.459 < 1.679 or t calculated < t table with a significance of 0.152 > 0.05, then H0 is accepted and Ha is rejected, which means that there is no significant influence between the emissions produced and the company value. A positive t value indicates that the resulting emissions variable has a unidirectional relationship with company value.

8.3.2. Simultaneous Hypothesis Test Results (F Statistical Test)

The results of the F statistical test can be found in the following table.

Table 20. *Simultaneous Hypothesis Test Results (F Test).*

ANOVA [a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	172.902	3	57.634	2.831	.049[b]
	Residual	916.020	45	20.356		
	Total	1088.923	48			

a. Dependent Variable: Company Value

b. Predictors: (Constant), Emission, Water, Energy

Source: processed Data SPSS 30, 2024

Based on Table 20, it can be seen that the calculated F value for all independent (free) variables is 2.831 > 2.81 or the calculated F value > F table and the significance value is 0.049 < 0.05, so it can be concluded that H_0 is rejected and H_a is accepted, which means that energy use, water consumption and emissions produced together (simultaneously) have a significant effect on company value.

8.4. Discussion of Results

The research results show that increases in energy use, water consumption, and emissions are directly proportional to increases in company value. These findings suggest that while green accounting may play a role in increasing awareness of environmental responsibility within organizations, it does not automatically translate into a real contribution to corporate value. This suggests that other factors may have a more dominant impact, or that combining environmental management systems with a more extensive and in-depth business strategy framework may need to be implemented in order for a significant impact on company value to be realized.

This is in line with research conducted by Mildazani et al. (2023), Anggita et al. (2024), Darlis et al. (2024), and Hutabarat (2024).

8.4.1. The Influence of Energy Use on Company Value

The results of data testing show that energy use does not have a significant influence on company value. This can be seen from the calculated t value for the energy use variable of -1.391 with a t table value of 1.679, the calculated t < t table with a significance level of 0.171 > 0.05. This shows that H0 is accepted and Ha is rejected, so it can be concluded that the energy use variable does not have a significant effect on company value. Based on the negative regression test, it shows that increasing energy use causes a decrease in company value.

If it is related to the research sample of the company that won the 2023 Asia Sustainability Reporting Awards, namely PT Vale Indonesia Tbk. which shows a relationship in the opposite direction according to the test results, which means that when energy use decreases, the value of the company increases, and vice versa, when energy use increases, then company value decreases. This is in accordance with the calculation results that the decline in energy use over the four years in 2019-2022 was -11.3%; 33.4%; -6.8%; and -6.5% followed by a company value of 2.58%; 3.58%; 6.70%; and 7.54%.

8.4.2. The Influence of Water Consumption on Company Value

The results of data testing show that water consumption has an influence on company value. This can be seen from the calculated t value for the water consumption variable of 2.350 with a t table value of 1.679, which means that t calculated > t table with a significance level of 0.023 < 0.05. This shows that H0 is rejected and Ha is accepted, so it can be concluded that the water consumption variable has a significant effect on

company value. Based on the positive regression test, it shows that increasing water consumption causes an increase in company value.

If it is related to the research sample of the company that won the 2023 Asia Sustainability Reporting Awards, namely E Ink Holdings Inc. which shows a unidirectional relationship according to the test results, which means that when water consumption increases, the company value also increases, and vice versa, when water consumption decreases, the company value also decreases. This is in accordance with the calculation results that the increase in water consumption over the four years in 2019-2022 was -11.4%; 7.3%; 1.5%; and 23.1%, followed by a company value of 7.62%; 8.02%; 9.14%; and 15.26%.

8.4.3. The Influence of Emissions on Company Value

The results of data testing show that the emissions produced do not have a significant influence on company value. This can be seen from the calculated t value for the resulting emission variable of 1.459 with a t table value of 1.679, which means the calculated t < t table with a significance level of 0.152 > 0.05. This shows that H0 is accepted and Ha is rejected, so it can be concluded that the resulting emissions variable does not have a significant effect on company value. Based on the positive regression test, it shows that the resulting increase in emissions causes an increase in company value.

If it is related to the research sample of the company that won the 2023 Asia Sustainability Reporting Awards, namely Manila Electric Company (MERALCO), it shows a unidirectional relationship according to the test results, which means that when the emissions produced increase, the value of the company also increases, and vice versa when the emissions produced decreases, the value of the company also decreases. This is in accordance with the calculation results that the increase in the emission value produced over the four years in 2019-2022 was 34.0%; 26.9%; 94.3%; and -2.2% followed by a company value of 6.55%; 4.14%; 4.98%; and 5.51%.

8.4.4. The Influence of Energy Use, Water Consumption, and Emissions Resulting (Green Accounting) on Company Value

The test results show that energy use, water consumption, and the resulting emissions (green accounting) simultaneously influence company value. This can be seen from the calculated F value for all independent variables of 2.831 with an F table value of 2.81, which means that the calculated F > F table with a significance level of 0.049 < 0.05. This shows that H0 is rejected and Ha is accepted, so it can be concluded that the variables energy use, water consumption and emissions produced (green accounting) have a significant effect on company value. This is in line with research conducted by Anggita et al (2024) and Dianty (2022).

9. Conclusions and Suggestions

9.1. Conclusion

The Conclusion is as follows:

1) Energy use in companies winning the 2023 Asia Sustainability Reporting Awards shows an average fluctuation value that tends to decrease during the 2019-2022 period. This reflects the company's efforts to implement energy efficiency practices and reduce the environmental impact of operational activities. Apart from that, this also shows that these companies are committed to implementing more environmentally friendly strategies including the use of renewable energy.
2) Water consumption in companies winning the Asia Sustainability Reporting Awards in 2023 shows an average fluctuation value that tends to decrease during the 2019-2022 period. This decline reflects the company's efforts to reduce environmental impacts and increase sustainability practices in its operations. In addition, this also shows that these companies are committed to implementing better water management strategies, in line with global trends towards sustainability and social responsibility.
3) Emissions produced by companies winning the 2023 Asia Sustainability Reporting Awards show an average fluctuation value that tends to increase during the 2019-2022 period. This increase does not completely reflect a lack of awareness about sustainability, but it is more accurate to say that these companies are facing challenges in managing environmental impacts amidst rapid operational growth. However, increasing emissions can also be understood as a symptom of a lack of implementation of optimal sustainability practices.
4) The company value of the companies winning the Asia Sustainability Reporting Awards in 2023 shows an average fluctuation value that tends to increase during the 2019-2022 period. This increase occurred as a result of the company's profits and asset value increasing every year, which reflects solid financial performance and success in sustainable business strategies.
5) The influence of green accounting on company value (a case study of the company that won the Asia Sustainability Reporting Awards in 2023).
   a. The energy use variable (X_1) partially has no significant effect on company value.
   b. The water consumption variable (X_2) partially has a significant effect on company value.
   c. The resulting emissions variable (X_3) partially has no significant effect on company value.
   d. The variables energy use (X_1), water consumption (X_2), and emissions produced (X_3) simultaneously have a significant effect on company value.

9.2. Suggestions

Based on the conclusions from the research results, the author intends to provide suggestions related to the discussion above and can be used as input and consideration as follows.

1) For further research, the author suggests exploring other independent variables that might influence company value, such as Environmental, Social, and Governance Disclosure or other environmental aspects,
2) This research focuses on companies that won the Asia Sustainability Reporting Awards in 2023. Therefore, for subsequent research, it is recommended to select samples from other categories or other companies in general. This aims to compare company values from various categories.
3) To improve the quality of further research, it is recommended to conduct research with a larger sample size and expand the research time period.
4) It is recommended for companies to integrate sustainability principles into all aspects of business. Companies can start by conducting regular energy and water audits, as well as investing in more efficient and environmentally friendly technologies.
5) It is recommended for investors to actively consider investing in companies that implement green accounting practices. It is important for investors to analyze sustainability reports and environmental cost disclosures made by companies to understand the impact of these practices on the company's financial performance and reputation.

Abbreviations

APAC	Asia-Pacific
ASEAN	The Association of South East Asian Nations
Co. Ltd.	Company Limited
Corp	Corporation
CSMS	Corporate Sustainability Management System
ESG	Environmental, Social, and Governance
EVA	Economic Value Added
GJ	Giga Joule
GRI	Global Reporting Initiative
IDX	Indonesia Stock Exchange
Inc	Incorporated
m^3	Meter Cubic
MSMEs	Micro, Small, and Medium Enterprises
PT	Perusahaan Terbuka (Public Company)
Pvt	Private
ROA	Return on Assets
ROE	Return on Equity
tCO2e	Tonnes of Carbon Dioxide Equivalent
Tbk	Terbuka (Public)
VIF	Variance Inflation Factor

Conflicts of Interest

There are no conflicts of interest between the authors

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