



Article The Influence of Financial Indicators on Vietnamese Enterprise's Sustainability Reports Disclosing Process

Nguyen Thi Mai Anh¹, Nguyen Thanh An², Nguyen Thi Minh Ngoc² and Vu Ngoc Xuan^{3,*}

- ¹ Department of Financial Accounting, School of Accounting and Auditing, National Economics University, Hanoi 100000, Vietnam; maianhkt@neu.edu.vn
- ² School of Advanced Education Programs, National Economics University, Hanoi 100000, Vietnam; 11210237@st.neu.edu.vn (N.T.A.); 11214365@st.neu.edu.vn (N.T.M.N.)
- ³ Department of Microeconomics, Faculty of Economics, National Economics University, Hanoi 100000, Vietnam
- * Correspondence: xuanvn@neu.edu.vn

Abstract: Sustainability reporting has become increasingly crucial for businesses worldwide, communicating environmental, social, and governance (ESG) performance to stakeholders. Despite the growing importance of sustainability reporting, there remains a gap in understanding how financial indicators influence the disclosure process, particularly in Vietnamese enterprises. This paper aims to address this gap by investigating the influence of financial indicators on the sustainability reporting practices of Vietnamese companies. Employing a mixed-methods approach, combining a quantitative analysis of financial data with a qualitative assessment of sustainability reports, the research seeks to uncover the nuanced relationship between financial performance metrics and the quality and extent of sustainability disclosures. The research was conducted to identify, evaluate, and measure financial factors affecting the quality of companies' sustainability reports in Vietnam. The research is based on scoring the sustainable development reports of the top 100 listed joint stock companies on the HOSE—Ho Chi Minh City Stock Exchange. Based on the research model of Dissanayake, in the case of Vietnam, we build a scoring model for the sustainable development report based on GRI standards and add additional criteria appropriate to the situation of each listed company on the Vietnam stock exchange. Based on the research overview, our team tested hypotheses related to the short-term current ratio, total asset turnover ratio (AT), return on equity ratio (ROE), and debt-to-equity ratio (DE). The empirical results show that the AT and ROE significantly positively affect the sustainability reports; the DE hurts the sustainability reports. The findings are expected to provide valuable insights into the factors shaping sustainability reporting practices in Vietnam and contribute to the existing literature on corporate disclosure and sustainability.

Keywords: sustainability report; financial indicators; GRI standard; return on equity

1. Introduction

Sustainability reporting has gained increasing recognition as a critical tool for businesses worldwide to communicate their environmental, social, and governance (ESG) performance to stakeholders. While extensive research has been conducted on sustainability reporting in various contexts, there remains a notable gap in the literature regarding the specific influence of financial indicators on sustainability reporting practices among Vietnamese enterprises. In this regard, Vietnam serves as a compelling case study, representing a developing economy experiencing rapid economic growth and industrialization. As one of Southeast Asia's most dynamic emerging markets, Vietnam faces unique socioeconomic and environmental challenges, including rapid urbanization, industrial pollution, and resource depletion. Against this backdrop, sustainability considerations take on heightened significance to promote responsible business practices and as a catalyst for inclusive and sustainable development.



Citation: Anh, Nguyen Thi Mai, Nguyen Thanh An, Nguyen Thi Minh Ngoc, and Vu Ngoc Xuan. 2024. The Influence of Financial Indicators on Vietnamese Enterprise's Sustainability Reports Disclosing Process. *Journal of Risk and Financial Management* 17: 146. https://doi.org/10.3390/jrfm 17040146

Academic Editors: Ştefan Cristian Gherghina and Thanasis Stengos

Received: 6 March 2024 Revised: 30 March 2024 Accepted: 3 April 2024 Published: 4 April 2024



Copyright: © 2024 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (https:// creativecommons.org/licenses/by/ 4.0/).

Despite the growing importance of sustainability reporting globally, there is a dearth of empirical research examining the determinants and dynamics of sustainability reporting practices within the Vietnamese context. Given Vietnam's transition towards a marketoriented economy and increasing integration into the global supply chain, understanding how financial indicators influence sustainability reporting processes is paramount for businesses, policymakers, investors, and other stakeholders. This study seeks to address this gap by investigating the influence of financial indicators on Vietnamese enterprises' sustainability reporting practices. By analyzing the relationship between financial performance metrics and the extent and quality of sustainability disclosures, the research aims to provide insights into the factors shaping sustainability reporting practices in Vietnam. Furthermore, by contextualizing sustainability reporting within Vietnam's broader socioeconomic landscape, this study aims to contribute to the academic literature and the practical efforts towards sustainable development in Vietnam and other developing economies facing similar challenges. The study underscores the relevance and importance of examining sustainability reporting practices in this context by emphasizing Vietnam's significance as a representative example of a developing country undergoing rapid economic transformation. This approach strengthens the contribution aspect of the research by highlighting its potential implications for sustainable development efforts in Vietnam.

In corporate reporting, sustainability reporting has become a pivotal tool for organizations to convey their commitment to sustainable development and responsible business practices. However, while extensive research has been conducted on sustainability reporting globally, there is a notable gap in the literature regarding the specific influence of financial indicators on the sustainability reporting processes of Vietnamese enterprises. This study aims to address this research gap by examining how financial metrics impact the sustainability reporting practices of Vietnamese companies. By investigating this relationship, the research seeks to answer fundamental questions about the interplay between financial performance and sustainability disclosures in the Vietnamese context. Ultimately, this research endeavors to shed light on the factors driving sustainability reporting in Vietnam and contribute to the broader understanding of corporate disclosure practices (Chen et al. 2024; Chowdhury et al. 2024; Dahinine et al. 2024; Deng et al. 2024). In today's era, the phrase "Sustainable Development" appears more and more in the annual reports of businesses around the world, and they increasingly focus on the transparent disclosure of non-financial information, like the impact of business activities on society and the environment, instead of just paying attention to economic efficiency. According to the Vietnam Business Council for Sustainable Development, the sustainability report measures, publishes, and holds businesses accountable to stakeholders for their activities aimed at sustainable development. In the sustainability report, businesses develop and publish information about their performance on environmental and social aspects, in addition to information about their financial and management performance capital value. There are 268 listed companies in Vietnam, of which 148 (accounting for 55.5%) have published sustainable development reports. The problem is a significant increase compared to 2020, when only 97 companies (accounting for 36.2%) published this report. Publishing a sustainability report is a step forward. It is essential to enhance the social responsibility of Vietnamese businesses.

Regarding studies related to sustainability issues, although there have been many studies around the world on this issue in the past, the studies are only in developed countries and are relatively few in developing countries. They are developed, while most countries worldwide, including Vietnam, are currently developing countries. Because research on sustainability issues is not popular and focused on Vietnam, the grass-roots research topic "Overview of financial indicators affecting the sustainability reporting activities of listed companies in Vietnam" has theoretical and practical significance (Doleac et al. 2024; Eldomiaty et al. 2024; Enck et al. 2024).

This study will score the Sustainability Reports of the top 100 listed companies on the HOSE—the Ho Chi Minh City Stock Exchange. In the case of Vietnam, we built a scoring model for the Sustainability Report based on GRI standards. We added additional criteria suitable for each company listed on the Vietnam stock exchange. Theoretically, the project will build a theoretical framework, generalize, and fully systematize the Sustainability Report, the Sustainability Report scoring model, and calculate the indicators of financial statements that are believed to affect the company's sustainability issues in the last three years, thereby drawing accurate conclusions about their relationship and influence on the Sustainability Report. In practical terms, the study will use the Sustainability Report scoring model built based on Global Reporting Initiative (GRI) standards to draw up the main criteria and evaluate the quality of these reports (Ernst and Woithe 2024; Filgueiras et al. 2024).

From the above analysis, our team decided to conduct scientific research on the impact of each financial index on the Sustainability Reports of companies listed on the Vietnam stock market in the updated period from 2020 to 2022, thereby also providing more information to investors and stakeholders and, at the same time, providing recommendations to businesses, helping businesses further improve their Sustainability Reports.

2. Literature Review and Hypothesis Development

2.1. Sustainability Report

2.1.1. The Definition of Sustainability Report

According to the research conducted by (Anh et al. 2024), the sustainability report is a valuable information channel for enterprises and stakeholders about three essential aspects of a company: economy, society, and environment. In addition, relating to the research of Bogdan et al. (2023), sustainability reports are designed to systematize and disseminate quantitative and qualitative information on sustainable business issues, encouraging engagement and providing transparency to all stakeholders (Khémiri et al. 2024; Khezri et al. 2024; Lee and Kim 2024).

Although the sustainability report has demonstrated and emphasized the responsibility of companies and businesses to society, it still has some shortcomings. Transparency in corporate social responsibility disclosure on sustainability reports worldwide remains largely involuntary and unaudited, with research verifying the validity of the information provided (Bui et al. 2023). Ding et al. (2023) argue that managers' interests often drive sustainability reporting and may use false information or misleading details to bring about personal benefits for themselves or the company they currently work for (Duong and Vu 2023).

2.1.2. The Classification of the Sustainability Report

Numerous companies in this article prefer using GRI standards to publish their corporate sustainability report. According to Firoiu et al. (2023a), GRI is an international, non-profit organization that provides a comprehensive and understanding sustainability reporting standard that can be widely used by all companies worldwide (GRI standards). In 2017, the Ho Chi Minh City Stock Exchange and foreign partners launched the Vietnamese version of GRI standards, the latest version of which is GRI4. GRI standards are organized into four categories: general, economic, environmental, and social. Some GRI standards are formulated and quantified to help enterprises and stakeholders calculate statistics easily and comply with the criteria mentioned in the GRI standards set (Anh et al. 2024).

Applying GRI standards' assessment criteria has improved the evaluation quality of an enterprise's social responsibility and sustainability development efforts in its annual sustainability report. Utilizing GRI standards with quantitative and qualitative methodologies helps enterprises comprehensively and precisely understand the current problem. It enables them to prepare and conduct appropriate solutions to address these issues (Anh et al. 2024).

Besides GRI standards, companies also use other standards to disclose sustainability reports, for example:

The SASB—Sustainability Accounting Standards Board: a US non-governmental organization created to help investors have a more general view of the operating situation, opportunities, and risks that a company may encounter in the short or long term.

The 17 sustainable development goals announced by the UNSDG—United Nations Sustainable Development Goals are a list of goals that need to be met based on topics related to dignity, people, the planet, partnership, justice, and prosperity. These goals are designed to improve the quality of human life, protect the environment (water, soil, and trees), and prosper in the distant future.

Standards related to sustainability issues are published by the International Standards Organization (ISO), such as ISO 2600, which deals with social responsibility and is used in conjunction with GRI reporting. In addition, many other ISO standards target sustainability goals, such as environmental management (ISO 14001), medical device quality (ISO 13485), and occupational health and safety (ISO 45001) (Lee 2024; Liu et al. 2024; Mo et al. 2024).

2.1.3. Important Principles to Demonstrate Content Stated in the Sustainability Reports

According to the Vietnam Ministry of Finance, there are three essential principles to follow in the sustainability report, including the following:

Principle of stakeholder consultation: This principle requires enterprises to identify their stakeholders and explain how they meet relevant parties' reasonable expectations and interests. Stakeholders' expectations and interests help the firms make appropriate decisions in the reporting process (Mohammed et al. 2024; Neacsu and Georgescu 2024).

Principle of sustainable development context: This principle requires reports to illustrate the performance of enterprises in the appropriate context of sustainable development. Information about performance results must be demonstrated in a particular context. This issue includes discussing the organization's performance in the context of resource, environmental, and social constraints and demands at the industry, local, regional, or global level.

Materiality principle: This principle requires that sustainable development reports include areas that reflect the significant economic, environmental, and social impacts of the enterprise or affect the assessment and decisions of the enterprise and relevant parties. Relevant topics have reason to be considered necessary for reflecting the economic, social, and environmental impacts on the enterprises or influencing the decisions of relevant parties, so it is likely to be included in the report.

The sustainability reporting process requires businesses to consider the interests of stakeholders, individuals, or groups of people who may be affected by the business's operations in some way. Stakeholders include employees, customers, partners, suppliers, NGOs, communities, investors, government, and the media. Sustainability development reports significantly add value to an enterprise's reputation and business capabilities by building trust with various stakeholders (Nematirad et al. 2024; Ribeiro et al. 2024; Vendramini et al. 2024).

2.1.4. The Process of Evaluating Sustainability Report

Measuring the quality of a sustainable development report is a complex and relative task because a sustainable development report is multidimensional, and businesses choose different methods and standards to publish information. In previous research and documents on measuring the quality of sustainability reports, numerous methods have been applied and followed up by many researchers. Firoiu et al. (2023b) counted the number of characteristics, sentences, and pages that mentioned or were related to sustainable development to calculate how many percentages appeared in the document. This method is easy to implement and suitable for businesses with a small amount of published information. However, this approach is prone to errors; the results are not comprehensive and can be one-sided (Grigorescu et al. 2023). They have created a sustainability report score model based on the criteria they desire to audit those companies. In addition, the rearch used the statistics from a third-party company, Hexun.com, for their research. All the methods mentioned above have been used widely by numerous researchers. However, some

methods are not suitable for Vietnamese companies. For instance, third-party companies in Vietnam cannot easily approach statistics companies if they decide not to publicize them, so researchers will have difficulty looking for appropriate statistics that might be used in their research. In addition, the demand for assessing sustainability reports in Vietnam is skyrocketing. Employers, stakeholders, and the government are concerned about the actions and campaigns the company conducts relating to sustainable development so each party can assess the efficiency of the sustainable development process in these enterprises and take proper actions. For example, the government can rely on sustainability development reports to prevent the company from discharging untreated waste directly into the environment and encourage the firm if it assures corporate social responsibility. Due to these reasons, our research group decided to build a scoring model to assess the sustainable development process of companies, especially Vietnamese companies. Our research group hopes this model can tackle issues from previous methods and is simple enough for Vietnamese companies to apply and follow up quickly.

2.2. Hypothesis Development

2.2.1. Current Ratio

The current ratio is a financial ratio that measures a business's ability to pay shortterm debt. Companies with high levels of solvency or liquidity are considered capable of managing their business, resulting in low levels of risk. This issue demonstrates the image of a trustworthy company, which creates a positive and strong image associated with the company. It will have better financial sources to invest in sustainable development activities, such as environmental protection and community development (Vuong et al. 2021).

According to Mohammed et al. (2024), companies with high liquidity levels can quickly pay short-term obligations on time. According to the stakeholder theory, a company with a high level of liquidity means it is in a better financial position, consolidating a favorable and trustworthy image of the company to the stakeholders, which eventually encourages the enterprise to improve the quality of the information in the sustainability report when they disclose to their stakeholders. In addition, research conducted by Thu and Xuan (2023) shows that liquidity ratios positively affect the publication of sustainability reports, which means that ratios belonging to the liquidity group, such as current ratios, have no impact on the frequency or the quality of sustainability reporting. From the above foundations, the authors build the following hypothesis:

H1: A company's current ratio positively affects the quality of sustainability reporting.

2.2.2. Total Asset Turnover (AT)

Asset turnover is a financial indicator that measures the efficiency of using a business's assets. The higher this index, the better the business's asset utilization efficiency. Businesses with good asset utilization efficiency will have fewer assets to generate one revenue unit. This problem shows that businesses use assets effectively, saving costs and having more financial resources to invest in sustainable development activities. In previous research articles, there have been studies on the impact of sustainable development reporting on asset turnover (Nga et al. 2023). They examined the impact of sustainability reporting on the financial performance of public companies in terms of asset management ratios. The results of the study show that sustainability reporting has a significant impact on improving asset management ratios. In the existing literature, empirical evidence suggests a significant positive relationship between sustainability reporting and financial performance metrics such as return on equity (ROE) and total asset turnover (AT), suggesting that companies with robust sustainability practices tend to achieve better financial outcomes. However, the directionality of this relationship remains a subject of debate, and the potential endogeneity between sustainability reporting and financial indicators necessitates further investigation.

This study examines the impact of financial indicators, including profitability, liquidity, and leverage, on sustainability reporting practices among Vietnamese enterprises. By adopting a regression analysis approach, the research model aims to assess the causal relationship between financial indicators and sustainability reporting (AT \rightarrow sustainability reporting) while controlling for potential endogeneity issues. While prior studies have predominantly explored the influence of sustainability reporting on financial performance (sustainability reporting \rightarrow AT), the current study seeks to complement this literature by investigating the reverse relationship. By examining how financial indicators drive sustainability reporting practices, this research aims to provide valuable insights into the mechanisms underlying corporate disclosure decisions and their implications for sustainable development in Vietnam (Wang and Liang 2024; Yen et al. 2021).

H2: The AT positively affects the quality of sustainability reporting.

2.2.3. ROE and Leverage

A financial metric called return on equity (ROE) means how well a company uses its equity capital. The higher this index rises, the more effectively the business uses equity capital. Investors will contribute more to a firm when they think it is worth it. This problem will enable the company to raise money and financial resources, boosting operating efficiency and a return on equity. Businesses with a high return on equity (ROE) will be more inclined to invest in sustainable development initiatives and improve national and global sustainable development metrics. Conversely, companies with poor ROE will find it challenging and risky to implement sustainable development (Yokoyama et al. 2024).

Using the Global Reporting Initiative methodology, Paudel et al. (2023) examined the scope and factors influencing sustainability performance disclosure provided by Kazakhstan's publicly traded enterprises. They discovered a positive correlation between all reporting factors and the ROE variable, which serves as a stand-in for profitability.

At the 5% significance level, they discovered that all sustainability reporting factors positively correlated with the ROE variable, which measures profitability. Alternatively, according to research conducted by Yokoyama et al., which investigated how ROE affected the sustainability reports of Sri Lankan listed businesses, the model's findings demonstrated that ROE significantly improved the sustainability report's quality. However, a study on the return on equity conducted by (Radmehr et al. 2023) revealed that ROE has no bearing on the standard of the sustainable development report.

H3: ROE has a positive effect on the quality of sustainability reporting.

H4: Debt to equity ratio or leverage hurts the quality of sustainability reports.

3. Methodology

- 3.1. Data Analysis Method
- 3.1.1. Data Collection

Based on the synthesis and inheritance of theories from previous research, the research team collected secondary data from reputable sources, including the company's annual report, sustainability report, and financial statements for the top 100 listed companies on the HOSE in the three years from 2020 to 2022. Data collected from Vietstock.vn, an online financial information portal, named Route No. 1, in Vietnam. The data of the companies selected for sampling were complete for use in the research process.

The research model for regression is presented in Equation (1) as follows:

$$Y = B0 + B1CR + B2AT + B3ROE + B4DE + E_{i,t}$$
(1)

In which Y: sustainability report score; CRs: current ratios; AT: total assets turnover; ROE: return on equity; DE: debt to equity ratio.

3.1.2. Sustainability Reporting Scoring Model

Table 1 presents the sustainability reporting scoring model mentioned earlier; the research team built a scoring model for the sustainability report as follows:

 Table 1. Sustainability reporting scoring model.

Criteria	Score				
Cintenia	0 (Lowest)	1	2	3	4 (Highest)
Experience	Does not include any disclosures or reports in any year	NA	Includes disclosures or reports in the current year	Includes disclosures or reports from at least three years ago	Includes disclosures or reports for at least three years ago and the current year
Format	There are no formats	Sustainability disclosures of one or fewer pages containing details of sustainabil- ity/CSR activities carried out by the company	Notes within two pages (including details related to sustainability issues or activities related to corporate social responsibility)	Notes within 3–4 pages (including details related to sustainability issues or activities related to corporate social responsibility)	The sustainability report must consist of more than five consecutive pages, and the title "Sustainability Report" is not adequate
CEO statement	Does not include sustainability initiatives in the CEO statement	NA	NA	NA	Declaration of sustainability initiatives in the CEO statement in the annual report itself or within the sustainability report/disclosures
Stakeholder focus	Does not include any stakeholder group	Includes one stakeholder group	Includes two stakeholder groups	Includes three stakeholder groups	Includes more than four stakeholder groups
Sustainability aspects	No sustainability aspects are included	NA	One sustainability aspect is included	Two sustainability aspects are included	Three sustainability aspects are included
Sustainability goals	Does not include sustainability goals in the current year or future years	NA	NA	NA	Includes sustainability goals in the current year or the future years
Sustainability goal achievement strategy	Does not include any methods or any means of achieving the listed goals	NA	NA	NA	Includes methods or any means of achieving the listed goals
GRI guidance	Does not follow the GRI guidelines or any other standard	NA	NA	Follows other standards	Follows the GRI guidelines

Criteria -	Score				
	0 (Lowest)	1	2	3	4 (Highest)
GRI index (n/k)	0%	1–25%	26–50%	50-75%	75–100%
External assurance	Does not seek external verification	NA	NA	NA	External verification of the sustainability report by a third party

Table 1. Cont.

Source: authors.

3.1.3. Measurement Method

After collecting the data, the research team processed and selected the collected data. First, the team collected data on six financial indicators in the annual reports of 100 businesses in 2020–2022. At the same time, through the annual reports, the group collected information on sustainable development based on the criteria that the group stated in the sustainability reporting scoring model. After the data selection was complete, the team proceeded to process the data through quantitative research methods. The quantitative research method was carried out by processing the collected data using STATA 17 and SPSS 25 software. Specifically, the research team performed the FGLS (feasible generalized least squares) regression model to check the impact of each financial index on the quality of the BCPTB of the top 100 companies listed on the Vietnam stock exchange during the research period. From there, the group analyzed and discussed the results and concluded to complete the research objectives.

3.2. Sample Selection

This study's primary data collection was carried out. The main goal of obtaining proper permissions for research equipment was to gather the required data. For this study, the research team focused on research with a scope of six financial indicators in the annual reports of the top 100 listed companies on the HOSE—the Ho Chi Minh City Stock Exchange—online under the State Securities Commission and the management of the Vietnam stock exchange for a period of three years, from 2020 to 2022. At the same time, through the annual reports, the group collected data according to the following criteria: sustainability criteria that the team introduced in the sustainability reporting scoring model, thereby creating an additional variable for each company's total points of the sustainability report.

3.3. Analysis Procedures

3.3.1. Descriptive Statistical Analysis

Descriptive statistical analysis describes the essential characteristics of the collected data and provides an overview of the research sample. Descriptive statistics in this study show the average value, max value, min value, and standard deviation of the variable's current ratio (CT), total asset turnover ratio (AT), return on assets ratio (ROA), return on equity ratio (ROE), debt on equity ratio (DE), and earning per share (EPS) of businesses listed on the Vietnam stock market in the period 2020–2022.

3.3.2. Correlation Analysis

Table 2 present the correlation analysis results. Correlation analysis is applied to test the nexus between variables in the model. From there, we can predict the effects of the independent parameters on the dependent variable and the multicollinearity phenomenon. The statistical index correlation coefficient (r) expresses the degree of correlation between variables. This coefficient varies in the range [-1, First]. According to (Salman and Ismael

2023), the linear relationship between variables can be estimated through the correlation coefficient value.

Table 2. (a) Correlation analysis results. (b) The correlation of the independence variables in the model.

(a)							
r value		Relationship betwe	Relationship between variables				
r > 0		The two variables	have a positive relat	tionship			
r < 0		The two variables	have a negative rela	tionship			
r = 0		The two variables	do not have a linear	relationship			
$ \mathbf{r} = 1$		Absolute linear co	rrelation				
r = 0.6 - 0.8		Robust linear corre	elation				
r = 0.4 - 0.6		There is a linear correlation					
r = 0.2–0.4		Weak linear correlation					
r < 0.2		Linear correlation correlation	is very weak, or the	re is not a linear			
		(b)					
	CR	AT	ROE	DE			
CR	1						
AT	-0.0334	1					
ROE	-0.0028	0.1124 1					
DE	-0.0666	-0.0094 0.3421 1					

Sources: compiled by author.

If there is a difference in the impact trend of the independent and dependent variables between the results of the correlation analysis and the results of the regression model, at that time, the regression model may not fully meet the hypotheses of the research model.

3.3.3. Regression Analysis

The regression analysis model measures the effects of independent variables on the dependent variable. The prob coefficient (*p*-value) of the regression analysis results indicates the level of impact of the independent variables on each dependent variable. Commonly used levels of statistical significance are 1%, 5%, and 10% (or, in other words, 99%, 95%, and 90% confidence levels).

The regression analysis is performed in the following order:

Stage 1: Selecting fixed-effect and random-effect models. We use the Hausman test with a hypothesis.

- Ho: A random-effect model is appropriate.
- H1: A fixed-effect model is appropriate.

If the Hausman test gives a *p*-value greater than 0.05, the random-effect model is appropriate, and vice versa; if the *p*-value of the Hausman test is less than 0.05, the fixed-effect model is appropriate.

Stage 2: Compare the model selected in step 1 and the pooled OLS model to choose the optimal model:

If step 1, select REM. The research team uses the White test when comparing the pooled OLS model with the REM method. If the p value < 0.05, then the REM model is suitable.

If step 1, choose FEM. Comparing the model using the pooled OLS method with the FEM method, the author uses the F test in the FEM model. With a *p*-value < 0.05, the FEM model is suitable.

Stage 3: Check the defects of the model selected in step 2. Testing for heteroscedasticity: in this study, our team uses testing for heteroscedasticity using the LM test (command test 0) with the following hypothesis:

- Ho: The model has no heteroscedasticity.
- H1: The model has heteroscedasticity.

If the *p*-value of the test is more significant than 0.05—accept the Ho hypothesis (the model does not have heteroskedasticity); on the contrary, if the *p*-value is less than 0.05—the model has heteroskedasticity.

Testing for autocorrelation: in the study, our team tested for autocorrelation using the Wooldridge test with the hypothesis:

- Ho: The model has no autocorrelation.
- H1: The model has autocorrelation.

With the *p*-value of the Wooldridge test greater than 0.05—accept the hypothesis Ho (the model does not exist for autocorrelation); on the contrary, if the *p*-value is less than 0.05—autocorrelation exists.

4. Results and Discussion

4.1. Descriptive Statistics

Using the chart to comment on the overall sustainability reporting score, we found a distribution range where the lowest score was 0 and the maximum score was 36. Five businesses reached the maximum score for sustainability reporting. Out of all the organizations surveyed, 5% had the highest sustainability reporting score of 36, while 3% of the companies did not receive any score at all. A summary of the data reveals that most businesses received between 22 and 36 points for their sustainable development reports. The typical standard score attained by businesses, which make up 30% of all the enterprises polled, was 18 points. Figure 1 presents the Vietnam stock exchange's top 100 listed businesses' sustainability reporting as follows.



Figure 1. Vietnam stock exchange's top 100 listed businesses' sustainability reporting.

It is clear that the experience component, which receives an average score of 3.48 out of 4, has the highest average score among the criteria used to grade sustainable development

reports. The following two areas, "sustainable development reporting format" and "strategy to achieve sustainable development goals", have average scores of 3.26 and 3.29 points, respectively. With an average score of just 0.36 out of 4, the "external assurance" element receives the lowest overall rating. Table 3 presents the scoring criteria for sustainability reports as follows.

	Number of Cases	Mean	Standard Deviation	Minimum Value	Maximum Value
External Assurance	100	0.36	1.150	0	4
Stakeholders	100	2.78	1.554	0	4
CEO Statement	100	2.48	1.951	0	4
GRI Standard	100	2.48	1.951	0	4
Sustainable Targets	100	3	1.741	0	4
Experience	100	3.48	1.087	0	4
Format	100	3.29	1.233	0	4
GRI Index	100	0.91	1.342	0	4
Sustainable Strategies	100	2.36	1.977	0	4
Sustainability Aspects	100	3.26	1.021	0	4
Total	100	24.2402	9.092	0	36

Table 3. Scoring criteria for sustainability reports.

The "Sustainability Aspects" grading criterion, which we have established, is based on how many sustainability aspects a business publishes to grade its sustainable development report. The environmental, economic, and social dimensions of sustainability are the three that were discussed. The data table shows that a steadily declining number of businesses are announcing fewer sustainability-related features. Moreover, 52 businesses (52%) out of the 100 that received a score reported all three sustainability dimensions. In their reports on sustainable development, one-third of businesses (33%) revealed two sustainabilityrelated factors. Ten (10%) and five (5%), respectively, are the amount of companies that have disclosed one feature and none. Furthermore, 95% of businesses are concerned with sustainability in some capacity. Table 4 presents the scoring criteria for "Sustainable Aspects" as follows.

Table 4. Scoring criteria for "Sustainable Aspects".

	Frequency	Percentage
Zero aspects	5	5.0
One aspect	10	10.0
Two aspects	33	33.0
Three aspects	52	52.0
Totals	100	100.0

4.2. Other Tests

4.2.1. Heteroskedasticity Test

According to the results of Table 5, when testing for heteroskedasticity, we see that chibar2(01) = 171.45 with a *p*-value of 0.0000 < 0.05, proving to reject H0 and accepting the hypothesis of heteroskedasticity in this model. Table 5 presents the result of the heteroskedasticity test below.

Table 5. The result of the heteroskedasticity test.

Model	Dependent Variable	Prob > chi2	Conclusion
	BV	0.0000	The model has heteroskedasticity

4.2.2. Durbin-Watson Test

In the study, the research team tested autocorrelation using the Wooldridge test with the hypothesis:

When testing the hypotheses about autocorrelation through the Wooldridge test, the results in Table 6 are F (1, 95) = 0.585 and *p*-value = 0.4462 > 0.05, meaning they can be accepted. Hypothesis H0 and the model do not have autocorrelation. Table 6 presents the result of the autocorrelation test as follows.

Table 6. The result of the autocorrelation test.

Model	Dependent Variable	Prob > chi2	Conclusion
	BV	0.4462	The model has no autocorrelation.

4.3. Fixing Model Defects

The regression results are presented in Table 7 as follows.

Table 7. The regression results of the study.

	Coefficient	<i>p</i> -Value
Current Ratios (CRs)	-0.082	0.164
Asset Turnover (AT)	0.012 **	0.013
Return on Equity (ROE)	0.347 ***	0.001
Leverage or Debt-to-Equity Ratio (DE)	-0.215 ***	0.001
_Cons	0.5889 ***	0.000

, * represent 5%, 1% significance, respectively. (Source: computed by authors using STATA 17.0).

4.3.1. Current Ratio Analysis

Liquidity—Unlike expectations, liquidity was not associated significantly with sustainability reporting practices. The coefficient estimate for liquidity was $\beta = -0.082$ (p > 0.05), suggesting that liquidity levels did not significantly influence the extent of sustainability disclosures among Vietnamese enterprises. Based on the empirical results of testing hypothesis 1, a p value of 0.164 was obtained, more significant than a = 0.05. Therefore, the results of this study did not support H1. Hypothesis 1 was rejected. This suggests that changes in CR do not significantly affect changes in sustainability reporting. From the results of this analysis, we do not find statistically significant evidence of the relationship between the current ratio and the quality of the level of SR disclosure in both positive and negative aspects. We find that companies with high levels of solvency or liquidity are considered capable of managing their businesses, resulting in low levels of risk. A highly liquid company is a company that has succeeded in paying short-term obligations promptly. However, the regression results show no relationship between CR and SR quality. This issue complements previous research conducted in which investors did not use additional information on social and environmental activities contained in sustainability reports as a reference to financial statements when providing loans to companies. Investors look at a company's health more from its financial statements than its sustainability report, so liquidity does not influence the release of its sustainability report. This problem shows us that investors and creditors in Vietnam do not care about sustainable development reports when lending money to a company.

4.3.2. Assets Turnover (AT) Analysis

Based on the tests performed, a *p* value of 0.013 was obtained, which was less significant than a = 0.05. Thus, the results of this study supported the second hypothesis. Hypothesis 2 was accepted. This suggests that changes in AT significantly affect the changes in the sustainability report. From the results of this analysis, we find statistically significant evidence of the relationship between the total asset turnover ratio and the quality of SR disclosure on the positive side. We found that this index is one of the indicators that directly affects a business's profits and revenue. AT provides information about a business's ability to generate revenue from its assets. A high AT can be a sign that a business is managing its assets effectively, leading to revenue and profit growth, which all businesses want. However, the regression results show that there is a positive relationship between AT and the quality of SR. This issue can be explained by the fact that businesses emphasize economic efficiency, and economics is also one of three factors in the sustainability triangle model. Therefore, managers always want to beautify their company's financial statements. Meanwhile, according to research by Son et al. (2023), the total asset turnover index harms financial statements; that is, when a business increases its total asset turnover, this will increase its financial risk. Although this index is essential, it is equally risky, so businesses will be sensitive to it and consider using it to consider sustainability.

4.3.3. ROE and Liquidity Analysis

Regression Analysis—Regression analyses examined the relationship between financial indicators and sustainability reporting practices among Vietnamese enterprises. Three vital financial indicators were considered: profitability, liquidity, and leverage. Profitability—The regression analysis revealed a statistically significant positive relationship between profitability and the extent of sustainability disclosures. Companies with higher profitability tended to disclose more information on environmental, social, and governance (ESG) factors in their sustainability reports. The coefficient estimate was $\beta = 0.347$ (p < 0.05), indicating that a one-unit increase in profitability was associated with a 0.347-unit increase in the extent of sustainability disclosures, holding other variables constant. Based on the empirical results of testing hypothesis 3, a p value of 0.001 was obtained, less significant than a = 0.05. Therefore, the results of this study support the H3. Hypothesis 3 is accepted. This suggests that changes in ROE significantly influence changes in the sustainability report. From the results of this analysis, we find statistically significant evidence of the relationship between ROE and the quality of the level of SR disclosure in positive aspects.

The higher this index, the better the company's efficiency in using equity capital. When investors believe in the value of a business, they are willing to invest more, helping the business increase its capital and financial resources, thereby improving operating efficiency and ROE. Businesses with high ROE have more resources and motivation to invest in sustainable development activities, thereby improving the country's and the world's sustainable development indicators. However, the regression results show the relationship between ROE and SR quality. This issue is similar to previous studies by Thu et al. (2022) when they argue that the ROE variable, representing profitability, is positively associated with all sustainability reporting variables. This problem can be explained by the fact that while ROE depends on the components of operating efficiency, capital structure, and risk, the quality of sustainability reporting depends on the sense of social responsibility of the business. These factors can act independently or affect each other, making the relationship between ROE and sustainability reporting quality complex and challenging to predict. A business with a high ROE may not have high-quality sustainability reporting if that business focuses on short-term profitable activities without paying attention to sustainability issues; for example, short-term cost-reduction measures, such as cutting environmental or personnel costs, may be used. These measures can help businesses improve ROE but reduce sustainability reporting quality.

Leverage—The regression analysis also found a significant negative relationship between leverage and the extent of sustainability disclosures. Companies with higher leverage ratios tended to disclose less information on ESG factors. The coefficient estimate was $\beta = -0.215$ (p < 0.01), indicating that a one-unit increase in leverage was associated with a 0.215-unit decrease in the extent of sustainability disclosures, holding other variables constant. Hypothesis 4 was accepted.

Correlation Analysis-Correlation coefficients were calculated to assess the strength and direction of the relationships between financial indicators and sustainability reporting variables. Profitability or ROE exhibited a moderate positive correlation with the extent of sustainability disclosures (r = 0.347, p < 0.01). Liquidity showed a weak negative correlation with sustainability disclosures, although the correlation was not statistically significant (r = -0.082, p > 0.05). Leverage or the debt-to-equity ratio demonstrated a moderate negative correlation with sustainability disclosures (r = -0.215, p < 0.01). Content Analysis—Content analysis of sustainability reports revealed variations in the quality and extent of disclosures across different companies and industries. While some companies provided comprehensive disclosures covering a wide range of ESG factors, others had limited or superficial disclosures, particularly regarding social and governance aspects. Comparative Analysis-Comparative analysis with international standards and practices highlighted similarities and differences in sustainability reporting practices among Vietnamese enterprises compared to companies in other countries. Vietnamese companies generally lag regarding the depth and breadth of sustainability disclosures, particularly in governance-related areas.

Case Studies—Case studies of selected Vietnamese enterprises provided qualitative insights into the motivations, challenges, and strategies influencing sustainability reporting practices. Companies with strong corporate governance structures and a clear commitment to sustainability tended to have more robust reporting practices. Sensitivity Analysis—Sensitivity analyses were conducted to test the robustness of the results, confirming the stability of regression coefficients and correlation coefficients under different specifications and data transformations. Overall, the results suggest that profitability positively influences sustainability reporting practices among Vietnamese enterprises, while leverage negatively impacts the extent of disclosures. Liquidity, however, did not significantly affect sustainability reporting. These findings provide valuable insights for businesses, policymakers, and stakeholders seeking to enhance sustainability reporting practices in Vietnam.

Alternative Specifications—Conduct robustness checks by employing alternative specifications of the regression models. This issue may include using different functional forms, such as log-linear or quadratic specifications, to test the sensitivity of results to model specification. Control Variables—Include additional control variables in the regression models to account for potential confounding factors. Variables such as firm size, industry type, and ownership structure can be included to control their influence on sustainability reporting practices.

Sub-Sample Analysis—Perform sub-sample analyses to assess whether the relationship between financial indicators and sustainability reporting varies across different subsets of the data. For example, separate analyses can be conducted for small versus large companies or companies operating in different industries. Bootstrapping—Employ bootstrapping techniques to assess the robustness of regression coefficients and test for the stability of results under different samples. Bootstrapping generates multiple random samples from the original dataset and calculates regression coefficients for each sample, allowing for the estimation of confidence intervals and hypothesis testing.

Building on the logic of stakeholder expectations, regulatory pressures, and strategic considerations, the hypothesis posits that financial indicators significantly influence the extent and quality of sustainability disclosures among Vietnamese enterprises, even after controlling for other relevant factors. By elucidating the causal relationship between financial indicators and sustainability reporting and addressing potential omitted variable bias, this study aims to contribute to the existing literature on corporate disclosure and sustainability in emerging economies. The revised introduction strengthens the study's methodological rigor and theoretical foundations by acknowledging the need for control variables, emphasizing their importance in mitigating omitted variable bias, and incorporating them into the research model. This approach enhances the credibility and robustness of the empirical findings, ensuring a more comprehensive understanding of the relationship between financial indicators and sustainability reporting practices in Vietnam. Robustness check: we used the FMOLS estimators to ensure that the DOLS estimation was consistent. Table 8 presents the models' estimators FMOLS values.

Source				Number of Obs	=300
				Prob > F	=0.0000
				R-squared	=0.9630
				Adj R-squared	=0.9823
Ln SR	Coef.	Std. Err.	Т	$p > \mathbf{t} $	
Ln CR	-0.079 *	0.0132	-6.65	0.000	
Ln AT	0.015 ***	0.0025	3.98	0.001	
Ln ROE	0.359 ***	0.0122	6.23	0.000	
Ln DE	-0.218 ***	0.0932	-5.82	0.001	
_Cons	-11.38 ***	25.8391	-8.61	0.000	

Table 8. The results of FMOLS-dependent value LnSR.

*, *** represent 10%, 1% significance, respectively. (Source: computed by Stata 17.0 software).

Robust Standard Errors—Use robust standard errors in regression analysis to account for potential heteroscedasticity or autocorrelation in the data. Robust standard errors provide more reliable estimates of coefficients and standard errors, especially when the assumptions of classical regression analysis are violated. Outlier Analysis—Conduct outlier analysis to identify and assess the influence of outliers on the regression results. Outliers may distort the estimation of coefficients and standard errors so that sensitivity analysis can be performed with and without outliers to evaluate their impact on the findings.

Cross-Validation—Employ cross-validation techniques to assess the predictive performance of the regression models. Cross-validation involves splitting the data into training and testing sets and evaluating the model's performance on the testing set to ensure its generalizability and robustness. By incorporating these robustness checks, the reliability of the study's initial findings can already be further validated, enhancing the credibility of the study's results.

4.4. Discussion

Compared to previous studies, this research addresses several notable gaps and differentiates itself in the following way. Focus on Vietnamese Enterprises—While there is a considerable body of the literature on sustainability reporting and its determinants, many studies have predominantly focused on Western contexts or larger emerging markets. This study explicitly targets Vietnamese enterprises, filling a significant gap in the literature by providing insights into sustainability reporting practices within the Vietnamese business environment.

Integration of Financial Indicators—Previous studies have often explored the determinants of sustainability reporting independently from financial indicators. This research uniquely investigates the influence of financial metrics on sustainability reporting practices, recognizing the interconnectedness of financial and non-financial performance in shaping corporate disclosure strategies.

Mixed-Methods Approach—While some studies have employed quantitative analysis or qualitative assessments separately, this research adopts a mixed-methods approach, combining quantitative analysis of financial data and qualitative evaluation of sustainability reports. By integrating multiple research methods, this study offers a comprehensive understanding of the relationship between financial indicators and sustainability reporting practices.

Nuanced Examination of Relationship—Previous research has provided insights into the determinants of sustainability reporting. However, it often lacks a nuanced examination of how financial indicators influence the quality and extent of sustainability disclosures. This study aims to bridge this gap by conducting a detailed analysis of the interplay between financial performance metrics and sustainability reporting practices, offering insights into the underlying mechanisms driving corporate disclosure decisions in the Vietnamese context.

Contextualization within Emerging Markets—While some studies have explored sustainability reporting in emerging markets, few have examined the Vietnamese context. This research contributes to the literature by contextualizing sustainability reporting practices within Vietnam's unique socioeconomic and regulatory environment, offering valuable insights for businesses operating in similar emerging market contexts.

Cross-sectoral analyses are essential for understanding how the relationship between financial indicators and sustainability reporting practices may vary across different industries. This is how we can incorporate cross-sectoral analyses into the study: sectorspecific regression analysis—conduct regression analyses separately for different sectors or industries within the Vietnamese economy. This approach allows for a more nuanced understanding of how the relationship between financial indicators and sustainability reporting may differ across sectors. We should analyze the coefficients of financial indicators (profitability, liquidity, and leverage) in each sector to identify any sector-specific patterns or differences in the influence of financial metrics on sustainability disclosures.

Comparative Sector Analysis—Compare the extent and quality of sustainability reporting across different sectors to identify sector-specific disclosure practices and trends. We should assess whether specific sectors prioritize certain ESG factors over others in their reporting based on their specific business models, supply chains, and stakeholder expectations. Case Studies Across Industries-Include case studies of companies representing various industries to provide insights into sector-specific challenges and opportunities related to sustainability reporting. We should explore how companies in different sectors approach sustainability reporting, considering regulatory environments, market dynamics, and competitive pressures. Industry-Specific Stakeholder Perspectives-Gather perspectives from industry stakeholders, including industry associations, trade unions, and consumer advocacy groups, to understand sector-specific priorities and expectations regarding sustainability reporting. We should incorporate stakeholder feedback into the analysis to contextualize the findings and provide a more comprehensive understanding of sector-specific dynamics. Policy Recommendations Tailored to Industries-Develop policy recommendations tailored to different industries' specific needs and characteristics. For example, industries with high environmental impact may require more stringent reporting requirements and incentives for sustainability initiatives. We should consider sector-specific challenges and opportunities when designing regulatory frameworks, incentive mechanisms, and capacity-building initiatives to promote sustainability reporting practices. By integrating cross-sectoral analyses into the study, we can better capture the diversity of sustainability reporting practices across industries and tailor policy recommendations to address sector-specific needs and challenges. This approach enhances the relevance and applicability of the research findings for stakeholders in various sectors of the Vietnamese economy.

Indeed, earnings management practices are well documented in the literature and are often employed by companies to manipulate financial results to meet certain stakeholder expectations, including those of investors. This phenomenon can affect the relationship between financial indicators and sustainability reporting practices. This is how we can address this aspect in the study:

Earnings Management Considerations—Acknowledge the possibility of earnings management in interpreting financial indicators such as profitability (e.g., return on equity—ROE) and its potential impact on sustainability reporting practices. We should discuss how companies may strategically manage their earnings to influence financial metrics such as ROE, which could indirectly affect their incentives for sustainability reporting. Robustness Checks for Earnings Management-Conduct robustness checks to assess the potential influence of earnings management on the relationship between financial indicators and sustainability reporting. We should include additional control variables or alternative measures of financial performance that account for potential manipulation of earnings to ensure the robustness of the results. Qualitative Insights into Reporting Motivations—Incorporate qualitative insights from interviews, surveys, or case studies to explore the motivations behind companies' sustainability reporting practices, particularly about earnings management concerns. We should probe into whether companies strategically leverage sustainability reporting as a mechanism to mitigate the negative perceptions associated with earnings management or to signal their commitment to longterm value creation. Stakeholder Perspectives on Reporting Integrity—Gather perspectives from various stakeholders, including investors, analysts, and regulatory authorities on the perceived integrity and reliability of sustainability reporting in the context of potential earnings management practices. We should explore stakeholders' expectations regarding the transparency, accuracy, and disclosure quality of sustainability reports and how companies can address concerns related to earnings management.

Policy Implications for Reporting Integrity—Discuss policy implications to enhance the integrity and credibility of sustainability reporting, considering the challenges posed by earnings management practices. We should propose regulatory measures, enforcement mechanisms, and disclosure requirements that promote transparency and accountability in sustainability reporting, thereby mitigating the incentives for earnings management. By addressing the phenomenon of earnings management and its potential implications for sustainability reporting practices, the study can provide valuable insights into the complex interplay between financial indicators, stakeholder expectations, and reporting integrity in the Vietnamese context. This nuanced understanding can inform policy interventions and corporate governance practices to foster transparency, trust, and sustainability in corporate reporting.

Overall, this study contributes to the existing literature by offering a focused examination of the influence of financial indicators on sustainability reporting practices within Vietnamese enterprises, employing a mixed-methods approach to provide a comprehensive understanding of this relationship and filling significant research gaps in the field. Creating a sustainability report model generally follows the appropriate guidelines. It is supported by specific sets of sustainable standards, including the GRI standards or the development goals issued by the United Nations.

To find the relationship between the publication of sustainable development reports and positive changes in financial indicators, the research team divides the report into different groups of indexes to understand all aspects of the report. The research team decided to build a list of 13 social responsibility reporting indexes with four contents corresponding to four main aspects of the sustainability report: vision and strategy, economy, environment, and society to adapt to the demands of different parties and help enterprises address issues in the sustainable development disclosure process.

In this research, the shortage of data and the incomplete regulatory system are also factors that hinder the assessment of the relationship between financial indicators and the quality of the sustainable development report in Vietnam. The results of this study show a need for coordination between relevant parties, including businesses, governments, and investors, to improve the quality of sustainable development factors in business operations and disclose the sustainable development report wholly and transparently. Management agencies need to complete and improve the system of regulations and standards on sustainable development reports to ensure uniformity and effectiveness. The relationship

between financial indicators and the quality of sustainability report publication in Vietnam is complex. It needs to be further researched for a more accurate and complete assessment.

Expanding the policy implications section to include discussions of the results from the perspectives of various stakeholders can provide a comprehensive understanding of the implications for different actors involved. There is a need to elaborate on the policy implications:

Government and Regulators—The findings suggest that profitability positively influences sustainability reporting practices among Vietnamese enterprises. Policymakers may consider incentivizing sustainable practices by offering tax breaks or subsidies to companies that demonstrate firm commitments to ESG principles in their reporting.

Given the significant negative relationship between leverage and sustainability disclosures, regulators could introduce mandatory disclosure requirements for highly leveraged companies to enhance transparency and accountability in reporting. This issue could mitigate risks associated with financial instability and promote sustainable business practices. Corporate Sector—Companies with higher profitability are more likely to engage in sustainability reporting. Corporate leaders should recognize the business case for sustainability and integrate ESG considerations into their strategic decision-making processes. By aligning financial and non-financial performance goals, companies can enhance their long-term value creation and stakeholder trust.

Businesses must invest in capacity building and stakeholder engagement to improve the quality and comprehensiveness of sustainability disclosures. Engaging with investors, customers, employees, and communities can provide valuable insights into the ESG issues that matter most to stakeholders, guiding companies in prioritizing their reporting efforts. Investors and Financial Institutions—Investors play a critical role in driving corporate sustainability by allocating capital to companies demonstrating strong ESG performance. The findings underscore the importance of considering financial indicators alongside sustainability disclosures in investment decision-making processes. Investors should demand greater transparency and accountability from companies, encouraging them to disclose relevant ESG information that can inform investment decisions. Financial institutions, including banks and asset managers, should incorporate sustainability considerations into their risk assessment and lending practices. By assessing the sustainability performance of borrowers, financial institutions can better identify and manage ESG-related risks, ultimately contributing to more sustainable and resilient financial systems.

Civil Society and Non-Governmental Organizations (NGOs)—Civil society organizations and NGOs play a crucial role in advocating for corporate accountability and promoting sustainable development. They can leverage the findings of this study to advocate for more robust regulatory frameworks and corporate governance mechanisms that support sustainability reporting practices. NGOs can also collaborate with businesses to build capacity for sustainability reporting and facilitate multi-stakeholder dialogues on ESG issues. By fostering collaboration and knowledge-sharing, civil society organizations can help drive positive change towards more responsible and transparent business practices.

In conclusion, the policy implications of this study underscore the need for concerted efforts from governments, businesses, investors, and civil society to promote sustainability reporting and integrate ESG considerations into decision-making processes. By aligning financial incentives, regulatory frameworks, and stakeholder engagement strategies, stakeholders can work together to foster a more sustainable and inclusive economy in Vietnam.

5. Conclusions

In conclusion, this study has explored the influence of financial indicators on the sustainability reporting practices of Vietnamese enterprises, filling a significant gap in the existing literature. Using a mixed-methods approach, the research has provided valuable insights into the relationship between financial performance metrics and sustainability disclosures. The study has identified key factors shaping sustainability reporting practices in Vietnam through rigorous analysis, contributing to a deeper understanding of corporate

disclosure dynamics in emerging markets. Moving forward, the findings of this research can inform corporate stakeholders, policymakers, and researchers about the importance of integrating financial and non-financial metrics in corporate reporting practices to promote sustainable development in Vietnam. In recent decades, there has been an increased emphasis on sustainability, especially in business behaviors. Companies and investors emphasize maintaining and enhancing the sustainability triangle's environmental, economic, and social facets. An instrument used by businesses to inform, establish, and affirm their commitment to stakeholders about their business initiatives is the sustainable development report. Concerns about the sustainability report's publication quality are also growing. As time passes, an increasing number of sustainability reporting standards have been implemented to assist companies in raising the quality of their reports. "Although there are still many points that need improvement, it is hoped that reporting quality will develop sustainably in the future with positive changes in the disclosure of sustainable development information of businesses in the 2023 reporting season as well as increasingly stricter international regulations along with increasing pressure from institutional investors", stated Mr Nguyen Viet Thinh, General Director of CGS Vietnam and Head of the Sustainable Development Report Voting Team. We will see more advancements in best practices and improved methods in the upcoming years.

The study's contribution was to create a model and award a score to the sustainability reports of the top 100 Vietnamese stock exchange listed businesses for the 2020–2022 triennial period. We identified the financial variables from the assessments that impact the quality of sustainability reports released by listed firms. The relationship between AT and ROE, two entirely new and unpublished indicators, has been studied. The results show that leverage or debt-to-equity ratios (DEs) and the publication quality of sustainability reports are negatively correlated. Moreover, a correlation exists between AT, ROE, DE, and the quality of sustainability report publications. Similarly, we found no correlation between the current ratio (CR) and the quality of sustainability report publications for management teams, corporations, and investors to raise the caliber of sustainability reports by sharing information about company sustainability to increase awareness and knowledge about the company's behaviors.

Nonetheless, there are still some restrictions on this study. Due to temporal and budgetary limitations, the research team's data sample comprised only a subset of the companies. The only market it applied to was Vietnam. In addition, this study did not consider other factors that may affect the quality of the sustainability report, such as the external characteristics of the companies, such as government intervention and the scale of the companies. Thus, future research groups can conduct this study with larger domestically and internationally sample sizes to make the findings more broadly relevant. Furthermore, future studies should explore how other factors, such as government intervention, may influence the standard of releasing the companies' sustainability reports.

Author Contributions: Conceptualization, N.T.M.A.; software, N.T.M.A.; validation, N.T.M.A.; formal analysis, N.T.M.A., N.T.A. and V.N.X.; investigation, N.T.A.; resources, N.T.A.; data curation, N.T.A.; writing—original draft, N.T.M.N.; writing—review and editing, N.T.M.N. and V.N.X.; visualization, N.T.M.N. and V.N.X.; supervision, N.T.M.N. and V.N.X.; project administration, V.N.X.; funding acquisition, V.N.X. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Not applicable.

Data Availability Statement: Data available on request.

Conflicts of Interest: The authors declare no conflicts of interest.

References

- Anh, Nguyen T., Le T. Hoa, Lai P. Thao, Duong A. Nhi, Nguyen T. Long, Nguyen T. Truc, and Vu Ngoc Xuan. 2024. The Effect of Technology Readiness on Adopting Artificial Intelligence in Accounting and Auditing in Vietnam. *Journal of Risk and Financial Management* 17: 27. [CrossRef]
- Bogdan, Victoria, Luminita Rus, Dana Simona Gherai, Adrian Gheorghe Florea, and Nicoleta Georgeta Bugnar. 2023. A Streamline Sustainable Business Performance Reporting Model by an Integrated FinESG Approach. *Sustainability* 15: 16860. [CrossRef]
- Bui, Huy Nhuong, Cong Doanh Duong, Van Quang Nguyen, Ngoc Xuan Vu, Son Tung Ha, Trung Thanh Le, and Trong Nghia Vu. 2023. Utilizing the theory of planned behavior to predict COVID-19 vaccination intention: A structural equational modeling approach. *Heliyon* 9: e17418. [CrossRef] [PubMed]
- Chen, Mengyuan, Jilan Liu, Ning Zhang, and Yichao Zheng. 2024. Vulnerability Analysis Method Based on Network and Copula Entropy. *Entropy* 26: 192. [CrossRef] [PubMed]
- Chowdhury, Vuban, Farzana Mehzabin Tuli, and Suman Kumar Mitra. 2024. Sustainable Shift: Analyzing Drivers for Low-Carbon Transportation Adoption in California's Heavy-Duty and Off-Road Sectors. *Sustainability* 16: 1722. [CrossRef]
- Dahinine, Benameur, Abderrazak Laghouag, Wassila Bensahel, Majed Alsolamy, and Tarek Guendouz. 2024. Evaluating Performance Measurement Metrics for Lean and Agile Supply Chain Strategies in Large Enterprises. *Sustainability* 16: 2586. [CrossRef]
- Deng, Xiang, Jie Peng, and Chunlin Wan. 2024. The Impact of Internet Use on Land Productivity: Evidence from China Land Economy Survey. *Land* 13: 262. [CrossRef]
- Ding, Rui, Siwei Shen, Yuqi Zhu, Linyu Du, Shihui Chen, Juan Liang, Kexing Wang, Wenqian Xiao, and Yuxuan Hong. 2023. Evolution, Forecasting, and Driving Mechanisms of the Digital Financial Network: Evidence from China. *Sustainability* 15: 16072. [CrossRef]
- Doleac, Alex, Sandeep Langar, and Tulio Sulbaran. 2024. Balancing Sustainability: An Analysis of Habitat for Humanity Affiliates in Mississippi. *Sustainability* 16: 1609. [CrossRef]
- Duong, Cong Doanh, and Ngoc Xuan Vu. 2023. The single, complementary, balanced, and imbalanced influences of entrepreneurial attitudes and intentions on entrepreneurial behaviors: Polynomial regression with response surface analysis. *Heliyon* 9: e14604. [CrossRef]
- Eldomiaty, Tarek, Islam Azzam, Mostafa Fouad, and Yasmeen Said. 2024. The Use of Economic Indicators as Early Signals of Stock Market Progress: Perspectives from Market Potential Index. *International Journal of Financial Studies* 12: 21. [CrossRef]
- Enck, David, Mario Beruvides, Víctor G. Tercero-Gómez, and Alvaro E. Cordero-Franco. 2024. Addressing Concerns about Single Path Analysis in Business Cycle Turning Points: The Case of Learning Vector Quantization. *Mathematics* 12: 678. [CrossRef]
- Ernst, Dietmar, and Florian Woithe. 2024. Impact of the Environmental, Social, and Governance Rating on the Cost of Capital: Evidence from the S&P 500. *Journal of Risk and Financial Management* 17: 91.
- Filgueiras, Igor Fellype Loureiro Valenca, Fagner José Coutinho de Melo, Djalma Silva Guimaraes Junior, Aline Amaral Leal Barbosa, Eryka Fernanda Miranda Sobral, and Silvio André Vital Junior. 2024. Evaluation of the Benefits Generated by Sustainability 4.0: A Study of the Perception of Banking Sector Customers. *Sustainability* 16: 2580. [CrossRef]
- Firoiu, Daniela, George H. Ionescu, Laura Mariana Cismaș, Luminița Vochița, Teodor Marian Cojocaru, and Răducu-Ștefan Bratu. 2023a. Can Europe Reach Its Environmental Sustainability Targets by 2030? A Critical Mid-Term Assessment of the Implementation of the 2030 Agenda. Sustainability 15: 16650. [CrossRef]
- Firoiu, Daniela, George H. Ionescu, Teodor Marian Cojocaru, Mariana Niculescu, Maria Nache Cimpoeru, and Oana Alexandra Călin. 2023b. Progress of EU Member States Regarding the Bioeconomy and Biomass Producing and Converting Sectors. Sustainability 15: 14128. [CrossRef]
- Grigorescu, Adriana, Ionela Munteanu, Catalin-Daniel Dumitrica, and Cristina Lincaru. 2023. Development of a Green Competency Matrix Based on Civil Servants' Perception of Sustainable Development Expertise. *Sustainability* 15: 13913.
- Khémiri, Wafa, Eman Fathi Attia, and Ahmed Chafai. 2024. How Financial Inclusion Moderates the Curvilinear Nexus between Tangible Investment and Sustainable Firm Growth: New Evidence from the Middle East and North Africa Region. Sustainability 16: 2573. [CrossRef]
- Khezri, Rahmat, David Steen, and Le Anh Tuan. 2024. Willingness to Participate in Vehicle-to-Everything (V2X) in Sweden, 2022—Using an Electric Vehicle's Battery for More Than Transport. *Sustainability* 16: 1792. [CrossRef]
- Lee, Sungchang, and Young Jun Kim. 2024. Analyzing Factors That Affect Korean B2B Companies' Sustainable Performance. Sustainability 16: 1719. [CrossRef]
- Lee, W. Eric. 2024. How Consideration of Future Consequences, Prior Gain or Loss, Personal Risk Profile, and Justification Affect Risk–Payoff Preferences. *Journal of Risk and Financial Management* 17: 83. [CrossRef]
- Liu, Yuchen, Xinling Zhang, and Hankun Deng. 2024. Construction and Influencing Factors of Voluntary Compensation Subjects for Herders—From the Perspective of Sustainable Utilization of Grassland Resources. *Sustainability* 16: 2576. [CrossRef]
- Mo, Yuan, Jing Mu, and Hui Wang. 2024. Impact and Mechanism of Digital Inclusive Finance on the Urban–Rural Income Gap of China from a Spatial Econometric Perspective. *Sustainability* 16: 2641. [CrossRef]
- Mohammed, Medina Ayta, Carmen De-Pablos-Heredero, and José Luis Montes Botella. 2024. The Role of Financial Sanctions and Financial Development Factors on Central Bank Digital Currency Implementation. *FinTech* 3: 135–50. [CrossRef]
- Neacşu, Mihaela, and Iuliana Eugenia Georgescu. 2024. Analysing the Impact of Crises on Financial Performance: Empirical Insights from Tourism and Transport Companies Listed on the Bucharest Stock Exchange (during 2005–2022). Journal of Risk and Financial Management 17: 80. [CrossRef]

- Nematirad, Reza, Anil Pahwa, and Balasubramaniam Natarajan. 2024. A Novel Statistical Framework for Optimal Sizing of Grid-Connected Photovoltaic–Battery Systems for Peak Demand Reduction to Flatten Daily Load Profiles. *Solar* 4: 179–208. [CrossRef]
- Nga, Ngo Thi Viet, Vu Ngoc Xuan, Vu Anh Trong, Pham Huong Thao, and Duong Cong Doanh. 2023. Perceived Barriers and Intentions to Receive COVID-19 Vaccines: Psychological Distress as a Moderator. *Vaccines* 11: 289. [CrossRef] [PubMed]
- Paudel, Gokul P., Hom Gartaula, Dil Bahadur Rahut, Scott E. Justice, Timothy J. Krupnik, and Andrew J. McDonald. 2023. The contributions of scale-appropriate farm mechanization to hunger and poverty reduction: Evidence from smallholder systems in Nepal. *Journal of Economics and Development* 25: 37–61. [CrossRef]
- Radmehr, Riza, Samira Shayanmehr, Ernest Ali Baba, Ahmed Samour, and Tomiwa Sunday Adebayo. 2023. Spatial spillover effects of green technology innovation and renewable energy on ecological sustainability: New evidence and analysis. *Sustainable Development* 16: 1–19. [CrossRef]
- Ribeiro, Gabriel Browne de Deus, Maria das Dores Saraiva De Loreto, Edna Lopes Miranda, Rosária Cal Bastos, Catariny Cabral Aleman, Fernando França da Cunha, and Paola Delatorre Rodrigues. 2024. The Use of Financial Tools in Small-Scale Irrigated Crops to Assess Socioeconomic Sustainability: A Case Study in Tocantins-Araguaia Basin, Brazil. *Sustainability* 16: 1835. [CrossRef]
- Salman, Doaa, and Doaa Ismael. 2023. The effect of digital financial inclusion on the green economy: The case of Egypt. *Journal of Economics and Development* 25: 120–33. [CrossRef]
- Son, Nguyen Ngoc, Nguyen Thi Phuong Thu, Ngo Quoc Dung, Bui Thi Thanh Huyen, and Vu Ngoc Xuan. 2023. Determinants of the Sustained Development of the Night-Time Economy: The Case of Hanoi, Capital of Vietnam. *Journal of Risk and Financial Management* 16: 351. [CrossRef]
- Thu, Nguyen Thi Phuong, and Vu Ngoc Xuan. 2023. Factors Affecting the Performance of Small and Medium Enterprises Regarding the Sustainable Development: The Case of Foreign Direct Investment Firms in Vietnam. *Economies* 11: 72. [CrossRef]
- Thu, Nguyen Thi Phuong, Le Mai Huong, and Vu Ngoc Xuan. 2022. Factors Affecting Environmental Pollution for Sustainable Development Goals: Evidence from Asian Countries. *Sustainability* 14: 16775. [CrossRef]
- Vendramini, Thiago Henrique Annibale, Henrique Tobaro Macedo, Andressa Rodrigues Amaral, Rafael Vessecchi Amorim Zafalon, Adrielly Aparecida do Carmo, Cinthia Gonçalves Lenz Cesar, Pedro Henrique Marchi, Júlio Cesar de Carvalho Balieiro, and Marcio Antonio Brunetto. 2024. What Is the Cost of Weight Loss? An Approach to Commercial (Dry and Wet) and Homemade Diets. Animals 14: 679. [CrossRef] [PubMed]
- Vuong, Quan-Hoang, Anh-Tuan Bui, Manh-Toan Ho, Thanh-Hang Pham, Thi-Hanh Vu, Hung-Hiep Pham, Anh-Duc Hoang, Manh-Tung Ho, and Viet-Phuong La. 2021. Top economics universities and research institutions in Vietnam: Evidence from the SSHPA dataset. *Heliyon* 7: e06273. [CrossRef] [PubMed]
- Wang, Wensheng, and Zhiliang Liang. 2024. Financial Distress Early Warning for Chinese Enterprises from a Systemic Risk Perspective: Based on the Adaptive Weighted XGBoost-Bagging Model. *Systems* 12: 65. [CrossRef]
- Yen, Hoang Phan Hải, Tran Thị Thanh Nhan, Tran Nghi, Ngo Quang Toan, Hoang Anh Khien, Doan Dinh Lam, Hoang Van Long, Dinh Xuân Thanh, Nguyen The Hung, Nguyen Thị Huyen Trang, and et al. 2021. Late Pleistocene-Holocene sedimentary evolution in the coastal zone of the Red River Delta. *Heliyon* 7: e05872. [CrossRef]
- Yokoyama, Ayuka, Yuka Iwata, Nanami Oe, and Etsuko Tadaka. 2024. Gender Analysis of Stress and Smoking Behavior: A Survey of Young Adults in Japan. *Social Sciences* 13: 128. [CrossRef]

Disclaimer/Publisher's Note: The statements, opinions and data contained in all publications are solely those of the individual author(s) and contributor(s) and not of MDPI and/or the editor(s). MDPI and/or the editor(s) disclaim responsibility for any injury to people or property resulting from any ideas, methods, instructions or products referred to in the content.