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The Effect of Media Exposure, Environmental Performance, and ISO 14001 Certification on Carbon Emission Disclosure

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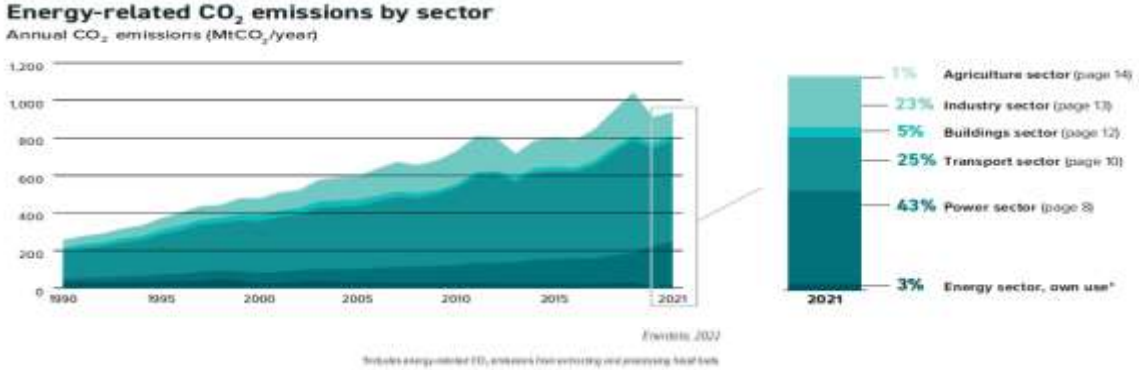
ABSTRACT: Climate change is increasingly having a negative impact on people's lives as well as the environment. Various diseases related to ambient air pollution are increasingly becoming the cause of death. Natural disasters also occur frequently, causing huge losses. Greenhouse gas emissions, often called carbon emissions, are one of the biggest causes of climate change. This research aims to provide empirical evidence regarding the effect of media exposure, environmental performance, and ISO 14001 certification on carbon emission disclosure. Research data were obtained from the Indonesia Stock Exchange website, the PROPER Secretariat website of the Ministry of Environment and Forestry in the Republic of Indonesia, and corporate media covering non-financial companies (energy, industry, basic materials, transportation and logistics). The research sample selection used purposive sampling, resulting in 95 unbalanced data for three years (2019-2021). This research uses panel data regression analysis to examine the effect of media exposure, environmental performance, and ISO 14001 certification on carbon emission disclosure. The results showed that media exposure and environmental performance positively affect carbon emission disclosure. Meanwhile, ISO 14001 certification has no effect on carbon emission disclosure.

KEYWORDS: Media Exposure, Environmental Performance, ISO 14001 Certification, Carbon Emission Disclosure

INTRODUCTION

According to the Climate Transparency Report 2022 (CTR 2022), energy-related CO_2 emissions increased in G20 countries by 5.9% in 2021. Bill Hare, CEO of Climate Analytics, said that G20 countries are responsible for three-quarters of the world's emissions. Bill Hare revealed that the world community is currently in a geopolitical and energy security issue emphasizing renewable energy use. Still, many of the G20 governments are turning to fossil fuels. Fossil fuels, which are expensive, high-emission, and least secure energy sources, are still the choice and receive high support from governments. Based on CTR 2022 data, increasing emissions have caused floods, fires, droughts, and storms that cause considerable losses in all aspects of life. In addition, according to the Institute for Health Metrics and Evaluation's 2020 data in CTR 2022 regarding the mortality rate caused by ambient air pollution, more than 168,300 people died in Indonesia in 2019 due to lung cancer, chronic respiratory diseases, heart disease, and stroke caused by outdoor air pollution. This case is one of the highest levels in the G20 member countries.

The emission-causing factor that impacts climate change and becomes a concern to the global community is greenhouse gas emissions. The biggest driver of overall greenhouse gas emissions is CO_2 emissions from fuel combustion. Emissions have increased since 1990, with a slight decrease in 2020. This decrease is most likely due to COVID-19 pandemic response measures, but emissions rose again in 2021 as the economy began to recover. Based on data from *Enerdata 2022*, the top three sectors for CO_2 emissions are energy (43%), transport (25%), and industry (23%).



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Through the 21st Conference of the Parties to the United Nations Framework Convention on Climate Change in 2016, the Government of Indonesia and members of the international community decided to embrace the Paris Agreement as part of a continuous effort to control climate change. Each nation must submit a Nationally Determined Contribution (NDC) paper to demonstrate their commitment to the agreement. Indonesia established a goal in the NDC document to reduce greenhouse gas (GHG) emissions by 29% through domestic efforts and up to 41% with international help from the scenario of no action (business as usual) in 2030. The Indonesian government issued Presidential Regulation Number 98 in the year 2021 regarding the Implementation of Carbon Economic Value for the Achievement of Nationally Determined Contribution Targets and Control of Greenhouse Gas Emissions in National Development (Presidential Regulation 98/2021) as a follow-up to the NDC. One of the target topics under Presidential Regulation 98/2021 for efforts to mitigate climate change are companies in Indonesia that are considered *Pelaku Usaha* in this regulation. Hence they must also bear responsibility for Presidential Regulation 98/2021 implementation. Due to this circumstance, even if no laws mandating the disclosure of carbon emissions by enterprises, it is crucial for evaluating the national progress of carbon emission control.

The Indonesian Institute of Accountants (IAI) regulates social responsibility disclosure practices in *Pernyataan Standar Akuntansi Keuangan* (PSAK). Implicitly encouraged in PSAK number 1 paragraph 9 are social responsibility disclosures concerning social and environmental issues, including pollution disclosures. However, there is no regulation requiring disclosure in this regard. As a result, the company's voluntary disclosure is regarded as having goodwill in the market economy and sending a positive message about the company's performance going forward. Besides that, a corporation must communicate with its stakeholders regarding pollution disclosure, such as carbon emissions, to win their support and fulfill its social obligation (Purnayudha & Hadiprajitno, 2022). The variables affecting carbon emission disclosure have been the subject of numerous research studies. The disclosure of carbon emissions is impacted by media exposure, according to research by Setiany et al. (2022). Purnayudha & Hadiprajitno (2022) established that carbon emission disclosure was shown to be favorably influenced by environmental performance. Additionally, a study by Jannah & Narsa (2021) demonstrates that having an ISO 14001 Certification favors disclosing carbon emissions.

Insufficient consistency exists between the assessment of the same variables used to evaluate the disclosure of carbon emissions from a prior study. Therefore it is necessary to carry out further studies on factors that have an impact on the disclosure of emissions.

LITERATURE REVIEW

Legitimacy Theory

The primary originator of legitimacy theory is Dowling & Pfeffer (1975), who explain that organizations try to establish harmony between the social values of the organization and the norms or values accepted in the more extensive social system of which they are a part. According to Choi et al. (2013), legitimacy theory considers the interaction between organizations and society, which can be linked to the concept of a "social contract." Mathews (1995) argues that there is a social contract between the organization and the parties affected by the organization's operations. Organizations are expected to adhere to the terms of this contract by attempting to operate within the boundaries and norms of society. An organization's legitimacy is threatened whenever public expectations relevant to the organization's performance conflict with the organization's actual performance. This is called the legitimacy gap (Brown & Deegan, 1998). According to Maqfirah & Fahrianta (2022), legitimacy theory protects the company's value from the legitimation gap. One of the company's efforts to overcome the legitimacy gap is by disclosing carbon emissions because the company will be considered responsible for the environment so that it shows a good impression in society. Furthermore, Kılıç & Kuzey (2019) also revealed that companies' involvement in environmentally responsible practices is increasing, as seen from the disclosure of their carbon management practices through several channels, including annual reports, sustainability reports, and websites.

Stakeholder Theory

The definition of stakeholders has changed substantially over time. Initially, shareholders were considered the company's only stakeholders based on Friedman's (1962) opinion. Friedman (1962) argues that the company primarily aims to maximize its owners' prosperity. However, Freeman & Reed (1986) disagree with this and then expand the definition of stakeholders to include other interested parties. These parties are any groups or individuals identified as being able to influence the achievement of organizational goals or being affected by the achievement of organizational goals, including shareholders, public interest groups, protest groups, customers, government agencies, competitors, trade unions, trade associations, and employees.

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Stakeholder theory explains that companies, in carrying out their business processes, must benefit all their stakeholders and not only operate for the company's benefit (Dewayani & Ratnadi, 2021). Purnayudha & Hadiprajitno (2022) argue that stakeholders pressure companies and force management to disclose more information. Therefore, stakeholders have an essential role in encouraging company social and environmental disclosure in an effort of them to maintain good relations. Managing good relations with stakeholders is a form of company strategy, including involvement in social responsibility activities, for example, through carbon emissions management as an indication of the company's concern for the sustainability of the environment and the public society (Firmansyah et al., 2021).

HYPOTHESES

1. The Effect of Media Exposure on Carbon Emission Disclosure

Media exposure means companies must describe social responsibility information and other pertinent viewpoints that impact stakeholders (Nurjanah & Herawaty, 2022). Based on stakeholder theory, a company is an entity that must operate for the benefit of its stakeholders, not just the company's interests. Purnayudha & Hadiprajitno (2022) state that these stakeholders pressure company management to provide more information. The media can influence a company's incentive to voluntarily disclose carbon emissions in its annual report to get favorable stakeholder feedback (Setiany et al., 2022). Consequently, given the number of carbon emissions information published in various company media, it can be said that exposure to media can positively influence the disclosure of carbon emissions (Florencia & Handoko, 2021). This is consistent with the study by Setiany et al. (2022), which demonstrates that media exposure significantly impacts the disclosure of carbon emissions.

H_1: Media Exposure has a positive effect on Carbon Emission Disclosure

2. The Effect of Environmental Disclosure on Carbon Emission Disclosure

One indicator of a company's environmental responsibility is its environmental performance (Purnayudha & Hadiprajitno, 2022). Delivering information on environmental performance aims to disclose environmentally sound business practices to investors and other outside stakeholders. In order to maintain the reputation of a company and avoid negative media attention, according to Luo et al. (2019), managers will voluntarily disclose environmental information and improve its transparency. According to the legitimacy theory, Amaliyah & Solikhah (2019) explain that a company must manage its environmental performance well and present this information in its report to attain company legitimacy. This demonstrates the company's dedication to the environment to gain legitimacy. Companies that have a good performance on environmental concerns will be encouraged the disclosure of carbon emissions. This is consistent with studies by Jannah & Narsa (2021) and Purnayudha & Hadiprajitno (2022), which demonstrate that carbon emissions disclosure is positively influenced by environmental performance.

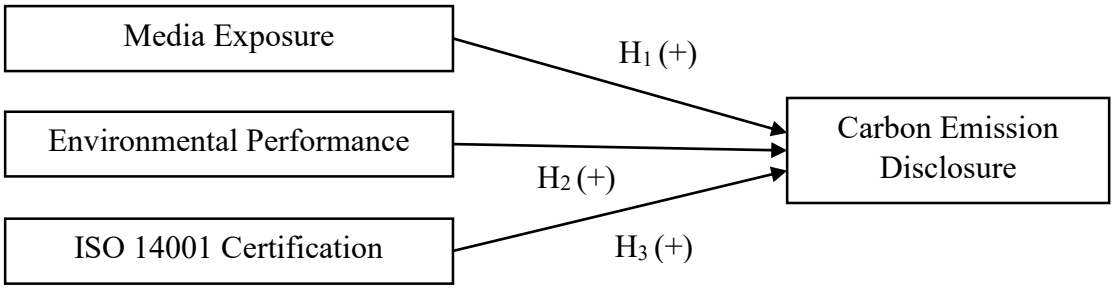
H_2: Environmental Performance has a positive effect on Carbon Emission Disclosure

3. The Effect of ISO 14001 Certification on Carbon Emission Disclosure

ISO 14001 is an international specification for Environmental Management Systems that help companies identify, prioritize, and manage environmental risks as part of regular business practices (icicert.com). Corporate entities that are ISO 14001 certified will carry out business activities under the requirements of ISO 14001. With ISO 14001 certification in companies, the disclosure of carbon emissions is considered to increase because carbon emissions are part of environmental management (Maqfirah & Fahrianta, 2022). In order to show support for proactive society in social issues and environmental matters, various institutional measures are taking place that involve reducing pollution, including certification from ISO 14001, which is evidence of the company's efforts on non-governmental directives. According to legitimacy theory, this certification includes an effort related to climate change follow-up (Iswati & Setiawan, 2020). This argument is in line with the opinion of Mathews (1995), which reveals that to maintain the organization's legitimacy, an organization makes social and environmental accounting disclosures to show accountability. This is supported by the research of Jannah & Narsa (2021), which proves that ISO 14001 certification significantly positively affects carbon emissions disclosure.

H_3: ISO 14001 Certification has a positive effect on Carbon Emission Disclosure.

FRAMEWORK



RESEARCH METHODS

Through the use of descriptive statistics, panel data regression analysis, and hypothesis testing with the software EViews 12 version, this research intends to test the hypothesis. Companies in the energy, industrial, basic materials, transportation and logistics sectors listed on the Indonesia Stock Exchange (IDX) from 2019 to 2021 serve as the research's objects. The purposive sampling method, a data source sampling technique with particular concerns, is used in the research sample selection technique to collect the research sample as required (Sugiyono, 2019, p. 133). The research's secondary data sources of the company, which is listed on the IDX, were obtained from annual reports, sustainability reports, company media, and the PROPER Secretariat website of the Ministry of Environment and Forestry.

This study makes use of panel data, which has several benefits over cross-sectional data or time series data, including the ability to overcome heterogeneity constraints between the units being studied, provide more information, more variation, and less collinearity between variables, as well as have a higher degree of freedom, greater efficiency, better detection, and measurement capabilities. Panel data also minimizes bias (Gujarati & Porter, 2012, p. 237). Based on these benefits, classical assumption tests are unnecessary for analyzing panel data (Kasmiarno & Mintaroem, 2017).

Dependent Variable

Carbon emission disclosure is used in this research as the dependent variable. Disclosure of carbon emissions is a way to communicate the contribution of entities related to carbon emissions, especially companies, by disclosing carbon management activities through several media, such as annual reports, sustainability reports, and company websites (Firmansyah et al., 2021). This research measures carbon emission disclosure using a checklist based on the Carbon Disclosure Project (CDP), as in research conducted by Setiany et al. (2022). This measurement consists of 18 index checklist items related to climate change and carbon emissions, called the Carbon Emission Disclosure Checklist (CEDC), developed by Choi et al. (2013). Furthermore, after obtaining the overall score from each company, the scores were added and then divided by the maximum total carbon emission disclosure items with the CED formula (Dani & Harto, 2022) as follows:

$$\text{CED} = \frac{\text{number of disclosure by company}}{\text{total disclosure}}$$

Independent Variable

The independent variables in this research are Media Exposure (ME), Environmental Performance (KL), and ISO 14001 Certification (ISO).

Media Exposure (ME)

The measurement of media exposure in this research uses dummy variables in line with research by Nurjanah & Herawaty (2022), namely, if the company discloses carbon emission information on the company's media, i.e., annual report, sustainability report, and website, will be given a score of one each. It is given a zero value if it does not disclose at all. After that, all media exposure scores worth one are added and divided by the maximum total media exposure for each company's assessment.

Environmental Performance (KL)

This research measures environmental performance using PROPER. PROPER (Company Performance Rating Assessment Programme) is public disclosure of environmental compliance to improve the quality of the environment to achieve more effective and efficient implementation. PROPER is also one of the instruments for transparency and democratization in environmental management in Indonesia. PROPER uses a rating score index provided by the Ministry of Environment and Forestry as in research conducted by Purnayudha & Hadiprajitno (2022), which is as follows:

Table 1. PROPER Rating Criteria

Score	Color Classification	Description
5	Emas (Gold)	Very very good
4	Hijau (Green)	Very good
3	Biru (Blue)	Good
2	Merah (Red)	Bad
1	Hitam (Black)	Very Bad

Source: processed secondary data, 2023

ISO 14001 Certification (ISO)

This research uses the dummy variable method to measure ownership of ISO 14001 certification. Dummy variables are variables to express qualitative data in the form of a zero (0) value if the variable has no effect and a value of one (1) if the variable has an effect (Tjaraka et al., 2000). Like the research conducted by Maqfirah & Fahrianta (2022), ISO variable measurements are weighted 1 (one) for companies that have ISO 14001 certification and 0 (zero) for companies that do not have ISO 14001 certification.

DISCUSSION

The object of this research is the population of companies listed on the Indonesia Stock Exchange (IDX) for 2019-2021 in the energy, industrial, basic materials, transportation and logistics sectors, totaling 258 companies. The following is a summary of the research sampling procedure using the purposive sampling method:

Table 2. Sample Selection Procedure

No.	Criteria	2019	2020	2021	Jumlah Data
1	Companies in the energy, industrial, basic materials, transportation and logistics sectors listed on the IDX for the period 2019-2021 consecutively	258	258	258	774
2	Companies that do not have a PROPER rating from the Ministry of Environment and Forestry in the Republic of Indonesia during the period 2019- 2021	(218)	(214)	(207)	(639)
3	Companies that do not disclose information on carbon emissions for at least one item of the Carbon Emission Disclosure Checklist for the period 2019-2021	(18)	(20)	(2)	(40)
Total research sample used		**22**	**24**	**49**	**95**

Source: processed secondary data, 2023

Based on the sample selection procedure in Table 2 above, out of 258 companies in the energy, industry, basic materials, transportation and logistics sectors listed on the Indonesia Stock Exchange for the period 2019-2021, with a total observation of 774 data, 639 data did not meet the criteria for having a PROPER rating from the Ministry of Environment of the Republic of Indonesia during the period 2019-2021. In addition, 40 data do not meet the criteria for disclosing information on carbon emissions for at least one item from the Carbon Emission Disclosure Checklist during the 2019-2021 period, so the total research sample is 95 unbalanced data with the number of companies in 2019, 2020, and 2021 are 22 companies, 24 companies, and 49 companies, respectively.

Descriptive Statistic

The descriptive statistical analysis contained in Table 3 and Table 4 is used to provide a representation and describe the data seen from the following mean, minimum, maximum, and standard deviation values as follows:

Table 3. Descriptive Statistic Result

Variables	Obs.	Min.	Max.	Mean	Standard Deviation
CED	95	0.055556	0.833333	0.431579	0.245320
ME	95	0.333333	1.000000	0.536842	0.244537
KL	95	2.000000	5.000000	3.336842	0.766458

Source: processed secondary data, 2023

Table 4. Frequency Result of Dummy Variable (ISO 14001 Certification)

Score	Freq.	Percent	Cum.
0	21	22.1	22.1
1	74	77.9	100.0
Total	**95**	**100.00**	

Source: processed secondary data, 2023

Based on the descriptive statistics results table and the dummy variable frequency results table above, the following information can be obtained:

1. A minimum value of 0.056 means that the company disclosed only one of the 18 CDEC items in 12 samples in the Carbon Emissions Disclosure (CED) variable. The most significant score, however, is 0.833, which indicates that the company revealed as many as 15 CDEC items in 1 study sample in 2021, specifically Semen Indonesia (Persero) Tbk. The spread (variation) of the data is minimal because the variable's standard deviation value (0.245) is lower than the average value (0.432).
2. The Media Exposure (ME) variable has a minimum value of 0.333, indicating that the company only discloses information related to carbon emissions (following CDEC) in 1 of the three types of media exposure in 51 research samples. The variable's highest value, 1, indicates that the business shares information about carbon emissions in three categories of media exposure (in line with CDEC) contained in 14 research samples. The variable's standard deviation (0.245) is less than its mean (0.537), indicating a slight variance in the data.
3. The Environmental Performance (KL) variable's minimum value is 2 in 7 research samples, while the highest value is 5 in 10 research samples. The variable's standard deviation (0.766) is smaller than the average (3.337), indicating less variance in the data.
4. In the ISO 14001 Certification (ISO) variable, there are 21 frequencies stating that there are 21 research samples that do not have ISO 14001 certification with a percentage of 22.1%. Furthermore, there are 74 frequencies stating that there are 74 research samples that have ISO 14001 certification with a percentage of 77.9%.

Panel Data Regression Analysis

According to Widarjono (2018, p. 365), to estimate the parameters of the regression model with panel data, there are three approaches, namely:

1. Common Effect Model (CEM)
2. Fixed Effect Model (FEM)
3. Random Effect Model (REM)

Three different test types, the Chow test, Hausman test, and Lagrange Multiplier test, are used while selecting the panel data estimation approach described above. The outcomes of the three tests are listed below:

Table 5. Panel Data Regression Results and Hypothesis Test

Test Summary		Statistic	d.f.	Prob.
Uji Chow	Cross-section F	2,311394	(48, 43)	0,0031
	Cross-section Chi-square	121,163741	48	0,0000
Uji Hausman	*Chi-square*	5,935070	3	0,1148
Uji Lagrange Multiplier	Breusch-Pagan (cross-section)			(0,0009)

Source: processed secondary data, 2023

Based on the test result in Table 5, the most appropriate regression model is Random Effect Model (REM).

Hypothesis Test

This test aims to prove the truth of the hypothesis using the coefficient of determination test (Adj R^2), F statistical test, and t statistical test with a significance level (α) of 5%. The initial regression equation in this research is:

$CED = \alpha + \beta_1 ME_{it} + \beta_2 KL_{it} + \beta_3 ISO_{it} + \varepsilon_{it}$

Definition:

α : constanta

$\beta_1, \beta_2, \beta_3$: regression coeficient for X variable

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CED_{it} : Carbon Emission Disclosure
ME_{it} : Media Exposure
KL_{it} : Environmental Performance
ISO_{it} : ISO 14001 Certification
ε_{it} : error

After estimating the model selection, the best regression analysis model is Random Effect Model (REM). The following are the regression test results using the *EViews 12* application with REM:

Table 8. Panel Data Regression Result and Hypothesis Test

Variable	Coefficient	Std. Error	t-Statistic	Prob.	Result
C	-0.079995	0.096633	-0.827821	0.4099	
ME	0.406306	0.090276	4.500737	0.0000	H_1 accepted
KL	0.081083	0.029589	2.740275	0.0074	H_2 accepted
ISO	0.029916	0.052573	0.569041	0.5707	H_3 denied
R-squared	0.348534				
Adjusted R-squared	0.327058				
F-statistic	16.22835				
Prob(F-statistic)	0.000000				

Source: processed secondary data, 2023

Based on the results in Table 8 above, the regression equation is obtained:

CED -0.079995 +0.406306 ME +0.081083 KL +0.029916 ISO

with the following explanation:

1. The regression constant of -0.079995 states that if the independent variable equals zero, the dependent variable, namely the Carbon Emission Disclosure (CED) is -0.079995.
2. The Media Exposure (ME) variable's coefficient value is 0.406306 with a positive sign. If ME rises by one unit while the other independent variables remain the same, the CED variable will also increase by 0.406306.
3. The Environmental Performance variable (KL) has a coefficient value of 0.081083 with a positive sign, meaning that the CED variable will rise by 0.081083 if KL increases by one unit while the other independent variables remain constant.
4. With a coefficient value of 0.029916 and a positive sign, the ISO 14001 Certification variable (ISO) shows that if the ISO independent variable grows by one unit while the other independent variables remain constant, the CED variable will also increase by 0.029916.

Based on the formula for calculating R-squared (R^2), the more independent variables included in the model, the greater the value of R^2 will be; however, in reality, it is not necessarily actual. Therefore, to make a more precise decision to compare regressions with the same dependent variable, Adjusted R^2 (Adj R^2) is used in this research (Nachrowi & Usman, 2006, p. 127). Based on Table 8, the Adj R^2 value is 0.327 or 32.7%, which shows the ability of the independent variables in this research, namely Media Exposure (ME), Environmental Performance (KL), and ISO 14001 Certification (ISO), in explaining variations in the dependent variable, Carbon Emissions Disclosure (CED), by 32.7%. In contrast, the remaining 67.3% (100% - 32.7%) is influenced by other variables not included in this research.

Table 8's data show that the F-statistic value is 16.228 and the probability (p-value) F is 0.000. It can be inferred that Media Exposure (ME), Environmental Performance (KL), and ISO 14001 Certification (ISO) collectively have a substantial impact on Carbon Emissions Disclosure (CED) because the p-value is below the significance level (α) of 0.05. In addition, Prob. t-statistic value in Table 8, compared with the significance level (5%), leads to the conclusion that while ISO 14001 certification has no effect on carbon emission disclosure, media exposure and environmental performance variables do.

Discussion Hypothesis Testing Results

The Effect of Media Exposure on Carbon Emission Disclosure

The first hypothesis (H_1) in this study is accepted according to the results of hypothesis testing, meaning that Media Exposure significantly affects the disclosure of carbon emissions. It shows that the increased media exposure of a company leads to greater disclosure of its carbon emissions. The percentage of corporate information disclosure on carbon emissions in annual reports,

sustainability reports, and company websites—based on the Carbon Emission Disclosure Checklist (18 indices) created by Choi et al. (2013)—is used in this study to quantify media exposure. According to Setiany et al. (2022), businesses should share carbon emissions data through annual reports, sustainability reports, company websites, and other platforms to gain stakeholder legitimacy. According to the explanation by Dowling & Pfeffer (1975) about legitimacy theory, organizations work to match their social ideals with those of the general public. Legitimacy is vital for the company's sustainability because, with the threat of company legitimacy, the public tends to reject the company's activities. Given that the business is situated in the middle of the public and depends on the involvement of the public, including shareholders, customers, suppliers, and other stakeholders, this will undoubtedly result in severe issues for the business. The findings of this study are consistent with those of Setiany et al. (2022), whose investigation established that media exposure has a considerable impact on the disclosure of carbon emissions.

The Effect of Environmental Performance on the Disclosure of Carbon Emissions

The second hypothesis (H_2) in this study is accepted because environmental performance significantly affects carbon emission disclosure, as shown by the results of the hypothesis testing. This correlation demonstrates that a company's disclosure level for carbon emissions rises directly to how well it performs environmentally. The PROPER criteria are used to measure the environmental performance variable in this study. Legitimacy theory advises every business that engages in commercial activity to have a social contract with society (Dani & Harto, 2022). Companies must manage the environment appropriately to receive more favorable feedback from the community about their activities as environmental concerns grow among the general public. In addition, stakeholder theory states that companies should operate for the benefit of all their stakeholders rather than just the company itself (Dewayani & Ratnadi, 2021). Companies can contribute to advancing the interests of their stakeholders by increasing environmental performance, for instance, by reducing company waste or attracting investors who base their investments on the green economy. This research concurs with Purnayudha & Hadiprajitno (2022), which establish that environmental performance significantly enhances carbon emission disclosure.

The Effect of ISO 14001 Certification on Carbon Emissions Disclosure

This study's third hypothesis (H_3) is rejected based on the result of the hypothesis testing, which revealed that ISO 14001 Certification has no appreciable impact on Carbon Emissions Disclosure. This demonstrates that having ISO 14001 certification does not significantly incentivise businesses to disclose their carbon footprints. According to Setiawan & Iswati (2019), ISO 14001 certification has not accurately represented a standard for businesses that can manage and reduce the risk of climate change caused by carbon emissions. Since the international standard ISO 14001 generally regulates environmental management systems, rather than just carbon emissions, and related emissions focus only on air emissions management, ISO 14001 certification has no bearing on any potential carbon emission disclosure. The result of this study does not support research by Jannah & Narsa (2021), which demonstrates that ISO 14001 certification has a significant positive effect on carbon emission disclosure but is consistent with research by Setiawan & Iswati (2019), which demonstrates that ISO 14001 certification has no effect on the disclosure of carbon emissions.

CONCLUSIONS

This research aims to ascertain how media exposure, environmental performance, and ISO 14001 certification affect the disclosure of carbon emissions. Research data from companies listed on the Indonesia Stock Exchange between 2019 and 2021 in the energy, industrial, basic materials, transportation, and logistics sectors were analyzed using a panel data regression model. Based on the test results and its analysis, also subsequent discussion led to the conclusion that environmental performance and media exposure positively affect the disclosure of carbon emissions. However, ISO 14001 certification has no effect on the disclosure of carbon emissions.

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