

**THE EFFECT OF IMPLEMENTING GREEN ACCOUNTING AND
CSR DISCLOSURES ON THE QUALITY OF FINANCIAL
REPORTING WITH INSTITUTIONAL OWNERSHIP AS A
MODERATION VARIABLE**
(Study of Energy Sector Companies Listed on the Indonesian Stock Exchange
for the 2019-2021 Period)

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Abstract

The purpose of this study was to investigate the effects of incorporating green accounting and corporate social responsibility (CSR) disclosure on the quality of financial reporting, with a focus on the energy sector companies listed on the Indonesia Stock Exchange from 2019 to 2021. The researchers collected secondary data from the official website of the Indonesia Stock Exchange (www.idx.co.id) or the company websites using purposive sampling. To analyze the data, the researchers employed panel data regression analysis and moderating regression analysis. The results of the study showed that both green accounting and CSR disclosure had a significant impact on the quality of financial reporting. This suggests that companies that incorporate green accounting practices and disclose their CSR activities tend to have higher-quality financial reports. Furthermore, the study found that institutional ownership played a moderating role in the relationship between CSR disclosure and the quality of financial reporting. Specifically, companies with higher levels of institutional ownership showed a stronger relationship between CSR disclosure and financial reporting quality. This implies that institutional investors, who often have a long-term perspective and a focus on sustainability, may place more importance on CSR disclosure when evaluating the quality of financial reports. However, the study did not find any significant impact of institutional ownership on the relationship between green accounting and the quality of financial reporting. This suggests that institutional ownership does not play a significant role in strengthening the relationship between green accounting practices and financial reporting quality.

Keywords: Corporate Social Responsibility, Green Accounting, Institutional Ownership, Quality of Financial Reporting

1. INTRODUCTION

In the current era of free-market development, Indonesian entrepreneurs no longer compete solely with domestic counterparts but face even more diverse competition. The advancement of science and technology, characterized by an increasingly sophisticated industry, has led to more complex operational activities and heightened corporate social responsibilities. The disclosure of accounting information has become a focal point in accounting research. There is a growing public concern for environmental protection awareness, with individuals now not only focusing on the accuracy of accounting information but also scrutinizing whether companies are making appropriate contributions to environmental protection (Ma & Ma, 2019).

Environmental laws and regulations have emerged, paying attention to industrial companies engaged in activities that pollute the environment. Environmental protection organizations have started demanding the preservation of the environment and natural resources to avoid threatening life. As environmental protection and development come with associated costs, the role of the accounting profession emerges in addressing environmental problems by providing financial information related to the environment that proves useful for relevant parties in decision-making (Bicer & Darewi, 2019).

The severe environmental crisis on planet Earth in recent years has been caused by increasing forest degradation and deforestation, water and soil pollution, the greenhouse effect, and damage to natural resources and habitats (Song et al., 2017). The environmental crisis involves several responsible parties, with the industry being one of them (Gonzalez & Mendoza, 2021). Companies adopt various strategies to maximize profits, engaging in research and development to enhance sales and cost efficiency. However, sometimes companies overlook environmental aspects to achieve cost efficiency, resulting in environmental pollution that cannot be avoided (Arum, 2019).

Environmental damage is a serious problem in Indonesia. Based on Yale University's analysis of the environmental performance of countries in the world in 2022, entitled The Environmental Performance Index (EPI), Indonesia is in 164th position out of 180 countries researched. Indonesia got a score of 28.20 points (Wolf et al., 2022). In the Southeast Asia region, Indonesia's score is in the bottom three. Singapore and Brunei are the two best countries with scores of 50.90 and 45.70.

Poor environmental performance indicates that Indonesia is not an environmentally friendly country. A country is considered environmentally friendly when it can produce environmentally friendly products, processes and practices that do not harm the natural environment, help conserve resources such as water and energy, and do not contribute to air, water and land pollution (Wolf et al., 2022).

Based on data from the Indonesian Forum for the Environment (WALHI), 39.4% of the environmental damage that occurred was caused by companies. Damage Natural causes such as forest burning that lasted several years not only disturbed Indonesia but also neighboring countries such as Singapore, Malaysia and Brunei Darussalam, so that companies have the greatest responsibility for environmental damage that occurs in Indonesia.

Government Regulation Number 47 of 2012 concerning Social and Environmental Responsibility of Limited Liability Companies (PP 47/2012) regulates that every PT as a legal subject has social and environmental responsibilities. The obligation to implement CSR is aimed at PTs that carry out business activities in the field and/or related to natural resources (SDA) based on law. However, even though the obligation to spend on CSR has been regulated, there are no binding national regulations regarding the amount or percentage of CSR that companies must spend (E. Permatasari, 2020).

In line with the *green accounting concept*, companies should include environmental costs in the company's operational costs (Rounaghi, 2019). In the national context, Director of the Indonesian Forum for the Environment (Walhi) Aceh Ahmad Shalihin said that not all mining companies carry out their responsibilities according to the regulations. There are several companies that do not carry out reclamation after the permit period expires, for which the company should be sanctioned or the company should

deposit its reclamation funds. However, the company did not do this and the company neglected its obligations (Zulkarnaini, 2023) . From the phenomenon described above, this shows the company's problems in implementing *green accounting* and inappropriate use of CSR a.

Green accounting can play an important role in preventing environmental damage by promoting more sustainable and responsible economic activities , by taking into account the true costs and benefits of economic activities, organizations can make more informed decisions that balance economic growth with environmental sustainability (Sadiku et al. al., 2021) . The green accounting concept directs corporations to make business decisions based on benefits that not only lead to profit orientation, but also to the environment and society around the company. This means that every business decision taken must pay attention to and consider the impact that will occur on finances and the environment (Prahara & A'yuni, 2021) . The application of green accounting by companies still raises controversy among researchers because it involves several views on quantitative (environmental financial reports) and qualitative (environmental policies and documents), both national (gross domestic product and environmental regulations) and local data (Gonzalez & Mendoza, 2021) . However, what is clear is that if a company wants to improve its environmental performance, accounting must be involved in it to carry out the function of collecting, calculating, analyzing and reporting environmental costs and other transactions related to the environment so that management can manage environmental aspects (Arum, 2019) .

Another concept related to the environment in companies is *corporate social responsibility*. The role of corporations in supporting *green accounting* is the implementation of CSR (Prahara & A'yuni, 2021) . *Green accounting* emerged with the aim of providing quantitative and qualitative information about the company's environmental aspects (Gonzalez & Mendoza, 2021) . Meanwhile, CSR covers the social, environmental and economic fields. In recent years, there has been an increase in indicators in various areas of CSR that will allow more in-depth analysis (Rodriguez-Gomez et al., 2020) .

The materiality matrix in the *global reporting initiative guidelines* (GRI 2016) can be considered an exemplary initiative to implement key ideas from stakeholder theory (Dmytriiev et al., 2021) . With the introduction of the materiality matrix, GRI requires companies to identify environmental and social issues that are of particular relevance to the company and important to their stakeholders. Once this identification, carried out together with the company's stakeholders, has been carried out, the company is required to report on its responsibilities regarding that specific issue.

Companies make regular financial reports which include reports on the company's profit sustainability to establish relationships between these two parties with different interests (Nurdin & Hamzah, 2016) . Positive relationships between stakeholders *can* help business. Meanwhile, bad relationships increase the risk of business development . Therefore , building positive connections with stakeholders can help businesses operate better (Vitolla et al., 2019; Yu et al., 2017) .

Accounting information is needed by users to make economic decisions. To be useful in making economic decisions, the accounting information presented in financial reports must meet the requirements (Arum, 2019) . In practice, implementing an

integrated *green accounting process* allows increasing the usefulness of accounting information for stakeholders in assessing and making economic and non-economic decisions that are more environmentally and socially friendly , so that multiple economic crises can be prevented and corrected (Prahara & A'yuni, 2021) .

The quality of financial reporting is often associated with company performance which is reflected in sustainable profits and is measured by accounting attributes. Value relevance is one of the attributes of accounting quality (Azar et al., 2019) which shows the extent to which accounting information still has a role in assessing relevance as a basis for decision making for investors. In this research, the quality of financial reporting is measured based on the company's earnings sustainability, namely how the condition of profits continues continuously (*earnings sustainability*).

In this research, institutional ownership was chosen as an element of company *stakeholders* which was used as a moderating variable . The use of institutional ownership in the relationship between these variables has not been widely studied. However, institutional investors have been able to motivate companies to improve the quality of their financial reporting, including maintaining consistent profits, thereby increasing investor confidence and strengthening the company's position in the capital market. (Al-Duais et al., 2022) . So it is interesting to see the role of institutional ownership in moderating the relationship between the variables in this research.

Related research on *green accounting* and CSR on the quality of financial reporting has been carried out by several previous researchers. Research conducted by Arum (2019) found that the implementation of *green accounting* had an effect on profit sustainability, but had no effect on the value relevance of accounting information. Research conducted by Agbo & Olufemi, (2022) shows that *environmental accounting* has a positive influence on the quality of financial reporting . Meanwhile, research conducted by Bicer & Darewi (2019) found that there was a statistically significant relationship between environmental costs and improving the quality of financial reports.

Furthermore, research conducted by Al-Qudah et al (2022) examined CSR And The quality of financial reporting in manufacturing companies in Jordan found that CSR has a positive and significant influence on the quality of financial reporting. In line with research conducted by Nugroho & Darsono (2023) which found that CSR disclosure and institutional ownership structure had a positive effect on the quality of financial reporting. However , contrary to the results of research conducted by Kim & Lee (2019) whose research results show that there is no significant relationship between CSR and the quality of financial reporting.

2. LITERATURE REVIEW

2.1. Legitimacy Theory

Legitimacy theory explains that disclosure of social responsibility is carried out by companies to gain legitimacy from the community where the company is located. This legitimacy causes the company to avoid undesirable things and can increase the value of the company. Companies are increasingly realizing that the survival of the company also depends on the company's relationship with the community and environment in which the

company operates. This is in line with *legitimacy theory* which states that companies have a contract with society to carry out activities based on justice values, and how companies respond to various interest groups to legitimize company actions (Tenriwaru et al., 2021).

Legitimacy theory is another theory used to explain social and environmental disclosures. Burgwal & Vieira (2014) and Mousa & Hassan (2015) argue that legitimacy theory are the most widely used to explain voluntary social and environmental disclosures in their studies of environmental determinants. Legitimacy theory originates from the concept of organizational legitimacy, a condition that exists when a company's value system conforms to the social value system and the larger system of which the company is a part. One of several tools for confirming corporate legitimacy is communication which is usually operationalized through the use of financial report disclosures to achieve a balance between corporate values on the one hand and social values on the other hand, to achieve social contract status. If not, the company will get a negative social impression that will be detrimental to the company's existence. An integral part of societal norms and value expectations is the disclosure of quality financial reports for use by society or various stakeholders, the latter being the result of the disintegration of the former, namely society, into smaller groups. These small groups that make up society are the focus of another similar and complementary theory known as stakeholder theory.

2.2. Stakeholder Theory

Stakeholder theory outlines that an organization will emphasize organizational accountability far beyond simple financial or economic performance (Chandra & Augustine, 2019). This theory states that organizations will choose to voluntarily disclose information about their environmental, social and intellectual performance, over and above their mandatory requests to meet *stakeholder expectations*. *Stakeholder* theory assumes that a company is not an entity that only operates for its own interests but must be able to provide benefits to its *stakeholders*. Thus, the existence of a company is greatly influenced by the support provided by the company's *stakeholders* (Ghozali & Chariri, 2007). The assumption of this theory explains that the existence of the company is always influenced by considerations from *stakeholders*.

In this research, the *stakeholder element* that is the main research variable is the institutional owner of the company. Companies that have a high level of institutional ownership tend to have better quality financial reporting, including higher earnings persistence. Profit persistence is a company's ability to maintain a consistent level of profit from year to year (Bushee et al., 2019).

In this context, institutional investors can motivate companies to improve the quality of their financial reporting, including maintaining consistent profits, thereby increasing investor confidence and strengthening the company's position in the capital market. (Al-Duais et al., 2022). However, it is important to remember that this relationship is not causal, meaning that institutional ownership does not directly lead to better financial reporting quality or higher earnings persistence. There are other factors that can also influence this relationship, such as company size, debt levels, and company management characteristics.

2.3. Green Accounting

Green accounting is a type of environmental accounting that describes efforts to incorporate environmental benefits and costs into financial decision making or the financial performance of a company. Green accounting describes efforts to incorporate environmental benefits and costs into financial decisions (Angelina & Nursasi, 2021).

Green accounting aims to incorporate business management permanently. It is currently a new part of the accounting and education systems in most countries. *Green accounting* provides access to environmental information by measuring environmental aspects that influence the sustainability of a company. Green accounting also organizes data in accounting systems, develops and clarifies environmental assets (assets and investments made to protect the environment), environmental liabilities, environmental revenues (economic benefits to the company resulting from its environmental management) and environmental costs costs incurred by the company to minimize use of renewable resources (Gonzalez & Mendoza, 2021).

2.4. Corporate Social Responsibility (CSR) Disclosure

Disclosure of responsibility Corporate social responsibility is the process of informing specific interest groups and society as a whole about the social and environmental impacts of an organization's financial activities (Siltaloppi et al., 2021) . Kim & Lee (2019) in the book Corporate Social Responsibility stated that corporate social responsibility means that conceptually, disclosure is an integral part of technical financial reports, and disclosure is the final stage of the accounting process, namely the presentation of information in the form of a series of financial reports.

Disclosure of social responsibility is a way to provide information and accountability to stakeholders. This is also a way to achieve, maintain and increase stakeholder legitimacy (Purba & Candradewi, 2019) . Based on this definition , disclosure of corporate social responsibility is the process of conveying information to certain groups and society in general about the social and environmental impacts caused by the activities of a company or organization.

2.5. Quality of Financial Reporting

The quality of financial reporting is the suitability of financial information produced by the accounting system and not limited to financial reports in meeting the needs of interested parties, especially external companies in making economic decisions. To be useful in making economic decisions, the accounting information presented in financial reports must meet the requirements (Arum, 2019) .

Financial reporting is part of the financial reporting process. Complete financial reporting generally contains profit and loss reporting, reporting on changes in financial position, namely those contained in cash flow reporting and funds flow reporting, balance sheets, notes to financial reporting and other reporting that contains explanatory material which is part of the financial reporting. Financial reporting provides accounting information that is useful for capital markets for making business decisions (Perotti & Wagenhofer, 2014) . High-quality financial reporting is essential to influence users in making investment decisions, and to increase market efficiency (Herath & Albarqi, 2017)

2.6. Institutional Ownership

Institutional ownership shows the composition of share ownership by institutions or organizations or cooperatives within a certain time period (Sutedja, 2020) . According to Istiantoro et al. (2017) is share ownership by the government, financial institutions, legal entities, foreign institutions, trust funds and other institutions at the end of the year. The existence of institutional ownership in a company will encourage increased supervision to optimize management performance. Dominant institutional ownership will have the power to influence the running of the company, an institution's need for useful information will increase the company's mandatory disclosure compliance (Alvionita & Taqwa, 2015) .

Institutional ownership has an important meaning in monitoring management because institutional ownership will encourage increased supervision of more optimal company operations, this is because institutional investors are involved in strategic decisions so they do not easily believe in acts of profit manipulation. This monitoring will certainly guarantee prosperity for shareholders, the influence of institutional ownership as a supervisory agent is suppressed through their quite large investments in the capital market (Suardikha & Apriada, 2016) .

2.7. Previous Research

Research conducted by Arum (2019) found that the implementation of *green accounting* had an effect on profit sustainability, but had no effect on the value relevance of accounting information. Research conducted by Agbo & Olufemi, (2022) shows that *environmental accounting* has a positive influence on the quality of financial reporting . Meanwhile, research conducted by Bicer & Darewi (2019) found that there was a statistically significant relationship between environmental costs and improving the quality of financial reports.

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3. RESEARCH METHODS

3.1. Research Approach

The research approach used in this research is a quantitative research approach, then uses descriptive methods. This type of quantitative research functions to measure something appropriately and used to measure customer behavior, knowledge, opinions, and attitudes (Cooper & Schindler, 2014) . In this research, the research object to be studied is the independent variable namely the implementation of *green accounting*, CSR disclosure, institutional ownership as a moderating variable and financial reporting

quality as the dependent variable. The subjects of this research are energy sector companies listed on the Indonesia Stock Exchange in 2019-2021.

3.2. Data Types and Sources

This research uses secondary data. Secondary data is data obtained indirectly through intermediaries (obtained and recorded by other parties). data comes from published and unpublished notes or documentaries (Indriantoro and Supomo, 2018) . Secondary data used in this research are annual financial reports of energy sector companies listed on the Indonesia Stock Exchange (BEI) which are published and found on the official BEI website, namely IDX (Indonesia Stock Exchange) on the official website www.idx.co.id for the 2019 period . -2021.

3.3. Research Population and Sample

Population is a collection of all object to be researched. In other words, population is a generalization area which consists of subjects/objects that have the same characteristics determined by researchers to be studied (Cooper & Schindler, 2014) . The population in this research is all energy sector companies listed on the Indonesia Stock Exchange (BEI) in the 2019-2021 period. A total of 80 companies will be listed by 2021

Sample is part of the number and characteristics owned by the population , so that we can draw conclusions about the entire population (Cooper & Schindler, 2014) . Sampling was carried out using a *purposive sampling method*, meaning that samples were selected using certain criteria according to the research objectives or research problems being developed.

As for the population in this study was 80 energy sector companies listed on the Indonesia Stock Exchange in 2019-2021 in accordance with the 2023 stock exchange clarification. So, 44 companies were obtained as research samples, resulting in 132 research data.

3.4. Data Analysis Techniques

Data analysis is an activity after data from all respondents or other data sources has been collected. Activities in data analysis are grouping data based on variables and type of respondent, presenting data for each variable studied, carrying out calculations to answer the problem formulation, and carrying out calculations to test the hypotheses that have been proposed (Sugiyono, 2017) . The data analysis used in this research is descriptive and verification analysis. The descriptive analysis related to the variables studied is as follows:

3.4.1. Descriptive Analysis

Descriptive statistics are used to analyze and present quantitative data with the aim of knowing the description of the companies used as research samples. By using descriptive statistics, the average (*mean*) , standard deviation, variance, maximum, minimum, *sum* , *range* , kurtosis and skewness values can be determined (Ghozali, 2018)

3.4.2. Classic assumption test

To test the regression model that will be used in this research, the classical assumption test is first carried out. The classic assumption tests in this research are the normality test, multicollinearity test, heteroscedasticity test and autocorrelation test.

1) Normality test

The normality test aims to test whether the variables from the panel data regression model are normally or not normally distributed. A regression model can be said to be good if it has a normal or close to normal data distribution. To determine whether the data used is normally distributed or not, a test can be carried out by comparing the *Jarque-Bera probability*, with a probability > 0.05 .

2) Multicollinearity Test

Ghozali (2018) stated that the purpose of the multicollinearity test is to test whether the regression model found a correlation between independent variables. A good regression model should not have correlation between independent variables. If the independent variables are correlated with each other, then these variables not orthogonal. Orthogonal variables are independent variables whose correlation value between independent variables is equal to zero.

3) Heteroscedasticity Test

The heteroscedasticity test aims to test whether in the regression model there is an inequality of *variance* from the residuals of one observation to another in the regression model. A good regression model is one that is homoscedastic or does not have heteroscedasticity (Ghozali, 2018). If the variance from one observation to another is the same, it is called homoscedasticity, and if the variance is different, it is called heteroscedasticity. To detect whether heteroscedasticity exists or not, it can be done using Breusch-Pagan-Godfrey, namely by regressing the absolute value. If the probability value is > 0.05 , it means there is no heteroscedasticity problem and vice versa.

4) Autocorrelation Test

The autocorrelation test aims to determine whether or not there is a correlation between confounding or residual errors in the period (t) and errors in the previous period (t-1) contained in the linear regression model. A good regression model is a regression model that does not contain autocorrelation. To find out whether there is a problem with autocorrelation or not. To find out whether there is a problem with autocorrelation or not, use the Breusch-Godfrey Serial Correlation LM Test method, where if the probability value is more than 0.05, it can be concluded that there is no autocorrelation problem in this research.

3.4.3. Panel Data Regression Analysis

3.4.3.1. Panel Data Model Selection Test

Three panel data method approaches, the next step is to sort and choose the best model for panel data analysis. The tests carried out were using the *Chow Test*, *Hausman Test* and *Lagrange Multiplier Test*

1) Chow test

Ghozali (2018) stated that the Chow test is a test carried out to choose a good approach between *the fixed effect model* (FEM) and *the common effect model* (CEM). The hypothesis used is as follows:

H_0 : Common Effect Model (CEM)

H_1 : Fixed Effect Model (FEM)

2) Hausman test

The Hausman test aims to choose whether to use a *fixed effect model* (FEM) or *random effect model* (REM) in panel data regression. From the results of this test, it can be seen whether the *fixed effect model* (FEM) is better than the *random effect model* (REM). This test follows the *chi-square distribution* in degrees of freedom ($k=3$) with the hypothesis:

H_0 : Random Effect Model (REM)

H_1 : Fixed Effect Model (FEM)

3) Lagrange Multiplier test

Lagrange multiplier test is a test used to choose the best approach between the *common effect model* (CEM) and the *random effect model* (REM) in estimating panel data. The Lagrange multiplier test is carried out if previously it was concluded that the *Chow test* and the *Hausman test* had different results, then a final test must be carried out to find the best model. Hypothesis testing is as follows:

H_0 : Common Effect Model (CEM)

H_1 : Random Effect Model (REM)

3.4.3.2.Types of Panel Data Regression

Regression using panel data will initially follow the procedure for selecting the best method, the estimation method using panel data regression techniques can be carried out with three alternative approaches to processing methods, namely the *Common Effect Model* or *Pooled Least Square* (CEM) method, the *Fixed Effect Model* (FEM) and *Random Effect Model* (REM) as follows:

1. Common Effect Model (CEM)

This model is a simple panel data model because it only combines *time series data* with *cross sections* and estimates using least squares. In this model, time or individual dimensions are not considered, so it can be assumed that the behavior of company data is the same over various time periods.

2. Fixed Effect Model (FEM)

This model assumes that differences between individuals can be accommodated from differences in intercepts, this occurs due to differences in work culture and managerial incentives. Therefore, this model uses a *dummy variable technique* or also called *Least Square Dummy Variable* (LSDV).

3. Random Effect Model (REM)

This model can estimate panel data where disturbance variables may be interconnected over time and between individuals. This model can eliminate heteroscedasticity and is often called the *Error Component Model* (ECM). The appropriate model to accommodate this *random effect model* is *Generalized Least Square* (GLS), with the assumption that the error component is homoscedastic and there are no symptoms of *cross sectional correlation*.

3.4.4. Panel Data Regression Equation and *Moderated Regression Analysis* (MRA)

Moderated Regression Analysis is used to identify whether there is a moderator variable or not as well as the type of moderator variable. Then to find out whether the moderating variable will strengthen or weaken the relationship between the independent variable and the dependent variable (Ghozali, 2018). In this research, the author used time series and cross section data. The use of time series data in this research is over a period of 3 years, namely 2019 - 2021, while the cross section data in this research is the energy sub sector listed on the Indonesia Stock Exchange with a total sample of 48 companies. The form of the regression equation used in testing is as follows:

$$FRQ = \beta_0 + \beta_1 GA + \beta_2 CSR + \beta_3 INST + \beta_3 (GA * INST) + \beta_4 (CSR * INST) + \varepsilon$$

Information:

FRQ = Financial reporting quality
 β_0 = Constant
 GA = Implementation of *Green accounting*
 CSR = CSR Disclosure
 $\beta_1 - \beta_2$ = Regression coefficient
 INST = Institutional ownership
 $\beta_3 - \beta_4$ = Moderation regression coefficient
 ε = Error

This equation shows the relationship between the implementation of *green accounting* and CSR disclosure with institutional ownership as a moderating variable on the quality of financial reporting.

3.4.5. Hypothesis testing

1) Test (Partial Test)

The t test basically shows how much influence an individual explanatory/independent variable has in explaining variations in the dependent variable (Creswell & Creswell, 2017).

The calculations used to accept and reject the formulated hypothesis are by looking at the significance (p-value) of each independent variable with a significance level of $\alpha = 0.05$. If the significance is smaller than $\alpha = 0.05$, then H_0 is rejected or H_a accepted, meaning that partially the independent variable has a significant effect on the dependent variable.

2) Coefficient of Determination

The coefficient of determination (R^2) is a test to measure the ability of the independent variable to explain the dependent variable Ghozali (2018). The value of the coefficient of determination (R^2) ranges between zero and one ($0 < R^2 < 1$). If the R^2 value of a regression equation is closer to 0 (zero), the smaller the influence of all independent variables on the value of the dependent variable, the lower the ability of the model to explain changes in the value of the dependent variable. Meanwhile, if R^2 approaches one (1), it can be said that the greater the ability of the independent variable model to explain the dependent variable. This also applies to *Adjusted R²* where it gets better if the

coefficient value is close to one (1). In this research, the *Adjusted R²* value was used when evaluating the ability of the model because more than one independent variable is used (1).

4. RESULTS AND DISCUSSION

4.1. Descriptive statistics

The results of descriptive analysis using *evIEWS 12* are as follows:

Table 1. Descriptive Statistics Result

Variables	N	Minimum	Maximum	Mean	Std. Deviation
GA (X1)	32	0,000	5,000	1,485	1,916
CSR (X2)	32	28,000	85,000	49,159	13,900
INST (M)	32	0,000	100,000	57,866	25,989
FRQ (Y)	32	-23,286	43,668	6,588	12,572

Source: Eviews Processed Data, 12

4.1.2. Classic Assumption Test Results

1) Normality Test

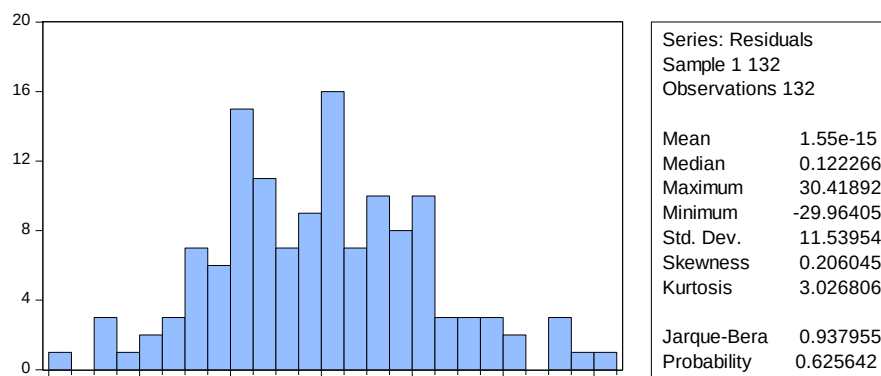


Figure 1. Normality Test Results
Source: Eviews Processed Data, 12

Note that based on Figure 1, it is known that the probability value of the JB statistic is 0.625642. Because the probability value *p*, namely 0.625642, is greater than the significance level, namely 0.05. This means that the normality assumption is met .

2) Multicollinearity Test

Table 2. Multicollinearity Test Results

Independent Variable	VIF
X1	1.297536
X2	1.297536

Source: Eviews Processed Data, 12

From the results of the multicollinearity test, it can be concluded that there are no symptoms of multicollinearity between the independent variables. This is because the VIF value is <10

3) Heteroscedasticity Test

Table 3. Heteroscedasticity Test Results

Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	0.714617	Prob. F(2.129)	0.4913
Obs*R-squared	1.446447	Prob. Chi-Square(2)	0.4852

Source: Processed Data Eviews 1 2

As shown in Table 3, we can see the results of the Breusch-Pagan test on the known value of Prob. Chi-Square $0.4852 > 0.05$ which means there is no heteroscedasticity.

4) Autocorrelation Test

Table 4. Autocorrelation Test Results

Log likelihood	-509.6408	Hannan-Quinn Criter.	7.793909
F-statistic	12.06493	Durbin-Watson stat	1.869936

Source: Eviews Processed Data, 12

Table 4. above shows that the i value of the Durbin-Watson statistic is 1.869936. Note that because the Durbin-Watson statistical value lies between 1 and 3, namely $1 < 1.869936 < 3$, the non-autocorrelation assumption is met. In other words, there are no symptoms of high autocorrelation in the residuals.

4.1.3. Panel Data Regression Analysis

4.1.3.1 Panel Data Model Selection Test

To determine the regression model that will be used in the research, three data tests are used. The three data tests are the *Chow test*, test Hausman, and *Langrange multiplier tests*. Each of these tests will produce recommendations for the best method. The method that has the most recommendations will later be chosen as the method that will be used to carry out panel data regression.

1. Chow test

Table 5. Chow Test Results

Redundant Fixed Effects Tests

Pool: DPANEL

Cross-section fixed effects test

Effects Test	Statistics	df	Prob.
Cross-section F	1.290054	(43.86)	0.1581
Chi-square cross-section	65.703915	43	0.0145

Source: Processed Data Eviews 1 2

Based on the results of the Chow test in Table 4.5, it is known that the probability value is 0.0145. Because the probability value is $0.0145 < 0.05$, the estimation model used is the *fixed effect model* (FEM).

2. Hausman test

Table 6. Hausman Tests Results

Correlated Random Effects - Hausman Test

Pool: DPANEL

Cross-section random effects test

Test Summary	Chi-Sq. Statistics	Chi-Sq. df	Prob.
Random cross-section	1.317169	2	0.5176

Source: Processed Data Eviews 1 2

Table 6 above shows the results of the Hausman test with a *random cross-section probability y (prob)* value of 0.5176 which is greater than the significance level ($0.5176 > 0.05$), so that H_0 is accepted, so the appropriate model is to use *random effects model* (REM).

3. Lagrange Multiplier test

Table 7. Lagrange Multiplier Test Results

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	0.676522 Prob. F(2.127)	0.5102
Obs*R-squared	1.391489 Prob. Chi-Square(2)	0.4987

Source: Processed Data Eviews 1 2

Table 7 above shows that result US probability value amounting to 0.4987 is greater than the significance level ($0.4987 > 0.05$), so H_0 is accepted. Based on these results it can be concluded that *there is a random effect model* (REM) is more appropriate to use than the *common effect model* (CEM). So, the author draws conclusions after carrying out these three tests, *the common effect model* (CEM) which is most appropriate

to use in this research rather than fixed *effect mode l* (FEM) and *random effects models* (REM).

4.1.4. Panel Data Regression Equations and Moderated Regression Analysis

Statistical test results using *evIEWS 12* produces panel data regression equations and *moderated regression analysis* (MRA) as follows:

**Table 8. Panel Data Regression Results and
Moderating Regression Analysis (MRA) Analysis**

Variables	Coefficient	Std. Error	t-Statistics	Prob.
C	-6.108492	3.881391	-1.573789	0.1180
X1 _ GA	1.479075	0.603990	2.448838	0.0157
X2 _CSR	0.213613	0.083259	2.565658	0.0114
M _INST	0.511981	0.182329	2.808009	0.0058
X1M	0.018409	0.025793	0.713720	0.4767
X2M	-0.009903	0.004206	-2.354684	0.0201

Source: Processed Data Eviews 1 2

Based on table 9 above , the regression equation can be formulated as follows:

$$FRQ = \beta_0 + \beta_1 GA + \beta_2 CSR + \beta_3 INST + \beta_4 (GA*INST) + \beta_5 (CSR*INST) + \varepsilon$$

$$FRQ = -6,108492 + 1,479075 + 0,213613 + 0,511981 + 0,018409 -$$

1. From the equation above, it is known that the constant value is - 6.108492 This means that if all the independent variables are equal to zero, then the quality of financial reporting will be - 6.108492.
2. *Green accounting* regression coefficient (X₁) is 1.479075 meaning every increase in *Green accounting* in one period, it will increase the quality of financial reporting by 1.479075 .
3. CSR Disclosure regression coefficient (X₂) as big as 0, 213613 meaning every increase in CSR Disclosure in one period, it will increase the quality of financial reporting by 0.213613 .
4. The regression coefficient of multiplying *Green accounting* with institutional ownership (X₁ M) is 0.0 18409 meaning that every time *Green accounting* is multiplied by institutional ownership (X₁) in one period, it will increase quality of financial reporting is 0.0 18409 .
5. The regression coefficient of multiplying CSR disclosure (X₂ M) with institutional ownership is - 0.0 09903 meaning that every time CSR disclosure is multiplied by institutional ownership (X₂ M) in one period, it will decrease the quality of financial reporting is - 0.0 09903.

4.1.5. Hypothesis test

4.1.5.1. t Test (Partial Test)

Table 9. T Test Results (partial)

Variables	Coefficient	Std. Error	t-Statistics	Prob.
C	-6.108492	3.881391	-1.573789	0.1180
X1 _ GA	1.479075	0.603990	2.448838	0.0157
X2 _ CSR	0.213613	0.083259	2.565658	0.0114
M_INST	0.511981	0.182329	2.808009	0.0058
X1M	0.018409	0.025793	0.713720	0.4767
X2M	-0.009903	0.004206	-2.354684	0.0201

Source: Processed Data Eviews 1 2

Based on the test results in table 4.10 it can be concluded as follows:

- 1) Variable *green accounting* (X_1) has a calculated t value of 2.448838 with a probability of 0,0157 or smaller than the α value = 0.05 ($0.0157 < 0.05$). This means that it can be concluded that the variable *green accounting* has an effect on the quality of financial reporting (H_1 is accepted).
- 2) Variable CSR disclosure (X_2) has a calculated t value of 2.448838 with a probability of 0.0114 smaller than the value $\alpha = 0.05$ ($0.0114 < 0.05$). This means that it can be concluded that CSR disclosure influences the quality of financial reporting (H_2 accepted).
- 3) Interaction variable between *green accounting* and institutional ownership ($X_1 M$) has a calculated t value of 0.713720 with probability 0.4767 smaller than $\alpha = 0.05$ ($0.4767 > 0.05$). It means can be concluded that Institutional ownership cannot moderate the relationship between *green accounting* and financial reporting quality (H_3 is rejected).
- 4) Interaction variables between CSR disclosure with institutional ownership ($X_2 M$) has a t value calculate -2.354684 with probability 0,0201 smaller than $\alpha = 0.05$ ($0.0201 < 0.05$). This means it can be concluded that Institutional ownership moderates the relationship between CSR disclosure and financial reporting quality (H_4 is accepted).

4.1.5.2. Coefficient of Determination

Table 10. Coefficient of Determination Test Results

R-squared	0.157578	Mean dependent var	6.588724
Adjusted R-squared	0.144517	SD dependent var	12.57255
SE of regression	11.62865	Akaike info criterion	7.767285
Sum squared resid	17444.08	Schwarz criterion	7.832804
Log likelihood	-509.6408	Hannan-Quinn Criter.	7.793909
F-statistic	12.06493	Durbin-Watson stat	1.551784
Prob(F-statistic)	0.000016		

Source: Processed Data Eviews 1 2

Table 10 gives an Adjusted R^2 determinant coefficient value of 0.1445 or 14.45 %. From these calculations it can be seen that the influence of green accounting, CSR disclosure on the quality of financial reporting amounted to 14.45 % and the remaining 85.55% was influenced by other variables not examined in this research.

The hypothesis testing results shed light on the relationships among Green Accounting, CSR Disclosure, Institutional Ownership, and the quality of financial reporting.

1) Effect of Green Accounting and CSR Disclosure

The t-test outcomes indicate that both Green Accounting (X1) and CSR Disclosure (X2) significantly impact the quality of financial reporting. Green Accounting demonstrates a significant effect ($t = 2.448838$, $p = 0.0157$), confirming its relevance in enhancing financial reporting quality. Similarly, CSR Disclosure is found to influence financial reporting quality significantly ($t = 2.565658$, $p = 0.0114$), emphasizing the importance of corporate social responsibility in financial reporting practices.

2) Moderating Role of Institutional Ownership

In the examination of the moderating role of Institutional Ownership, the results diverge for the two variables:

1. Interaction Variable between Green Accounting and Institutional Ownership (X1M):

- The test indicates that Institutional Ownership does not moderate the relationship between Green Accounting and financial reporting quality ($t = 0.713720$, $p = 0.4767$). This suggests that, contrary to our hypothesis (H3), Institutional Ownership does not significantly influence the impact of Green Accounting on financial reporting quality.

2. Interaction Variable between CSR Disclosure and Institutional Ownership (X2M):

- Conversely, the results reveal that Institutional Ownership moderates the relationship between CSR Disclosure and financial reporting quality ($t = -2.354684$, $p = 0.0201$). This supports our hypothesis (H4) and implies that the influence of CSR Disclosure on financial reporting quality is contingent upon the level of Institutional Ownership.

3) Overall Explanation of Variability

The Coefficient of Determination (Adjusted R-squared) provides insight into the overall explanatory power of the model. Green Accounting and CSR Disclosure collectively account for 14.45% of the variability in financial reporting quality. The remaining 85.55% suggests the presence of other unexamined variables influencing financial reporting quality.

5. CONCLUSION

In conclusion, the findings of the hypothesis test in this research lead to several key conclusions: Firstly, the implementation of green accounting has a discernible impact on the quality of financial reporting. Secondly, the disclosure of Corporate Social Responsibility (CSR) significantly influences the quality of financial reporting.

Furthermore, it is observed that institutional ownership does not play a moderating role in the relationship between the implementation of green accounting and the quality of financial reporting. Conversely, institutional ownership does act as a moderator in the relationship between CSR disclosure and the quality of financial reporting. These conclusions contribute to a deeper understanding of the interplay between green accounting, CSR disclosure, institutional ownership, and financial reporting quality.

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