International Journal of Current Science Research and Review
ISSN: 2581-8341
Volume 07 Issue 03 March 2024
DOI: 10.47191/ijcsrr/V7-i3-48, Impact Factor: 7.943
IJCSRR @ 2024
www.ijcsrr.org

The Influence of Sustainability Disclosure on Financial Performance: A Study of Indonesian Firms

Lutrika Mufti Rachmat[1], Dr. Erman Sumirat[2], Yunieta Anny Nainggolan[3]
[1,2,3] School of Business and Management ITB, Indonesia.

ABSTRACT: This study examines the correlation between the disclosure of sustainability measures and the financial success of companies in Indonesia. The increasing importance of sustainability disclosure, which includes environmental, social, and governance factors, for firms to demonstrate their dedication to sustainable practices, has generated significant debate on its influence on financial results. This study investigates the impact of sustainability disclosures on the financial performance of companies in Indonesia, thus adding to the existing body of knowledge on this topic. The study utilizes a mixed-method approach, incorporating qualitative content analysis of data extracted from annual reports, as well as quantitative analysis derived from financial statements of publicly traded corporations. The sample consists of companies from three major industry sectors, each demonstrating different levels of quality in disclosing their sustainability practices. Accounting-based indicators like return on assets (ROA) and return on equity (ROE) are used to evaluate financial performance. The findings demonstrate a direct and favorable relationship between the caliber of sustainability disclosures and financial performance, specifically in sectors that are highly responsive to environmental concerns. Companies that have more comprehensive and transparent sustainability reporting processes in these industries generally achieve better performance compared to those with less comprehensive reporting. These conclusions have substantial ramifications for firms, investors, and policymakers. Enhancing sustainability disclosure can enhance a company's financial performance and act as a significant factor for investment choices, providing information about a company's dedication to sustainability and related risks. Policymakers can utilize these observations to support the implementation of improved sustainability reporting regulations, thereby fostering sustainable economic growth in Indonesia. Ultimately, the research confirms that Indonesian companies who provide detailed and reliable information on their sustainability efforts have a positive correlation with their financial performance. This emphasizes the significance of improving these practices to achieve both economic prosperity and sustainable development objectives.

KEYWORDS: Financial Performance, Reporting Quality, ROA, ROE, Sustainability Disclosure.

INTRODUCTION

In contemporary corporate dynamics, sustainability has emerged as a principal consideration, embodying an enterprise's commitment to sustainable economic progression. This commitment, as defined by the World Business Council for Sustainable Development, requires collaborative efforts to improve the living standards of employees, their families, and the wider community. The shift towards sustainability is evident in corporate mission statements, which have evolved from focusing solely on immediate financial gains to a broader perspective of societal value creation. This evolution has redefined corporations as key contributors to societal welfare and environmental protection, going beyond their traditional fiduciary roles.

The paradigm shift towards sustainability has elevated the importance of Sustainability Reporting. According to the Global Reporting Initiative, this type of reporting involves a systematic process of evaluating, disclosing, and being accountable for sustainable development contributions. The widespread adoption of sustainability reporting is evident with a substantial percentage of the top global enterprises integrating corporate responsibility reporting into their operations. This global trend is mirrored regionally, with many corporations in the Asia-Pacific and Europe actively engaging in sustainability reporting, marking a significant shift in corporate transparency and accountability.

The introduction of Environmental, Social, and Governance (ESG) metrics marks a significant development in measuring sustainability, blurring the lines between short-term benefits and long-term corporate value. These metrics have become essential in assessing firms' stewardship in environmental and societal domains, correlating with enhanced returns to stakeholders. However, traditional financial ledgers, while crucial, have been shown to be insufficient in capturing a company's comprehensive health, as

International Journal of Current Science Research and Review
ISSN: 2581-8341
Volume 07 Issue 03 March 2024
DOI: 10.47191/ijcsrr/V7-i3-48, Impact Factor: 7.943
IJCSRR @ 2024
www.ijcsrr.org

highlighted by financial crises and oversights in environmental considerations. Therefore, sustainability reports that combine fiscal and non-fiscal data have become vital tools in presenting a holistic view of an enterprise's stature.

The Global Reporting Initiatives (GRI) plays a pivotal role in defining the standards for sustainability reporting. These standards encompass a range of thematic areas, including economic, environmental, and social dimensions, and aim to provide a comprehensive overview of an organization's impact. The Sustainability Report Disclosure Index (SRDI) is used to empirically assess these reports, ensuring that they meet established criteria and effectively communicate the company's sustainability efforts. These reports are crucial in capturing the tripartite impacts on economic, environmental, and social aspects, thus adhering to the Triple Bottom Line paradigm and CSR reporting principles.

The role of corporations in supporting economic growth alongside environmental sustainability is increasingly recognized by international organizations. The United Nations' Sustainable Development Goals (SDGs) provide a framework for integrating sustainability principles into business operations. Indonesian firms, especially in sectors with significant carbon footprints, use sustainability reporting to align with the SDGs. This alignment enhances a firm's reputation, attracts investment, and fosters better stakeholder relationships, thereby creating a synergy between sustainable development and financial performance.

In Indonesia, the landscape of sustainability reporting presents unique challenges. Despite the global momentum towards standardized reporting, many Indonesian companies are still in the early stages of adopting these practices. The absence of universally accepted reporting standards contributes to the complexity and inconsistency in sustainability reporting. This situation calls for a concerted effort from the corporate sector and regulatory agencies in Indonesia to bridge the gap between awareness and adoption of sustainability reporting. Larger corporations often lead in producing detailed reports, but there is a need for widespread and genuine engagement in sustainability practices across all business sizes.

This research aims to determine the level of support the business sector provides for the SDGs, with a focus on Indonesia. By analyzing Annual Reports, Sustainability Reports, and Combined Reports from key sectors contributing to Indonesia's GDP, the study seeks to understand how companies disclose their support for the SDGs. These disclosures play a critical role in propelling the nation towards sustainable economic growth and are instrumental for companies to maintain their legitimacy and going concern status. The research will explore the relationship between sustainability reporting and financial performance, underscoring the strategic importance of integrating sustainability into financial strategies for long-term business success.

LITERATURE REVIEW

Sustainability Reporting

Sustainability reporting is a crucial process where organizations communicate their environmental, social, and governance (ESG) performance to stakeholders, transcending traditional financial reporting. This practice aims to provide transparency and accountability in a company’s broader societal and environmental impact. It unveils both financial and non-financial information, shedding light on a company’s policies and their effects on society and the environment. This kind of reporting is guided by the ESG dimensions, dissecting a company's influence into environmental, social, and governance sections to provide a comprehensive view.

The move towards multidimensional reporting, including integrated reports combining sustainability information with financial data, reflects an evolving trend. Despite this, one-dimensional reporting focusing solely on isolated sustainability aspects, like environmental or financial reports, still exists. The distinction is crucial as true sustainability reporting encompasses all ESG dimensions, unlike one-dimensional reports that tend to overlook economic aspects. This voluntary reporting nature allows companies flexibility in how they disclose their sustainability practices, leading to a variety of report labels and a lack of standardization in reporting formats.

The Global Reporting Initiative (GRI) is a prominent framework in sustainability reporting, aiming to standardize and improve the transparency and comparability of corporate social responsibility (CSR) reports. GRI's guidelines, encompassing over 100 indicators across economic, social, and environmental dimensions, have become a global benchmark. Despite its wide acknowledgment, the application of the GRI framework varies globally. Additionally, the Sustainability Accounting Standards Board (SASB) provides an alternative with industry specific ESG standards, tailoring reporting to material factors in different sectors and complementing traditional financial reporting.

International Journal of Current Science Research and Review
ISSN: 2581-8341
Volume 07 Issue 03 March 2024
DOI: 10.47191/ijcsrr/V7-i3-48, Impact Factor: 7.943
IJCSRR @ 2024
www.ijcsrr.org

SASB's standards cover five key dimensions: Environment, Social Capital, Human Capital, Business Model & Innovation, and Leadership & Governance. These dimensions address a range of issues from environmental impacts and stakeholder relationships to workforce management and ethical governance. SASB aims to provide a flexible framework that adapts to evolving business conditions and sustainability priorities, helping companies and investors make informed decisions on ESG factors.

In Indonesia, sustainability reporting has gained traction, becoming mandatory for banks and listed companies. A significant number of Indonesian companies now disclose their sustainability practices through such reports, covering ESG priorities and engaging with stakeholders. The trend in Indonesia is supported by regulations from the Indonesia Financial Service Authority and the adoption of international frameworks like the GRI Standards. This approach aligns business performance with ESG priorities, promoting sustainable business practices within the Indonesian corporate sector.

Future research in Indonesia should focus on enhancing the quantity and quality of sustainability disclosure. It's important to explore the role of various factors, like audit committees and regulatory frameworks, in shaping sustainability reporting practices. Investigating the impact of sustainability reporting on a company's value across different industries can provide deeper insights into the effectiveness and influence of these practices. This ongoing research will contribute to advancing corporate transparency and social responsibility in Indonesia.

Quality and Completeness of Sustainability Reporting

Sustainability reporting involves measuring, disclosing, and being accountable to both internal and external stakeholders for an organization's performance in relation to sustainable development (Agama & Zubairu, 2022). According to Al-Shaer (2020), firms that allocate more resources to produce high-quality sustainability reports generally demonstrate a commitment to quality. This commitment can reduce concerns about the opportunistic use of sustainability reporting and decrease business risk. Consequently, auditors may require less effort in auditing financial reports, suggesting a positive correlation between the quality of sustainability reporting and financial reporting.

Chang et al. (2019) found that financial institutions in industrialized countries tend to have higher quality sustainability reports. This suggests that the financial sector prioritizes creating superior sustainability reports, possibly due to regulatory requirements and stakeholder expectations. Complementing this, Papoutsi and Sodhi (2020) highlighted the significant role of sustainability reports in reflecting actual sustainability performance, as indicated by measures like Bloomberg's ESG ratings and Dow Jones Sustainability Indices. This finding points to the importance of transparency in sustainability reporting. Gambetta et al. (2021) further suggest that financial institutions use sustainability reporting as a strategic tool to demonstrate their commitment to the 2030 Agenda and to improve their reporting quality.

However, the link between sustainability performance and financial performance is complex and not clearly defined, as per Hussain et al. (2018). Their study calls for a more comprehensive framework for sustainability performance reporting, indicating an evolving relationship between sustainability and financial performance. Orazalin et al. (2019) suggest that in Russia, sustainability reporting can enhance financial stability and reduce financial distress, implying a connection between sustainability reporting and financial resilience.

Orazalin and Mahmood (2020) investigated the determinants of sustainability reporting among companies in Kazakhstan. They discovered that factors like stand-alone reporting, reporting language, firm profitability, firm size, and auditor type significantly affect the quality and extent of sustainability reporting in an emerging market.

In conclusion, the critical role of high-quality sustainability reporting in enhancing financial reporting, mitigating business risks, and creating value highlights the complex relationship between sustainability and financial performance. These findings are valuable for firms, auditors, regulators, and investors seeking to understand the impact of sustainability reporting on various aspects of corporate performance.

Financial Performance and Firm Size

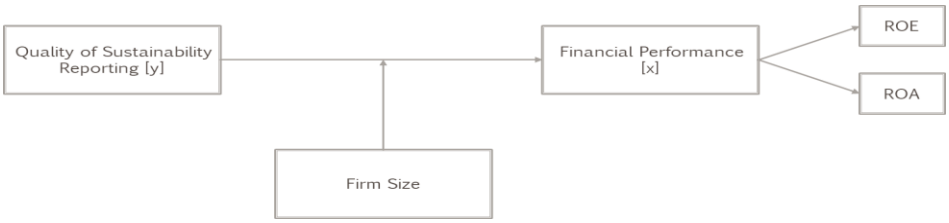
Sustainability reporting, crucial in the realm of corporate transparency, plays a significant role in shaping financial narratives. Research by Al-Shaer (2020) on FTSE 350 firms demonstrates a negative correlation between high-quality sustainability reporting and earnings management, suggesting such reporting as a safeguard against financial data manipulation. However, defining the

International Journal of Current Science Research and Review
ISSN: 2581-8341
Volume 07 Issue 03 March 2024
DOI: 10.47191/ijcsrr/V7-i3-48, Impact Factor: 7.943
IJCSRR @ 2024
www.ijcsrr.org

"quality" of these reports remains a challenge. Multiple factors, including reporting format, language, firm size, and auditor involvement, influence reporting practices, with financial institutions in developed countries often showing superior reporting quality compared to emerging economies. Cesarone et al. (2022) further analyzes the interplay between profits quality and sustainability disclosures, revealing the complexity of this relationship. Despite the recognized value of sustainability reporting, Hussain et al. (2018) point out ambiguities, highlighting the need for more standardized reporting frameworks.

The relationship between sustainability reporting and financial performance is nuanced, with firm size emerging as a key mediating variable. Keskin et al. (2020) emphasizes that factors like company size, leverage, and volatility significantly impact this relationship. Wang (2017) identifies corporate governance and business characteristics that influence sustainability reporting, while Akbulut & Kaya (2019) observe a positive correlation between firm size and sustainability reporting but a negative one with financial leverage. Gazi et al. (2022) and Bergmann & Posch (2018) support the influence of external factors like industry and economic size on reporting practices. Conversely, Nguyen (2020) finds a negative correlation between firm value and sustainability reporting adherence, suggesting a potential trade-off.

The relationship between sustainability reporting and financial performance is further mediated by the industry sector of a company. Jung et al. (2018) notes a more pronounced association in the ICT industry in Korea, while Loh et al. (2017) find the relationship to be sector-independent. Al Hawaj & Buallay (2022) highlight sector-specific effects on various performance metrics, and Kumar et al. (2015) emphasize the differences in sustainability reporting across Indian industries. These studies collectively indicate that the industry sector plays a critical role in mediating the relationship between sustainability reporting and financial performance.



H1: The quality of ESG reporting influences financial performance.
H2: Firm size mediates the relationship between ESG reporting and financial performance.

METHODOLOGY

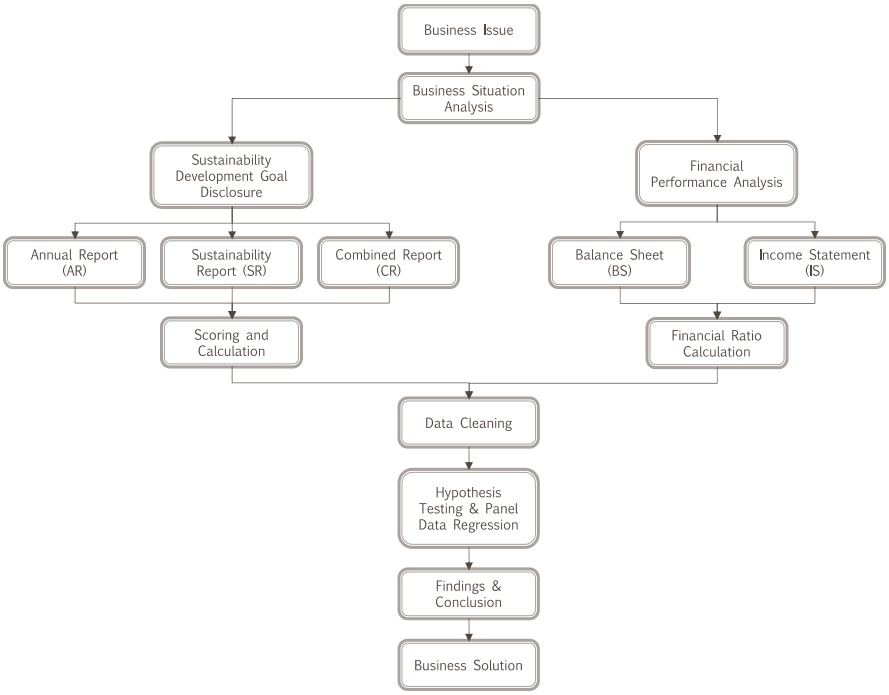


Figure 1. Research Methodology

International Journal of Current Science Research and Review
ISSN: 2581-8341
Volume 07 Issue 03 March 2024
DOI: 10.47191/ijcsrr/V7-i3-48, Impact Factor: 7.943
IJCSRR @ 2024
www.ijcsrr.org

Sample Population

The population for this study consists of all companies operating in the food & beverage, the coal & oil refining, and the chemical & pharmaceutical industries sub-sector that are listed on the Indonesia Stock Exchange. The data was sourced from the companies' official websites, specifically from their Annual Reports (AR), Sustainability Reports (SR), or Combined Reports (CR) spanning the years 2018-2022. The data utilized for scoring in this study is secondary data. Based on the above description, the following is an outline of the sample collection summary.

Table 0-1 Summary of Sample Collection

No.	*Information*	*Qty*
1	Number of Annual Reports (AR), Sustainability Reports (SR), or Combined Reports (CR) published by food and beverage subsector companies listed on the Indonesia Stock Exchange (BEI) in 2018-2022.	174
2	Number of Annual Reports (AR), Sustainability Reports (SR), or Combined Reports (CR) published by coal and oil refining subsector companies listed on the Indonesia Stock Exchange (BEI) in 2018-2022	178
3	Number of Annual Reports (AR), Sustainability Reports (SR), or Combined Reports (CR) published by chemical and pharmaceutical industry subsector companies listed on the Indonesia Stock Exchange (BEI) in 2018-2022.	63
	Number of Annual Reports (AR), Sustainability Reports (SR), or Combined Reports (CR) that can be analyzed to express support for the Sustainable Development Goals.	415

Content Analysis

Content analysis is a method that encompasses categorization, systematic data recording to provide fresh insights about a phenomenon and analyzing specific patterns (Elo & Kyngäs, 2008). Data measurement in this research was achieved by assigning weights or values to each Sustainable Development Goal (SDG) within the Annual Reports (AR), Sustainability Reports (SR), or Combined Reports (CR) spanning from 2018 to 2022. The scoring system was devised considering the importance of the SDGs, which includes having targets and strategies necessary to showcase a company's commitment to supporting the SDGs, and not merely disclosing narrative information (Hsieh & Shannon, 2005).

The scoring system outlined below represents an adaptation from the methodology developed by (Gunawan, 2021) focusing on qualitative measurement. This system is employed to evaluate the level and depth of corporate disclosures in support of the Sustainable Development Goals (SDGs). It distinguishes the extent to which a company communicates its SDG-related initiatives, ranging from basic narrative description to comprehensive disclosure including quantitative data, goals, and strategies. The assessment employed a scoring method developed based on understanding the significance of strategic information, targets, and achievements (Gunawan, 2007).

Table 0-2 Scoring Table for SDG Reported

Scores	**SDG Narratives**	**SDG Achievements**	**SDG Targets**	**SDG Strategies**
0	-	-	-	-
1	√	-	-	-
2	√	√	-	-
3	√	-	√	-
4	√	-	-	√
5	√	√	√	-
6	√	√	-	√
7	√	-	√	√
8	√	√	√	√

International Journal of Current Science Research and Review
ISSN: 2581-8341
Volume 07 Issue 03 March 2024
DOI: 10.47191/ijcsrr/V7-i3-48, Impact Factor: 7.943
IJCSRR @ 2024
www.ijcsrr.org

Table 0-2 above summarizes the scoring scenario used in this analysis. The following is the description of the scoring system for companies' disclosure in support of the Sustainable Development Goals (SDGs):

a) A score of "0" is given if the company does not disclose any support for the SDGs.
b) A score of "1" is awarded if the company discloses its SDG support solely in narrative form.
c) A score of "2" is assigned when the company presents its SDG support narratively along with its achievements.
d) A score of "3" is given if the company's narrative disclosure of SDG support narratively and includes targets.
e) A score of "4" is designated when the company's narrative disclosure of SDG support is accompanied by strategies.
f) A score of "5" is given if the company provides a narrative of SDG support, including both achievements and targets.
g) A score of "6" is awarded if the company's narrative disclosure of SDG support encompasses both achievements and strategies.
h) A score of "7" is provided when the company's narrative disclosure of SDG support is paired with both targets and strategies.
i) Finally, a score of "8" is given when the company narratively discloses its SDG support inclusive of achievements, targets, and strategies.

According to (Hassan, et al., 2018), "*descriptive statistics are used to explain, provide an overview of the characteristics of a series of data without drawing general conclusions*". Descriptive Statistical Analysis is also expected to provide explanations that can be easily understood by data users regarding the problem being analyzed (Cai, et al., 2020). In this research, descriptive statistical analysis will help convey the amount of disclosure of each company's targets, strategies, and achievements to describe the results of calculating scores.

The targeted population for this study encompasses the financial reports (annual reports) of food & beverages, coal & oil refining, and chemical & pharmaceutical industries listed on the Indonesia Stock Exchange from 2018-2022. The study utilizes a non-probability sampling technique, specifically the purposive sampling method. This involves selecting samples based on specific considerations or criteria ensuring their relevance for the research.

Panel Data Regression

Panel data regression analysis stands as a robust statistical method that merges the intricacies of cross-sectional data (data across multiple subjects at a single point in time) with those of time-series data (data across multiple time periods for the same subject), offering a multifaceted perspective that captures both individual-specific variations and temporal changes. The quintessence of this approach lies in its ability to accommodate variability and control for potential heterogeneity inherent in the subjects, which single-dimensional analyses might overlook.

Indicators pivotal to this analysis include time-invariant individual characteristics, which are controlled for in fixed effects models by allowing each entity to have its own intercept. This technique accounts for any unobserved differences among subjects that do not change over time. Alternatively, random effects models, which assume that these individual-specific effects are random and uncorrelated with the explanatory variables, are utilized when such an assumption is plausible, thus providing a more efficient estimation under the right conditions. Hybrid models, however, can be employed to harness the strengths of both fixed and random effects approaches, mitigating the limitations inherent in each.

The indicators or variables of interest in panel data regression typically involve those that capture the evolution of phenomena over time and across different entities. These could range from economic indicators like GDP growth, investment levels, and employment rates to social indicators such as educational attainment or health outcomes. By leveraging panel data, researchers gain insights into the dynamics of change, allowing them to make more informed conclusions about causality and the impacts of policy changes or market shifts, which single time point (cross-sectional) or single subject (time-series) data would fail to reveal adequately.

The research employs the panel regression test method, as described by (Pesaran, 2021) in (Hassan, et al., 2018), which integrates cross-sectional and time series data types. This approach offers several advantages over standard cross-sectional and time series methods:

a) The combination of cross-sectional and time series data in panel data results in more informative and diverse data, reduced collinearity between variables, increased degrees of freedom, and enhanced efficiency.
b) Analyzing cross-sectional and time series data over multiple periods makes panel data suitable for investigating dynamic

International Journal of Current Science Research and Review
ISSN: 2581-8341
Volume 07 Issue 03 March 2024
DOI: 10.47191/ijcsrr/V7-i3-48, Impact Factor: 7.943
IJCSRR @ 2024
www.ijcsrr.org

changes.

c) Panel data has the capability to identify and measure negative influences that may not be apparent in pure cross-sectional or pure time series data.
d) Panel data allows for the examination of more intricate models of behavior, such as economies of scale and technological changes, offering a better understanding compared to pure cross-sectional or time series data.
e) Since panel data encompasses individuals, companies, cities, countries, etc., over time, it inherently involves heterogeneity within these units. Techniques for estimating panel data can explicitly incorporate this heterogeneity for each specific individual variable.

Following the hypothesis that has been developed, this study proposed two mathematical model:

- Direct relationship between financial performance (ROE, ROA) and the quality of ESG reporting:

$$FP_{it} = \alpha + \beta_1(SDGN + ACH + TAR + STR)_{it} + \epsilon_{it}$$

- Relationship between financial performance (ROE, ROA) and the quality of ESG reporting moderated by firm size:

$$FP_{it} = \alpha + \beta_1(SDGN + ACH + TAR + STR)_{it} + \beta_2 SIZE_{it} + \epsilon_{it}$$

Where:

FP:	Financial performance	TAR:	SDG targets defined
SDGN:	SDG narratives given	STR:	Strategies aligned to SDG
ACH:	SDG achievement reported		

The proxy for financial performance variables can be divided into two distinct approaches, each reflecting different dimensions of financial performance. The first approach involves profitability and is reflected in two key ratios: Return on Equity (ROE), which measures a company's efficiency in generating profits for shareholders, and secondly Return on Assets (ROA), indicating the company's ability to leverage its assets to generate earnings. Thus, these approaches offer a holistic view of the financial health of an entity through different lenses, encompassing operational efficiency, asset utilization, and investor perceptions of the company's value in the market.

The panel regression test is applied in this study to assess the impact of sustainability reporting quality on financial performance across three sectors: the food & beverage industry, the coal & oil refinery industry, and the pharmaceutical industry.

FINDINGS AND DISCUSSION

Analysis for Food & Beverage Subsector

Table 0-3 Effect of SDG on Financial Performance in Food & Beverage Sector

Variable	ROE $_{t+1}$	ROA $_{t+1}$
ESG Reporting	0.0015*(1.81)	0.0002 (0.92)
Year	control	control
Industry	control	control
_cons	0.027	0.061
N	180	180
Adj R^2	0.010	0.025

t statistics in parentheses, *p < 0.1, **p < 0.05, ***p < 0.01

International Journal of Current Science Research and Review
ISSN: 2581-8341
Volume 07 Issue 03 March 2024
DOI: 10.47191/ijcsrr/V7-i3-48, Impact Factor: 7.943
IJCSRR @ 2024
www.ijcsrr.org

Based on the Table 0-3 of regression results fromSDG on financial performance in the food and beverage sector, it shows that there is not a influence of theSDG variables on ROE. The numbers in parentheses are the t-statistics, which are used to determine the statistical significance of the coefficients. The t-statistics for SDG are 1.81 for ROE and 0.92 for ROA. Normally, a t-statistic greater than 2 (or less than -2) is considered statistically significant at the 5% level, indicating that the relationship between the variable and the outcome is unlikely to be due to chance. Here, neither t-statistic reaches that threshold, suggesting that the SDG variable is not significantly related to either ROE or ROA at the 5% level. The following are the results of panel data regression analysis in selecting the best model in the Food & Beverage sector.

Based on the outcomes of both the Chow and Hausman tests, the most suitable model for the data is the random effects model. The Chow test indicated that there are significant differences across groups, which would typically suggest the use of a fixed effects model. However, the Hausman test, which more directly compares the fixed and random effects models, did not find a systematic difference between the two models' coefficients. The p-value of the Hausman test was not below the conventional threshold of 0.05, suggesting that the unique errors are not correlated with the regressors, which validates the use of the random effects model.

a. Hypothesis Testing (the influence of Sustainability Disclosure on ROE)

Table 0-4 REM Regression Result for RQ#1 Food & Beverage Subsector

```
Random-effects GLS regression                   Number of obs     =       179
Group variable: kode                            Number of groups  =        36

R-squared:                                      Obs per group:
     Within  = 0.0002                                         min =         4
     Between = 0.0657                                         avg =       5.0
     Overall = 0.0109                                         max =         5

                                                Wald chi2(1)      =      3.26
corr(u_i, X) = 0 (assumed)                      Prob > chi2       =    0.0710

                                  (Std. err. adjusted for 36 clusters in kode)
------------------------------------------------------------------------------
             |               Robust
          y2 | Coefficient  std. err.      z    P>|z|     [95% conf. interval]
-------------+----------------------------------------------------------------
          x1 |    .001568   .0008683     1.81   0.071    -.0001339    .0032699
       _cons |   .0277022   .0819121     0.34   0.735    -.1328424    .1882469
-------------+----------------------------------------------------------------
     sigma_u |  .38294669
     sigma_e |  .65605928
         rho |  .25412899   (fraction of variance due to u_i)
------------------------------------------------------------------------------
```

The output provided shows the results of a random-effects GLS regression with robust standard errors. The coefficient forSDG (x1) is 0.001568. This suggests that there is a positive but small association betweenSDG and ROE; for every one-unit increase inSDG, ROE increases by 0.001568 units. The constant (_cons) is 0.277022, which is the expected value of ROE whenSDG is zero, accounting for the random effects. The robust standard error forSDG (x1) is 0.008683, which is larger than the standard error from the non-robust model. This adjustment for robustness often leads to larger standard errors if heteroskedasticity is present. Although the model includes corrections for heteroskedasticity within clusters, it does not sufficiently explain the variation in ROE, as indicated by the low R-squared values. The marginal significance of the Wald test suggests that while the model might have some explanatory power, it is not strong, and additional variables or model modifications may be necessary for a more accurate analysis. The Wald chi-squared statistic is 3.26 with a p-value of 0.0710. This test assesses the joint significance of all the coefficients in the model. The p-value, being just above 0.05, indicates a marginal level of significance, suggesting that the model's explanatory variables collectively have a borderline significant impact on ROE. The z-value for SDG (x1) is 1.81 with a corresponding p-value of 0.071. This p-value is greater than the conventional threshold of 0.05, indicating that SDG is not statistically significant at the

International Journal of Current Science Research and Review
ISSN: 2581-8341
Volume 07 Issue 03 March 2024
DOI: 10.47191/ijcsrr/V7-i3-48, Impact Factor: 7.943
IJCSRR @ 2024
www.ijcsrr.org

5% level after adjusting for robust standard errors. The constant has a z-value of 0.34 with a p-value of 0.735, also indicating a lack of statistical significance. The R-squared is 0.0002, indicating that the model explains virtually none of the variation in ROE within groups. The between R-squared is 0.0657, which is somewhat higher, suggesting that the model explains some of the variation in ROE between groups. The overall R-squared is 0.0109, which is still very low, indicating that the model, as a whole, explains very little of the variance in ROE.

b. Hypothesis Testing (the influence of Sustainability Disclosure on ROA)

Table 0-5 REM Regression Result for RQ#1 Food & Beverage Subsector

```
Random-effects GLS regression                   Number of obs     =       180
Group variable: kode                            Number of groups  =        36

R-squared:                                      Obs per group:
     Within  = 0.0002                                         min =         5
     Between = 0.1054                                         avg =       5.0
     Overall = 0.0252                                         max =         5

                                                Wald chi2(1)      =      0.70
corr(u_i, X) = 0 (assumed)                      Prob > chi2       =    0.4040
```

y3	Coefficient	Std. err.	z	P>|z|	[95% conf.	interval]
x1	.0002144	.0002569	0.83	0.404	-.0002892	.000718
_cons	.0611586	.0136388	4.48	0.000	.034427	.0878902
sigma_u	.07035963					
sigma_e	.07997742					
rho	.43628595	(fraction of variance due to u_i)				

The output from the random-effects Generalized Least Squares (GLS) regression analysis provided indicates that the model is attempting to estimate the effect of SDG (x1) on ROA (y3), with 'kode' as the group variable for the panel data set. Coefficient Analysis: The coefficient for SDG (x1) is estimated to be 0.002144, which implies that for every one-unit increase in SDG, there is an expected increase of approximately 0.002144 units in ROA. However, the associated p-value of 0.404 indicates that this relationship is not statistically significant at the conventional alpha level of 0.05. This means we cannot confidently assert that changes in SDG have a predictable effect on ROA based on this dataset. Significance of the Constant: The constant (intercept) of the model is significant ($p < 0.001$), with an estimated value of 0.0611586. This suggests that if SDG were zero, the average ROA would be approximately 6.12%. The significance of the constant term indicates that factors not included in the model may have a baseline effect on ROA. R-squared Values: The overall R-squared is 0.0252, which means that overall, the model explains only about 2.52% of the variance in ROA across all observations. Wald Chi-Squared Test: The Wald chi-squared statistic is low (0.70), with a p-value of 0.4040, signaling that SDG is not a significant predictor of ROA in the context of this random-effects model.

In conclusion, the random-effects model does not provide strong evidence to suggest that SDG is a significant predictor of ROA. While there is some variation in ROA between groups, the model's overall explanatory power is quite limited, indicating that other variables not included in the model might better account for the observed variation in ROA. Additionally, the non-significant p-value for SDG and the low R-squared values suggest that *further research is needed*, possibly including more variables, or exploring different model specifications, to better understand the determinants of ROA.

International Journal of Current Science Research and Review
ISSN: 2581-8341
Volume 07 Issue 03 March 2024
DOI: 10.47191/ijcsrr/V7-i3-48, Impact Factor: 7.943
IJCSRR @ 2024
www.ijcsrr.org

The Influence of Sustainability Disclosure on ROE and ROA moderated by Firm size

Table 0-6 Effect of SDG on financial performance moderated by firm size.

	ROE_{t+1}	ROA_{t+1}
SDG	0.001 (0.63)	0.0001 (0.42)
Size	0.015 (0.48)	0.008***(2.81)
Year	control	control
Industry	control	control
_Cons	-0.077	-0.0008
N	180	180
Adj R^2	0.0103	0.0526

t statistics in parentheses; * p<0.1, ** p<0.05, *** p< 0.01

The table above is presenting the outcomes of a regression analysis that examines the impact of ESG (Environmental, Social, Governance) reporting and company size on financial performance, specifically on Return on Equity (ROE) and Return on Assets (ROA). The coefficient for SDG is 0.001 for ROE and 0.0001 for ROA. These are very small effect sizes and the t-statistics (0.63 for ROE and 0.42 for ROA) indicate these are not statistically significant. The Size coefficient is 0.015 for ROE and 0.008 for ROA. For ROA, the size coefficient is significant, and the t-statistic is 2.81. The main takeaway from this table is that while SDG does not have a statistically significant impact on financial performance in terms of ROE and ROA.

a. Hypothesis Testing (the influence of Sustainability Disclosure on ROE moderated by size)

Table 0-7 REM Regression Result for RQ#3 (SDG and ROE moderated by Firm Size) for Food & Beverage Subsector

```
. xtreg y2 x1 x3, re

Random-effects GLS regression                   Number of obs     =       179
Group variable: kode                            Number of groups  =        36

R-squared:                                      Obs per group:
     Within  = 0.0006                                         min =         4
     Between = 0.0333                                         avg =       5.0
     Overall = 0.0103                                         max =         5

                                                Wald chi2(2)      =      0.83
corr(u_i, X) = 0 (assumed)                      Prob > chi2       =    0.6597
```

y2	Coefficient	Std. err.	z	P>|z|	[95% conf.	interval]
x1	.001303	.0020626	0.63	0.528	-.0027395	.0053456
x3	.0152861	.031678	0.48	0.629	-.0468016	.0773738
_cons	-.0774181	.2340722	-0.33	0.741	-.5361911	.3813549
sigma_u	.3907007					
sigma_e	.65803714					
rho	.26064108	(fraction of variance due to u_i)				

The provided output details a random-effects GLS regression analysis with Return on Equity (ROE, y2) as the dependent variable, and Sustainable Development Goals alignment (SDG, x1) and size (x3) as the independent variables. The data is structured as panel data with 'kode' representing the panel groups. Coefficients and Significance: The coefficient for SDG (x1) is 0.001303 with a standard error of 0.0020626. The p-value is 0.528, which indicates that the effect of SDG on ROE is not statistically significant at conventional levels. The coefficient for size (x3) is 0.0152861 with a standard error of 0.031678. The p-value is 0.629, also indicating a lack of statistical significance. The constant (intercept) is -0.0774181 with a p-value of 0.741, suggesting that when SDG and size

International Journal of Current Science Research and Review
ISSN: 2581-8341
Volume 07 Issue 03 March 2024
DOI: 10.47191/ijcsrr/V7-i3-48, Impact Factor: 7.943
IJCSRR @ 2024
www.ijcsrr.org

are at zero, the average ROE would be negative, but this result is not statistically significant. Wald Chi-Squared Test: The Wald chi-squared statistic is 0.83 with a p-value of 0.6597, indicating that the independent variables as a group are not statistically significant in explaining the variability in ROE.

b. Hypothesis Testing (the influence of Sustainability Disclosure on ROA moderated by size)

Table 0-8 REM Regression Result for RQ#3 (SDG and ROA moderated by Firm Size) for Food & Beverage Subsector

```
Random-effects GLS regression                   Number of obs     =       180
Group variable: kode                            Number of groups  =        36

R-squared:                                      Obs per group:
     Within  = 0.0110                                         min =         5
     Between = 0.0866                                         avg =       5.0
     Overall = 0.0526                                         max =         5

                                                Wald chi2(2)      =      8.58
corr(u_i, X) = 0 (assumed)                      Prob > chi2       =    0.0137

                                  (Std. err. adjusted for 36 clusters in kode)
------------------------------------------------------------------------------
             |               Robust
          y3 | Coefficient  std. err.      z    P>|z|     [95% conf. interval]
-------------+----------------------------------------------------------------
          x1 |   .0001043   .0002462     0.42   0.672    -.0003783    .0005869
          x3 |   .0089422   .0031806     2.81   0.005     .0027084    .015176
       _cons |  -.0008297   .0240962    -0.03   0.973    -.0480574    .046398
-------------+----------------------------------------------------------------
     sigma_u |  .07084919
     sigma_e |  .07979659
         rho |  .44081509   (fraction of variance due to u_i)
------------------------------------------------------------------------------
```

The statement discusses a scenario in which the random effects model initially did not show significance in the estimated coefficients. As a response to this, robust standard errors were used to address the issue. When robust standard errors are employed, it typically means that the estimation has been adjusted to account for potential heteroskedasticity, which is a problem where the variance of the error terms is not constant across observations. Heteroskedasticity can lead to inefficiencies in the ordinary least squares (OLS) estimates and can result in standard errors that are biased, leading to unreliable hypothesis tests. By using robust standard errors, the estimation becomes more reliable as it corrects for this inconsistency in variance, and hence, it improves the robustness of the model against violations of the homoscedasticity assumption. This adjustment is crucial, especially in panel data analysis, as it can lead to more accurate inferences about the significance of the model's coefficients. The information provided is from the output of a random-effects GLS regression analysis where the dependent variable is ROA (y3), and there are two independent variables: SDG (x1) and size (x3). This model is accounting for random effects across different groups represented by 'kode'. Coefficients: The coefficient for SDG (x1) is 0.0001043, with a robust standard error of 0.0002462. The coefficient is not statistically significant, as indicated by a p-value of 0.672. This suggests that, after accounting for group random effects and using robust standard errors, there is no clear evidence of an impact of SDG on ROA. The coefficient for size (x3) is significantly different from zero (p = 0.005) with a value of 0.0089422, suggesting that size has a positive impact on ROA. For every one-unit increase in size, ROA increases by 0.0089422 units, all else being equal. The R-squared values are as follows: within = 0.0110, between = 0.0866, overall = 0.0526. These values indicate that the model explains 1.10% of the variance within groups, 8.66% of the variance between groups, and 5.26% of the total variance in ROA. These are relatively low values, suggesting that the model has limited explanatory power. Wald Chi-Squared Test: The Wald chi-squared test statistic is 8.58 with a p-value of 0.0137, indicating that the independent variables, when considered together, do have a statistically significant relationship with ROA at the 5% significance level.

Conclusion: This random-effects model with robust standard errors suggests that while SDG does not have a significant impact on ROA, the size of the entity (or some proxy for size) does. The model's overall explanatory power is relatively low, but there is a significant portion of variance attributed to differences between groups. Given the significance of size and the Wald test's indication

International Journal of Current Science Research and Review
ISSN: 2581-8341
Volume 07 Issue 03 March 2024
DOI: 10.47191/ijcsrr/V7-i3-48, Impact Factor: 7.943
IJCSRR @ 2024
www.ijcsrr.org

of overall model significance, future analysis could benefit from exploring additional variables that might capture the group-level effects more effectively or considering other factors that may influence ROA.

Result Summary on Food and Beverage Sector

In this study of the Food & Beverage (F&B) sector, the impact of SDG on financial performance indicators such as Return on Equity (ROE) and Return on Assets (ROA) was examined. The findings revealed a minimal and statistically insignificant impact of SDG on these financial metrics, consistent with previous research. Two tests, the Chow Test and the Hausman Test were conducted to determine the most appropriate model for the analysis. The results led to the selection of the Random Effect Model (REM) for its efficiency, highlighting the common dilemma in econometric modeling where different tests may suggest different approaches.

In the REM analysis, SDG showed a small and non-significant positive association with both ROE and ROA. The introduction of firm size as a moderating factor demonstrated a significant positive effect on ROA, but not on ROE, aligning with other research indicating that larger firms often derive more tangible benefits from SDG activities. The application of robust standard errors to address potential heteroskedasticity did not significantly alter the results, underscoring the robustness of these findings. Overall, the study contributes to the ongoing discourse about the tangible financial benefits of SDG practices, suggesting that while SDG may not directly enhance financial performance indicators in the short term, its role in long-term value creation, risk mitigation, and stakeholder engagement remains a vital aspect of corporate strategy.

The F&B sector's unique challenges and opportunities were also highlighted, with the significance of firm size in positively affecting ROA, but not ROE, indicating that larger firms are more likely to harness the benefits of SDG. The contrasting impacts ofSDG across sectors such as coal mining and minerals versus the F&B industry were attributed to the unique operational, regulatory, and market dynamics inherent to each sector. In the F&B sector, the impact of SDG initiatives is more subtle and often manifests in areas like brand reputation and customer loyalty rather than direct financial performance, reflecting the sector-specific nature of SDG impact.

The study's findings underscore the need for a nuanced understanding of the relationship between SDG practices and financial performance, considering the specific characteristics of each industry. The F&B sector may realize the financial benefits of SDG initiatives over a longer term through sustained customer engagement and market positioning, rather than immediate improvements in financial metrics like ROE and ROA.

Analysis for Coal & Oil Refinery Subsector

Table 0-9 Effect of SDG on Financial Performance in Coal & Oil Refinery Subsector

Variable	ROE_{t+1}	ROA_{t+1}
SDG	0.055**(2.16)	0.001*** (3.52)
Year	control	control
Industry	control	control
_cons	-0.214	0.063
N	130	130
Adj R^2	0.0277	0.0298

*t statistics in parentheses, *p < 0.1, **p < 0.05, ***p < 0.01*

The Table 0-9 above is a statistical analysis within the context of the Coal & Oil Refinery Subsector, specifically examining the impact of SDG (Environmental, Social, and Governance) Reporting on the financial performance of companies. For ROE (t+1), the coefficient for SDG is 0.033 with a t-statistic of 2.16, which is statistically significant at the 5% level ($p < 0.05$), denoted by two asterisks (**). For ROA (t+1), the coefficient is 0.001 with a t-statistic of 3.52, which is statistically significant at the 1% level ($p < 0.01$), denoted by three asterisks (***).

International Journal of Current Science Research and Review
ISSN: 2581-8341
Volume 07 Issue 03 March 2024
DOI: 10.47191/ijcsrr/V7-i3-48, Impact Factor: 7.943
IJCSRR @ 2024
www.ijcsrr.org

The analysis suggests that in the Coal & Oil Refinery Subsector, SDG has a positive and statistically significant impact on both ROE and ROA. This could mean that for companies in this sector, a greater emphasis on SDG practices and reporting may be associated with better financial performance. The negative constant for ROE suggests that without the positive influence of SDG, the expected ROE might be negative, which could reflect challenges in the subsector, such as regulatory pressures or market conditions. Conversely, the positive constant for ROA indicates baseline profitability in terms of asset utilization. Given the significant coefficients and the context of the industry, this could imply that investors and stakeholders may reward companies that are actively engaging in SDG with higher valuations, potentially due to perceived lower risks or better management practices. However, the relatively low R-squared values suggest that other factors not included in the model also play a significant role in determining financial performance.

a. Hypothesis Testing using CEM (the influence of Sustainability Disclosure on ROE)

In the context of determining the optimal econometric model to assess the impact of SDG (Sustainable Development Goals) (x1) on the Return on Equity (ROE, y2), a comprehensive analysis was conducted using a series of statistical tests. The Chow test initially suggested no significant variations across groups, indicating that group-specific effects may not be prominent. This was followed by the Hausman test, which did not show any systematic differences between the Fixed Effects Model (FEM) and Random Effects Model (REM), implying that REM could be a viable option. However, the Breusch-Pagan test countered this by demonstrating a lack of significant variance across the groups, which would typically negate the need for REM. Considering the results of these three diagnostic tests, the most fitting model for this analysis emerges as the Common Effects Model (CEM).

Table 0-10 CEM Regression Result for RQ#1 Coal & Oil Refinery Subsector

Source	SS	df	MS	Number of obs	=	130
				F(1, 128)	=	4.67
Model	270.416735	1	270.416735	Prob > F	=	0.0325
Residual	7411.28904	128	57.9006957	R-squared	=	0.0352
				Adj R-squared	=	0.0277
Total	7681.70578	129	59.5481068	Root MSE	=	7.6093

y2	Coefficient	Std. err.	t	P>|t|	[95% conf.	interval]
x1	.055883	.0258586	2.16	0.033	.0047174	.1070487
_cons	-.2142704	.8226312	-0.26	0.795	-1.841987	1.413446

Table **0-10** above shows the results from a regression analysis, where Return on Equity (ROE, y2) is regressed on Sustainable Development Goals reporting (SDG, x1). This analysis appears to be structured as a Common Effects Model (CEM), considering the previous discussions regarding model selection.

The model has an F-statistic of 4.67, with a corresponding p-value of 0.0325. This indicates that the model is statistically significant at the 5% level, suggesting that the SDG reporting has a collectively significant effect on ROE. The R-squared value is 0.0352, which means that approximately 3.52% of the variability in ROE can be explained by the SDG reporting. The Adjusted R-squared, which accounts for the number of predictors in the model, is slightly lower at 0.0277, indicating a small but non-negligible explanatory power of the model. The Root Mean Square Error (Root MSE) is 7.6093, which is a measure of the standard deviation of the prediction errors or residuals. It gives us an idea of the typical size of the prediction errors.

The coefficient for SDG reporting (x1) is 0.055883, with a standard error of 0.0258586. The t-statistic for this coefficient is 2.16, and the p-value is 0.033, indicating that the coefficient is statistically significant at the 5% level. This suggests that as SDG reporting increases, ROE is expected to increase by approximately 0.055883 units, holding all else constant. The 95% confidence interval for the SDG reporting coefficient ranges from 0.0047174 to 0.1070487, which does not include zero, reinforcing the significance of the result.

International Journal of Current Science Research and Review
ISSN: 2581-8341
Volume 07 Issue 03 March 2024
DOI: 10.47191/ijcsrr/V7-i3-48, Impact Factor: 7.943
IJCSRR @ 2024
www.ijcsrr.org

Based on this regression analysis within a CEM framework, there is evidence to suggest that SDG reporting is positively associated with ROE. However, given the low R-squared values, the effect size is quite small, and other unmodeled factors likely explain the majority of the variation in ROE. This model provides some insight into the relationship between SDG reporting and financial performance as measured by ROE, but it should be noted that the explanatory power of the model is limited, and further research might be necessary to uncover additional factors that influence ROE.
Based on this assumption, the CEM model is stated as follows:

$$ROE_{i,t+1} = -2.14 + 0.0558SDG_{i,t} + \epsilon_{i,t}$$

b. Hypothesis Testing using REM (the influence of Sustainability Disclosure on ROA)

Table 0-11 REM Regression Result for RQ#2 Coal and Oil Refinery Subsector

```
Random-effects GLS regression                   Number of obs     =       130
Group variable: kode                            Number of groups  =        26

R-squared:                                      Obs per group:
     Within  = 0.1141                                         min =         5
     Between = 0.0000                                         avg =       5.0
     Overall = 0.0298                                         max =         5

                                                Wald chi2(1)      =     12.39
corr(u_i, X) = 0 (assumed)                      Prob > chi2       =    0.0004
```

y3	Coefficient	Std. err.	z	P>|z|	[95% conf.	interval]
x1	.0016895	.00048	3.52	0.000	.0007488	.0026302
_cons	.0632672	.0295246	2.14	0.032	.0054	.1211345
sigma_u	.13343953					
sigma_e	.11843148					
rho	.55937545	(fraction of variance due to u_i)				

The Table 0-11 below shows results from a Random Effects Generalized Least Squares (GLS) regression that evaluates the impact of Sustainable Development Goals (SDG) reporting (x1) on Return on Assets (ROA, y3) across different groups coded as 'kode'. The regression is structured to account for variations both within and between 26 groups in the dataset. Each group has exactly 5 observations, indicating a balanced panel structure.

The within R-squared is 0.1141, which suggests that the model explains 11.41% of the variability in ROA within the groups. The between R-squared is 0.0000, indicating no variability in ROA between the groups is explained by the model. The overall R-squared is 0.0298, signifying that the model explains 2.98% of the total variance in ROA across all groups and observations. Coefficients: The coefficient for SDG reporting (x1) is 0.0016895 with a standard error of 0.00048. This coefficient is statistically significant (p-value = 0.000), indicating a positive relationship between SDG reporting and ROA. The constant term (cons) is 0.0632672 with a standard error of 0.0295246. This is also statistically significant (p-value = 0.032), representing the average ROA when SDG reporting is zero. The Wald chi-squared statistic of 12.39 with a p-value of 0.0004 indicates that the model's predictors significantly contribute to the explanation of ROA.

The Random Effects Model shows a significant positive relationship between SDG and ROA, suggesting that companies that report on SDG metrics may see better asset returns. This could imply that investors and market participants view SDG reporting as indicative of a company's efficiency, risk management, or long-term sustainability, which could translate into financial performance.

However, the low overall R-squared indicates that while SDG reporting is a significant predictor of ROA, there are many other factors not included in this model that influence ROA. Also, the between R-squared of 0.0000 suggests that the model does not capture any variability between groups, which may be a concern if we expect differences between groups to influence ROA. The

International Journal of Current Science Research and Review
ISSN: 2581-8341
Volume 07 Issue 03 March 2024
DOI: 10.47191/ijcsrr/V7-i3-48, Impact Factor: 7.943
IJCSRR @ 2024
www.ijcsrr.org

positive and significant constant term implies that there is a baseline level of ROA that is not attributed to SDG reporting. This could represent the baseline financial performance of companies in the absence of SDG initiatives.
Based on this assumption, the CEM model is stated as follows:

$$ROA_{i,t+1} = 0.063 + 0.001SDG_{i,t} + \epsilon_{i,t}$$

The Influence of Sustainability Disclosure on ROE and ROA moderated by Firm size

Table 0-12 Effect of SDG on financial performance moderated by firm size.

	ROE_{t+1}	ROA_{t+1}
SDG	0.045 (1.63)	0.0006 (1.57)
Size	0.435 (0.91)	0.28***(8.30)
Year	control	control
Industry	control	control
_Cons	-3.880	-2.446
N	130	130
Adj R^2	0.026	0.0736

*t statistics in parentheses; * p<0.1, ** p<0.05, *** p< 0.01*

The table presents a statistical analysis examining the effect of Sustainable Development Goals (SDG) on financial performance, specifically on Return on Equity (ROE) and Return on Assets (ROA), with firm size as a moderating variable. The coefficient for SDG reporting on ROE is 0.045, with a t-statistic of 1.63. This indicates a positive relationship between SDG reporting and ROE, but it is not statistically significant at conventional levels (p > 0.1). For ROA, the coefficient is 0.0006 with a t-statistic of 1.57, also suggesting a positive relationship but not reaching statistical significance.

a. Hypothesis Testing (the influence of Sustainability Disclosure on ROE moderated by size)

The Table **0-13 CEM Regression Result for RQ#3 (SDG and ROE moderated by Firm Size) for Coal and Oil Sector**

below provided the results of a Common Effects Model (CEM) regression analysis for the coal and oil sector, examining the impact of Sustainable Development Goals (SDG) reporting (x1) on Return on Equity (ROE, y2) with firm size (x3) as a moderating variable. The coefficient for SDG reporting (x1) is 0.045825, which suggests a positive association with ROE. However, the t-statistic is 1.63, and the p-value is 0.106, indicating that this association is not statistically significant at the conventional 0.05 level. The coefficient for firm size (x3) is 0.4349853, with a t-statistic of 0.91 and a p-value of 0.362, also indicating no statistically significant impact on ROE at the conventional levels. The constant (_cons) coefficient is -3.880304, but it is not statistically significant (p-value = 0.345), suggesting that the baseline ROE when both SDG reporting and firm size are zero is not significantly different from this value.

Table 0-13 CEM Regression Result for RQ#3 (SDG and ROE moderated by Firm Size) for Coal and Oil Sector

Source	SS	df	MS	Number of obs	=	130
				F(2, 127)	=	2.75
Model	318.84803	2	159.424015	Prob > F	=	0.0677
Residual	7362.85775	127	57.9752579	R-squared	=	0.0415
				Adj R-squared	=	0.0264
Total	7681.70578	129	59.5481068	Root MSE	=	7.6141

y2	Coefficient	Std. err.	t	P>|t|	[95% conf.	interval]
x1	.045825	.0281181	1.63	0.106	-.0098157	.1014656
x3	.4349853	.4759188	0.91	0.362	-.5067722	1.376743
_cons	-3.880304	4.094614	-0.95	0.345	-11.98281	4.222199

International Journal of Current Science Research and Review
ISSN: 2581-8341
Volume 07 Issue 03 March 2024
DOI: 10.47191/ijcsrr/V7-i3-48, Impact Factor: 7.943
IJCSRR @ 2024
www.ijcsrr.org

The F-statistic for the model is 2.75 with a p-value of 0.0677, indicating that the model is not statistically significant at the conventional 0.05 level, but it is marginally significant, suggesting that the independent variables as a whole may have some relationship with ROE.

The R-squared value is 0.0415, meaning that the model explains 4.15% of the variance in ROE. The Adjusted R-squared is lower at 0.0264, which accounts for the number of predictors in the model and indicates a relatively small amount of the variance in ROE is explained by the model. The Root Mean Square Error (Root MSE) is 7.6141, which gives an indication of the standard deviation of the residuals or the average distance of the data points from the fitted model.

The results suggest that, in this model for the coal and oil refinery subsector, neither SDG reporting nor firm size is a significant predictor of ROE when analyzed through a CEM.

The low explanatory power of the model (as indicated by the low R-squared values) suggests that other variables not included in the model may have a more significant impact on ROE. The lack of statistical significance for the moderating effect of firm size might indicate that the relationship between SDG reporting and ROE does not vary significantly with the size of the firm in this sector, or that the sample size or variability within the data is insufficient to detect such an effect. Given the results, it could be beneficial to reevaluate the model, considering additional variables that may influence ROE in the coal and oil sector, or to investigate the model further for potential non-linear effects or interaction effects that were not captured. It might also be worth exploring other forms of moderation analysis or different methodological approaches that could yield more insight into the conditions under which SDG reporting may affect ROE.

b. Hypothesis Testing (the influence of Sustainability Disclosure on ROA moderated by size)

Table 0-14 FEM Regression Result for RQ#3 (SDG and ROA moderated by Firm Size) for Coal and Oil Sector

```
. xtreg y3 x1 x3, fe

Fixed-effects (within) regression               Number of obs      =       130
Group variable: kode                            Number of groups   =        26

R-squared:                                      Obs per group:
     Within  = 0.4714                                         min =         5
     Between = 0.0657                                         avg =       5.0
     Overall = 0.0736                                         max =         5

                                                F(2,102)           =     45.49
corr(u_i, Xb) = -0.9343                         Prob > F           =    0.0000

------------------------------------------------------------------------------
          y3 | Coefficient  Std. err.      t    P>|t|     [95% conf. interval]
-------------+----------------------------------------------------------------
          x1 |   .0006462   .0004105     1.57   0.118    -.0001679    .0014604
          x3 |   .2855533   .0343867     8.30   0.000     .2173474    .3537592
       _cons |  -2.446768   .3021848    -8.10   0.000     -3.04615   -1.847386
-------------+----------------------------------------------------------------
     sigma_u |  .43008656
     sigma_e |  .09192622
         rho |  .95631157   (fraction of variance due to u_i)
------------------------------------------------------------------------------
F test that all u_i=0: F(25, 102) = 13.84                     Prob > F = 0.0000
```

The model assesses the effect of Sustainable Development Goals (SDG) reporting (x1) on Return on Assets (ROA, y3), with firm size (x3) as a moderating variable, within the coal and oil sector.

The coefficient for SDG reporting (x1) is 0.0006462, but it is not statistically significant (p-value = 0.118), indicating that SDG reporting does not have a significant impact on ROA within the entities after accounting for unobserved heterogeneity. The

International Journal of Current Science Research and Review
ISSN: 2581-8341
Volume 07 Issue 03 March 2024
DOI: 10.47191/ijcsrr/V7-i3-48, Impact Factor: 7.943
IJCSRR @ 2024
www.ijcsrr.org

coefficient for firm size (x3) is 0.2855533, which is highly significant (p-value = 0.000), suggesting that firm size has a significant positive effect on ROA. The F-statistic for the overall model is 45.49, with a p-value of 0.0000, indicating that the model is highly significant.

The FEM is appropriate for this dataset as it accounts for the individual heterogeneity across firms. The significant F-statistic indicates that the model is useful in explaining ROA, particularly within entities. Firm size is a significant predictor of ROA, implying that larger firms tend to have higher ROA, at least within the context of this model. SDG reporting does not show a significant effect on ROA, suggesting that other factors may drive the profitability as measured by ROA in the coal and oil sector. The negative constant suggests that firms, on average and when other factors are held at zero, have a baseline negative ROA, which may need further investigation to understand industry-specific dynamics or other external factors affecting the sector.

Firm size is a significant predictor of ROA in the coal and oil sector, indicating that larger firms tend to have higher returns on assets. This might reflect economies of scale or better access to capital and resources. SDG does not have a statistically significant impact on either ROE or ROA in the periods studied, according to this analysis. However, the positive coefficients suggest that there could be a slight positive effect or that a larger sample or different model specifications could reveal a significant relationship. The low adjusted R-squared values for both models suggest that other factors not included in the model may be more influential in explaining the variability in financial performance for firms in this sector. The significant negative constants imply that when SDG reporting and firm size are not accounted for, firms in the coal and oil sector might expect to have negative returns on equity and assets, which could reflect the baseline challenges or characteristics of the industry. Overall, while firm size is a key factor in the financial performance of firms within the coal and oil sector, SDG reporting does not appear to have a strong measurable impact on financial outcomes as per this analysis. However, it is worth noting that SDG initiatives may have indirect benefits or longer-term impacts not captured in this analysis.

Result Summary for Coal & Oil Refinery Subsector

In the analysis of the Coal & Oil Refinery Subsector, the impact of Sustainable Development Goals (SDG) reporting on financial performance was examined, revealing several key findings:

1. SDG reporting positively influences Return on Equity (ROE), with a modest effect size and statistical significance.
2. A positive and significant correlation was observed between SDG reporting and Return on Assets (ROA), although its overall influence was limited.
3. Firm size significantly affects ROA, demonstrating a strong positive relationship, while SDG reporting does not show a significant impact on ROE when firm size is considered.

The study highlights a nuanced relationship between ESG practices and financial performance in the Coal & Oil Refinery Subsector. While there's a general positive trend showing the benefits of SDG reporting on financial metrics like ROE and ROA, the impact is relatively moderate and often overshadowed by other factors such as firm size.

The positive results from SDG reporting in this subsector can be attributed to factors such as enhanced transparency, improved reputation, proactive risk management, regulatory compliance, operational efficiencies, innovation, employee morale, and long-term success. However, the complexity of this relationship underscores the importance of considering a range of factors, beyond just ESG practices, in understanding and predicting financial performance within this sector.

Analysis for Chemical & Pharmaceutical Subsector

Table 0-15 Effect of SDG on Financial Performance in Chemical & Pharmaceutical Sector

	ROE_{t+1}	ROA_{t+1}
SDG	0.001**(2.17)	0.0007**(2.32)
Year	control	control
Industry	control	control
_Cons	3.10	0.068
N	40	40
Adj R^2	0.067	0.19

*t statistics in parentheses; * p<0.1, ** p<0.05, *** p< 0.01*

International Journal of Current Science Research and Review
ISSN: 2581-8341
Volume 07 Issue 03 March 2024
DOI: 10.47191/ijcsrr/V7-i3-48, Impact Factor: 7.943
IJCSRR @ 2024
www.ijcsrr.org

The Table 0-15 below presents results from a statistical analysis investigating the impact of Sustainable Development Goals (SDG) reporting on financial performance, specifically Return on Equity (ROE) and Return on Assets (ROA), in the Chemical and Pharmaceutical sector. The coefficient for SDG reporting is 0.001 for ROE and 0.0007 for ROA. Both coefficients are statistically significant at the 5% level, indicated by two asterisks (**).
The t-statistics are 2.17 for ROE and 2.32 for ROA, further supporting the significance of these findings. This suggests a positive association between SDG reporting and both ROE and ROA, indicating that companies with higher engagement in SDG reporting tend to have slightly better financial performance. The adjusted R-squared for ROE is 0.067, meaning that the model explains 6.7% of the variability in ROE. For ROA, the adjusted R-squared is 0.19, indicating that the model explains 19% of the variability in ROA.

a. Hypothesis Testing using CEM (the influence of Sustainability Disclosure on ROE)

Table 0-16 CEM Regression Result with Robustness Test for RQ#1 Chemical & Pharmaceutical Subsector

Linear regression

Number of obs	=		40
F(1, 38)	=		4.71
Prob > F	=		0.0363
R-squared	=		0.0917
Root MSE	=		.15502

y2	Coefficient	Robust std. err.	t	P>|t|	[95% conf.	interval]
x1	.0014195	.000654	2.17	0.036	.0000957	.0027434
_cons	.107413	.0217104	4.95	0.000	.0634625	.1513634

Based on the panel data regression table, the F probability value of 0.0363 indicates that the F probability is less than 0.05, thus the alternative hypothesis (H_a) can be accepted. This implies that the model is accepted, or in other words, the independent variables simultaneously influence the dependent variable. The regression output presented above depicts the results of a linear regression analysis involving 'ROE' as the dependent variable y2 and an unspecified independent variable (x1). In this model, there are 40 observations. The F-statistic value of 3.84 with a probability of more than F of 0.0575 indicates that the model as a whole is on the threshold of statistical significance at conventional levels (usually $p < 0.05$), indicating that there is a possibility of a linear relationship between the independent variables and ROE. The R-squared value of 0.0917 indicates that around 9.17% of the variation in ROE can be explained by this independent variable. The coefficient for x1 is 0.014195 with a standard error of 0.007247, which indicates that for every unit increase in x1, ROE increases by 1.4195%, although this is not significant at the 5% level (p-value = 0.058). However, the model constant (intercept) is statistically significant (p-value = 0.004), with a value of 0.107413. This shows that when SDG is zero, the average value of ROE is 10.7413%. Root MSE (Mean Squared Error) of 0.15502 provides an estimate of the standard deviation of the residuals in the model.

Based on this assumption, the CEM model is stated as follows:

$$\boldsymbol{ROE_{i,t+1} = 0.1074 + 0.0014SDG_{i,t} + \epsilon_{i,t}}$$

International Journal of Current Science Research and Review
ISSN: 2581-8341
Volume 07 Issue 03 March 2024
DOI: 10.47191/ijcsrr/V7-i3-48, Impact Factor: 7.943
IJCSRR @ 2024
www.ijcsrr.org

b. Hypothesis Testing using REM (the influence of Sustainability Disclosure on ROA)

Table 0-17 REM Regression Result for RQ#2 Chemical & Pharmaceutical Subsector

```
Random-effects GLS regression                   Number of obs     =        40
Group variable: kode                            Number of groups  =         8

R-squared:                                      Obs per group:
     Within  = 0.1066                                         min =         5
     Between = 0.3006                                         avg =       5.0
     Overall = 0.1913                                         max =         5

                                                Wald chi2(1)      =      5.37
corr(u_i, X) = 0 (assumed)                      Prob > chi2       =    0.0205
```

y3	Coefficient	Std. err.	z	P>|z|	[95% conf.	interval]
x1	.0007211	.0003112	2.32	0.020	.0001112	.0013309
_cons	.0680736	.025602	2.66	0.008	.0178946	.1182526
sigma_u	.06177038					
sigma_e	.05236762					
rho	.58182527	(fraction of variance due to u_i)				

Based on the panel data regression table, the F probability value of 0.0205 indicates that the F probability is less than 0.05, allowing us to accept the null hypothesis (H_a). This suggests that the model is accepted, or in other words, the independent variables collectively influence the dependent variable in the context of this regression. The low F probability indicates that at least one independent variable has a significant impact on the dependent variable in this panel regression model.

From the analysis of the panel data regression table, it is found that the P-value for the SDG Variable is less than 0.05, specifically 0.020, indicating significance at the 5% level. This suggests that the SDG Variable has a significant positive impact on Return on Asset (ROA). Specifically, this finding implies that in the context of the pharmaceutical industry sector, the SDG Variable makes a meaningful positive contribution to financial performance (Return on Asset).

In the Random Effects Model (REM), it is assumed that αi is a random variable with a mean of α0, so the intercept can be expressed as αi = α0 + εi, where εi is a random error with a mean of 0 and variance of σ2εi. The variable εi is not directly observed and is also referred to as a latent variable. The equation for the REM model is as follows:

$$ROA_{i,t+1} = 0.006807 + 0.00072SDG_{i,t} + \mu_i + \epsilon_{i,t}$$

In the equation, μ_i is the cross-sectional error component and $\epsilon_{i,t}$ is a combination of both cross-sectional and time-series error component. From the panel data regression results, the adjusted R^2 value is 0.1913 or 19.13%, indicating that this percentage of the variability in the dependent variable is explained by the independent variables in the model after adjusting for the number of predictors.

The Influence of Sustainability Disclosure on ROE and ROA moderated by Firm size

Table 0-18 Effect of SDG on financial performance moderated by firm size.

	ROE_{t+1}	ROA_{t+1}
SDG	0.000(0.16)	3.0* (1.90)
Size	0.251***(3.81)	0.050**(2.10)
Year	control	control
Industry	control	control
_Cons	-1.9	-0.33
N	40	40
Adj R^2	0.0012	0.014

International Journal of Current Science Research and Review
ISSN: 2581-8341
Volume 07 Issue 03 March 2024
DOI: 10.47191/ijcsrr/V7-i3-48, Impact Factor: 7.943
IJCSRR @ 2024
www.ijcsrr.org

*t statistics in parentheses; * p<0.1, ** p<0.05, *** p< 0.01*

The table presented indicates a regression analysis where the dependent variables are ROE (Return on Equity) and ROA (Return on Assets). The independent variables are SDG (Sustainable Development Goals) alignment and the moderating variable is firm size. The analysis pertains to the pharmaceutical sector. From the table, SDG alignment does not significantly predict ROE ($p > 0.1$), but it is positively associated with ROA ($p < 0.1$), suggesting some impact of sustainable practices on asset profitability. Firm size is a significant predictor for both ROE and ROA ($p < 0.01$), with larger firms likely having better equity returns and asset profitability. The 'Year' and 'Industry' variables are controlled, ensuring that the results are not confounded by these factors. The adjusted R-squared values are relatively low, indicating that while the model explains some variance in future financial performance, other factors not included in the model may also play a significant role.

a. Hypothesis Testing using FEM (the influence of Sustainability Disclosure on ROE moderated by size)

Table 0-19 FEM Regression Result for RQ#3 (SDG and ROE moderated by Firm Size) Chemical & Pharmaceutical Subsector

```
Fixed-effects (within) regression               Number of obs     =        40
Group variable: kode                            Number of groups  =         8

R-squared:                                      Obs per group:
     Within  = 0.3881                                         min =         5
     Between = 0.1206                                         avg =       5.0
     Overall = 0.0012                                         max =         5

                                                F(2,30)           =      9.51
corr(u_i, Xb) = -0.9415                         Prob > F          =    0.0006

------------------------------------------------------------------------------
          y2 | Coefficient  Std. err.      t    P>|t|     [95% conf. interval]
-------------+----------------------------------------------------------------
          x1 |   .0001405   .0008565     0.16   0.871    -.0016088    .0018898
          x3 |   .2514923   .0660679     3.81   0.001     .1165636     .386421
       _cons |  -1.935388   .5358027    -3.61   0.001    -3.029643   -.8411327
-------------+----------------------------------------------------------------
     sigma_u |  .37343712
     sigma_e |  .12238987
         rho |  .90300565   (fraction of variance due to u_i)
------------------------------------------------------------------------------
F test that all u_i=0: F(7, 30) = 4.13                     Prob > F = 0.0028
```

Based on the panel data regression table, The F-test that all u_i (unobserved individual effects) are zero has an F-statistic of 4.13 with a Prob > F value of 0.0028. This implies that the model is accepted, or in other words, the independent variables simultaneously influence the dependent variable. From the results of the panel data regression table analysis, SDG (x1): The coefficient is 0.0001405 with a standard error of 0.0008565. The t-value is 0.16 with a p-value of 0.871, indicating that SDG is not statistically significant in explaining variations in ROE within entities. Size (x3): The coefficient is 0.2514923 with a standard error of 0.0660679. The t-value is 3.81 with a p-value of 0.001, showing a statistically significant relationship between Size and ROE within entities.

In conclusion, the fixed-effects model indicates that Size has a significant negative impact on ROE within entities. SDG does not have a statistically significant impact on ROE within the same entities. The high within R-squared value suggests that the model does a good job of explaining the variability of ROE within entities, and the fixed-effects F-test supports the presence of individual effects. The choice of the fixed-effects model seems justified given the correlation between the unobserved effects and the regressors. However, it is important to consider potential dynamic effects and the role of other variables not included in the model, which might provide additional insights into the determinants of ROE.

International Journal of Current Science Research and Review
ISSN: 2581-8341
Volume 07 Issue 03 March 2024
DOI: 10.47191/ijcsrr/V7-i3-48, Impact Factor: 7.943
IJCSRR @ 2024
www.ijcsrr.org

b. Hypothesis Testing using FEM (the influence of Sustainability Disclosure on ROA moderated by size)

Table 0-20 FEM Regression Result for RQ#3 (SDG and ROA moderated by Firm Size) Chemical & Pharmaceutical Subsector

```
Fixed-effects (within) regression               Number of obs      =        40
Group variable: kode                            Number of groups   =         8

R-squared:                                      Obs per group:
     Within  = 0.2504                                         min =         5
     Between = 0.0010                                         avg =       5.0
     Overall = 0.0145                                         max =         5

                                                F(2,30)            =      5.01
corr(u_i, Xb) = -0.6631                         Prob > F           =    0.0133
```

y3	Coefficient	Std. err.	t	P>|t|	[95% conf.	interval]
x2	3.00e-07	1.58e-07	1.90	0.067	-2.19e-08	6.22e-07
x3	.0503149	.0239088	2.10	0.044	.0014867	.0991431
_cons	-.3352741	.1974677	-1.70	0.100	-.738557	.0680087
sigma_u	.10272416					
sigma_e	.04876263					
rho	.81610324	(fraction of variance due to u_i)				

F test that all u_i=0: F(7, 30) = 8.02 Prob > F = 0.0000

Based on the panel data regression table, the F probability value of 0.0133 indicates that the F probability is less than 0.05, thus the alternative hypothesis (Ha) can be accepted. This implies that the model is accepted, or in other words, the independent variables simultaneously influence the dependent variable. From the results of the panel data regression table analysis, SDG (x2): The coefficient is very small (3.00e-07) and has a p-value of 0.067. This indicates a marginally significant positive effect on ROA at the 10% level but not at the traditional 5% level. The confidence interval is also very close to zero, suggesting the effect size is small. Size (x3): The coefficient is 0.0503149 with a p-value of 0.044, which is statistically significant at conventional levels (5%). The size of the company has a statistically significant impact on ROA according to this model. F-Test of Overall Significance: The F-test statistic is 8.02 with a p-value of 0.0000, indicating that the model is statistically significant at the 1% level. This suggests that at least one of the predictors is significantly related to the ROA.

Result Summary for Chemical & Pharmaceutical Subsector

The regression analysis on Sustainable Development Goals (SDG) in the chemical & pharmaceutical sector reveals a significant positive impact of SDG variables on financial metrics such as ROE and ROA. Comparing these findings with broader research and global data trends highlights the diverse range of patterns in how SDGs influence financial performance, emphasizing unique industry-specific dynamics. The study's emphasis on the moderating role of firm size and the long-term perspective underscores the complexity of SDGs' impact on corporate performance in sectors with distinct societal and environmental responsibilities, like pharmaceuticals.

In Indonesia, the chemical & pharmaceutical sector's engagement with SDGs encompasses unique regional challenges and opportunities, such as equitable access to medicines, environmental sustainability, and ethnic research practices. Innovation in pharmaceutical research, particularly for diseases prevalent in Indonesia, is vital for progressing SDG 3. Achieving these objectives necessitates collaborative efforts, as emphasized by SDG 17, involving government, industry, and civil society to facilitate knowledge exchange, resource allocation, and joint efforts to address healthcare challenges.

International Journal of Current Science Research and Review
ISSN: 2581-8341
Volume 07 Issue 03 March 2024
DOI: 10.47191/ijcsrr/V7-i3-48, Impact Factor: 7.943
IJCSRR @ 2024
www.ijcsrr.org

The pharmaceutical sector in Indonesia has significant potential to positively influence the SDGs, playing a crucial role in sustainable development and enhancing health outcomes nationwide.

CONCLUSION

The examination of sustainability disclosures in the Food & Beverage sector and the Coal & Oil Refinery Subsector reveals nuanced insights into the relationship between Environmental, Social, and Governance (ESG) or Sustainable Development Goals (SDG) reporting and financial performance metrics. Food & Beverage sector sustainability disclosure, particularly through Environmental, Social, and Governance (ESG) Reporting, exhibits a marginal and statistically insignificant influence on financial performance metrics such as Return on Equity (ROE) and Return on Assets (ROA). These findings suggest that the positive effects of ESG may be more discernible in non-financial dimensions or may materialize over extended temporal horizons. Moreover, the size of a firm and its industry classification do not significantly moderate the association between sustainability reporting and financial performance. Nevertheless, larger enterprises demonstrate a more pronounced positive impact on ROA, likely attributable to enhanced resources and well-structured sustainability strategies.

Within the Coal & Oil Refinery Subsector, reporting aligned with Sustainable Development Goals (SDG) exerts a modest yet positive effect on financial metrics, specifically ROE and ROA. This implies a general tendency wherein companies with heightened SDG reporting tend to experience marginal enhancements in financial returns. Furthermore, firm size significantly conditions this relationship, particularly affecting ROA. This observation suggests that larger firms in this subsector may possess a greater capacity to leverage the benefits of SDG reporting, possibly owing to their scale and resource availability. Overall, these insights underscore the sector-specific nuances of sustainability impacts on financial performance, emphasizing the intricate interplay of factors such as company size and industry dynamics in shaping these relationships.

REFERENCES

1. Adhariani, D. & du Toit, E., 2020. Readability of Sustainable Reports: Evidence from Indonesia. *Journal of Accounting in Emerging Economies,* 10(4), pp. 621-636.
2. Adhima, M. & Hariadi, B., 2012. Pengaruh Pengungkapan Sustainability Report Terhadap Profitibilitas Perusahaan Studi Kasus pada Perusahaan Manufaktur yang Terdaftar di Bursa Efek Indonesia. *Jurnal Ilmiah Mahasiswa FEB.*
3. Adrangi, B. & Kerr, L., 2022. Sustainable Development Indicators and Their Relationship to GDP: Evidence from Emerging Economics. *Sustainability 2022,* 14(2), p. 658.
4. Baudouin, C. & Rianda, B., 2021. *Sustainability Reporting in Indonesia.* [Online] Available at: https://www.moores-rowland.com/articles/SustainabilityReportinginIndonesia
5. Bergmann, A. & Posch, P., 2018. Mandatory Sustainability Reporting in Germany: Does Size Matter?. *Sustainability,* 10(11).
6. Brown, H., de Jong, M. & Levy, D., 2009. Building Institutions Based on Information Disclosure: Lesson from GRI's Sustainability Reporting. *Journal of Cleaner Production,* 17(6), pp. 571-580.
7. Cammarano, A. et al., 2022. SDG-Oriented Supply Chains: Business Practices for Procurement and Distribution. *Sustainability (Switzerland),* 14(4).
8. Devie, D., Kamandhanu, J., Tarigan, J. & Hatane, S., 2019. Do Environmental Performance and DIsclosure Bring Financial Outcome? Evidence from Indonesia. *World Review of Science, Technology, and Sustainability Development,* pp. 66-86.
9. Goodarzian, F. et al., 2022. A Sustainable-Resilience Healthcare Network for Handling COVID-19 Pandemic. *Annals of Operations Research,* 312(2).
10. Gunawan, J., 2007. Corporate Social Disclosures by Indonesia Listed Companies: A Pilot Study. *Social Responsibility Journal,* 3(3).
11. Hahn, R. & Kuhnen, M., 2013. Determinants of Sustainability Reporting: A Review if Results, Trends, Theory, and Opportunities in an Expanding Field of Research. *Journal of Cleaner Production,* Volume 59, pp. 5-21.
12. Harymawan, I., Nasih, M., Salsabilla, A. & Putra, F., 2020. External Assurance on Sustainability Report Disclosure and FIrm Value: Evidence from Indonesia and Malaysia. *Enterpreneuship and Sustainability Issue,* 7(3).
13. Hassan, M., Razalli, M. & Musa, U., 2018. A Review of the Challenges and Prospects for Islamic Tourism Policies in

International Journal of Current Science Research and Review
ISSN: 2581-8341
Volume 07 Issue 03 March 2024
DOI: 10.47191/ijcsrr/V7-i3-48, Impact Factor: 7.943
IJCSRR @ 2024
www.ijcsrr.org

Malaysia. *Journal of Social Sciences Research,* 2018(6).

14. Joseph, L. et al., 2019. Removal of Heavy Metals from Water Sources in the Developing World using Low-Cost Materials: A Review. *Chemosphere,* Volume 229, pp. 142-159.
15. Jung, S., Nam, C., Yang, D. & Kim, S., 2018. Does Corporate Sustainability Performance Increase Corporate Financial Performance? Focusing on the Information and Communication Technology Industry in Korea. *Sustainable Development,* 26(3), pp. 243-254.
16. Kolk, A. & Perego, P., 2010. Determinants of the Adoption of Sustainability Assurance Statements: An International Investigation. *Business Strategy and the Environment,* 19(3).
17. KPMG, 2013. *KPMG International Survey of Corporate Responsibility Reporting 2013,* s.l.: KPMG.
18. Mohammadi, S., 2022. A Test of Harmful Multicollinearity: A Generalized Ridge Regression Approach. *Communications in Statistics,* 51(3).
19. Nguyen, T. T. D., 2020. An Empirical Study on the Impact of Sustainability Reporting on Firm Value. *Journal of Competitiveness,* 12(3), pp. 119-135.
20. Orazalin, N. & Mahmood, M., 2020. Determinants of GRI-based Sustainability Reporting: Evidence from an Emerging Economy. *Journal of Accounting in Emerging Economies,* 10(1).
21. Orazalin, N., Mahmood, M. & Narbaev, T., 2019. The Impact of Sustainability Performance Indicators on Financial Stability: Evidence from the Russian Oil and Gas Industry. *Environmental Science and Pollution Research,* 26(8), pp. 8157-8168.
22. Ordonez-Ponce, E., Clarke, A. & MacDonald, A., 2021. Business Contribution to the Sustainability Development Goals through Community Sustainability Partnerships. *Sustainability Accounting, Management, and Policy Journal,* 12(6), pp. 1239-1267.
23. Papoutsi, A. & Sodhi, M., 2020. Does Disclosure in Sustainability Reports Indicate Actual Sustainability Performance?. *Journal of Cleaner Production.*
24. Qudriyah, H., Hastuti, Burhany, D. & Sumardi, S., 2021. An Analysis of Sustainable Finance Disclosure at Indonesia Sharia Commercial Banks using POJK 51/POJK 03/2017. *Proceeings of the 2nd International Seminar of Science and Applied Technology (ISSAT 2021),* p. 207.
25. Roberts, R., 2020. Qualitative Interview Questions: Guidance for Novice Researchers. *Qualitative Report,* 25(9).
26. SASB, 2020. Sustainability Accounting Standards Boards Conceptual Framework & Rules of Procedure. *SASB.*
27. Schaltegger, S., Ludeke-Freund, F. & Hansen, E., 2016. Business Model for Sustainability. 29(3), pp. 264-289.
28. Talbot, J. & Venkataraman, R., 2011. Integration of Sustainability Principles into Project Baseline using a Comprehensive Indicator Set. *International Business & Economics Research Journal (IBER),* 10(9).
29. Uddin, M., Majumber, M., Akter, A. & Zaman, R., 2022. Do the Diversification of Income and Assets Spur Bank Profitability in Bangladesh? A Dynamic Panel Data Analysis. *Vilakshan - XIMB Journal of Management,* 19(2).
30. Wang, M.-C., 2017. The Relationship between Firm Characteristics and Disclosure of Sustainability Reporting. *Sustainability,* 9(4), p. 624.
31. Widianto, H., 2011. Pengaruh Profitabilitas, Likuiditas, Leverage, Aktivitas, Ukuran Perusahaan, dan Corporate Governance Terhadap Praktik Pengungkapan Sustainability Report.
32. Wikantiyoso, B., Riyanti, B. & Suryani, A., 2021. A Construction of Entrepreneurial Personality Tests: Testing Archetype Personality Inventory in Entrepreneurship. *International Journal of Applied Business and Internation Management,* 6(1).
33. Zimon, G., Arianpoor, A. & Salehi, M., 2022. Sustainability Reporting and Corporate Reputation: The Moderating Effect of CEO Opportunistic Behavior. *Sustainability (Switzerland),* 14(3).
34. Zisko, N. et al., 2015. Meso Level Influence on Long Term Condition Self-Management: Stakeholder Accounts of Comonalities and Differences across Six European Countries. *PLOS ONE,* 10(3).

Cite this Article: Lutrika Mufti Rachmat, Dr. Erman Sumirat, Yunieta Anny Nainggolan (2024). The Influence of Sustainability Disclosure on Financial Performance: A Study of Indonesian Firms. International Journal of Current Science Research and Review, 7(3), 1857-1879