



The Effect Of Environmental Performance, Carbon Emissions On Corporate Financial Performance With Code Of Conduct as a Moderating Variable

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abstract

This study examines the relationship between the issue of environmental performance and carbon emissions on company performance with a code of conduct as a moderating variable. Weather variability in many regions, including Indonesia, has an adverse impact on health in the long term. The strong commitment of the Government of Indonesia has been conveyed in the Paris Agreement and realized with Nationally Determined Contributions (NDC) 29% with its efforts and international support is expected to reduce carbon emissions by 41% in 2030. This commitment is realized by updating Indonesia's NDC by adding the marine and fisheries sector. The effect of environmental performance and Carbon Emissions on the Company's Financial Performance with a moderated Code of Conduct is 49.5%, and 50.5% is influenced by other factors not observed in this study. The Code of Conduct does not have a significant effect directly on the Company's Financial Performance.

Develop an operating model of environmental performance in management, and companies can keep the company alive without sacrificing the survival of humanity by reducing these carbon emissions on Earth. This study discusses the difficulties associated with environmental performance, carbon emissions, and codes of conduct in the context of intentional research in management. It offers novel insights into the transformations that firms and management principles and practices should undergo to mitigate irreversible environmental harm.





Keywords: environmental performance, carbon emissions, code of conduct, company performance

1. INTRODUCTION

The Nationally Determined Contribution to GHG reduction is at least 29% to 41% in 2030 by Government Regulation No.98 of 2021 on implementing Carbon Economic Value and the Minister of Environment and Forestry Regulation on the performance of carbon economic Value. The long-term strategy the government prepared to reduce carbon emissions is the Long-Term Strategy for Low Carbon Climate Resilience/LTS-LCCR in 2050 and Net Zero Emission in 2060. The government's dedication to addressing climate change was significantly enhanced through the utilization of financial resources from both the state budget and the private sector.. <https://fiskal.kemenkeu.go.id/publikasi/siaran-pers-detil/385>.

Since the industrial revolution, human activities that generate GHG emissions have posed global challenges that have not been seen in the past regarding social development and impacts on the natural environment. There is a growing recognition of the need for environmental conservation and the advancement of international collaborative frameworks, leading to a widespread agreement on the necessity of regulating greenhouse gas emissions worldwide. In order to address the irreversible and catastrophic impacts of climate change, a more significant number of firms must undertake proactive measures and establish credible pledges to mitigate climate change. These commitments should align with the objectives outlined in the Paris Agreement and the United Nations Sustainable Development Goals.

As a prominent global food and beverage corporation, PepsiCo has undertaken significant endeavors in aligning its climate objectives with scientific principles. These commitments include a 75% reduction in greenhouse gas (GHG) emissions from its direct operations, based on a 2015 reference point, and a 40% reduction in GHG emissions throughout its indirect value chain by 2030. Furthermore, PepsiCo has set an ambitious target of achieving zero emissions by 2040. PepsiCo has incorporated carbon and climate reduction strategies in all areas of focus across its value chain, leveraging its efforts in scaling up sustainable agriculture and regenerative farming practices, reducing the use of plastics and increasing the use of recycled and renewable materials and adopting carbon shift alternatives; balancing efficient and alternative solutions in transportation and distribution; shifting to renewable electricity and fuels in manufacturing and fleets. By 2021, PepsiCo will





have achieved 23% of the absolute emission target for Scope 1 and 2 and 7.9% of the total emission target for Scope emission reductions (Duan Qian et al., 2022).

As a market-oriented environmental regulation policy, carbon emissions trading policy (CEiT) neutralizes the cost of reducing corporate carbon emissions, which will be transmitted to the securities market and may affect the firm's market value. Based on the results of several previous studies, the CEiT policy will decrease the company's market value. Implementing the CEiT policy will increase the firm's production and operating costs, which will reduce the firm's investment budget.

After implementing the CET policy, a carbon emission permit market is established, where the supply and demand equilibrium determines the price of carbon emission permits. The cost of carbon emission permits signals companies to choose between investing in emission reductions or purchasing emission allowances in the carbon trading market. Thus, firms will invest in emission reductions until the marginal cost equals the CET permit price.

Emissions trading schemes (ETS) are practical measures that facilitate economic growth and carbon mitigation, especially for developing countries like China. These schemes can further influence regulated companies' cash flow, production, and investment decisions. (Tian et al., 2022). For example, the Chinese government has successively launched various policies to control GHG standards. As the most critical standard, the carbon emissions trading policy was implemented in several provinces and regions in China in 2013, aiming to limit corporate carbon emissions. However, the government's control of enterprises' carbon emissions limits their rapid economic growth to a certain extent. Enterprise green technology innovation can be an effective means to ensure the implementation of low-carbon policies and promote sustainable economic growth simultaneously. (Tian et al., 2022).

The purpose, objectives, and benefits of the ethics of conduct are ethical guidelines for company personnel to implement GCG in all aspects and activities of the company to maintain and improve organizational performance. Indonesian regulations related to the code of conduct are contained in RI Law No. 40 of 2007 concerning PT, Capital market regulations, PT articles of association, vision and mission, and GCG. And Decree of the Minister of SOEs No. Kep-117/M-MBU/2002 on code of conduct

Understanding companies' financial implications in reporting their carbon emissions is essential. First, countries like the UK have established carbon taxes as a compliance requirement. (Bae Choi, Lee, and Psaros 2013). Second, the Kyoto Protocol, which includes countries such as Australia, China, Japan, New Zealand, Singapore, the UK, and the US (Houge





et al., 2022), binds industrialized countries to reduce their GHGE emissions. Third, the Paris Agreement involves GHGE mitigation (Unfccc. int n.d.).

Several other nations have implemented Emissions Trading Schemes, together with a set of rules and regulations, with the primary objective of mitigating greenhouse gas emissions (GHGE). In the United States, water and air quality standards are designed to ensure their cleanliness. (EiPA.gov n.d.) and Australia's National Greenhouse and Energy Reporting (NGER) Act 2007 in Australia. There is also pressure from corporate stakeholders to improve their GHGE disclosures. (Kolk, Levy, and Pinkse 2008). Several companies, mainly from high-emission-intensive industries, have taken a voluntary approach to disclose their GHGE. Some companies have also made substantial R&D investments to find more efficient and innovative ways to operate while reducing their carbon footprint.

While several studies have found a significant positive relationship between climate change performance and firm performance (Borges et al., 2020; Moyo & Wingard, 2015; Wang et al., 2014), others have found neutral or negative results (Alvarez, 2012; Lioui & Sharma, 2012).

The imposition of a carbon tax aims to increase the state budget and as a climate regulation and mitigation function to achieve economic growth by the polluter pays principle. There is great hope that the issuance of regulations related to carbon tax can change behavior and economic activities that are greener and more sustainable. This is stated in Law No.7 of 2021 concerning harmonizing tax regulations (HPP Law). Therefore, we study the effect of KL and carbon emissions on corporate financial performance with a code of conduct as moderation using companies listed in the Ministry of Environment that published reports from 2020 to 2021.

2 LITERATURE REVIEW

2.1 Theoretical foundation

a. Legitimacy Theory

Written and unwritten norms and legal systems are used as the basis for efforts to legitimize the company to run according to the rules in which the company operates. Efforts to perceive and assume that the entity's activities are appropriate to the normative system, value, trust, and the development of social definitions are continuous efforts from the entity to legitimize the company. (Siregar and Br Bukit, 2018; Novrizal and Fitri, 2016; Sari, 2018).

Organizational incentives for voluntary environmental disclosure are explained by legitimacy theory. (O'Donovan, 2002). Adams (2015) revealed that legitimacy theory stems





from a congruent value system aligned with the more extensive social value system of which the organization is a part. The legitimacy of the entity will be threatened by the actual and potential differences between the two value systems. (Adams, 2015; O'Donovan, 2002).

Legitimacy theory studies the interaction of companies with society through regulations set by regulators. According to (Baker et al., 2012), the role of disclosure bridges the company with society. Recognition of the entity's legitimacy from a group of people is an effort to convince the community that its business activities are by applicable norms and standards. (Deegan, Rankin, and Tobin 2002)

A company can obtain recognition of the legitimacy of a company if the company and the community with which it has a relationship can obtain the same expected results. This is to reduce the risk in the long run from the demands of society at any time if the company violates the norms and standards set by the government. (Deegan, Rankin, and Tobin 2002).

The foundation of the company's social contract with the surrounding community and its use of resources from that place is a form of legitimization theory. (Suryono and Prastiwi, 2011; Wicaksono and Chariri, 2015). Legitimacy efforts can be built because of the social contract and the recognition of the community where the company is located without ignoring the strength of finance in the long term to support these social actions.

Organizational behavior aware of the limitations suppressed by social norms and values and reactions to these limitations requires analysis to stay on track by the code of ethics that is held as a guideline, one of which is without ignoring environmental conditions. (Wicaksono and Chariri 2015)

The alignment of the social value system of activities with the norms in the community where the organization is part of the system shows the company's legitimacy. Otherwise, if there is no harmony between the two systems, it can threaten the company's legitimacy.

The description of legitimacy theory shows the importance of positive stakeholder perceptions; on the other hand, the organization must also strive to ensure that the company's operations are carried out within the boundaries and norms that do not violate the rules. (Deegan, Rankin, and Tobin, 2002)

b Stakeholder Theory

The entity's operation not only benefits the entity owner but is helpful for internal and external stakeholders. Stakeholder support for the company influences the entity's existence (Wicaksono & Chariri, 2015).





One of the entity's activities is seeking stakeholder support for the company's survival (Adams, 2015). The company's adaptation will be more significant, along with the magnitude of the role of stakeholders towards the company. Social Disclosure is used as the company's communication with stakeholders.

Legitimacy theory is different from Stakeholder Theory, which states that there are different groups of stakeholders, causing different views of the organization, so a social contract is needed that adapts to the needs of each stakeholder. (Deegan, Rankin, and Tobin 2002).

2.2 Corporate Environmental Performance and Corporate Financial Performance

The relationship between corporate environmental performance and financial performance. It is imperative to evaluate companies in terms of their sustainability to ensure the long-term viability of the ecology on this island; one of the performance factors that the company must fulfill to preserve its environment is related to the environment. In addition, maintaining and preserving the environment is a non-negotiable need for companies. This is due to pressure from the government, as the highest-ranking regulator, and various community organizations concerned about the environment. (Irwhantoko and Basuki, 2016).

According to research conducted by (Sawyer et al., 2002), Important information related to efficient production levels, productivity and safety standards, environmental degradation costs, and new market opportunities can be gleaned from environmental performance reporting sources.

According to several studies analyzing the effect of KL companies on KK companies with the results of a significant positive effect on financial performance. (Manrique & Ballester, 2017 ; Suwarno and Muthohar 2018; dan Dobrei et al, 2015). While the cons of Iwata, Okada, and Samreth (2010) state that the company's KL has no significant effect on the company's KK

2.3 Disclosure of Corporate Carbon Emissions and Corporate Financial Performance

The relationship between carbon emissions disclosure and corporate financial performance is a hot topic of discussion. The adoption of environmental responsibility not only aligns with the long-term interests of the entity but also supports the government's commitment to mitigating global carbon emissions. A firm's financial performance is





intrinsically linked to its responsibility for the surrounding environment. According to several studies analyzing the effect of corporate carbon emission disclosure on financial performance conducted by (Suwarno and Muthohar, 2018), the disclosure of corporate carbon emissions significantly positively affects the company's financial performance. Meanwhile, research conducted by (Ganda Milondzo, 2018) asserts that the company's Key Performance Indicator (KL) has a notable detrimental impact on the company's financial outcomes.

2.3 Environmental Performance

Mechanism Integration of the environment into operating activities and interactions with stakeholders voluntarily is implementing environmental performance that exceeds its legal responsibilities. (Haholongan, 2016). Environmental management systems can be measured by integrating environmental performance results with goals and objectives. (Sunu, 2001).

The environmental performance disclosures capture responsibilities resulting from the impacts of the entity's operations, such as energy use (Rahmawati & Subardjo, 2017). Environmentally friendly energy and efficient use of SD are efforts to preserve the environment at the company level. At the government level, the company's environmental performance is appreciated by issuing an assessment of compliance with LH regulations, namely PROPER (Company Performance Rating Program in Environmental Management by KLHK Indonesia

2.4 Carbon Emission

The release of carbon into the atmosphere caused by GHG emissions significantly contributes to global climate change (eicolifei.com). Carbon dioxide pollution continues to increase in several regions, along with the extensive use of fossil energy, land exploitation, forest fires, and increasing anthropogenic activities. (Slameit S, Peineiliti Lapan).

Air pollution activities carried out by companies through their operations are expected to be disclosed in carbon emission disclosure by the regulations set by each jurisdiction.

To reduce carbon emissions in Indonesia, the government has periodically issued and revised regulations related to carbon emissions. As stipulated in Presidential Regulation No. 61 the Year 2011, regarding the National Action Plan for Reducing Greenhouse Gas Emissions, and Presidential Regulation No. 61 the Year 2011, regarding the National Action





Plan for Reducing Greenhouse Gas Emissions No. 71, the Year 2011 on the Implementation of National GHG Inventory. In addition, stakeholders are starting to realize and demand companies' disclosure of carbon emissions. (Jannah and Muid, 2014) Discloses that CED is a set of quantitative and qualitative past information and predictions of future carbon pollution for which financial implications can be predicted to deal with climate variability.

Disclosure of operating information is a requirement for entities. The annual report is one of the indicators of corporate disclosure and accountability. Disclosure aims to fulfill information for stakeholders and achieve reporting objectives (Suwardjono, 2008). Reported carbon emission performance is an effort to care for the environment and facilitate evaluation and decision-making. (Ennis et al. 2012).

Disclosure related to social and environmental activities is also contained in PSAK No.1, where entities present separate LK and environmental reports where environmental factors play an essential role for industries where employees are users of financial statements.

Carbon Emission Disclosure is applied as an additional report to the environmental disclosure as stated in the PSAK. Environmental disclosure items include GHG emission intensity, energy use, corporate governance, climate change strategy, climate performance, risks, and opportunities. (Cotter, Lokman, and Najah 2019).

The measurement of Carbon Emission Disclosure is adopted from five dimensions (Bae Choi, Lee, and Psaros, 2013) with 18 indicators, namely Climate change (CC), Greenhouse gases (GHG), Energy consumption (EiC), Reduction and costs (RC), and Accountability for carbon emissions (AEC).

2.5 Factors Affecting Carbon Emission Disclosure

Volunteer Disclosure by the entity, one of which is environmental social disclosure. The positive and negative impacts caused by the company's activities are part of the environmental, and social disclosure to legitimate the company's accountability. (Wicaksono and Chariri, 2015).

This study examines the several factors influencing the quantity and quality of Carbon Emission Disclosure information. These factors are Media Exposure, Industry Type, Profitability, Company Size, Environmental Performance, and Leverage.

2.6 Media Exposure





Media influences stakeholder decisions through communication and information, such as CSR. Media coverage affects public attitudes as stakeholders and also impacts voluntary environmental disclosure. (Dawkins and Fraas, 2011).

According to (Carpenter et al. 2001), Public opinion of the company can change along with increased environmental and social media coverage and indirect supervision from Non-Governmental Organizations (NGOs). The company's disclosure strategy is determined by many factors, one of which is the role of the news media.

The control function inherent in media coverage is vital for companies and stakeholders, so a symbiotic mutualism relationship is needed to manage the impact of company operations. (McCombs and Shaw, 2016) The influence of the media on public behavior in evaluating companies is significant. Disseminating positive and negative information about a firm through media channels can significantly influence the company's overall worth.

2.7 Industry Type

Indonesia's commitment to reduce GHG by 26% in 2020 under the Business as Usual (BAU) scenario is guided by Presidential Regulation No.61 of 2011 related to the National Action Plan for Reducing GHG Emissions. The type of industry in which a company operates determines the level of pollution. (Choi, Lee, and Psaros, 2013) The intensive industry category produces more carbon emissions than the non-intensive industry category.

Global Industry Classification Standard (GICS) As a global standard for categorizing entities in the industrial sector based on their primary business activities, it categorizes emission-intensive and non-emission-intensive industries. Intensive industries include energy, transportation, materials, and utilities. (Choi, Lee, and Psaros 2013).

2.8 Financial Performance

Financial performance is a quantitative and qualitative depiction of financial condition during a specific period. (Bhunja, Khan, and MuKhuti, 2011). Meanwhile, financial performance analysis is a process of quantitative and qualitative characteristics of accounting and financial statements to obtain information on the performance of company management. (Bhunja, Khan, and MuKhuti 2011).

The effectiveness and efficiency of management in utilizing resources is an effort to achieve high performance and generally contribute to the country's economy. (Majali,



Alamro, and Al-Soub 2012). This study uses the manufacturing sector analyzed to obtain information related to its financial performance.

Measuring tools that can be used for financial performance are Return on Assets (ROA) and Return on Equity (ROE). ROA is considered more comprehensive because it measures all intangible and non-intangible assets. I (Simamora,2000).

In this research, the researcher uses the ROA measurement tool to analyze its financial performance because it can describe the increasing and decreasing financial performance affected by the company's strategy and internal control.

2.9 Code Of Conduct

The ethics of behaviour or code of conduct is prepared with the intention that all those involved in the company's operations carry out their activities by the GCG principles so that the company's performance can be maintained at its best level. This code of ethics must always be guided by the applicable regulations, namely the Decree of the Minister of State-Owned Enterprises keep-117/M-MBU/2002 on code of conduct, as well as Law No. 40 of 2007 on Limited Liability Companies.

3. RESEARCH METHOD

3.1 Data Type and Source

Quantitative research with secondary data sources is used in this research according to the Decree of the Ministry of Environment with the company's website and www.idx.co.id, in the form of a Sustainability Report (SR) and Annual Report (AR).

Population and Sample

The population utilized in this study is companies listed with the Proper rating in the environmental ministry from 2020 to 2021. This meets the requirements for a sample of 360 observations of listing on the IDX with SR publications and company annual reports.

3.2 Instrument

**Table 1.Environmental Performance Instrument
PROPER Classification**

Score	Color Classification	Description
5	Gold	Very good at times
4	Green	Very good

3	Blue	Good
2	Red	Bad
1	Black	Very bad
0	Nil	Not participating in PROPER

Source: Processed by the author

Environmental Performance is prepared and disclosed as an effort to disclose information regarding the impact of the company's operations. Environmental performance assessment refers to PROPER, which researchers used in the past. (Amaliyah and Herwiyanti 2019).

Table 2. Carbon Emissions Instrument

category	Item	Description
Climate change: Risks and opportunities	CC1	Assessment and management of climate change risks and opportunity identification.
	CC2	Assess current and future climate change's financial, business, and opportunity implications.
Greenhouse Gas Emissions (Greenhouse Gas)	GHG1	Description of the methodology of the GHG measurement tool (e.g., GHG protocol or ISO).
	GHG2	Internal verification of assessors
	GHG3	Total GHG (metric tons CO ₂ -ei) generated.
	GHG4	Scope 1 and 2 disclosure, or three direct GHG emissions.
	GHG5	Disclosure of GHG emissions by origin or source (e.g., coal, electricity, etc.).
	GHG6	Disclosure of GHG emissions by facility or segment level.
	GHG7	Comparison of GHG emissions with previous years.
Energy Consumption (EiC/Energyne	EiC1	Energy consumption (e.g., tera-joules or Peta-joules).
	EiC2	Calculation of energy used from renewable resources.

Energy Consumption)		
	EiC3	Disclosure by type, facility, or segment.
Greenhouse Gas Reductions and Costs (RC/Reduction and Cost)	RC1	Details of GHG reduction plans and strategies
	RC2	Breakdown of current GHG emission reduction target levels and emission reduction targets.
	RC3	Emission reductions and costs or savings are achieved due to the emission reduction plan.
	RC4	Emission cost plan in capital expenditure (capital expenditure planning).
Accountability of Emission Carbon (ACEi)	ACC1	Board (or other executive body) responsibilities related to climate change
	ACC2	Review of entity progress by the Board committee on climate change

Source: Choi et al. (2013), Sudibyo (2018)

Code of Conduct Instrument

- Protecting Employee Interests (PEI)
- Employee Management (PEI1)
- Occupational Safety, Health, and Environment (PEI2)
- Equal Opportunity, Harassment, Threats, and Violence (PEI3)
- Relationship With Business Partners (RWBP)
- Relationship with Shareholders (RWBP1)
- Relationship with Customers (RWBP2)
- Relationship with Creditors/Investors (RWBP3)
- Relationship with Suppliers (RWBP4)
- Relationship with Subsidiaries/Joint Ventures (RWBP5)
- Giving and Receiving (RWBP6)
- Improper Payments and Political Participation (RWBP7)
- Conflict of Interest (RWBP8)



Protection of Information and Assets (PIA)

Financial Statement Integrity (PIA1)

Confidentiality of Information (PIA2)

ICT System (PIA3)

Archives (PIA4)

Asset Monitoring and Protection (PIA5)

Intellectual Property Rights (PIA6)

Protecting Community and Government Interests (PCGI)

Relation between Regulators (PCGI1)

Partnership with the surrounding community (PCGI2)

Equality and Respect for Human Rights (PCGI3)

Source: Code of Conduct (Decree of the Minister of State-Owned Enterprises Number Kep-117/M-MBU/2002)

3.3 Financial Performance

Measurement of financial performance using the ROE approach. ROE is comprehensive as a financial measurement tool, proven by using ROE as an analytical tool for large and small companies. ROE is the ratio of the ability to generate net income available to owners and investors.

4. RESULT

Moderated Regression Analysis (MRA): The Effect of Environmental Performance and Carbon Emissions on Corporate Financial Performance moderated by the Code of Conduct

The classical assumption test is used to obtain BLUE estimates (Beist, Linear, Unbiaseid, Estimator)

4.1 Classical Assumption Test

The assumption test has three distinct evaluations: the normalcy test, the heteroscedasticity test, and the multicollinearity test.

a. Normality Test

Using the IBM SPSS 25 program application, the following normality test output was obtained:



NPar Tests

One-Sample Kolmogorov-Smirnov Test

		Kinerja Lingkungan	Emisi Karbon	COC	Kinerja Keuangan	Moderasi1	Moderasi2	
N		360	360	360	360	360	360	
Normal Parameters ^{a,b}	Mean	3,6306	,8724	,4542	,0609	1,6603	,4063	
	Std. Deviation	,67972	,17561	,12709	,04718	,57056	,12833	
Most Extreme Differences	Absolute	,307	,481	,362	,306	,171	,400	
	Positive	,307	,341	,318	,306	,137	,282	
	Negative	-,223	-,481	-,362	-,212	-,171	-,400	
Test Statistic		,307	,481	,362	,306	,171	,400	
Asymp. Sig. (2-tailed)		,000 ^c	,000 ^c	,000 ^c	,000 ^c	,000 ^c	,000 ^c	
Monte Carlo Sig. (2-tailed)	Sig.	,000 ^d	,000 ^d	,000 ^d	,000 ^d	,000 ^d	,000 ^d	
	99% Confidence Interval	Lower Bound	,000	,000	,000	,000	,000	,000
		Upper Bound	,000	,000	,000	,000	,000	,000

- a. Test distribution is Normal.
- b. Calculated from data.
- c. Lilliefors Significance Correction.
- d. Based on 10000 sampled tables with starting seed 334431365.

The acquisition of normal data distribution in the histogram graph above and the results of the one sample Kolmogorov Smirnov Test data a. Teist distribution is Normal, b: Lilliefors Significance Correction, d. Baseid on 10000 sampleid tableis with starting seieid 334431365

b. Autocorrelation Test

The correlation between members of observations at different times is autocorrelation. The following results are obtained using the help of the SPSS program application.

From Table 3, the value of d is obtained for each model. Value comparisons are made

Tabel 1. Hasil Uji Autokorelasi

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,711 ^a	,505	,498	,03342	2,010

- a. Predictors: (Constant), Moderasi2, Kinerja Lingkungan, Emisi Karbon, COC, Moderasi1
- b. Dependent Variable: Kinerja Keuangan

with the dL and dU values in the Durbin-Watson table. For $\alpha = 0.05$, $k = 5$ and $n = 360$, $dL = 1.805$ and $dU = 1.850$ are obtained. The regression has no autocorrelation since the Durbin-Watson value is between dU and $4-dU$ ($1.850 < 2.010 < 2.150$).



c. Multicollinearity test

The multicollinearity test is used as a test tool for correlation between independent variables. The VIF value output test results are as follows:

Tabel 2. Hasil Uji Multikolinieritas

Model	Collinearity Statistics	
	Tolerance	VIF
1 (Constant)		
Kinerja Lingkungan	,046	21,826
Emisi Karbon	,073	13,609
COC	,030	33,897
Moderasi1	,015	66,122
Moderasi2	,024	42,315

Each VIF value of the independent variables is above 10, meaning there is multicollinearity between the independent variables in the model.

4.2 Equation Moderated Regression Analysis (MRA)

Moderated regression analysis (MRA) is intended to determine the effect of KL and Carbon Emissions on corporate financial performance with a moderated Code of Conduct. The regression model is as follows:

$$Y = \alpha + \beta_1X_1 + \beta_2X_2 + \beta_3Z + \beta_4X_1*Z + \beta_5X_2*Z + e$$

Y = Company Financial Performance; X1= Environmental Performance; X2= Carbon Emissions; Z= Code of Conduct; X1*Z = Codei of Conduct moderates the relationship between Environmental Performance and Corporate Financial Performance; X2*Z = Codei of Conduct modeling the relationship between Carbon Emissions and Corporate Financial Performance; α = A constant number; $\beta_1,2,3,4,5$ = Regression coefficient; e_i = error

The output of the moderation regression results with the help of SPSS is as follows:



Tabel 3.
Hasil Perhitungan Nilai Koefisien Persamaan Moderated Regression Analysis (MRA)

Model	Coefficients ^a				
	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	,255	,036		7,143	,000
Kinerja Lingkungan	-,060	,012	-,869	-4,973	,000
Emisi Karbon	,154	,037	,571	4,143	,000
COC	-,141	,081	-,379	-1,740	,083
Moderasi1	,150	,025	1,810	5,955	,000
Moderasi2	-,722	,089	-1,964	-8,075	,000

The output results obtained the constant value and regression coefficient with the moderated regression analysis equation as follows:

$$Y = 0,255 - 0,060 X_1 + 0,154 X_2 - 0,141 Z + 0,150 X_1 * Z - 0,722 X_2 * Z + 0,495$$

The meaning of the regression equation above:

$\alpha = 0,255$, meaning if Environmental Performance and Carbon Emissions with a moderated Code of Conduct have a value of zero (0), KL is 0.255 units.

$\beta_1 = -0,060$; If Environmental Performance increases or improves by one unit and other variables are constant, the corporate KL decreases by 0.060 units.

$\beta_2 = 0,154$; implies that Carbon Emissions increase or get better by one unit and other variables are constant, then the Company's Financial Performance increases by 0.154 units.

$\beta_3 = -0,141$, meaning that if the Code of Conduct increases or gets better by one unit and other variables are constant, then the Company's Financial Performance will decrease by 0.141 units.

$\beta_4 = 0,150$, meaning Codei of Conduct moderates the effect of KL on the Company's KK with a strengthening nature; this is because the regression coefficient of Environmental Performance before being moderated Codei of Conduct of -0.060 and after moderation Codei of Conduct by 0,150.

$\beta_5 = -0,722$, meaning Codei of Conduct moderates the effect of Carbon Emissions on Corporate Financial Performance with a weakening nature; this is because the regression coefficient of Environmental Performance before being moderated Codei of Conduct of 0.154 and after moderated Codei of Conduct of -0,722.

4.2 Coefficient of Determination Analysis

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The KD analysis method examines the impact of independent variables on dependent variables. The subsequent findings present the results obtained from the computation of the coefficient of determination.

Tabel 4.
Analisis Koefisien Determinasi

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,711 ^a	,505	,498	,03342

Results KD= 49.8% show that the effect of Environmental Performance and Carbon Emissions on Corporate Financial Performance with a moderated code of Conduct amounted to 49.8%. The remaining 50.2% of other factors not studied in this study may be affected.

4.4 Hypothesis Testing

a. Simultaneous Test (F Test)

The effect of independent factors on the dependent variable is tested simultaneously using hypothesis testing. Hypothesis:

Ha: Environmental Performance and Carbon Emissions significantly affect Corporate Financial Performance with a moderation Code of Conduct.

Significant level (α) by 5%

Testing Criteria:

If p-value (sig) > α , then H0 is Retrieved.

If p-value (sig) < α , then H0 is rejected.

The results of simultaneous hypothesis testing are presented below:

Tabel 5.
Pengujian Hipotesis Simultan (Uji-F)

		ANOVA ^a				
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	,404	5	,081	72,288	,000 ^b
	Residual	,395	354	,001		
	Total	,799	359			

a. Dependent Variable: Kinerja Keuangan

b. Predictors: (Constant), Moderasi2, Kinerja Lingkungan, Emisi Karbon, COC, Moderasi1

Output value F count = 72,288 with p-value (sig) 0,000, using $\alpha = 0,05$. Due to the p-value (sig) $< \alpha$ or $0,000 < 0,05$, then H_0 rejected, KL and Carbon Emissions significantly affect Corporate Financial Performance with a moderated Code of Conduct.

b. Partial Test (T-test)

The partial test obtained the following results:

Tabel 6.
Pengujian Hipotesis Parsial (Uji-t)

Model		Coefficients ^a				
		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta			
1	(Constant)	,255	,036		7,143	,000
	Kinerja Lingkungan	-,060	,012	-,869	-4,973	,000
	Emisi Karbon	,154	,037	,571	4,143	,000
	COC	-,141	,081	-,379	-1,740	,083
	Moderasi1	,150	,025	1,810	5,955	,000
	Moderasi2	-,722	,089	-1,964	-8,075	,000

COC: Code Of Conduct

Partial Hypothesis Test of the Effect of Environmental Performance on Corporate Financial Performance

Ha: Environmental Performance has a significant effect on Corporate Financial Performance.

From the above calculations, the value is obtained by -4,973 with a p-value of 0,000. H_0 is rejected because the p-value (sig) $< \alpha$ or $0,000 < 0,05$ means that Environmental Performance significantly affects the Company's Financial Performance.

Partial Hypothesis Testing of the Effect of Carbon Emissions on Corporate Financial Performance

Ha: EK has a significant effect on the Company's KK.

From the above calculations, the value is obtained t hitung by 4,143 with a p-value of 0,000. Due to the value of p-values (sig) $< \alpha$ or $0,000 < 0,05$, H_0 is rejected, meaning that Carbon Emissions significantly affect the Company's Financial Performance.



Partial Hypothesis Testing of the Effect of Code of Conduct on Company Financial Performance

Ha: The Code of Conduct does not significantly affect the Company's KK.

From the above calculations, the value is obtained by a t number of -1,740 with a p-value of 0,083. Due to the value of p-values (sig) $> \alpha$ or $0,083 > 0,05$, then H_0 was retrieved, the Code of Conduct does not significantly affect the Company's Financial Performance.

4. Partial Hypothesis Testing of the Effect of Environmental Performance on Corporate Financial Performance with Moderation Code of Conduct

Ha: Environmental Performance significantly affects Corporate Financial Performance with a moderated Code of Conduct.

From the above calculations, the value is obtained as a t number of 5,955 with a p-value of 0,000. Due to the p-value (sig) $< \alpha$ or $0,000 < 0,05$, H_0 was rejected, meaning that Environmental Performance significantly affects Corporate Financial Performance with a moderated Code of Conduct.

5. Partial Hypothesis Testing of the Effect of Carbon Emissions on Corporate Financial Performance with Moderation Code of Conduct

Ha: Carbon Emissions significantly affect Corporate Financial Performance with a moderation Code of Conduct.

From the above calculations, the value is obtained by -8,075 with a p-value of 0,000. Due to the p-value (sig) $< \alpha$ or $0,000 < 0,05$, H_0 is rejected, meaning that Carbon Emissions significantly affect Corporate Financial Performance with a moderation Code of Conduct.

5. Discussion

All companies always expect the results of their company's financial performance to increase from year to year. With this research, the environmental performance of Proper, Carbon Emissions, and Code of Conduct are the reference variables used in the analysis.

The statistical test results show that Environmental Performance affects the company's financial performance. This is indicated by the Environmental Performance variable having a significant value of $0.000 < 0.05$, with an unstandardized coefficient value

of -0.060 having a negative direction of influence, meaning that Environmental Performance has little effect on financial performance (ROE), so the first hypothesis is rejected. Based on the available evidence, it may be inferred that H1: Environmental Performance positively affects Financial Performance (ROE).

The multiple regression test results show that the disclosure of carbon emissions affects Return On Equity (ROE). This shows that the Carbon Emissions variable has a significant value of $0.000 <$ than the significant level of 0.05, with a coefficient value of 0.154 having a positive direction of influence, meaning that Carbon Emissions affect the Company's Financial Performance (ROE), so the second hypothesis is accepted. So it can be concluded that H2: Disclosure of carbon emissions positively affects Corporate Financial Performance (ROE).

Code of Conduct does not significantly affect the company's financial performance; from the above calculations, the count value is -1.740, with a p-value of 0.083. Due to the p-value (sig) $>$ α or $0.083 >$ 0.05, H_0 is accepted, meaning that the Code of Conduct has no significant effect on the Company's Financial Performance. This factor occurs because many companies still have not implemented the Code of Conduct regulations issued by the Minister of State-Owned Enterprises Number Kep-117/M-MBU/2002.

However, a code of conduct positively affects company performance when moderating both environmental performance and carbon emissions.

This research aligns with research conducted by Ganda, Fortune, and Khazamula Samson Milondzo. 2018, this finding demonstrates that corporations that use environmentally friendly strategies to mitigate carbon emissions can proficiently maintain their financial outcomes.

As for the weaknesses in this study, namely, the relationship with the data needed and obtained from the Decree of the Ministry of Environment (PROPER), there are 4298 companies registered in the PROPER Decree during 2020 and 2021, with a total of 480 financial reports and only 360 data for two years that can be used as a reference for further analysis by researchers.

The study recommends that the company immediately carry out its activities in a structured manner, both from financial reports and sustainability reports, and must also comply with the code of conduct rules that have been enacted by the Minister of State-Owned Enterprises Number Kep-117 / M-MBU / 2002. In order to achieve better company performance from year to year.

Disclosure of carbon emissions is now mandatory and must be complied with to meet carbon emission reductions and better implementation of carbon emission governance, firm policies, accountability, and disclosure transparency.

Companies that are very orderly in carrying out the Carbon Emission factors are Pertamina and PT ANTAM, namely 94%, In comparison, the smallest is 17%, namely PT Charoen Pokphand, from the factors issued by previous researchers (Choi et al.). In comparison, companies that carry out COC regulations are very orderly at 90%, namely PT ANTAM, while the smallest is 20%, namely PT Charoen Pokphand.

The most significant factors implemented by companies related to Carbon Emissions are in carbon emissions accountability (the responsibility of the board or executive body related to climate change by 100%, while related to the review of the entity's progress by the Board committee on climate change only reached 14%.

For factors related to COC, 99% is in protecting the interests of employees (safety, health, and work environment), while the minor factor is in protecting information and assets (technology and communication systems) 20%; this shows that system protection is still not good enough.

Innovations in policy instruments from management are expected to implement generally accepted ethical values and governance systems by improving good and proper corporate governance. This supports the strong commitment of the Indonesian government that has been expressed in the Paris Agreement and realized with Nationally Recognized Contributions (NDC) 29% with its efforts. International support is expected to reduce carbon emissions by 41% by 2030. In this case, planning, evaluation, and supervision must be transparently carried out regularly and strictly on a long-term basis related to these guidelines through regulations issued by the government for the sustainability of all entities in Indonesia.

6. CONCLUSION

The conducted tests on the sample provide empirical evidence supporting a favorable correlation between environmental performance and its impact. And carbon emissions on company performance, with code of conduct as a moderating variable. This means that good environmental performance will increase carbon emission disclosure because the company has an active strategy to deal with carbon emission issues, and there is an effort to disclose the strategy in carbon emission disclosure.



When the code of conduct variable is not moderate, it shows insignificant results at 5%, while at 10%, it has no significant effect on company performance. Companies that obey the code of conduct achieve financial performance that continues to increase, and vice versa. If the code of conduct is ignored, it will reduce financial performance

REFERENCES

- Adams, Carol A. 2015. 6 Sustainability Accounting, Management, and Policy Journal Accountability, Social Responsibility and Sustainability: Accounting for Society and the Environment.
- Amaliyah, Fitri, and Eliada Herwiyanti. 2019. "Pengaruh Kepemilikan Institusional, Dewan Komisaris Independen, Dan Komite Audit Terhadap Nilai Perusahaan Sektor Pertambangan." *Jurnal Akuntansi* 9(3): 187–200.
- Bae Choi, Bo, Doowon Lee, and Jim Psaros. 2013. "An Analysis of Australian Company Carbon Emission Disclosures." *Pacific Accounting Review* 25(1): 58–79.
- Baker, C. Richard, Bruno Cohanier, and Daniele Pederzoli. 2012. "Corporate Social And Environmental Reporting In The Large Retail Distribution Sector." *Procedia Economics and Finance* 2(Af): 209–18. [http://dx.doi.org/10.1016/S2212-5671\(12\)00081-0](http://dx.doi.org/10.1016/S2212-5671(12)00081-0).
- Bhunia, Amalendu, Islamuddin Khan, and Somnath MuKhuti. 2011. "A Study of Managing Liquidity." *Journal of Management Research* 3(2).
- Borges, Pedro Paulino et al. 2020. "Stream Fish Metacommunity Organisation across a Neotropical Ecoregion: The Role of Environment, Anthropogenic Impact and Dispersal-Based Processes." *PLoS ONE* 15(5): 1–18.
- Carpenter, Steve, Brian Walker, J Marty Anderies, and Nick Abel. 2001. "From Metaphor to Measurement: Resilience of What to What?" *Ecosystems* 4(8): 765–81. <https://doi.org/10.1007/s10021-001-0045-9>.
- Choi, Bo, Doowon Lee, and Jim Psaros. 2013. "An Analysis of Australian Company Carbon Emission Disclosures." *Pacific Accounting Review* 25.
- Cotter, Julie, Norziana Lokman, and Muftah M. Najah. 2019. "Voluntary Disclosure Research: Which Theory Is Relevant?" *SSRN Electronic Journal*: 1–25.
- Dawkins, Cedric, and John W. Fraas. 2011. "Coming Clean: The Impact of Environmental Performance and Visibility on Corporate Climate Change Disclosure." *Journal of Business Ethics* 100(2): 303–22.





- Deegan, Craig, Michaela Rankin, and John Tobin. 2002. 15 Accounting, Auditing & Accountability Journal An Examination of BHP's Corporate Social and Environmental Disclosures from 1983-1997: A Test of Legitimacy Theory.
- Ennis, Christopher J. et al. 2012. "Biochar: Carbon Sequestration, Land Remediation, and Impacts on Soil Microbiology." *Critical Reviews in Environmental Science and Technology* 42(22): 2311-64.
- Ganda, Fortune, and Khazamula Samson Milondzo. 2018. "The Impact of Carbon Emissions on Corporate Financial Performance: Evidence from the South African Firms." *Sustainability (Switzerland)* 10(7).
- Haholongan, Rutinaias. 2016. "Kinerja Lingkungan Dan Kinerja Ekonomi Perusahaan Manufaktur Go Public." *Jurnal Ekonomi dan Bisnis* 19(3): 413.
- Houqe, Muhammad Nurul, Solomon Opare, Muhammad Kaleem Zahir-Ul-hassan, and Kamran Ahmed. 2022. "The Effects of Carbon Emissions and Agency Costs on Firm Performance." *Journal of Risk and Financial Management* 15(4).
- Irwhantoko, Irwhantoko, and Basuki Basuki. 2016. "Carbon Emission Disclosure: Studi Pada Perusahaan Manufaktur Indonesia." *Jurnal Akuntansi dan Keuangan* 18(2): 92-104.
- Iwata, Hiroki, Keisuke Okada, and Sovannroeun Samreth. 2010. "Empirical Study on the Environmental Kuznets Curve for CO2 in France: The Role of Nuclear Energy." *Energy Policy* 38(8): 4057-63. <https://econpapers.repec.org/RePEc:eee:enepol:v:38:y:2010:i:8:p:4057-4063>.
- Jannah, Richatul, and Dul Muid. 2014. "Analisis Faktor-Faktor Yang Mempengaruhi Carbon Emission Disclosure Pada Perusahaan Di Indonesia (Studi Empiris Pada Perusahaan Yang Terdaftar Di Bursa Efek Indonesia Periode 2010-2012)." *Diponegoro Journal of Accounting* 3(2): 1000-1010. <https://ejournal3.undip.ac.id/index.php/accounting/article/view/6164>.
- Kolk, Ans, David Levy, and Jonatan Pinkse. 2008. "Corporate Responses In An Emerging Climate Regime: The Institutionalization And Commensuration of Carbon Disclosure." *European Accounting Review* 17(4): 719-745. <http://ssrn.com/abstract=1268404>.
- Lioui, Abraham, and Zenu Sharma. 2012. "Environmental Corporate Social Responsibility and Financial Performance: Disentangling Direct and Indirect Effects." *Ecological Economics* 78: 100-111. <http://dx.doi.org/10.1016/j.ecolecon.2012.04.004>.
- Majali, Amal, Sameer Alamro, and Yahya Al-Soub. 2012. "Factors Affecting the Financial Performance of Jordanian Insurance Companies Listed at Amman Stock Exchange." *Journal of Management Research* 4.





- McCombs, Maxwell, and Donald Shaw. 2016. "The Agenda-Setting Function of Mass Media." *Agenda Setting: Readings on Media, Public Opinion, and Policymaking* 36(2): 17–26.
- Moyo, Mandla, and Hermina Christina Wingard. 2015. "An Assessment of the Impact of Climate Change on the Financial Performance of South African Companies." *Journal of Governance and Regulation* 4(2): 49–62.
- Novrizal, Muhammad Fajrul, and Meutia Fitri. 2016. "... Corporate Social Responsibility (CSR) Pada Perusahaan Yang Terdaftar Di Jakarta Islamic Index (JII) Tahun 2012-2015 Dengan Menggunakan Islamic Social Reporting" *Jurnal Ilmiah Mahasiswa Ekonomi Akuntansi* 1(2): 177–89.
- O'Donovan, Gary. 2002. "Environmental Disclosures in the Annual Report." *Accounting, Auditing & Accountability Journal* 15(3): 344–71. <https://doi.org/10.1108/09513570210435870>.
- Rahmawati, Mia Ika, and Anang Subardjo. 2017. "Pengaruh Pengungkapan Lingkungan Dan Kinerja Lingkungan Terhadap Kinerja Ekonomi Yang Dimoderasi Good Corporate Governance." *Jurnal Buletin Studi Ekonomi* 22(2): 200–226.
- Sari, Nova Reksita. 2018. "Pengaruh Keputusan Investasi, Keputusan Pendanaan Dan Kebijakan Dividen Terhadap Nilai Perusahaan Dengan Gcg Sebagai Variabel Moderating Wahidahwati Sekolah Tinggi Ilmu Ekonomi Indonesia (STIESIA) Surabaya."
- Sawyer, Hall, Fred Lindzey, Doug Mcwhirter, and Keith Andrews. 2002. "Potential Effects of Oil and Gas Development on Mule Deer and Pronghorn Populations in Western Wyoming." *Transactions of the Sixty-Seventh North American Wildlife and Natural Resources Conference*: 350–65.
- Siregar, Narumondang Bulan, and Rina Br Bukit. 2018. "Impact of Corporate Social Responsibility and Company Size on Corporate Financial Performance with Good Corporate Governance as Moderating Variable." 46(Ebic 2017): 241–48.
- Suryono, Hari, and Andri Prastiwi. 2011. "Pengaruh Karakteristik Perusahaan Dan Corporate Governance(CG) Terhadap Praktik Pengungkapan Sustainability Report (SR) (Studi Pada Perusahaan – Perusahaan Yang Listed (Go-Public) Di Bursa Efek Indonesia (BEI) Periode 2007 - 2009)." *Simposium Nasional akuntansi XIV Aceh 2011*: 21–22.
- Suwarno, Rima Cahya, and Ahmad Mifdlol Muthohar. 2018. "Analisis Pengaruh NPF, FDR, BOPO, CAR, Dan GCG Terhadap Kinerja Keuangan Bank Umum Syariah Di Indonesia Periode 2013-2017." *BISNIS : Jurnal Bisnis dan Manajemen Islam* 6(1): 94.





- Tian, Lan et al. 2022. "Prediction and Measurement of Critical Properties of Gasoline Surrogate Fuels and Biofuels." *Fuel Processing Technology* 228: 107156.
- Wang, Lei, Steven Li, and Simon Gao. 2014. "Do Greenhouse Gas Emissions Affect Financial Performance? - An Empirical Examination of Australian Public Firms." *Business Strategy and the Environment* 23(8): 505-19.
- Wicaksono, Gregorius Satrio, and Anis Chariri. 2015. "Mekanisme Corporate Governance Dan Kemungkinan Kecurangan Dalam Pelaporan Keuangan." *Diponegoro Journal of Accounting* 4(4): 552-63.

