

CHAPTER 3

RESEARCH METHOD

Broadly speaking, this chapter will discuss the object of the research to be carried out, the design of the research, what variables are contained in this research, data collection, sampling, and data analysis techniques used in this research.

The research design will explain the research methods and approaches to be used as well as a description of the explanation of why these methods and approaches are used. The research variables will contain an elaboration of each variable and its operational definition and what can be used as an indicator of the research variable. Collection techniques are how researchers collect data, describe data, and the data collection techniques used. Meanwhile, the sampling technique will contain an explanation of the technique of selecting members of the population to become members of the sample. The data analysis technique will contain analytical methods used to measure research results, statistical formulas, and computer programs needed for data processing.

A. Research Object

According to Sugiyono (2012:115) population is a common domain consisting of objects or subjects with certain characteristics that are studied by the researcher and determined when conclusions are drawn from them.

This research is a quantitative study using secondary data obtained from the annual report of manufacturing companies listed on the Indonesia Stock Exchange (IDX) and participating in PROPER held by the Ministry of Environment in 2019-2021.





All manufacturing companies listed on the Indonesia Stock Exchange (IDX) are covered in this study. The data required in this study are managerial ownership, independent board of commissioners as measured by the number of independent commissioners against the number of commissioners, social costs incurred by the companies in Corporate Social Responsibility Disclosures, environmental performance, and Corporate Social Responsibility Disclosures regarding social activities they have carried out. Data is secondary data.

B. Research Design

The research design empirically aims to examine how the impact of managerial ownership, independent board of commissioners, and social costs affects Corporate Social Responsibility Disclosure with environmental performance as an intervening variable for analysis. The study was conducted through several processes. Develop theoretical frameworks, frameworks of thought, and research hypotheses. Then proceed with determining the research method, then validating the research hypothesis and discussing the research results. And finally, make a conclusion from all the data that has been obtained in this study.

C. Research Variables

This study empirically analyses the factors influencing Corporate Social Responsibility Disclosure by manufacturing companies listed on the Indonesia Stock Exchange (IDX). The variables used in this study consists of independent variables, dependent variables, and intervening variables. The independent variable in this study consists of managerial ownership, independent board of commissioners, and social costs. The dependent variable in this study consist of Corporate Social Responsibility

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Disclosure, while the intervening variable used in this study is environmental performance.

1 Corporate Social Responsibility Disclosure

Corporate Social Responsibility Disclosure is a dependent variable in this study. Corporate Social Responsibility Disclosure is a form of report on the implementation of corporate social responsibility published in the company's annual report.

The Global Reporting Initiatives (GRI) standard is a manual for producing sustainability reports that demonstrate the world's best practices for informing the public about economic, environmental, and social effects. The latest GRI guideline, GRI G4, was released in 2013, according to the Global Reporting Initiative (Global Reporting Initiative, 2013). The GRI guideline report was first published in 2006. The six factors that make up this guideline are economic performance, environmental performance, and social performance, which includes labour responsibility, human rights, society responsibility, and product responsibility.

To calculate the Corporate Social Responsibility Disclosure score using GRI can be through the following methods:

- a. Map the standards used by the company, as stated in the annual report or in force in the year
- b. Check each indicator listed in the GRI in the company's annual report
- c. Provide a score of 1, if the corresponding indicator has been disclosed by the company, and 0 if not
- d. After all is finished being analysed, the final score calculation is carried out with the following calculations:

$$CSEDa = \frac{\sum Xa}{na}$$

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Information:

CSEDa = Corporate Social and Environmental Disclosures Index of company

a

$\sum Xa$ = Number of items successfully disclosed by company *a*

na = Total items, *na* = 82

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2) Managerial Ownership

Managerial ownership is a situation where the manager owns shares of the company or in other words the manager at the same time has the role of a company holder. In this case there are shareholders who concurrently serve as members of the board of directors or management team of the company. In this study, managerial ownership variable was treated as a dummy variable as measure by 1 for companies that have managerial ownership, and 0 for which there is no managerial ownership.

3. Independent Board of Commissioners

Independent Commissioners have a role, namely ensuring the implementation of company strategy, supervising company management in managing the company, and implementing accountability. In this study, the variable of independent board of commissioners is measured by a comparison between the independent board of commissioners and the total board of commissioners of the company.

The formula of this variable can be described as follows:

$$\text{Independent Board of Commissioners} = \frac{\text{Independent Commissioners}}{\text{Board of Commissioners}}$$

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4. Social Costs

Social costs are costs that are related to social accounting including environmental costs, product costs, employee costs, and community costs. In this study, social costs are measured by comparing the costs incurred for the company's Corporate Social Responsibility activities with their profit. This is in accordance with the opinion of Babalola (2012) and Hadi (2017).

The formula of this variable can be described as follows:

$$\text{Social Costs} = \frac{\text{Corporate Social Responsibility Costs}}{\text{Company Profit}}$$

5. Environmental Performance

The performance of the corporate environment can be defined as how a company impacts the surrounding environment with the use of their resources and from the company's operational activities. There is a program called PROPER, Public Disclosure Program for Environmental Compliance which aims to encourage companies in terms of environmental management. The PROPER performance rating is divided into 5 colors, each of which has their own criteria. Gold color describes very good with a score of 5, green describes excellent with a score of 4, blue describes very well with a score of 3, red describes bad with a score of 2, and black describes very bad with a score of 1.

D. Data Sampling Technique

Sampling from the population in this study used purposive sampling techniques. According to Sugiyono (2016), purposive sampling is a sample determination technique with certain considerations and the reason for using this purposive sampling technique

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is because it is suitable for use in quantitative research, or studies that do not generalize.

Some of the criteria used to determine the sample in this study are:

1. Manufacturing companies listed on the Indonesia Stock Exchange (IDX) that have issued annual reports and become participants in the 2019-2021 PROPER organized by the Ministry of Environment.
2. Manufacturing companies that report the costs incurred to carry out social activities and show concern for the environment and society.
3. Manufacturing companies that have complete data on research variables that can be further analyzed.

The criteria and number of research samples gathered for this study are shown in the following table:

Table 3.1 Criteria and Number of Research Samples

No	Criteria	Number of Research Samples
1	Manufacturing companies listed on the Indonesia Stock Exchange (IDX) that have issued annual reports and become participants in the PROPER 2019-2021	132
2	Manufacturing companies that report the costs incurred to carry out social activities and show concern for the environment and society	102
3	Manufacturing companies that have complete data on research variables that can be further analyzed	90
Total Number of Final Samples		90

E. Data Collection Technique

The collection technique used in this study is the documentation technique. In this method, the data taken is secondary data obtained from the public annual report of a company listed on the Indonesia Stock Exchange (IDX). The annual report was originally downloaded from the official website of www.idx.co.id and www.menlh.go.id.



F. Data Analysis Technique

The data obtained from the results of this study are quantitative data, which will then be analyzed according to their type. Quantitative data is research data in the form of numbers and analysis using statistics (Sugiyono, 2014). The data collected in this study will be processed and analyzed by statistical testing using SPSS 26 and path analysis using Warp PLS 7.0 with the following equation:

$$CSR_D = \beta_0 + \beta_1MO + \beta_2BC + \beta_3SC + \beta_4EP + \varepsilon$$

$$EP = \beta_0 + \beta_1MO + \beta_2BC + \beta_3SC + \varepsilon$$

Information:

CSR_D = Corporate Social Responsibility Disclosure

EP = Environmental Performance

β₀ = Constant

MO = Managerial Ownership

BC = Independent Board of Commissioners

SC = Social Costs

ε = Error

1. Similarity of Coefficients (Pooling) Test

Pooling test is a data test done by combining data between cross-section or time-series to find out whether the combined data is eligible to be pooled together.

This test combines data for three years, namely 2019, 2020, and 2021 using dummy variables. If the Sig value obtained is < 0.05, data pooling cannot be done and testing of this data must be done annually. However, if the result of the Sig value is > 0.05, then data pooling can be done, and data testing can be done within one simultaneous test. The pooling equation used is as follows:

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$$CSR = \beta_0 + \beta_1MO + \beta_2BC + \beta_3SC + \beta_4EP + \beta_5D_1 + \beta_6D_2 + \beta_7D_1MO + \beta_8D_1BC + \beta_9D_1SC + \beta_{10}D_1EP + \beta_{11}D_2MO + \beta_{12}D_2BC + \beta_{13}D_2SC + \beta_{14}D_2EP + \varepsilon$$



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$$EP = \beta_0 + \beta_1MO + \beta_2BC + \beta_3SC + \beta_4D_1 + \beta_5D_2 + \beta_6D_1MO + \beta_7D_1BC + \beta_8D_1SC + \beta_9D_2MO + \beta_{10}D_2BC + \beta_{11}D_2SC + \varepsilon$$

Information:

- CSR = Corporate Social Responsibility Disclosure
- EP = Environmental Performance
- β_0 = Constant
- β_{1-14} = Regression Coefficient
- MO = Managerial Ownership
- BC = Independent Board of Commissioners
- SC = Social Costs
- D_1 = Dummy 1 = 2019, 0 = other than 2019 (2020, 2021)
- D_2 = Dummy 1 = 2020, 0 = other than 2020 (2019, 2021)
- ε = Error

2. Data Analysis Method

The measurement model, also known as the outer model, and the structural model, also known as the inner model, were both used in this work. The measurement model demonstrates how variables appear, are observed, or take the shape of latent variables that can be measured.

a. Descriptive Statistics Analysis

According to Ghazali (2018), statistical tests are used to provide a summary or description of proven data from mean, standard deviation, variance,

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maximum, minimum, sum, range, kurtosis, and skewness. The measurements carried out in this study, namely the measurement of mean (average), maximum, minimum, and standard deviation. The descriptive statistics used in this study were used to describe data consisting of managerial ownership, independent board of commissioners, social costs, environmental performance, and corporate social responsibility disclosure.

b. Measurement Model (Outer Model)

Outer model is carried out to assess indicators of fit and multicollinearity models. In the formation and rationalization of a construct can be formed with reflective and formative indicators. Measurement model testing or outer model in this study used:

(1) Indicator Model Fit

With the fit method, the provisions of this study if the P value ≤ 0.05 , the model can be said it is fit. With the APC model, it can be said to be fit if the P value ≤ 0.05 .

(2) Multicollinearity Test

Testing using multicollinearity aims to analyze whether or not there is a multicollinearity problem between indicators and latent variables. The magnitude of multicollinearity is measured by looking at the Average VIF (AVIF) and Average Full Collinearity (AFVIF) with a size of ≤ 3.3 is accepted, however the value of ≤ 5 can still be received (Ghozali, 2020:87).





c. Structural Model (Inner Model)

The inner model aims to predict the relationship between latent variables by looking at how much variance is described and to determine the significance of the P-value (Ghozali, 2020:74). In assessing structural models or inner models with Partial Least Square (PLS) we start with the magnitude of the percentage. The variance described is by looking at the value of R-Squares for each latent variable as the predictive power of the structural mode, Stone-Geisser (Geisser and Stone, in Ghozali 2020:80). This inner model research was done by the following methods:

(1) R Square

R Square is used to produce the power of the model. According to Ghozali (2020:87) R Square is divided into 3 parts:

- (a) ≤ 0.70 indicates that the model is strong,
- (b) ≤ 0.45 indicates that the model is moderate, and
- (c) ≤ 0.25 indicates that the model is weak.

(2) Q-Square Predictive Relevance

Q2 is used to measure predictive relevance, namely how well the observation value produced by the model and also the estimated parameters. According to Ghozali (2020:87), Q2 values greater than zero have predictive relevance to certain endogenous construct models. And if Q2 is smaller than zero it shows that the model lacks predictive relevance.

(3) f^2 effect size

The value of f^2 effect size according to Ghozali (2020:87):

- (a) ≥ 0.02 indicates a small effect size,
- (b) ≥ 0.15 indicates a medium effect size, and

(c) ≥ 0.35 indicates a large effect size.

(4) Significance of Path Coefficient

The step of evaluating the structural model that must be done is to look at the P-Value to determine the influence between variables based on the hypothesis that is built by resampling. The significance value used in this study is two-tailed with P-value 0.1 (Significance level = 10%) (Ghozali, 2020:88).

(5) Indirect and Total Effects

This test is carried out to analyze the effect of the existence of managerial ownership, independent board of commissioners, and social costs on corporate social responsibility disclosure intervened by environmental performance. indirect total effects can be accepted/ intervened if the P value is <0.1 (10%) (Ghozali, 2020).

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