

Stakeholder Theory of Energy Disclosure: Main Factors and Valuable Observations

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ABSTRACT: This study examines corporate social responsibility, with a primary focus on the disclosure of energy practices in the non-cyclical consumer sector. This research aims to examine the effects of financial factors, including financial performance and leverage, as well as governance factors, such as management ownership and the composition of the board of directors, on energy disclosure practices. We employed a purposive sampling method and collected 98 samples from non-cyclical consumer sector companies listed on the Indonesia Stock Exchange (IDX) between 2021 and 2022. This research employs multiple linear regression analysis. This research finds that financial performance and directorship have a significant positive impact on the energy disclosure, whereas leverage has a significant negative effect. In contrast, management ownership has a low impact on the energy disclosure. Our research contributes to the current discussion on corporate sustainability, highlighting the significant impact of financial and governance considerations on energy disclosure.

Keywords: Energy Disclosure, Financial Performance, Managerial Ownership

ABSTRAK: Penelitian ini meneliti tanggung jawab sosial perusahaan, terutama berfokus pada pengungkapan praktik energi di sektor konsumen non siklus. Penelitian ini bertujuan untuk menguji pengaruh faktor keuangan, termasuk kinerja keuangan dan leverage, dan faktor tata kelola, yang terdiri dari kepemilikan manajemen dan direksi, terhadap praktik pengungkapan energi. Kami mengumpulkan satu set data yang terdiri dari 98 sampel data dari perusahaan sektor konsumsi nonsiklus yang terdaftar di Bursa Efek Indonesia (BEI) antara tahun 2021 dan 2022 dengan menggunakan metode purposive sampling. Hipotesis penelitian ini diuji dengan menggunakan regresi linier berganda. Temuan penelitian mengungkapkan bahwa kinerja keuangan dan direksi memiliki pengaruh positif yang signifikan terhadap pengungkapan energi, sedangkan leverage memiliki pengaruh negatif yang signifikan. Sebaliknya, kepemilikan manajemen memiliki pengaruh yang minimal. Penelitian kami menambah diskusi saat ini mengenai keberlanjutan perusahaan, dengan menekankan pengaruh penting dari pertimbangan keuangan dan tata kelola terhadap pengungkapan energi.

Kata Kunci: Pengungkapan Energi, Kinerja Keuangan, Kepemilikan Manajerial

INTRODUCTION

Worldwide energy consumption is trending upward, primarily due to the growth of the global population, as noted by Gomez-Echeverri (2018) and Herrero et al. (2009). The projections for the near future indicate a significant rise in the global population by 2030, together with a corresponding surge in energy demand, as emphasized by Liu et al. (2020) and Madkour (2022). The increasing energy demand requires immediate action to provide a sustainable energy supply for current and future energy needs. It is important to research these energy needs because they are in line with SDGs goal number 7 regarding Clean and Affordable Energy. Companies should support government and local government policies to ensure access to affordable, reliable and sustainable energy. Energy use in economic activities should be efficient, sustainable and renewable as much as possible. As a response to this urgent command, the government is implementing strict rules, as demonstrated by Government Regulation (PP) Number 33 of 2023, which prioritizes energy-saving efforts. The rules emphasized by Aboueata et al. (2021) and Dorian et al. (2006) aim to tackle the urgent energy requirements in a financially feasible, logical, and environmentally friendly manner, guaranteeing a well-rounded approach to energy use and preservation.

Regulatory frameworks, including Government Regulation (PP) No. 33 of 2023, play a crucial role in guiding energy policies towards sustainability and resilience in the face of increasing energy difficulties. Indonesia's heavy dependence on fossil fuels poses a significant challenge to achieving sustainable development goals, surpassing targets for renewable energy (Kusmayadi et al., 2024). Despite efforts to diversify energy sources, such as Government Regulation (PP) Number 33 of 2023 focusing on energy conservation, reliance on coal, petroleum, and gas persists, hindering sustainability progress (Amalia et al., 2022). With mounting environmental concerns, corporations face increasing pressure to address sustainability issues, evidenced by calls for comprehensive assessments of economic, environmental, and social impacts Hasan et al., 2012; Sharvini et al., 2018; Apriyanti et al., 2019). However, the energy sector receives insufficient attention in sustainability reporting studies, underscoring the need for a comprehensive analysis of energy disclosure protocols to address associated sustainability challenges effectively (Wu & Chen, 2017; Chen et al., 2019; Shalaeva et al., 2020). Energy disclosure and efficiency not only fulfill regulatory obligations, but also become a business strategy that strengthens the company's financial performance and contributes significantly to sustainable regional economic development. The impacts on the regional economy include low energy costs, increased energy security, transparency and sustainable development, as well as creating jobs and strengthening the local economy (Makeeva et al., 2024).

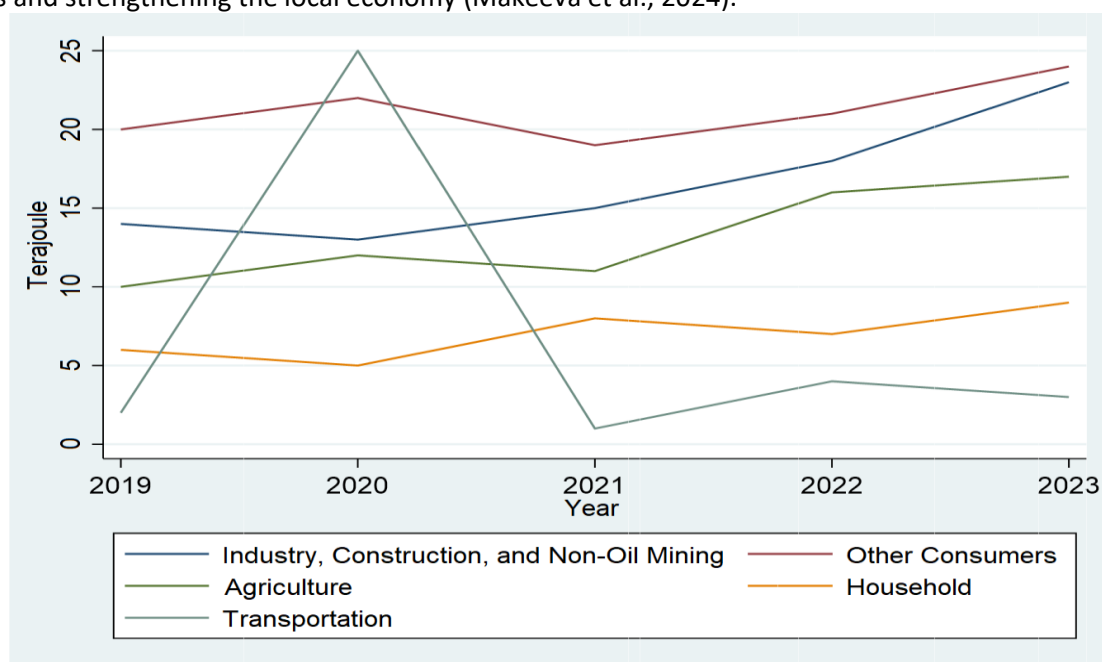


Figure 1. Graph of Energy Use in Indonesia from 2019 to 2023

Sustainability reporting is crucial for organizations to effectively convey their performance and impacts. Sustainability reporting has a positive impact on regional economic development through job creation, increased investment, transparency, and contribution to achieving the SDGs. It also encourages inclusive and sustainable regional economic growth, for both large companies and MSMEs. However, effective reporting must take into account potential negative impacts so that economic benefits can be felt fairly by all stakeholders (Gozali et al., 2024; Sutadji et al., 2024). According to Carolina et al. (2020), Kurniawan et al. (2020) and Orazalin & Mahmood (2020), sustainability reporting is a holistic platform that communicates both financial accomplishments and the wider impact of corporate operations on the environment and society. Energy disclosure is essential in this framework because it serves as a concrete indication of a company's dedication to environmental stewardship and openness. Energy disclosure is a form of corporate and industrial accountability to the public for the impact of their activities. This practice not only strengthens the legitimacy and reputation of companies, but also becomes an important instrument in encouraging transparent, sustainable, and responsible governance in the energy and industrial sectors. Regulatory support, implementation of good corporate governance principles, and active stakeholder involvement are key to improving the quality and effectiveness of energy disclosure in Indonesia (Oktapiani & Simatupang, 2024; Tabitha, 2025). According to Kay et al. (2020), including information on energy usage in sustainability reports demonstrates proactive efforts to address environmental issues and improve stakeholder trust and accountability.

Furthermore, incorporating stakeholder theory viewpoints into energy disclosure analysis enhances the importance of sustainability reporting. Carolina et al. (2020), Kurniawan et al. (2020) and Orazalin and Mahmood (2020) stressed that stakeholder theory emphasizes the significance of taking into account the concerns of different stakeholders, such as investors, employees, communities, and society as a whole when making corporate decisions. By integrating stakeholder viewpoints into the analysis of energy disclosure, firms can acquire useful insights about their sustainability and accountability processes. Essentially, incorporating stakeholder theory viewpoints enhances energy disclosure procedures, leading to enhanced business sustainability and accountability.

Kay et al. (2020) found a strong correlation between well-established environmental, sustainability, and social responsibility policies in organizations and their propensity to establish Environmental, Social, and Governance (ESG) incentive goals. This alignment signifies a commitment to enhancing stakeholder value and underscores the critical role of sustainability measures in contemporary corporate governance, ultimately enhancing firms' competitiveness and resilience in an increasingly conscientious market. This competitiveness is not only important for the company itself, but also contributes to increasing regional competitiveness and regional economic performance. Increasing the competitiveness of companies in a region will encourage regional productivity, progress, and independence, which in turn increases community welfare and regional economic growth (Mudyanti et al., 2022). Additionally, examining energy disclosure practices through the lens of stakeholder theory, as proposed by Carolina et al. (2020), Kurniawan et al. (2020) and Orazalin & Mahmood (2020) provides valuable insights into the influence of ESG strategies and objectives on energy disclosure. This analysis elucidates the intricate dynamics shaping corporate sustainability efforts and underscores the interplay between sustainability initiatives, stakeholder expectations and societal well-being, thereby promoting transparency, accountability and overall corporate sustainability.

This study explores the intricate relationship between financial performance metrics and energy disclosure practices in the non-cyclical consumer sector. This study examines the factors influencing energy disclosure practices, including financial performance, leverage, ownership structures, and directorial responsibilities. Research is crucial for academia, industry practitioners, politicians, and stakeholders interested in advancing sustainable energy practices and corporate responsibility programs. The aim of this project is to enhance the understanding of energy management and reporting by identifying key elements influencing disclosure strategies. This study aims to provide practical ideas for improving energy openness and accountability in the non-cyclical consumer sector, promoting well-informed decision-making, and facilitating positive transformation toward a more sustainable and socially responsible business environment.

Stakeholder Theory

The Stakeholder Theory emphasizes that corporations must operate in a manner that benefits not only themselves but also a wide range of stakeholders, including shareholders, creditors, consumers, suppliers, government agencies, society, and other relevant parties (Donaldson & Preston, 1995; Jamali, 2008; Steurer, 2006). This principle asserts that firms have a social responsibility to consider the interests of all stakeholders affected by their decisions.

An excellent approach to fulfilling these responsibilities and establishing strong connections with stakeholders is to provide sustainability reports. These reports, which include economic, social, and environmental performance measurements, are used to distribute important information to all stakeholders (Ayuso et al., 2012). Companies can enhance their ability to navigate dynamic market conditions and ensure their survival by meeting the information requirements of stakeholders, thus cultivating crucial support (Cullen et al., 2018; Leonidou et al., 2020). Stakeholder Theory suggests that when organizations disclose financial, social, and environmental information, it helps enhance communication between the companies and their stakeholders. This transparent flow of information positively influences the way stakeholders perceive and expect companies (Singh & Rahman, 2021; J. Wu & Yuan, 2020).

Energy disclosure refers to an organization sharing information about its energy consumption and management methods. Energy disclosure in the context of sustainability reporting involves sharing detailed information on the use of energy both within and outside the organization (Cormier et al., 2004; Manetti, 2011). Maximizing energy efficiency and embracing renewable energy sources are crucial in addressing climate change and reducing the environmental impact of organizations. The disclosures described in this Standard provide a means of revealing information about an organization's energy impact and the techniques it employs to manage it (Diouf & Boiral, 2017; Hahn & Kühnen, 2013).

Energy disclosure is a crucial element in sustainability reporting because it demonstrates an organization's dedication to environmental stewardship and sustainable operations. Organizations can enhance stakeholder trust and confidence by providing detailed information on energy usage patterns and management strategies and by promoting transparency and accountability (Camilleri, 2017; Carolina et al., 2020; Hahn et al., 2015). Furthermore, energy disclosure enhances the ability of stakeholders to make informed decisions, allowing stakeholders to evaluate an organization's environmental performance and determine its compliance with sustainability goals and regulatory obligations. By clearly explaining the environmental consequences of energy usage and outlining methods for reducing and improving it, organizations can promote innovation and efficiency improvements throughout their activities (Ngu & Amran, 2018; Traxler & Greiling, 2019; Velte et al., 2020; Zong et al., 2020). Furthermore, energy disclosure promotes communication and cooperation among individuals or groups with an interest in the matter, creating a shared dedication to promoting sustainable energy goals and building resilience in response to climate-related difficulties. Companies should manage and consider the interests of various stakeholders who have power and influence over the company's operations and sustainability. Transparent and accountable energy reporting is part of the company's responsibility to stakeholders, which in turn supports sustainable and inclusive regional economic performance (Bridoux & Stoelhorst, 2022; Mahajan et al., 2023).

Hypothesis Development

Financial performance is a crucial measure that indicates how well a company's management is performing. This often leads to more disclosure of information during periods of higher financial performance (Aldaas, 2021; EL-Ansary & Al-Gazzar, 2021). Evaluation of this metric is commonly conducted using Return on Assets (ROA), which is determined by dividing the net profit after tax by the total assets (Aminah et al., 2022). It is worth mentioning that corporations with higher returns on assets tend to have higher levels of Corporate Social Responsibility (CSR) disclosure (García-Sánchez et al., 2019; Gillan et al., 2021). There is a notable and favorable relationship between financial performance and the disclosure of sustainability reports (López-Santamaría et al., 2021; Singh & Rahman, 2021a). Increased financial performance is believed to impact the publication of sustainability

reports by strengthening shareholder trust in the company's fulfillment of social duties (Ziaei, 2021; Taha et al., 2023);

H₁ posits that financial performance exerts a positive effect on Energy Disclosure.

Leverage, however, is a measure of the degree to which a corporation depends on borrowing money, usually assessed by the Debt to debt-equity ratio (DER). Increased leverage amplifies the likelihood of violating loan agreements, forcing managers to disclose higher profits to reduce the risk (López-Santamaría et al., 2021; Singh & Rahman, 2021). As a result, enterprises may give more importance to reporting large profits to create a positive financial image and gain stakeholder trust to obtain loans (Ng & Rezaee, 2015; Xie et al., 2019). Nevertheless, there is typically a negative association between increased leverage and the extent to which sustainability reports are disclosed. This is because more leverage is seen as an added financial burden (Ng & Rezaee, 2015; Qiu et al., 2016).

H₂ asserts that Leverage exerts a negative effect on Energy Disclosure.

Managerial ownership refers to the ownership of shares by individuals who are actively involved in making decisions for the organization. Managers have a vested interest in both operational success and shareholder profits, which motivates them to provide more detailed information about their social activities (Ika et al., 2021; Singh & Rahman, 2021). Increased managerial ownership promotes a higher level of active involvement by managers in providing social disclosures, which, in turn, improves the value of the company for shareholders (Muhmad & Muhamad, 2021; Fatmawati & Trisnawati, 2022).

H₃ suggests that Managerial Ownership positively influences Energy Disclosure.

The stakeholder theory posits that directors must take into account the concerns of all individuals and groups connected to the company, emphasizing a comprehensive approach to corporate responsibility that goes beyond the interests of shareholders. Boards that are bigger frequently have access to a wider range of resources and experience, which improves their ability to make decisions and encourages them to provide more detailed information about their corporate social responsibility activities (Ben-Amar & McIlkenny, 2015; Helfaya & Moussa, 2017; Hussain et al., 2018). This viewpoint is supported by studies that show the beneficial impact of larger boards on sustainability reporting (Helfaya & Moussa, 2017).

H₄ contends that Directors exert a positive influence on Energy Disclosure.

METHODS

The research methodology employed in this study is quantitative, emphasizing a systematic analysis of numerical data to discern patterns and trends. Secondary data serve as the primary information source, acquired indirectly through intermediary channels. The data collection encompasses annual and sustainability reports from non-cyclical consumer sector enterprises, spanning the years 2021 to 2022. These reports were sourced from either the official websites of the relevant companies or the Indonesia Stock Exchange (IDX) website (<http://www.idx.co.id>).

Sample selection adheres to a purposive sampling method that deliberately selects samples that meet predetermined criteria. The parameters for sample selection encompass several crucial aspects:

- (1). Inclusion of non-cyclical consumer sector companies listed on the IDX between 2021 and 2022.
- (2). Evaluating non-cyclical consumer sector enterprises that have published both annual reports and sustainability reports within the specified timeframe.
- (3). Identification of non-cyclical consumer sector enterprises that have disclosed energy-related information during the reporting period of 2021-2022.

This research employs purposive selection to select relevant samples aligned with the study's objectives, facilitating an exploration of energy disclosure practices across the non-cyclical consumer sector. This methodology enables focused and precise research, fostering a deeper understanding of the factors and trends driving energy disclosure behaviors among selected organizations.

Table 1. Table of Definitions and Measurements of Variables

Variable	Definition	Measurement	Verified References
Energy Disclosure	Disclosure of corporate social responsibility regarding energy use and	Ratio of disclosed energy items to maximum items per GRI	Global Reporting Initiative (2016); Siregar & Bachtiar (2010)

Variable	Definition	Measurement	Verified References
Financial Performance	efforts in energy conservation. The company's ability to generate profits from its assets.	302: Energy 2016 $EDie = (\sum Xie) / ne$ Return on Assets (ROA): ROA = Profit After Tax / Total Assets	Ahmad, N. N. N., & Sulaiman (2004); Al-Tuwaijri, Christensen, & Hughes (2004)
Leverage	The extent to which a company is financed by debt compared to equity.	Debt-to-Equity Ratio (DER): DER = Total Debt / Total Equity	Rajan & Zingales (1995); Saragih & Sembiring (2019)
Managerial Ownership	The portion of shares owned by management actively involved in company decisions.	Dummy variable: 1 if managerial ownership exists, 0 otherwise.	Jensen & Meckling (1976); Fauzi & Locke (2012)
Directors	The board of directors oversees corporate governance and strategic decisions.	Measured as the number of board members.	Ramdani & van Witteloostuijn (2010); Yermack (1996)

Energy disclosure is evaluated using the Global Reporting Initiative (GRI) 302 Standard, specifically focusing on the energy component within the environmental category outlined by the GRI framework. The selection of the GRI 302 Standard underscores a comprehensive approach to assessing energy disclosure practices that aligns with globally recognized reporting criteria. Within this framework, various metrics are used to gauge the extent and quality of energy disclosure by enterprises in the non-cyclical consumer sector. This research ensures consistency and comparability in evaluating energy disclosure practices among selected companies by adhering to the GRI 302 Standard. This methodological choice facilitates a thorough analysis of energy-related metrics and offers critical insights into corporate sustainability initiatives in the non-cyclical consumer industry.

Table 2. Energy Disclosure Measurement Indicators

Category	Item
Energy	302-1 Energy consumption in organizations
	302-2 Energy consumption outside the organization
	302-3 Energy intensity
	302-4 Reduction in energy consumption
	302-5 Reduction in the required energy consumption for products and services

This research leverages an analytical approach to gain nuanced insights into the factors influencing energy disclosure behaviors in non-cyclical consumer sector enterprises.

$$ED = \alpha + \beta_1 FP + \beta_2 LV + \beta_3 MO + \beta_4 DIR + e \dots \dots \dots (1)$$

Information:

- ED = Energy Disclosure
- α = Constant
- β_1, \dots, β_4 = Coefficients Variable
- FP = Financial performance
- LV = Leverage
- MO = Managerial ownership
- DIR = Directors

RESULTS AND DISCUSSIONS

Table 3. Descriptive Statistics Table

	N	Minimum	Maximum	Average	Standard Deviation
Financial performance	98	-.22	.25	.067	.092
Leverage	98	-.46	3.18	.872	.723
Managerial ownership	98	.00	1.00	.653	.478
Directors	98	1.00	11.00	4.561	2.056
Energy Disclosure	98	.20	1.00	.467	.207

Out of the 120 collected data points, 22 data points were eliminated due to the presence of outliers that could potentially disrupt the study. In total, 98 data samples were processed. The use of descriptive statistical tests yielded data indicating that financial performance ranged from a maximum value of 0.25 to a minimum value of -0.022. The mean financial performance figure is 0.0667, indicating that the company being analyzed has a financial performance ratio of 6.67%. The financial performance has a standard deviation of 0.092.

The greatest leverage value was 3.18, while the minimum value is -0.46. The variable has a mean value of 0.872, indicating that the company to be analyzed has a leverage ratio of 87.16%. Based on this mean figure, it can be inferred that most company's composition is derived from debt. The financial performance has a standard deviation of 0.723.

Managerial Ownership employs a binary variable, where the highest value is 1 and the lowest value is 0. Management ownership has a standard deviation of 0.478. The mean management ownership value is 0.653. Considering the average value, which is often near 1, we infer that most of the organizations analyzed (65.3%) possess managerial ownership. The directors' values range from 1 to 11, inclusive. The standard deviation of directors is 2.06. The average score for directors was 4.56, indicating that each company examined typically has around 4 or 5 directors.

The energy disclosure ranges from a minimum value of 0.2 to a maximum value of 1. The variable has a standard deviation of 0.207. The mean energy disclosure value was 0.467. Based on the average figure, we can infer that the companies analyzed submitted energy information for 46.7% of all the items that were eligible for disclosure.

The statistical test results of this research fulfilled the classical assumptions. The coefficient of determination has an adjusted R-square value of 0.351. This study indicates that approximately 35.1% of the differences seen in the independent factors, specifically Financial Performance, Leverage, Managerial Ownership, and Directors, can explain the changes in the dependent variable, Energy Disclosure. Nevertheless, it is important to mention that the components included in the regression model only explain 35.1% of the remaining variation, leaving 64.9% unexplained. This suggests that there are other factors not considered in the analysis that could influence the differences in energy disclosure procedures among the entities being analyzed. Therefore, although the variables identified provide some understanding of the relationship with energy disclosure, a significant amount of the variation is still unexplained and can be attributed to factors that have not been explored. This indicates the need for further investigation to fully understand the factors that determine energy disclosure within the specific context being studied.

The results obtained from the F Test indicate a highly significant value of 0.000. The result obtained is significantly below the conventional threshold of 0.05, indicating that the combined effect of the independent variables (Financial performance, Leverage, Managerial Ownership, and Directors) has a statistically significant impact on the dependent variable, Energy Disclosure. This result highlights the crucial influence of these elements on the development of energy disclosure practices in the specific environment that was examined. This study examines how financial performance, organizational structure, and managerial dynamics affect energy disclosure, by analyzing these variables together. Therefore, this research provides significant knowledge on the various factors that influence openness

and accountability in energy-related disclosures. This knowledge helps in making well-informed decisions and promoting sustainable business practices in the non-cyclical consumer sector.

Table 4. t-test Result

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.351	.057		6.133	.000
Financial performance (FP)	.863	.206	.386	4.199	.000
Leverage (LV)	-.064	.026	-.224	-2.461	.016
Managerial ownership (MO)	-.033	.036	-.076	-.903	.369
Directors	.030	.008	.296	3.595	.001

The regression model obtained from the table above provides valuable insights into the correlation between different parameters and energy disclosure (ED) within firms. The model is depicted in the following manner.

$$ED = 0.351 + 0.863FP - 0.64LV - 0.033MO + 0.03DIR \dots\dots\dots (2)$$

The regression analysis offers excellent insights into the factors that influence energy disclosure in organizations, revealing the intricate connections between financial performance, leverage, managerial ownership, directorship, and energy disclosure policies. These insights can be used to make strategic decisions and develop policies that improve corporate transparency and sustainability. Transparent and renewable energy-oriented energy disclosure in Indonesia provides dual benefits: improving environmental conditions by reducing emissions and pollution and supporting sustainable economic growth through job creation, increased investment, and improving people's quality of life. Therefore, the integration of green energy policies into national development strategies is essential to achieve a balance between the economy, society, and the environment (IAI, 2025; Sofia, 2024).

Effect of Financial Performance on Energy Disclosure

The findings of this study strengthen Hypothesis 1 (H1) which states that there is a positive correlation between financial performance and energy disclosure (Cormier et al., 2004; Manetti, 2011; Kim & Lim, 2018; Amalia et al., 2022). The analysis reveals a statistically significant regression coefficient of 0.863 ($p < 0.001$), indicating a substantial impact of financial performance on energy disclosure, supporting the acceptance of H1 (Hahn & Kühnen, 2013; Diouf & Boiral, 2017). This aligns with stakeholder theory, suggesting that profitable organizations tend to exhibit enhanced performance and resource availability, prompting stakeholders to seek greater transparency in social responsibility efforts (Hahn et al., 2015; Camilleri, 2017). Consequently, as financial performance increases, organizations are inclined to expand and fortify their energy disclosure policies (Carolina et al., 2020). The company's financial performance shows good so that the company's financial reports tend to be good, meaning they have good energy disclosure. This shows that there is a correlation between financial performance and good financial reports (energy disclosure), thus showing that the company is concerned about improving the environment. The better the financial performance, the better the company's financial reporting (good energy disclosure) thus showing the higher the company's concern for the environment (Kim & Lim, 2018; Amalia et al., 2022).

Moreover, these findings echo those of previous studies, which indicated the positive influence of financial performance on sustainability report disclosure (Ngu & Amran, 2018; Traxler & Greiling, 2019). This underscores the pivotal role of financial performance in driving transparent and comprehensive disclosure practices within corporate sustainability reporting systems (Velte et al., 2020; Zong et al., 2020). Such insights are instrumental for stakeholders, managers, and policymakers, emphasizing the integration of financial performance considerations with sustainability reporting endeavors to enhance transparency and accountability in business operations (EL-Ansary & Al-Gazzar, 2021).

Comprehending financial performance is paramount when evaluating a company's financial health and efficacy (Nguyen & Nguyen, 2020; Shahnian et al., 2020). Profitability ratios, including Return On Investment (ROI) and Return On Assets (ROA), provide invaluable insights into a company's ability to generate profits and manage resources efficiently (Chaudhry et al., 2019; Bashir et al., 2022). Higher financial performance is often correlated with increased disclosure during periods of financial success (García-Sánchez et al., 2019; Gillan et al., 2021). This finding is consistent with the notion that heightened financial performance strengthens shareholder trust, driving greater disclosure of sustainability reports and social responsibility efforts (López-Santamaría et al., 2021; Singh & Rahman, 2021a).

In conclusion, financial performance catalyzes energy disclosure, underscoring the symbiotic relationship between financial performance and sustainability reporting (Taha et al., 2023; Ziaei, 2021). As organizations strive for financial performance, they are incentivized to adopt transparent energy disclosure practices, foster stakeholder trust and facilitating informed decision-making towards sustainable operations and long-term viability (Hediger, 2010; Sternberg, 1997; Kim & Lim, 2018; Amalia et al., 2022).

The Effect of Leverage on Energy Disclosure

This study explores the relationship between leverage and energy disclosure, with a focus on understanding how financial structures influence organizational transparency regarding energy consumption and management practices. Hypothesis 2 (H2) proposes a negative association between leverage and energy disclosure. The analysis reveals a statistically significant regression coefficient of -0.064, with a significance level of 0.016, supporting the assertion that higher leverage correlates with reduced energy disclosure. This finding aligns with previous research, which suggests that leverage exerts a detrimental effect on sustainability reporting, particularly in terms of sharing energy-related information.

Consistent with stakeholder theory, organizations facing higher debt levels often prioritize meeting their financial obligations to creditors, potentially at the expense of non-essential expenses like energy disclosure. The inverse correlation between leverage and energy disclosure underscores the intricate interplay among financial structures, stakeholder responsibilities, and disclosure policies in modern business environments (Cormier et al., 2004; Manetti, 2011). This finding underscores the significance of energy disclosure as a vital component of sustainability reporting.

Energy disclosure serves as a key mechanism by which organizations can communicate their energy consumption patterns and management approaches, demonstrating a commitment to environmental responsibility and sustainable practices (Camilleri, 2017; Carolina et al., 2020; Hahn et al., 2015). By providing detailed information on energy usage and management strategies, organizations can foster transparency, which enhances stakeholder trust and confidence. Moreover, energy disclosure enables stakeholders to assess an organization's environmental performance and compliance with sustainability objectives and regulatory requirements.

Additionally, energy disclosure plays a pivotal role in driving organizational change toward adopting more sustainable energy practices. By highlighting the environmental impacts of energy consumption and offering strategies for improvement, organizations stimulate innovation and efficiency enhancements across their operations (Ngu & Amran, 2018; Traxler & Greiling, 2019; Velte et al., 2020; Zong et al., 2020). Furthermore, energy disclosure fosters collaboration among stakeholders, fostering a shared commitment to sustainable energy goals and resilience building in response to climate challenges (Diouf & Boiral, 2017; Hahn & Kühnen, 2013).

The study's findings affirm the negative impact of leverage on energy disclosure, highlighting the importance of transparent reporting practices in promoting sustainability and driving organizational change towards more environmentally responsible operations. Through comprehensive energy disclosure, organizations can enhance stakeholder engagement, foster innovation, and contribute to collective efforts to address climate change.

The Effect of Managerial Ownership on Energy Disclosure

These findings challenge the assumed positive correlation between managerial ownership and energy disclosure. Contrary to expectations, regression analysis indicates a negative coefficient for managerial ownership (-0.033), with a significance level (0.361) surpassing the preset threshold ($\alpha = 0.05$), thereby rejecting the hypothesis of a positive correlation (Fatmawati & Trisnawati, 2022; Muhmad & Muhamad, 2021). The lack of significance suggests that managerial ownership has a diminished impact on energy disclosure.

One plausible explanation for this diminished impact lies in the fact that a significant number of firm managers have minimal or no stake in the companies they oversee. This lack of substantial ownership diminishes managers' motivation to prioritize energy disclosure, potentially undermining the effectiveness of sustainability reporting in maximizing business value (Ika et al., 2021; Singh & Rahman, 2021b). This finding is consistent with previous research indicating that managerial ownership does not notably influence the disclosure of sustainability reports (Perrini & Tencati, 2006).

These observations underscore the complex impact of managerial ownership on disclosure practices, emphasizing the need for further exploration into the fundamental mechanisms driving corporate transparency and accountability in energy disclosure (Cormier et al., 2004; Manetti, 2011). Despite the theoretical expectation that managerial ownership incentivizing greater social disclosures, the empirical evidence suggests a nuanced reality where the link between managerial ownership and energy disclosure is not straightforward (Diouf & Boiral, 2017; Hahn & Kühnen, 2013). Hence, future research should delve deeper into the contextual factors that mediate this relationship to inform effective corporate governance and sustainability practices.

The Influence of Directors on Energy Disclosure

The findings of this study affirm the significant influence of directors on energy disclosure practices within organizations, which is consistent with existing research on energy disclosure and corporate governance. Energy disclosure, as part of sustainability reporting, plays a vital role in conveying an organization's commitment to environmental responsibility and operational sustainability (Manetti, 2011). By sharing detailed information on energy consumption and management techniques, organizations enhance transparency and accountability, thus fostering stakeholder trust and confidence (Camilleri, 2017; Carolina et al., 2020; Hahn et al., 2015).

Moreover, energy disclosure catalyzes organizational change toward adopting more sustainable energy practices (Ngu & Amran, 2018; Traxler & Greiling, 2019; Velte et al., 2020; Zong et al., 2020). By delineating the environmental impacts of energy usage and strategies for improvement, organizations can stimulate innovation and efficiency enhancements across their operations. Additionally, energy disclosure facilitates communication and collaboration among stakeholders, fostering collective commitment to sustainable energy goals and climate resilience.

The observed correlation between the number of directors and energy disclosure underscores the pivotal role of board composition in shaping corporate disclosure behavior. A larger board size not only signifies access to a broader array of resources and expertise and correlates with enhanced decision-making capabilities and a proactive stance towards corporate social responsibility (CSR) disclosure (Ben-Amar & McIlkenny, 2015; Helfaya & Moussa, 2017; Hussain et al., 2018). These attributes contribute to a climate conducive to robust energy disclosure procedures, thereby bolstering an organization's overall sustainability efforts.

The regulatory framework defines directors as central figures within organizations, entrusted with the responsibility of safeguarding the company's interests and guiding its strategic direction (Financial Services Authority Regulation, 2014). Directors play a critical role in upholding the organization's integrity, overseeing its activities, and ensuring compliance with legal and regulatory mandates, including the dissemination of optional reports, such as sustainability reports (Chanatup et al., 2020; Hahn & Kühnen, 2013; Kostyuk et al., 2016).

Considering stakeholder theory, directors are obligated to consider the interests of all stakeholders, not just shareholders, in their decision-making processes. Larger boards are better equipped to fulfill this obligation by leveraging their diverse resources and experiences to provide comprehensive information on CSR activities, as evidenced by their positive impact on sustainability reporting (Helfaya

& Moussa, 2017). Thus, the findings of this study underscore the crucial role of directors in shaping energy disclosure practices and highlight the importance of board composition in advancing organizational sustainability objectives. Companies that have good financial reports and energy delivery, with structured environmental accounting standards, not only increase transparency and cost efficiency but also make a real contribution to environmental improvement. This will strengthen the company's reputation, improve long-term financial performance, and support the creation of a sustainable and environmentally responsible business (IAI, 2025; News, 2024; Oktapiani & Simatupang, 2024).

CONCLUSION

Our research offers useful insights into the intricate landscape of energy disclosure in non-cyclical consumer-sector manufacturing companies. The worldwide increase in energy usage, which is caused by population growth, highlights the necessity for sustainable energy methods to guarantee long-term development and economic progress. Governmental laws, such as Government Regulation (PP) Number 33 of 2023, specifically target energy-saving programs to meet the urgent need for cost-effective and sufficient energy provision. Energy disclosure by corporate entities in Indonesia is an important indicator of corporate concern for the environment and support for sustainable development policies. The level of CSR disclosure and sustainability reporting in the energy sector in Indonesia is still low and needs to be improved, although some large companies have made progress. Transparent and comprehensive disclosure can strengthen stakeholder trust, support better environmental management, and accelerate the achievement of sustainable development goals in Indonesia (Fia et al., 2024; Oktapiani & Simatupang, 2024).

Empirical research has revealed a strong and positive relationship between financial performance and energy disclosure. This supports the idea proposed by the stakeholder theory that prosperous organizations should prioritize transparent reporting. Furthermore, this research reveals that directors have a significant impact on energy disclosure policies. However, it also identifies a significant negative effect of leverage, which emphasizes firms' difficulty in balancing financial risk management with maintaining transparency. The results of robustness and sensitivity testing, namely the energy disclosure variable measured with a dummy variable, show consistent results. These findings imply that organizations can strategically use financial performance and directorial influence to improve energy disclosure.

This research can help support national energy conservation efforts and encourage the adoption of renewable energy (EBT). However, this study has many limitations, particularly the relatively low corrected R square value of 35.1%, which highlights the intricate nature of the elements that affect energy disclosure. Therefore, further examination and a more comprehensive comprehension of the complex characteristics of energy disclosure procedures are necessary. To make progress in this area, future research should consider the inclusion of supplementary independent variables, such as company size, liquidity, and institutional share ownership. An extensive investigation into energy disclosure behaviors in the non-cyclical consumer sector, along with continued empirical research and methodological improvements, will provide valuable insights for discussions on business sustainability policies and energy-saving programs. This will contribute to the development of sustainable corporate practices and energy conservation.

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