



## Jurnal Nominal Barometer Riset Akuntansi dan Manajemen

URL: <https://journal.uny.ac.id/index.php/nominal>



# The Impact of Carbon Disclosure and Environmental Charges on Financial Performance is Affected by Environmental Performance as Moderator

Dewi Ainun Fauziah <sup>a,1</sup>, Dewi Ayu Puspita <sup>a,2\*</sup>

<sup>a</sup> Universitas Jember, Indonesia

<sup>1</sup> dewiainunf99@gmail.com ; <sup>2</sup> dewiayu@unej.ac.id

\* corresponding author

### ARTICLE INFO

#### Article history

Received: 04 January 2024

Revised : 15 July 2024

Accepted: 10 September 2024

#### Keywords

Carbon Emissions  
Environmental Costs  
Financial Performance  
Environmental Performance  
Manufactured

#### Kata Kunci

Emisi Karbon  
Biaya Lingkungan  
Kinerja Keuangan  
Kinerja Lingkungan  
Manufaktur

### ABSTRACT

The research was conducted to test the disclosure of carbon emissions and environmental costs and their impact on environmental costs, with financial performance as its moderation. The study used an explanatory research method with 72 manufacturing companies listed in the BEI during the period 2018–2022 as a sample. The sampling technique used is purposive sampling. The data sources used are secondary data, namely sustainability reports and annual company reports of samples analyzed using moderate regression analysis (MRA). According to research, disclosure of carbon emissions has no effect on financial performance; environmental costs have an impact on financial performance; carbon disclosures have an impact on financial performance by moderating environmental performance; and carbon disclosure has an impact on financial performance by moderating environmental performance.

### ABSTRAK

Penelitian ini dilakukan guna menguji pengungkapan emisi karbon dan biaya lingkungan berdampak pada biaya lingkungan dengan kinerja keuangan sebagai moderasinya. Penelitian ini menggunakan metode explanatory research dengan 72 perusahaan manufaktur yang terdaftar di BEI selama periode 2018-2022 sebagai sampel. Teknik pengambilan sampel yang dipakai menggunakan purposive sampling. Sourced data yang digunakan adalah data sekunder yakni laporan keberlanjutan dan annual report perusahaan sampel yang dianalisis menggunakan Moderated Regression Analysis (MRA). Penelitian menunjukkan bahwa pengungkapan emisi karbon tidak mempengaruhi kinerja keuangan; biaya lingkungan mempengaruhi kinerja keuangan; pengungkapan emisi karbon mempengaruhi kinerja keuangan dengan dimoderasi kinerja lingkungan; dan pengungkapan emisi karbon mempengaruhi kinerja keuangan dengan dimoderasi kinerja lingkungan.

This is an open-access article under the [CC-BY-SA](https://creativecommons.org/licenses/by-sa/4.0/) license.



## 1. Introduction

Companies, in managing their operations, often focus only on their financial conditions. Unfortunately, this financial condition can be measured through financial performance, which is a measure of a company's ability to achieve its financial goals and manage its resources effectively and efficiently (Esomar, 2021). The high level of business competition is driving companies to show their competitive advantage, not just in financial terms. The United Nations, in its 2030 agenda, states that social, economic, and political evolution needs to accelerate digital transformation to enhance sustainable development. Currently, environmental handling related to climate change has many negative effects, such as decreased health quality, damage to land and ocean ecosystems, which affect fishing yields, and water and food shortages due to changes in biomass production and ecosystems, including loss of assets, employment, and changes in consumer demand (N. Masripatin et al., 2017). As a result, given the impact of this situation on the stakeholder environment, companies are expected to participate in the disclosure of their carbon emissions (Amalia & Daljono, 2021).

Allocating environmental costs simultaneously can improve financial performance by reducing the risk of environmental damage that requires higher costs for repair. Corporate responsibility for the environment is strengthened through the Law of RI No. 32, Article 68 of 2009 on the Protection and Management of the Living Environment. As a follow-up to the regulation, the Ministry of Environment and Forestry (KLHK), which is responsible for the conservation of the environment in Indonesia, established an Environmental Performance Rating Program. (PROPER). Proper environmental management can improve the quality of production and corporate image, thus triggering improved corporate financial performance (Saputra, 2020).

Manufacturing has a huge impact on the environment and is one of the main causes of problems such as climate change, waste, loss of natural resources, water pollution, and water (Kraus et al., 2020). In 2019, 47 companies out of 114 manufacturing industries in Jakarta were sanctioned for their exhaust gases creating environmental pollution (Ariefana, 2019). The above problem suggests that companies in the manufacturing sector need to pay particular attention to the management of their environment. Siagian (2021) found that environmental performance can moderate the relationship between environmental costs and corporate performance. Rahmanita (2020), through his research, also proves that environmental performance can moderate the relationship between CED (carbon emissions disclosure) and the value of companies with the pure moderators model. The inconsistency in the results of previous research has created a research gap that motivates us to do further and deeper research of carbon emissions and environmental cost disclosure on financial performance, the effect of environmental costs on economic performance with environmental performance as moderation, and the impact on overall financial performance.

## 2. Literature Review and Hypothesis Development

### 2.1. Legitimacy Theory

According to Deegan and Michael (2014:344), legitimacy theory is the general belief or presumption that an entity's activity is anticipated, true, or consistent with some set of norms, values, beliefs, and socially created meanings. Manisa and Defung (2017) stated that legitimacy is the theory that explains the relationship between society and the company, where there are rules that are in harmony with the law in force in society. Crossley (2021) argues that optimism is the impression or assumption that an enterprise's environmental performance is expected, accurate, or consistent with the social and/or environmental spectrum. Because of its flexibility, companies can make strategic decisions to change their legitimacy status to increase resources through company actions, i.e., by adjusting their activities and changing perceptions (Crossley, 2021).

This theory is perfectly consistent with the understanding that environmental disclosure potentially enhances and preserves the legitimacy of the company and thus demands disclosures of effective environmental action (Syahri, 2023). Based on the legitimacy theory, companies with worse environmental performance are expected to provide compensation or better environmental disclosure in their financial statements. It's because legitimacy can guarantee the sustainability of the company (Ifada et al., 2021).

---

## 2.2. Signalling Theory

According to [Morris \(1987\)](#) Signal theory was created to deal with the issue of information asymmetry in organizations by increasing the conveyance of information signals from those with more information to less well-informed stakeholders. Information asymmetry in signaling theory is implied by positive monitoring costs in agency theory. [Suganda \(2018\)](#), is concerned with how a company informs investors and shapes their opinion of the company's health. Management generally tries to reveal information that can improve corporate confidence and performance, even if it is not necessary. Financial statement data can give either positive or negative signals.

## 2.3. How financial performance is affected by carbon disclosure

The existence of government regulations to reduce carbon emissions and increased public and investor awareness of environmental issues give companies opportunities to grow and improve their sustainable financial performance. It can be caused by an increased interest in environmentally friendly goods and services. In addition, increased disclosure of carbon emissions will lead to stock price changes, followed by increased business profitability ([Alfayerds & Setiawan, 2021](#)).

This is consistent with [Crossleys \(2021\)](#) theory of legitimacy, which defines legitimacy as the perception or presumption that a company's environmental performance is reasonable, accurate, or consistent with the social and/or environmental spectrum and is employed by the company as a business development strategy. This theory highlights the potential influence of transparent and consistent carbon disclosure on higher expenses and revenue for companies as stakeholder and public confidence grow. According to a study by [Khairunisa and Pohan \(2022\)](#), disclosure of carbon emissions enhances financial success as measured by return on sales (ROS).

H1: Financial performance is positively impacted by carbon disclosure.

## 2.4. The Impact of Environmental Issues on Financial Performance

Companies with good environmental management can affect the quality of production, so their financial performance is expected to improve. Good environmental management is characterized by an environmental cost allocation that plays an important role as it can be evidence of a company's commitment to social responsibility in order to increase stakeholder confidence. Environmental costs can reduce a company's profits, but they are a long-term investment because they support companies in reducing long-run costs by increasing operational efficiency and reducing environmental risks. It can be used as a strategy for increasing corporate profits through increased corporate revenue.

In line with [Crossley's \(2021\)](#) theory of legitimacy, legitimacy is the impression or assumption that the company's environmental performance is expected, accurate, or consistent with the social and/or environmental spectrum and is used as a strategy by the company to develop its business. This theory emphasizes that as public and stakeholder confidence increases, it can affect increased environmental costs and corporate revenue. Research by [Suandi and Ruchjana \(2021\)](#) explains that environmental costs simultaneously influence the financial performance projected with ROA.

H2: Financial performance is positively impacted by environmental costs.

## 2.5. Disclosure of Carbon Emissions to Financial Performance with Environmental Performance as Moderation

It is anticipated that higher CEDs will increase corporate profitability, which affects financial performance. Through improvements in stock prices and higher business profitability, increased carbon disclosure is anticipated to draw investors ([Alfayerds & Setiawan, 2021](#)). Together with more sales and a better reputation, improved environmental performance can also boost financial performance. The company's environmental performance is anticipated to improve through the use of appropriate ratings as moderation.

In order to lower business risks and boost financial performance, the company hopes that the environmental performance demonstrated by the PROPER value will serve as a signal to stakeholders and help the company receive a positive value in return for its commitment to disclose carbon emissions. Using the pure moderator type, [Rahmanita \(2020\)](#) discovered that environmental performance moderates CED with the company's worth. Research by [Gabrielle and Toly \(2019\)](#) demonstrates that environmental performance and company value can both moderate CED.

H3: The influence of carbon disclosure on financial performance is moderated by environmental performance.

## 2.6. Environmental cost to financial performance with environmental performance as moderation

Though they can lower a company's profitability, environmental costs can also be viewed as long-term investments because they lower long-term costs by increasing operational effectiveness and lowering environmental risks. It is anticipated that enhanced operational efficiency and higher production quality will result from environmental performance in terms of financial success. Sales growth is anticipated to enhance the influence of environmental costs on the financial performance of the organization by employing appropriate ratings as a moderator. Moreover, implementing ecoefficiency might be a tactic to raise business productivity.

In line with the signal theory, where ranking acquisition can provide public assurances that a company has contributed to minimizing its environmental impact, environmental performance shown with a PROPER value is expected to be a signal to stakeholders, where such a rating helps a company obtain a positive value in relation to its commitment to allocate environmental costs so that it can reduce the emergence of business risks and improve the company's financial performance. In line with the assessment carried out by the [Siagian \(2021\)](#), it provides evidence that environmental performance has the ability to moderate the relationship between environmental costs and business performance. However, another study by [Ramadhana dan Setiawan \(2020\)](#) states that environmental performance cannot moderate environmental costs with financial performance.

H4: Environmental performance moderates the impact of environmental costs on financial performance

## 3. Research Methods

This study employs an explanatory research strategy in conjunction with a quantitative methodology ([Roziq et al., 2021](#)). The following criteria are used in the sampling process: 1) manufacturing enterprises listed on the Indonesia Stock Exchange and following PROPER during 2018–2022, 2) companies that report environmental costs and use rupee currency in their annual reports and/or sustainability reports, and 3) companies that explicitly disclose carbon emissions in their annual reports or sustainability reports (including at least one policy related to CED/GRK). The 72 samples of manufacturing companies listed on the Indonesian Stock Exchange (BEI) for the period 2018–2022, are accessible through the official EIB website [www.idx.co.id](http://www.idx.co.id) and the official company website, as well as the PROPER results report via <http://proper.menlhk.go.id>.

### 3.1. Measurement Scales and Operational Variables

The table below displays the operational definitions of the measuring scales and variables used in this study:

**Table 1.** Operational Variabel

Nama Variabel	Indikator	Definisi Variabel	Skala
<b>Dependent variables</b> , can also be influenced or bound. ( <a href="#">Indriantoro dan Supomo, 2018:63</a> ): Financial performance (Y)	ROA = Net Profit Total asset ( <a href="#">Fahmi, 2017: 68</a> )	Return on assets (ROA) is a part of the profitability ratio that provides information about the ratio of net profits earned to the total assets owned.	Ratio
<b>Independent variables</b> are free variables or influencing variables. ( <a href="#">Indriantoro dan Supomo, 2018:63</a> ): Carbon Emission Disclosure (X1)	<i>Carbon Emission Disclosure Checklist:</i> The final score falls between 0 (the lowest possible score) and 18 (the maximum possible score). ( <a href="#">Choi et al., 2013</a> )	The following five primary areas include the parameters used to determine the extent to which carbon emissions are disclosed: energy consumption, reduction of greenhouse gas emissions and costs, climate change (risk and opportunity), greenhouse gas emissions (GRK), and carbon accountability ( <a href="#">Choi et al. 2013</a> ).	Interval

Nama Variabel	Indikator	Definisi Variabel	Skala
Environmental cost (X2)	Environmental cost = <i>Cost Profit</i> (Saputra, 2020)	Compare the company's CSR expenditures to its operating year's profits.	Ratio
A moderate variable has the ability to either amplify or attenuate the direct correlation between an independent variable and a dependent variable. (Indriantoro dan Supomo, 2018:64): Environnemental performance (Z)	Gold: Very Good = 5 Green: Good = 4 Blue: Enough = 3 Red: Bad = 2 Black: Very Bad = 1 (Kementerian LHK, 2018)	A government initiative to enhance company environmental performance management in compliance with legal and regulatory requirements is the Environmental Performance Rating Program (PROPER). (Kementerian LHK, 2018).	Interval

The four hypothetical tests of normality, multicollinearity, heteroskedasticity, and autocorrelation are used to analyze research data. An MRA model, designed specifically for double linear regression (two or more independent variables), was employed for subsequent testing: (Indriantoro & Supomo, 2018:200). Following the following equation, the research model is presented :

$$Y = a_1 + b_1X_1 + b_2X_2 + e_1$$

$$Y = a_2 + b_1X_1 + b_2X_2 + b_3Z + b_4X_1Z + b_5X_2Z + e_2$$

Keterangan:

- Y = Financial performance
- a = Regression equation constant
- b1- b5 = Regression coefficient
- e1, e2 = Error
- X1 = Carbon emission disclosure
- X2 = Environmental cost
- Z = Environnemental performanc

#### 4. Results and Discussion

**Table 2.** Descriptive Statistic Analysis

	<i>Descriptive Statistics</i>				
	N	Minimum	Maximum	Mean	Std. Deviation
Carbon Emission Disclosure	72	1	16	9.58	4.258
Environmental Cost	72	-3.40	18.91	1.5448	3.27897
Environmental Performance	72	3	5	3.51	0.556
Financial Performance	72	-0.03	0.12	0.0407	0.02954
Valid N (listwise)	72				

The table indicates that the data convergence is homogenous when the standard deviation value is less than or equal to the mean, and heterogeneous when the standard deviation value is more than or equal to the mean. When the standard deviation of CED, financial performance, and environmental performance is less than the mean, it suggests that the data is homogeneous.

#### 4.1. Classical Assumption Test

##### a. Normality Test

Normality test is performed to see if each variable has been distributed normally. The results of the normality test show that an asymptote sig. (2-tailed) of 0.200 means the data is distributed normally, or  $0.200 > 0.05$ .

**Table 3.** Normality Test  
*One-Sample Kolmogorov-Smirnov Test*

<i>Unstandardized Residual</i>	
N	72
Asymp. Sig. (2-tailed)	0.200 <sup>c,d</sup>

## b. Multikolinearity Test

Determines if the independent variable in the regression model deviates from the test conditions. Without multicollinearity, tolerance  $>0.10$  and VIF  $<10.00$  are suggested.

**Table 4.** Multikolinearity test

<i>Coefficients<sup>a</sup></i>			
	Model	<i>Collinearity Statistics</i>	
		<i>Tolerance</i>	<i>VIF</i>
1	Carbon Emission Disclosure	0.923	1.084
	Environmental Cost	0.974	1.027
	Environmental Performance	0.945	1.058

Its carbon emission disclosure tolerance value is 0.923, its environmental cost is 0.974, and its environmental performance is 0.945, all of which are greater than 0.10, according to the above table's three factors. There is no multicollinearity because the VIF value of the carbon disclosures is 0.084, the environmental costs are 1.027, and the ambient performance is 1.058.

## c. Heterocadasthesis Test

The purpose of the process is to find out if the fixed residual variance contains any inequalities. Assuming that there are no heterocadasthesis symptoms, we run the Park test when the significance value is more than 0.05.

**Table 5.** Heteroskedasthesis test

<b>Model</b>	<b>Sig.</b>
Carbon Emission Disclosure	0.195
Environmental Cost	0.631
Environmental Performance	0.810

As seen in [table 5](#), where the disclosure values of carbon emissions, environmental costs, and environmental performance are consecutive at 0.195, 0.631, and 0.810, significance values larger than 0.05 indicate no heterocadasthesis.

## d. Autocorrelation Test

Carried out to ascertain whether collation took place amongst residues. The run test is conducted on the presumptions that there is no autocorrelation and that the Asymp. Sig. (2-tailed) value is greater than 0.05 ( $> 0.05$ ).

**Table 6.** Autocorrelation test

<i>Runs Test</i>	
	<i>Unstandardized Residual</i>
Asymp. Sig. (2-tailed)	0.154
a. Median	

## 4.2. Result Study

**Table 7.** Model Validity Test (f)

<b>ANOVA<sup>a</sup></b>			
Model		<b>F</b>	<b>Sig.</b>
1	<i>Regression</i>	5.786	0.000 <sup>b</sup>
	<i>Residual</i>		
	<i>Total</i>		

As shown by the [table](#) above, the f-count value is 5,786 with a significance value of 0.000. Therefore, further analysis deserves to be done.

**Table 8.** MRA Test

<i>Coefficients<sup>a</sup></i>			
Model		t	Sig.
1	(Constant)	-0.622	0.536
	Carbon Emission Disclosure	0.446	0.657
	Environmental Costs	2.006	0.049
	Environmental Performance	2.767	0.007
	MODERAT1	-4.585	0.000
	MODERAT2	2.425	0.018

$$Y = -0,33 + 0,002 X_1 + 0,014 X_2 + 0,029 Z - 0,001 X_1Z - 0,004 X_2Z$$

The carbon emission disclosure variable ( $X_1$ ) has a significance of  $0.000 < 0.05$  and a t value of 0.446. It was shown that the first hypothesis was rejected, namely that the disclosure of carbon emissions had a negative impact on financial performance. The environmental cost variable ( $X_2$ ) has a degree of significance of 2,006, which indicates that hypothesis two is accepted, meaning that environmental costs have a positive impact on financial performance.

The moderate variable 1 has a significance of  $0.000 < 0.05$ , which means the third accepted hypothesis is that environmental performance ( $Z$ ) has the ability to moderate the relationship between financial performance ( $Y$ ). The moderate variable 2 has a significance of  $0.018 < 0.05$ , indicating that the fourth accepted hypothesis is that environmental performance ( $Z$ ) has the ability to moderate the relationship between financial performance ( $Y$ ) and environmental cost ( $X_2$ ).

**Table 9.** Determination Coefficient Test

<i>Model Summary<sup>b</sup></i>				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.552 <sup>a</sup>	0.305	0.252	0.02555

With an adjusted R square value of 0.252, the study's variable represents 25.2% of financial performance; other variables outside the research model contribute to the remaining 74.8%.

#### 4.3. Discussion

There is no correlation between the financial performance measured by ROA and the disclosure of carbon ( $X_1$ ) emissions. The first hypothesis ( $H_1$ ) is not supported, as indicated by [table 8](#) significance level of  $0.657 < 0.05$ . This is because the research was conducted in the extreme conditions of COVID-19, during which all companies' income decreased, resulting in low ROA levels. Carbon emissions assertions remained voluntary, resulting in a low level of disclosures dependent on each company's regulations. The study [Salsabila \(2022\)](#) corroborates these conclusions, showing that financial performance is unaffected by the disclosure of carbon emissions. Nevertheless, there is a problem with the legitimacy hypothesis proposed by [Crossley \(2021\)](#), according to which there is an improvement in stakeholder and public confidence and that consistent and transparent carbon disclosure can affect higher disclosure costs and company revenue.

[Table 8](#) demonstrates that the second hypothesis ( $H_2$ )—that is, the idea that environmental costs ( $X_2$ ) improve financial performance (ROA)—is supported. A statistical significance level of less than 0.05, or 0.049, indicates that an organization's financial performance is positively correlated with its environmental cost management. According to the legitimacy hypothesis ([Crossley, 2021](#)) a firm can use legitimacy as a strategy to grow. According to prior research by [Hapsari, et al. \(2021\)](#), environmental expenses significantly and favorably affect the financial performance predicted by ROA.

With a significance rate of  $0.000 < 0.05$ , the third hypothesis ( $H_3$ ), which states that carbon disclosure influences financial success with environmental performance operating as a moderating

variable, is supported. Financial performance can be moderated by the impact of carbon disclosure on environmental performance as evaluated by PROPER. The count t value of -4,585 and the mild coefficient's magnitude of -0,001 indicate that environmental performance may mitigate the financial performance impact of carbon disclosure. Suganda (2018:15) signal theory states that environmental performance that is shown by appropriate values can serve as a signal for stakeholders. Stakeholders may be concerned and the company may receive negative signals from a low-category PROPER grade. The relationship between carbon emission disclosure (CED) and the company's value is moderated by environmental performance, according to Rahmanita (2020) study that used a pure moderator type. Furthermore, Gabrielle and Toly's (2019) research reveals that environmental performance can regulate the relationship between CED and a company's significance.

Using environmental performance as a moderation variable with a significance rate of  $0.018 < 0.05$ , the fourth hypothesis (H<sub>4</sub>) that environmental costs influenced financial performance was supported. Since environmental performance is a moderation factor, the relationship between environmental cost (X<sub>2</sub>) and financial performance is strengthened, as indicated by the t-value of 2.425 and the size of the Z variable interaction coefficient (moderat2) of 0.001 (Y). Sustainability as shown by the PROPER value can serve as a signal to stakeholders, as per Suganda (2018:15) signal theory. A commitment to controlling environmental expenses can lower business risk and boost financial performance, which is why stakeholders are supportive of this PROPER upgrade. The link between environmental expenses and business success can be moderated, as Siagian (2021) demonstrates.

## 5. Conclusion

The disclosure of carbon emissions had no impact on the financial performance, environmental cost influences financial performance. Carbon disclosure affects financial performance, with environmental performance as a variable of moderation, environmental performance moderates the impact of environmental costs on financial performance. The proper rating helps the company get a positive rating from stakeholders related to its commitment to managing environmental costs, which can improve the company's financial performance.

This study has limitations, the research data on environmental cost variables has not yet been consistently measured and reported, and it may be biased due to calculation errors by the author, even though each company's data format varies. This research only assesses the existence of carbon emission disclosures using the Carbon Disclosure Project's (CDP) index list; it is unable to investigate the caliber of carbon disclosure. Based on the research findings and limitations indicated above, below are some recommendations for future researchers to conduct research innovations by evaluating environmental costs using various methodologies. Furthermore, researchers might conduct research breakthroughs by evaluating the quality of carbon emission disclosure.

## References

- Alfayerds, W. D., & Setiawan, M. A. (2021). Pengaruh Pengungkapan Emisi Karbon dan Annual Report Readability terhadap Nilai Perusahaan. *Jurnal Eksplorasi Akuntansi*, 3(2), 349–363. <http://jea.ppj.unp.ac.id/index.php/jea>
- Amalia, D. N., & Daljono. (2021). Pengaruh Reputasi Perusahaan Terkait Emisi Gas Rumah Kaca Dan Tanggung Jawab Sosial Terhadap Nilai Perusahaan (Studi Empiris terhadap Perusahaan Manufaktur yang Terdaftar di BEI Tahun 2014-2018). *Diponegoro Journal Of Accounting*, 10 (1), 1–11. <http://ejournal-s1.undip.ac.id/index.php/accounting>
- Ariefana, P. (2019, August 8). *47 Industri Manufaktur Mencemari Udara Jakarta, Tapi Tak Ditutup*. <https://www.suara.com/news/2019/08/08/141200/47-industri-manufaktur-mencemari-udara-jakarta-tapi-tak-ditutup>
- Choi, B. B., Lee, D., & Psaros, J. (2013). An analysis of Australian company carbon emission



- disclosures. *Pacific Accounting Review*, 25(1), 58–79. <https://doi.org/https://doi.org/10.1108/01140581311318968>
- Crossley, R. M. (2021). *Sustainability and legitimacy theory : The Case of Sustainable Social and Environmental Practices of Small and Medium-Sized Enterprises*. December 2020, 3740–3762. <https://doi.org/10.1002/bse.2837>
- Deegan, & Michael, C. (2014). *Financial accounting theory* (K. McDevitt (ed.); 4th ed.). McGraw-Hill Education (Australia) Pty Ltd.
- Esomar, M. J. F. (2021). Analisa Dampak Covid-19 terhadap Kinerja Keuangan Perusahaan Pembiayaan di Indonesia. *Jurnal Bisnis, Manajemen Dan Ekonomi*, 2(2), 22–29. <https://doi.org/10.47747/jbme.v2i2.217>
- Fahmi, I. (2017). *ANALISIS KINERJA KEUANGAN Panduan bagi Akademisi, Manajer, dan Investor untuk Menilai dan Menganalisis Bisnis dari Aspek Keuangan* (4th ed.). CV ALFABETA.
- Gabrielle, & Toly, A. A. (2019). The Effect Of Greenhouse Gas Emissions Disclosure And Environmental Performance On Firm Value: Indonesia Evidence. *Jurnal Ilmiah Akuntansi Dan Bisnis*, 14(1), 106–119. <https://doi.org/10.24843/jiab.2019.v14.i01.p10>
- Hapsari, H. R., Irianto, B. S., Rokhayati, H., & Purwokerto, K. (2021). Pentingnya Alokasi Biaya Lingkungan terhadap Kinerja Lingkungan dan Profitabilitas Perusahaan. *Jurnal Riset Akuntansi Dan Keuangan*, 9(2), 407–420. <https://doi.org/10.17509/jrak.v9i2.29598>
- Ifada, L. M., Indriastuti, M., Ibrani, E. Y., & Setiawanta, Y. (2021). *Environmental Performance and Environmental Disclosure: The Role of Financial Performance*. 8(4), 349–362. <https://doi.org/10.13106/jafeb.2021.vol8.no4.0349>
- Indriantoro, N., & Supomo, B. (2018). *Metedologi Penelitian Bisnis untuk Akuntansi & Manajemen* (Maya (ed.); 1st ed., Vol. 1). ANDI Offset, BPFE.
- Kementerian LHK. (2018, October 23). *Program Penilaian Peringkat Kinerja Perusahaan Dalam Pengelolaan Lingkungan*. Kementerian Lingkungan Hidup Dan Kehutanan Republik Indonesia. <https://www.menlhk.go.id/site/post/119>
- Khairunisa, S., & Pohan, H. T. (2022). Pengaruh Pengungkapan Emisi Karbon, Kinerja Lingkungan Dan Biaya Lingkungan Terhadap Kinerja Keuangan Perusahaan. *Jurnal Ekonomi Trisakti*, 2(2), 283–292. <https://doi.org/10.25105/jet.v2i2.14144>
- Kraus, S., Shafique Ur Rehman, F., & García, J. S. (2020). *Corporate Social Responsibility and Environmental Performance: The Mediating Role of Environmental Strategy and Green Innovation, Technological Forecasting and Social Change*. 160(ISSN 0040-1625). <https://doi.org/10.1016/j.techfore.2020.120262>.
- Manisa, D. E., & Defung, F. (2017). Pengaruh Pengungkapan Sustainability Report terhadap Kinerja Keuangan Perusahaan Infrastruktur yang Terdaftar di Bursa Efek Indonesia. *FORUM EKONOMI*, 19(2), 2017.
- Masripatin, N., Rachmawaty, E., Suryanti, Y., Setyawan, H., Farid, M., & Iskandar, N. (2017). *Strategi Implementasi NDC (Nationally Determined Contribution)* (M. F. S. D. I. N. Masripatin (ed.)). Direktorat Jenderal Pengendalian Perubahan Iklim, Kementerian Lingkungan Hidup dan Kehutanan. [https://ditjenppi.menlhk.go.id/reddplus/images/adminppi/dokumen/strategi\\_implementasi\\_ndc.pdf](https://ditjenppi.menlhk.go.id/reddplus/images/adminppi/dokumen/strategi_implementasi_ndc.pdf)
- Morris, R. D. (1987). Signalling, Agency Theory and Accounting Policy Choice. *Accounting and Business Research*, 18(69), 47–56. <https://doi.org/10.1080/00014788.1987.9729347>

- Rahmanita, S. A. (2020). Pengaruh Carbon Emission Disclosure Terhadap Nilai Perusahaan Dengan Kinerja Lingkungan Sebagai Variabel Moderasi. *Jurnal Akuntansi Integratif*, 6(1), 53–70.
- Ramadhana, N. M., & Setiawan, M. A. (2020). Pengaruh Pengungkapan Biaya Lingkungan Terhadap Kinerja Keuangan Dengan Kinerja Lingkungan Sebagai Variabel Moderasi. *Jurnal Eksplorasi Akuntansi (JEA)*, 2(4).
- Roziq, A., Sulistiyo, A. B., Shulthoni, M., & Anugerah, E. G. (2021). An Escalation Model of Muzakki's Trust and Loyalty towards Payment of Zakat at BAZNAS Indonesia. *Journal of Asian Finance, Economics and Business*, 8(3), 551–559. <https://doi.org/10.13106/jafeb.2021.vol8.no3.0551>
- Salsabila, K. (2022). *Pengaruh pengungkapan emisi karbon dan pengungkapan corporate social responsibility terhadap kinerja keuangan pada perusahaan manufaktur yang terdaftar di Bursa Efek Indonesia periode 2016-2020* [Universitas Trisakti]. [http://repository.trisakti.ac.id/usaktiana/index.php/home/detail/detail\\_koleksi/0/SKR/judul/000000000000108525](http://repository.trisakti.ac.id/usaktiana/index.php/home/detail/detail_koleksi/0/SKR/judul/000000000000108525)
- Saputra, M. F. M. (2020). Pengaruh Kinerja Lingkungan Dan Biaya Lingkungan Terhadap Kinerja Keuangan Dengan Pengungkapan Lingkungan Sebagai Variabel Intervening. *Jurnal Riset Akuntansi Tirtayasa*, 5(02), 123–138.
- Siagian, A. O. (2021). Pengaruh Environmental Cost Terhadap Kinerja Bisnis Dengan Kinerja Lingkungan Sebagai Variabel Moderasi. *Jurnal Ecodemica: Jurnal Ekonomi, Manajemen, Dan Bisnis*, 5(1), 51–60. <http://ejournal.bsi.ac.id/ejurnal/index.php/ecodemica>
- Suandi, A., & Ruchjana, E. T. (2021). Pengaruh Kinerja Lingkungan Dan Biaya Lingkungan Terhadap Return on Assets (Roa). *Jurnal Riset Terapan Akuntansi*, 5(1), 2021. <https://jurnal.polsri.ac.id/index.php/jrtap/article/view/2419>
- Suganda, T. R. (2018). *Teori dan Pembahasan Reaksi Pasar Modal Indonesia*. Seribu Bintang.
- Syahri, E. R. (2023). Kinerja Keuangan dan Lingkungan: Dampak Terhadap Pengungkapan Lingkungan di Indonesia. *Management, Accounting and Technology (JEMATEch)*, 6(1). <https://doi.org/10.32500/jematech.v6i1.2605>