

Carbon Emission Disclosure Viewed from Competitive Business Strategy and Environmental Performance: India's Perspective

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Article Type:
Research Paper

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Article Process
Submitted:
May 1, 2023
Reviewed:
May 5, 2023
Revised:
June 28, 2023
Accepted:
June 29, 2023
Published:
July 16, 2023

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P-ISSN: 3021-7253
E-ISSN: 3021-7261

ABSTRACT

Purpose: This study aims to empirically test and analyze the influence of competitive business strategy and environmental performance on carbon emission disclosure.

Methodology/approach: The independent variables in this study are competitive business strategy as measured by cost leadership strategy and environmental performance as measured by implementation and ISO 14001 certificates. The population in this study are non-financial companies registered with NSE India in 2021. The sample selection in this study used a purposive sampling technique to produce 100 samples that fit and meet the criteria of 278 total population. Testing the hypothesis in this study used the statistical tool STATA 14.2 with multiple linear regression analysis techniques.

Findings: The results of this study indicate that competitive business strategy has no effect on disclosure of carbon emissions, while environmental performance influences disclosure of carbon emissions.

Practical implications: These research findings have an impact on stakeholders and policy makers considering Carbon Disclosure disclosure.

Originality/value: This research has the latest in the form of modifications to models and objects that are relevant to the carbon emissions phenomenon.

Keywords: Carbon Emission Disclosure; Competitive Business Strategy; Environmental Performance.



INTRODUCTION

Global Warming and Climate Change have become political and business issues that are growing to threaten the future of a country and even the world. The Secretary General of the United Nations, Antonio Guterres, at the virtual summit held in December 2020, mentioned all conference participants to issue a Climate Emergency status or climate emergency for each participating country. The call is intended for the countries participating in the conference to focus on efforts to reduce carbon emissions so that disasters caused by climate change can be avoided ([Sulkan, 2020](#)).

Based on Kompas.com reports, Carbon Brief analysis data, accounting for all humans, has released around 2.5 trillion tons of CO₂ into the atmosphere since 1850. Of the remaining carbon emissions, less than 500 billion tons of CO₂ from the remaining carbon budget stay below 1.5 degrees Celsius from global warming. According to Carbon Brief analysis, the United States has been the country with the largest CO₂ emission contribution in the world since 1850, namely with 509 billion tons or 20 percent of total carbon emissions overall. Below that are China (11%), Russia (7%), Brazil (5%), Indonesia (4%), and India (3.4%). There is a strong correlation between the total amount of CO₂ and human activities (especially in the use of transportation); besides that, CO₂ is also generated by the burning of fossils, industrial processes, forest fires, and agricultural activities.

Environmental issues are currently a topic of discussion that has attracted much attention from various institutions such as the government, community organizations, environmental organizations and activists, the community, and business people ([Ramadhan et al., 2019](#); [Syahadat & Putra, 2022](#); [Yanuary & Gumilar, 2018](#); [Yue et al., 2020](#)). According to the IPCC or The Intergovernmental Panel on Climate Change, industry is one of the sectors that causes damage to the environment. The damage is caused by waste from production activities, both solid, liquid, and gas waste/emissions ([Kishor et al., 2021](#); [Mahamadsaidovich, 2021](#); [Shrivastava et al., 2020](#)).

Disclosure of carbon emissions by companies is currently only voluntary ([Adhikari & Zhou, 2021](#); [Jiang et al., 2021](#); [Lee & Choi, 2021](#)), which means that each company has great flexibility to decide what information they will not disclose and consider it as relevant information for decision-making. Disclosure of carbon emissions is a form of responsibility that is used to explain the impact resulting from a company's operational activities on future climate change.

Many stakeholder groups are asking for action and suggesting several solutions to problems related to the release of carbon emissions, which result in extreme climate change ([Kılıç & Kuzey, 2018](#)). The above phenomenon can prove that the stakeholders want the company to take responsibility for the activities carried out by the company so that it has an impact on climate change and global warming. Companies that obtain a diploma in carbon make it easy for stakeholders interested to make decisions about the status of emission carbon company, push the company to reduce emission carbon, and be involved in debate public about policy and regulation change climate ([Du et al., 2021](#); [Martin-Roberts et al., 2021](#)).

The choice of the object in this study was based on the reason that it had not been studied in previous similar studies because the previous research only examined Indonesia. The distribution of carbon emissions in India is also the most influential in the released carbon emissions resulting in global warming. This study aims to empirically prove and test "The Influence of Competitive Business Strategy and Environmental Performance on Carbon Emission Disclosure" by modifying the variables and objects studied. The independent variables are Competitive Business Strategy and Environmental Performance, with a different sample, namely non-financial sector companies registered on NSE India in 2021. It is expected that the independent variables, Competitive Business Strategy and Environmental Performance, can influence the dependent variable, namely Carbon Emission Disclosure

LITERATURE REVIEW

Stakeholder theory is a theory that describes which parties a company is responsible for ([Freeman, 1984](#)). In stakeholder theory, a company is not an entity that only operates for its own interests and is only profit-oriented, but must provide benefits to its stakeholders, which in this case consist of shareholders, creditors, consumers, suppliers, government, society, analysts and other parties ([Lindawati & Puspita, 2015](#); [Mustika et al., 2023](#); [Rasyid et al., 2022](#); [Wicaksono et al., 2023](#)). So, it can be said that the existence and sustainability of a company is greatly influenced by the support provided by stakeholders to the company. To gain legitimacy from stakeholders, companies are required to submit accountability reports, especially in environmental matters. This is also a way to show company transparency and accountability.

In this research, carbon emission disclosure is measured using an index that has been developed by ([Choi et al., 2013](#)) from an information request sheet provided by the CDP (Carbon Disclosure Project). CDP is an independent, non-profit organization that provides information about world climate change. The following is the index used in this research ([Choi et al., 2013](#)).

Carrying out environmental awareness and disclosing this is one strategy for maintaining harmonious relations with stakeholders ([Cahya, 2016](#)). By making environmental disclosures, the company hopes to fulfill the desires of stakeholders thereby creating a harmonious relationship between the company and stakeholders.

The research and development carried out by [Porter \(1985\)](#) developed a framework outlining how companies can choose business strategies to compete effectively in the existing business competition. He argues that companies should emphasize that the essence of a company's business strategy is its ability to deliberately choose a series of activities that will provide a unique mix of values to its customers. Several studies analyzing the effect of disclosing company carbon emissions on company financial performance conducted by [Al-Rdaydeh \(2018\)](#) stated that a competitive business strategy strengthens the influence between the company's environmental performance and the company's financial performance.

However, [Rusli et al. \(2019\)](#) entitled The Moderating Effect of Competitive Business Strategy on Corporate Environmental Performance and Corporate Carbon Emission Disclosure Towards Corporate Financial Performance found

results that Competitive Business Strategy cannot affect Carbon Emission Disclosure.

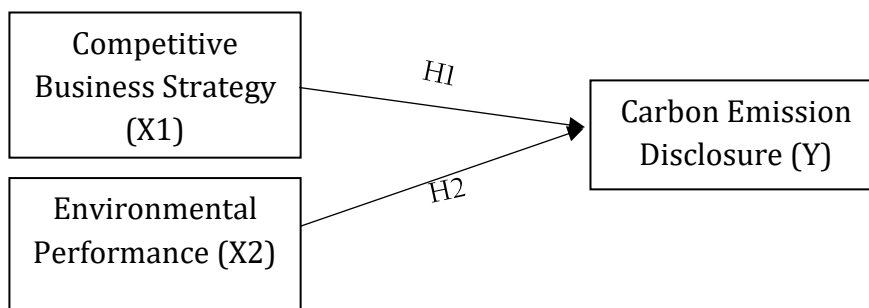
H1: Competitive Business Strategy Influences Carbon Emission Disclosure

Environmental Performance is defined as a general description of the company's performance in running a business or efforts to create a good conditioned environment and preservation of the natural environment that is implemented by the company as a party that has the potential to cause negative environmental and social impacts. Good environmental performance is a reflection of environmental preservation activities or activities that have been carried out by a company.

In the research of [Kholmi et al. \(2020\)](#), it was found that Environmental Performance did not influence companies to make Carbon Emission Disclosures, but in [Saptiwi \(2019\)](#) found that Environmental Performance had a positive effect on Carbon Emission Disclosures. Therefore, companies that have good environmental performance will be more proactive in environmental empowerment and carry out environmental disclosures, especially commitments to participate in reducing carbon emissions properly so that companies gain legitimacy from the community.

H2: Environmental Performance influences Carbon Emission Disclosure

Based on the development of the hypotheses that have been described, the following framework is used to draw the relationship between the independent variables and the dependent variable as follows:



METHOD

The method used in this study is the associative method. The associative method is a method used to identify and analyze the relationship between two or more variables. This study uses a quantitative approach, in which the data obtained will be calculated and analyzed using the STATA data processing tool. The population of this study is non-financial companies registered with NSE India in 2021. The determination of the sample in this study uses a *purposive sampling technique*, which must be based on certain criteria in determining the sample. The criteria used and determined in this study are as follows: (1) Non-Financial Sector Companies that are registered with NSE India in 2021, (2) Companies that issue annual reports and sustainability reports in 2021, (3) Companies that issue annual reports and sustainability reports in English, (4) Companies that disclose carbon emissions. Of the 278 total population, the researchers obtained 100 samples that matched the above criteria. The data used in this study are secondary data obtained from the official website of NSE

India (nseindia.com), and the official website of each company selected as the research sample. Data from this study were obtained using documentation techniques. The variables used in this study are the independent variables, namely *competitive business strategy* and *environmental performance*, and the dependent variable, namely *carbon emission disclosure*.

Dependent Variable

In this study, the disclosure of carbon emissions was measured using an index that had been developed by [Choi et al. \(2013\)](#) from a request for an information sheet provided by the CDP (*Carbon Disclosure Project*). CDP is an independent, non-profit organization that provides information on global climate change. The following is the index used in this study ([Choi et al., 2013](#)).

Table 1 Index Carbon Emissions Disclosure

Category	Items
<i>Climate Change: Risk and Opportunity</i>	CC-1: Assessment/description of risks (both specific and general regulations or regulations) and actions taken to manage these risks. CC-2: Current (and future) assessment/description of the financial, business and opportunity implications of climate change.
<i>Green House Gas Accounting</i>	GHG-1: Description of the methodology used to quantify greenhouse gas emissions (eg, GHG Protocol or ISO). GHG-2: Existence of external verification of quantity of GHG emissions by whom and on what basis. GHG-3: Total greenhouse gas emissions (metric tons of CO ₂ - e) generated. GHG-4: Disclosure of scope 1 and 2 or scope 3 of direct GHG emissions. GHG-5: Disclosure of GHG emissions by origin and source. (e.g., coal, electricity, etc.) GHG-6: Disclosure of GHG emissions by facility or segment. GHG-7: Comparison of GHG emissions with previous years
<i>Energy Consumption Accounting</i>	EC-1: The amount of energy consumed (eg, terajoules, MAP-joules). EC-2: Quantification of energy used from renewable resources. EC-3: Disclosure by type, facility and segment
<i>GHG Reduction and Cost</i>	RC-1: Details of plans or strategies to reduce GHG emissions. RC-2: Specifications of the target level/level and year of GHG emission reductions.

<i>Carbon Emissions Accountability</i>	RC-3: Current emission and cost reductions or savings achieved as a result of carbon emission reduction plans
	RC-4: Calculated future emission costs
	ACC-1: Indication of which board committee (or other executive body) has responsibility for action related to climate change.
	ACC-2: Description of the mechanism by which the board (or other executive body) reviews company progress on climate change.

Carbon emission disclosure has 18 indexes where each index item is worth 1. So the maximum total score that will be obtained by the company in this measurement is 18. Then the score will be calculated based on the following formula:

$$CED = \frac{\text{Total disclosed index}}{\text{Total CED index}}$$

Independent Variable

Competitive Business Strategy

Competitive Business Strategy is a competitive strategy that allows companies to survive in an environment of intense business competition (Ndung’u et al., 2016). Companies can be classified into strategic business types using Porter (1985) framework. As stated above, researchers have succeeded in utilizing Porter’s typology to classify a company’s business strategy in order to improve the company’s financial performance because the company has a business advantage. Classification of the company’s business strategy is based on Porter (1985) strategy. Thus, the company’s business strategy can be categorized into two groups: cost leadership strategy and product differentiation strategy (Rahimi, 2016). However, this study only measures cost leadership strategy because the companies studied in this study have different types of products that cannot be used as a benchmark, calculated from:

$$\text{Com_Bustra} = \frac{(\text{Total Sales})}{(\text{Total Assets})} \times 100\%$$

Environmental Performance

Environmental performance is the result of the company’s work on the environment in an effort to preserve the environment, which refers to how much impact and damage has been caused by the company for its business activities. Environmental performance in this study is calculated based on the implementation of ISO 14001 certification developed in research Amaliyah and Solikhah (2019), namely with the following calculations:

Table 2 ISO 14001 Assessment Indicators

Mark	Assessment Indicator
0	If you have not implemented and ISO 14001 certified

1	When implementing ISO 14001
2	If you have implemented an ISO 14001 certified dam

Data analysis technique

Data analysis techniques in this study used descriptive statistical analysis and simple linear regression analysis, which were processed using the help of statistical tools in the form of Stata. Data analysis in this study is Multiple Linear Regression Analysis. Testing with the multiple regression method model is a method used to see the relationship between one or more independent variables (free) and has a straight-line relationship with the dependent variable (tied). The equation of multiple linear regression is:

$$CED = \alpha + \beta_1 ComBuStra + \beta_2 EnvPer + e$$

Information:

CED = Carbon Emissions Disclosure

α = Constant

$\beta_1 - \beta_2$ = Regression Coefficient

ComBusstra = Competitive Business Strategy

EnvPer = Environmental Performance

e = Errors

RESULTS & DISCUSSION

Descriptive Analysis

Descriptive Statistical Analysis is defined as a data analysis technique by describing or describing the data that has been collected as it is without intending to make general conclusions. The data that has been collected can be seen from the amount of data, average value (mean), *standard deviation*, minimum value (*min*), and maximum value (*max*) of each variable in this study, namely, competitive business strategy, environmental performance, and carbon emission disclosure at non-financial companies registered with NSE India in 2021. The following is the result of a descriptive statistical analysis of each variable:

Table 3 Descriptive statistics

Variables	Obs	Means	std. Dev.	Min	Max
CED	100	.6511111	.1994631	.1111111	1
ComBusstra	100	.8860435	.5613619	.0584074	2.933989
EnvPer	100	1.32	.8394322	0	2
E	0				

Source: Results of data processing STATA/MP 14.2

Based on table 3 shows the results of the descriptive statistics of the dependent variable, namely, *Carbon Emission Disclosure* (CED) with a minimum value of 0.1111111, which is owned by India Hotel and Apollo Hospital, which means that there is still a lack of disclosure of carbon emissions (CED) and a maximum value of 1 which is owned by Bharat Petroleum Ltd, Adani Total Gas Ltd, and Larsen & Toubro India which means they are very good at disclosing carbon emissions (CED). Furthermore, the average value of the dependent variable is 0.6511111, and the standard deviation is 0.1994631. This means that the tendency of companies to disclose carbon emissions (CED) is 65% which can be seen from the average value of descriptive statistics on research results on companies, so the data is considered good. With a standard deviation value that is smaller than the average value, it can be shown that the data in the dependent variable has a wide distribution in disclosing carbon emissions (CED), so it can be said to be good.

The independent variable *Competitive Business Strategy* (ComBusStra) can be seen as it has descriptive statistical test results with a minimum value of 0.0584074, which is owned by Adani Transmission Limited; this means that the company is still not optimal enough to carry out a competitive strategy in minimizing costs and a maximum value of 2.933989 which is owned by APL Apollo Limited, this means that the company has maximized its competitive strategy to minimize costs. Furthermore, the average value on the *Competitive Business Strategy independent variable* is 0.8860435, and the standard deviation is 0.5613619. This is quite good because the variation in the data spreads quite widely.

The independent variable *Environmental Performance* (EnvPer) can be seen has descriptive statistical test results with a minimum value of 0 owned by Adani Green Energy Ltd, Indian Oil Corporation Ltd, Tata Power International Ltd, and 21 other companies, which I will attach the data to in the attachment this thesis. From the minimum value data above, it can be concluded that the company has not implemented and received an ISO 14001 certificate, which means that it is still not optimal in managing the environment to keep it clean and green and is still not optimal in corporate responsibility towards the surrounding environment. Then, the maximum value in this variable is 2, which is owned by Adani Transmission Limited, Bharat Petroleum Ltd, Adani Total Gas Ltd, and 52 other companies, which I will attach in the appendix of this thesis. From the maximum value data above, it can be concluded that the company has implemented and obtained the ISO 14001 certificate, which means that it has maximized in managing the environment to keep it clean and has maximized the company's responsibility towards the surrounding environment. Furthermore, the average value of the dependent variable, *Environmental Performance*, is 1.32, and the standard deviation is 0.8394322. This is quite good because the variation in the data spreads quite widely.

Multiple Linear Regression Model a

Table 4 Multiple Linear Regression Test Results

Number of obs	=	100
F(2, 97)	=	15.66
Prob > F	=	0.0000
R-squared	=	0.2441
Adj R-squared	=	0.2286
Root MSE	=	.17519

CED	Coef.	std. Err.	t	P> t	[95% interval]	Conf.
ComBusStra	.0378854	.0314036	1.21	0.231	-	.100213 .0244421
EnvPer	.1134028	.0210009	5.40	0.000	.0717219	.1550837
_cons	.4678513	.0421172	11.11	0.000	.3842604	.5514422

Source: Results of STATA/MP data processing 14.2

From the results of the data test above, the regression equation can be made as follows:

$$CED = 0.4678513 + 0.0378854ComBusStra + 0.1134028EnvPer + e$$

In the regression equation, multiple linear regression coefficients are obtained which can be interpreted as follows:

1. The regression constant of 0.4678513 indicates that if the independent variable is said to be constant or does not exist then the CED that occurs is 0.4678513.
2. The regression coefficient of 0.0378854 indicates that if every increase of 1 ComBusStra unit will increase CED by 0.0378854
3. The regression coefficient of 0.1134028 indicates that if every increase of 1 EnvPer unit will increase CED by 0.1134028

Kurtosis Skewness Normality Test

The normality test aims to test whether, in the regression model, the confounding or residual variables have a normal distribution or not. The normality test was carried out statistically with the *Skewness Kurtosis statistical test*. If the ratio value or Z value is at a critical value between -2 and

+2, then the data is said to be expected. Data is normally distributed and will look good when applied to analysis in answering and explaining phenomena. Based on the analysis that has been carried out, the results are as follows:

Table 5 Skewness and Kurtosis Test Results

Variables	Obs	Pr (Skewness)	Pr (Kurtosis)	Adj chi2 (2)	Prob>chi2
Error	100	0.8449	0.8742	0.06	0.9688

Source: Results of data processing STATA/MP 14.2

Based on the results in table 5, it shows that the results of the skewness and kurtosis tests are in the critical range of ± 2 , so that the data is said to be normally distributed data.

Multicollinearity Test

A multicollinearity test was conducted to test whether there is a relationship between the independent variables in the regression model. To find out whether multicollinearity occurs or not, that is by looking at the tolerance value and the *Variance Inflation Factor* (VIF). If the tolerance value is below 0.1, there is no multicollinearity, and the VIF value for each independent variable is more than 0.1; then it is said that there is a symptom of multicollinearity. Based on the analysis that has been carried out, the results are as follows:

Table 6 Multicollinearity Test Results

Variables	VIF	1/VIF
ComBusstra	1.00	0.997588
EnvPer	1.00	0.997588
VIF means	1.00	

Source: Results of data processing STATA/MP 14.2

Based on the results in Table 6, it shows that the results of the multicollinearity test show that the tolerance value of all independent variables has a value of less than 0.1, so it can be concluded that there is no correlation between the independent variables. Likewise, the *Variance Inflation Factor* (VIF) value on the test results shows a value that is less than 0.1, meaning that there is no correlation between the independent variables. So, from the above test results, it can be concluded that there is no multicollinearity between the independent variables, namely, *Competitive Business Strategy* and *Environmental Performance*.

Heteroscedasticity Test

The heteroscedasticity test was carried out to test whether the value in the regression has an unequal residual variance from one observation to another. A good regression model is homoscedasticity, not heteroscedasticity. It is said that there are no symptoms of heteroscedasticity if the indicated P value is > 0.05. Based on the analysis that has been carried out, the results are as follows:

Table 7 Heteroscedasticity Test Results

Chi2 (1)	2.76
Prob > Chi 2	0.0968

Source: Results of data processing STATA/MP 14.2

Based on the results in table 7, the results of the heteroscedasticity test show that the probability chi-square value is 0.0968 greater than the P value shown at 0.5. So it can be concluded that there is no heteroscedasticity in this study.

Hypothesis testing

In this study, the coefficient of determination test was used to determine the ability of the independent variables to influence the dependent variable. A value close to one indicates that the independent variables influencing the dependent variable are getting bigger. Based on the analysis that has been carried out, the results are as follows:

Table 8 Determination Coefficient Test Results

Variable	Coef.	t	Prob.	Conclusion
ComBusstra	0.0378854	1.21	0.231	No effect
EnvPer	0.1134028	5.40	0.000	Influential
Adj. R-square			0.2286	
F-Statistics			15.66	
Prob(F-Statistics)			0.0000	

Source: Results of data processing STATA/MP 14.2

Based on the test results of the coefficient of determination in, Table 8 shows that Adj. The R-Square in this study is 0.2286, or, if used, as a percentage of 22.86%. This proves that the Carbon Emission Disclosure variable is influenced by the Dependent Variable X2, namely Environmental Performance of 22.86%, but not influenced by X1, namely Competitive Business Strategy. While the remaining 77.14% of the results of 22.86% were influenced by other variables outside this study.

Based on the results of the data test in Table 8, the prob>f result is 0.0000, which means that this number is smaller than the constant value of 0.05,

so *Competitive Business Strategy* (X1) and *Environmental Performance* (X2) simultaneously have an influence on *Carbon Emission Disclosure*.

This test is used to determine the level of significance of the independent variables on the dependent variable individually or partially. Testing is done using a significance value of 0.05 or 5%. This test will prove the effect of the independent variables, namely *Competitive Business Strategy* and *Environmental Performance*, on the dependent variable, namely *Carbon Emission Disclosure*. The provisions for testing these variables must refer to a significance value of <0.05 . If the independent variable test results are <0.05 , then it is accepted; if the independent variable test results are >0.05 , then it is rejected.

The following are the results of the test to determine the relationship between the independent variables and the dependent variable partially:

H₁: Competitive Business Strategy Influences Carbon Emission Disclosure.

Based on the data obtained in Table 8, which shows the probability value of the independent variable *ComBusStra*, which is 0.231, which is greater than the significance value of 0.05, this means that H₁ is rejected. So it can be concluded that the results of the first hypothesis test, *Competitive Business Strategy* has no effect on *Carbon Emission Disclosure*.

H₂: Environmental Performance Influences Carbon Emission Disclosure

Based on the data obtained in Table 8, which shows the probability value of the independent variable *EnvPer* which is equal to 0.000, which is smaller than the significance value of 0.05, this means that H₁ is accepted. So it can be concluded that the results of the second hypothesis test, *Environmental Performance* has an effect on *Carbon Emission Disclosure*.

The Influence of Competitive Business Strategy on Carbon Emission Disclosure

The competitive Business Strategy in this study is denoted by *ComBusStra*. Measurement in determining the value of *ComBusStra* is to use the cost leadership strategy method; cost leadership is the company's strategy to minimize costs to a minimum so that the costs incurred are not too much; in this way, the company can generate a lot of total sales or according to what is expected by the company. Thus, the company's business strategy can be categorized into two groups: cost leadership strategy and product differentiation strategy (Rahimi, 2016). But in this study, the researchers only used the cost leadership strategy because only this strategy could be used for all types of companies. Calculation of the cost leadership strategy is by dividing total sales by total assets and then dividing by 100%.

Based on the table of multiple linear regression analysis test results, it can be seen that the significance value obtained is 0.231. The value obtained from the analysis test results is greater than the specified significance value, which is equal to 0.05. This proves that *Competitive Business Strategy* has no significant effect on *Carbon Emission Disclosure*. However, even though this variable has no effect, it will have an impact of 3% on *Carbon Emission*

Disclosure; this is evidenced by the results of the coefficient of determination test where the coefficient value of the ComBusStra variable is 0.0378854.

From the results of the test of the coefficient of determination, it can be concluded that every increase of 1 ComBusStra unit will increase CED by 0.0378854. This is similar to research conducted by [Rusli et al. \(2019\)](#), which proves that *Competitive Business Strategy* cannot moderate the relationship between *Corporate Carbon Emission Disclosure* and *Corporate Financial Performance*.

The ComBusStra variable is also not in line with stakeholder theory, which means that there is no emphasis on companies running CED by carrying out a good competitive strategy. Companies prefer to increase sales rather than fulfill stakeholder requests to disclose CED. This is evidenced by the fact that the average ComBusStra score is 0.8860435, which is good at implementing a Competitive Strategy but not necessarily doing CED well. This is evidenced by the company Adani Transmission Limited, which has a small ComBusStra value of 0.06, but the CED value disclosed by this company is quite large, namely 0.83, which means it is close to 1 (discloses all indicators). Whereas the Motherson Group Limited company has a ComBusStra value of 1.13 which is good enough to carry out a competitive strategy, the CED value of this company is only 0.44, which means that not all CED indicators are disclosed by this company.

The company's ability to carry out competitive strategies cannot influence the company to carry out *Carbon Emission Disclosures* ([Rachmawati, 2021](#)). This is because the company carries out a competitive strategy only to focus on increasing company sales by maximizing the management of the company's assets ([Farida & Setiawan, 2022](#); [Rounaghi et al., 2021](#)). The greater the sales made by the company, the better the management of assets carried out by the company to carry out a competitive strategy by minimizing costs to utilize existing assets ([Agustia et al., 2020](#); [Asiaei et al., 2022](#)) so that the company's sales continue to increase. The no effect of the ComBusStra variable can also be caused by differences in the characteristics of the companies studied; these characteristics are the types of companies that vary so that there is no similarity in the products sold or managed by the company.

The Effect of Environmental Performance on Carbon Emission

Disclosure Environmental Performance in this study is denoted by EnvPer. The measurement in determining the value of EnvPer is based on ISO 14001 Certification, which only assesses whether the company has implemented and obtained ISO 14001 certification or has not implemented and obtained ISO 14001 certification. Based on the table of multiple linear regression analysis test results, it can be seen that the significant value obtained from the EnvPer variable is 0.000. The value obtained from the analysis test results is smaller than the specified significance value, which is equal to 0.05. This proves that *Environmental Performance* influences *Carbon Emission Disclosure*. This research is in line with previous research conducted [Saptiwi \(2019\)](#) and is not in line with research conducted by [Kholmi et al. \(2020\)](#) and ([Amaliyah & Solikhah, 2019](#)).

This research is consistent with the *stakeholder theory*, which in fulfilling stakeholder requests to improve company performance will also increase the company's quality in disclosing CED expected by *stakeholders*. This can be

proven by the results of multiple linear regression tests on the R-Square value of 0.2286 or 22.86%. With these results, it can be concluded that Environmental Performance can influence Carbon Emission Disclosure by 22.86%. Besides being consistent with the stakeholder theory, this research is also consistent with the legitimacy theory, which concerns the company's relationship with the community. From this research, it was found that it is the company's responsibility to manage the environment so that it does not have an impact on people's lives so that this can provide a good reputation for the company ([Barauskaite & Streimikiene, 2021](#)). So that the Disclosure of social or environmental responsibility in the Annual Report or Sustainability Report is important to describe the company's image to the public regarding the company's activities and achievements so that the community can accept the company's presence ([Di Vaio et al., 2022](#); [Solikhah & Maulina, 2021](#)).

CONCLUSION

In Based on the results of data analysis regarding the influence of competitive business strategy and environmental performance on carbon emission disclosure in non-financial companies registered with NSE India in 2021, it can be concluded as follows: (1). Competitive business strategy has no effect on carbon emission disclosure. In carrying out a competitive strategy, it cannot influence the company to disclose all indicators or not to disclose all indicators. By implementing a competitive strategy, a good company cannot significantly determine the disclosure of carbon emissions. (2). Environmental performance affects carbon emission disclosure. The company's ability to properly manage the environment will influence the company's disclosure of carbon emissions.

Based on the conclusions that have been presented, this study still has limitations that will affect the results of the desired research. The following are the limitations of this study: (1). This research examines all sectors except non-financial, so the data cannot be averaged, (2). The sample used in this study is limited (3). Researchers only tested two independent variables that could not affect the dependent variable (4). In this study, the measurement for the Carbon Emission Disclosure variable was only based on the Carbon Disclosure Project (CDP) developed by [Choi et al. \(2013\)](#). This will allow for significant differences from one researcher to another because it is based on the subjectivity of the CDP assessment.

Based on the conclusions and limitations presented by the researcher, the suggestions that the researcher can give for further research are as follows: Future research may consider using objects that are more than one year old so that the data produced is more accurate than previous studies. Future studies may consider replacing independent variables that influence carbon emission disclosures, such as *audit committees, good corporate governance, political connections*, and others

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How to Cite:

Wicaksono, A. P. N., Ayu Amalia, F., & Firmansyah. (2023). Carbon Emission Disclosure Viewed from Competitive Business Strategy and Environmental Performance: India's Perspective. *Journal of Multiperspectives on Accounting Literature*, 1(2), 70–86. <https://doi.org/10.22219/jameela.v1i2.28616>