Int. J. Nonlinear Anal. Appl. In Press, 1–7
ISSN: 2008-6822 (electronic)
http://dx.doi.org/10.22075/ijnaa.2025.36763.5393

The impact of institutional ownership on sustainability performance disclosure with an emphasis on the moderating role of board independence

Rasool Moradi Horini

Kabir Gharb Institute of Higher Education, Kermanshah, Iran

(Communicated by Javad Vahidi)

Abstract

The present study is applied research with a post-event causal methodology, investigating the impact of institutional ownership on sustainability performance disclosure, focusing on the moderating role of board independence. The statistical population consists of companies listed on the Tehran Stock Exchange, and 103 companies were selected as the sample using a screening sampling method from 2019 to 2023. Generalized least squares (GLS) regression was employed for data analysis. The results indicate that institutional ownership positively and significantly impacts sustainability performance disclosure. Furthermore, board independence is a moderating factor in the relationship between institutional ownership and sustainability performance disclosure.

Keywords: institutional ownership, board independence, sustainability performance disclosure, stock exchange
2020 MSC: 91G30

1 Introduction

In recent decades, the evolution of the global landscape of non-financial information disclosure has given rise to numerous concepts related to social, economic, and environmental issues. These concepts have emerged as a response to corporate actions and their impact on the environment in which they operate [16]. According to stakeholder theory, companies must consider the demands of stakeholders to legitimize their activities [2]. Disclosure of information related to corporate activities is one of the stakeholders' demands and a tool for communication with various stakeholders. Moreover, meeting stakeholders' demands protects companies from additional pressures they might face and reduces the information gap between shareholders and companies. Thus, issues related to sustainability performance fall within the framework of stakeholders' interests [11], offering companies an excellent opportunity to build trust and enhance legitimacy.

Corporate reporting and information disclosure reduce information asymmetry between companies and investors, providing a pathway to gain legitimacy and social approval. Companies listed on stock exchanges must annually submit a report on their status as part of the board of directors' annual report. This report can influence stakeholders' perceptions and social approval of companies, ultimately contributing to their reputation and corporate goodwill

*Corresponding author
Email address: rasoolmoradihorini@gmail.com (Rasool Moradi Horini)

Received: January 2025 *Accepted:* March 2025

[8]. As a result, companies can leverage this reputation and goodwill to achieve competitive advantages, sustain their operations, and maintain profitability. Conversely, crises and reputational damage can easily harm a company's reputation. Poor reputation can reduce social approval and alienate key shareholders. Therefore, a poor reputation may destroy shareholder value and increase legal, financial, and operational costs. In recent years, corporate reputation and goodwill issues have shifted from traditional risks, such as political, technological, and economic risks, to environmental, social, and governance (ESG) risks. If a company's ESG performance is assessed as weak, it will likely increase regulatory, legal, and reputational risks [10].

For a long time, investors and company owners have examined corporate information and records to make informed investment decisions. In recent years, investors have increasingly focused on companies' governance and social and environmental practices [1]. Studies have demonstrated that investors respond negatively when a company's environmental, social, and governance (ESG) practices falter [2].

As a result, these issues can place significant pressure on business managers to disclose their environmental, governance, and social performance. Such pressure is exerted by various groups, including shareholders, governments, media, investors, and other organizations [17].

According to previous research, disclosing information about environmental commitments and social responsibility bridges businesses and stakeholders, attracting institutional investors. Institutional investors, who own a significant portion of companies' shares, have considerable influence over invested companies. They can shape managerial practices and promote professional ethics through the provision of accurate information by companies. Consequently, the internal functions of environmental, social, and governance (ESG) disclosures and ownership structures can enhance a company's position, leading to increased profitability, competitiveness, and, ultimately, the long-term survival of companies [15].

On the other hand, independent boards of directors in companies are essential for making decisions without bias or personal interests [17]. Independent boards also play a critical supervisory role in monitoring corporate performance [7]. Furthermore, independent boards limit the negative impacts of ownership structures, such as family ownership, on disclosure practices, which improves transparency and trust while ensuring that stakeholder demands are considered. From the legitimacy theory perspective, board independence stimulates corporate social responsibility (CSR) disclosures and enhances the sustainability of a company's activities [6]. Accordingly, independent boards are expected to prioritize meeting the demands of various stakeholders and adopt mechanisms to ensure the company's legitimacy within its operating environment.

In this context, Zaid et al. [22] argued that board independence plays a significant mediating role in enhancing corporate social responsibility, as its positive impact on external ownership and government ownership is reflected in the disclosure practices of Palestinian companies. Similarly, Husted and de Sousa-Filho [9] stated that companies with highly independent boards are likelier to engage in ESG activities.

Given the aforementioned points, this study aims to examine the impact of institutional ownership on sustainability performance disclosure, emphasizing the moderating role of board independence. The research seeks to answer the following question: How does institutional ownership influence sustainability performance disclosure, considering the moderating role of board independence?

2 Empirical background of the study

Sabet Koushki Nian [19] examined the relationship between corporate governance mechanisms and corporate sustainability performance. The research utilized financial data from 63 companies on the Tehran Stock Exchange from 2015 to 2021. The findings indicate a significant relationship between institutional ownership and corporate sustainability performance. Additionally, the relationship between audit quality and corporate sustainability performance was confirmed.

Taheri and Afsai [21] investigated the impact of environmental, social, and governance (ESG) disclosures on auditor effort and audit quality. Analyzing data from 97 companies listed on the Tehran Stock Exchange between 2013 and 2019 found a negative relationship between ESG disclosure levels and auditor effort. Furthermore, a negative relationship was identified between ESG disclosure levels and audit quality, which was influenced by the level of auditor effort.

Sabouhi and Mohammadzadeh [20] investigated the relationship between social performance, ownership structure, and corporate governance. Their findings indicate a significant relationship between ownership concentration, institutional ownership, board independence, firm size, financial leverage, and corporate social responsibility (CSR). However, no significant relationship was observed between board size, CEO duality, return on assets, liquidity, and CSR.

Raei et al. [14], in a study titled "The Impact of Ownership Structure and Capital Structure on Environmental Reporting Disclosure of Companies Listed on the Tehran Stock Exchange," analyzed 123 companies from 2009 to 2013 using multiple linear regression methods. The results showed a positive and significant relationship between ownership structure and environmental reporting disclosure. Additionally, the findings from the second hypothesis indicated a positive and significant relationship between capital structure and environmental reporting disclosure.

Fauziah et al. [5] examined the role of institutional ownership in the relationship between ESG disclosure and firm value in the consumer cyclical industry subsector during the 2019–2021 period. By analyzing 38 companies selected through purposive sampling, they concluded that ESG disclosure significantly impacts firm value. Furthermore, the study revealed that institutional ownership strengthens the relationship between ESG disclosure and firm value.

Li et al. [12] explored how environmental, social, and governance (ESG) efficiency affects corporate innovation, emphasizing its role as a critical indicator of company resource utilization. Analyzing data from A-share listed companies in China from 2009 to 2021, they found a positive correlation between ESG efficiency levels and corporate innovation outputs, which suggests that higher ESG efficiency contributes to more significant innovation. Their results also indicate that the company's ownership structure moderates the relationship between ESG efficiency and corporate innovation. Specifically, the negative moderating effects of ownership are more pronounced in regions with lower economic development or stricter environmental regulations. These findings confirm that ESG efficiency is a crucial mechanism linking ESG practices to enhanced innovation capabilities.

Bark and Wang [4] utilized ESG risk data from an ESG database to examine auditors' responses to risks associated with clients' environmental, social, and governance (ESG) profiles. The authors found that auditors either withdraw from engagements or demand higher audit fees in response to ESG risks posed by clients.

3 Research methodology

This research is applied in nature and falls under descriptive accounting studies. Additionally, since historical data were used to test the hypotheses, it is classified as quasi-experimental research. From an epistemological perspective, the study is empirical, employing inductive reasoning. It adopts a field-library approach, using historical information post-event (i.e., utilizing past data).

The statistical population of this research consists of all companies listed on the Tehran Stock Exchange (TSE). The statistical sample was determined after applying the following restrictions:

Companies must be listed on the Tehran Stock Exchange.

Companies must have been admitted to the TSE before 2019.

Required data must be available for the period from 2019 to 2023.

To ensure consistency in reporting dates and eliminate seasonal effects, the financial year-end for the selected companies must align with the end of the Iranian calendar year.

Additionally, companies must not belong to the banking and financial institutions sector (including investment companies, financial intermediaries, holdings, and leasing companies).

Based on these criteria and after applying the aforementioned restrictions, 103 companies met the requirements from 2019 to 2023. Therefore, the research hypotheses were tested within this timeframe and on the selected companies.

This study employed the Generalized Least Squares (GLS) method for modeling. The EViews 10 software was utilized to test the hypotheses.

3.1 Regression model and research variables

The following regression models were used in this study

$$Disclosure = a_0 + a_1 Stawn + a_2 Boind + a_3 Stawn * Boind + a_4 Cosze + a_6 Bsize + \varepsilon \tag{3.1}$$

3.1.1 Independent variables

Institutional Ownership (STAWN): The percentage of shares held by institutional shareholders relative to the total number of issued shares.

Board Independence (BOIND): The percentage of independent directors on the board.

3.1.2 Dependent variable

Disclosure: This variable refers to the disclosure of information, encompassing environmental (ENVD), social (SOCD), governance (GOVD), and overall sustainability performance disclosure (ESGD). The present study uses a sustainability checklist the Tehran Stock Exchange recommended as a proxy for the dependent variable (Disclosure). The disclosed components in Iran are outlined below:

ESG Disclosure Components

Environmental Performance Disclosure (ENVD): The disclosure of the following environmental elements: Direct and indirect energy consumption, energy intensity, primary energy source, waste management, environmental policies, and environmental impacts (Each component is scored as one if disclosed and zero otherwise.)

Social Performance Disclosure (SOCD): CEO pay ratio, gender diversity, non-discrimination, injury rate, board diversity, charitable donations, social work, health (1 for disclosed items and zero otherwise).

Governance Performance Disclosure (GOVD): Board structure - separation of powers, confidential voting, incentive pay, fair labor practices, supplier code of conduct (SC), code of ethics (EC), tax transparency (1 for disclosed items and zero otherwise).

Finally, the average of disclosed items constitutes the Sustainability Performance Disclosure variable.

3.1.3 Control Variables

Board Size (BSIZE): Defined as the number of members on the board.

Firm Size (COSZE): The natural logarithm of total assets.

Firm Age (COAGE): The number of years since the firm's establishment.

4 Research findings

Table 1: Descriptive Statistics of Research Variables

Variables	Mean	Median	Std. Deviation	Maximum	Minimum	Skewness	Kurtosis
Sustainability Performance Disclosure	0.52	1	0.49	0.000	1	-0.11	1.03
Board Size	5	5	5	5	0.00	0.002	0.045
The ratio of Independent Directors to Members	0.57	0.60	0.12	1	0.4	1.24	7.1
Financial Leverage	0.53	0.50	0.65	1.8	0.00	10.1	11.9
Firm Size	15.2	15.01	1.5	21.33	11.5	1.1	5.19

4.1 Jarque-Bera test results

The results of the Jarque-Bera test indicate that the research variables do not follow a normal distribution. However, according to the central limit theorem, if the sample size exceeds 20 observations, the distribution of variables tends to approximate normality. Therefore, given the large number of companies included in the sample, the non-normality of the data based on this test does not pose an issue for estimating the regression model.

4.2 Stationarity of research variables

Table 2: Panel Data Unit Root Test

Variables	Result	Levin, Lin, and Chu Statistic	Fisher-Phillips Perron Statistic
Institutional Ownership	Stationary at Level	Test Statistic: -30.90	Test Statistic: 391.53
		p-value: 0.000	p-value: 0.0000
Sustainability Performance Disclosure	Stationary at Level	Test Statistic: -32.35	Test Statistic: 237.004
		p-value: 0.000	p-value: 0.0000
Board Size	Stationary at Level	Test Statistic: -28.41	Test Statistic: 524.31
		p-value: 0.000	p-value: 0.0000
Financial Leverage	Stationary at Level	Test Statistic: -58.76	Test Statistic: 480.12
		p-value: 0.000	p-value: 0.0000

Firm Size	Stationary at Level	Test Statistic: -9.29	Test Statistic: 437.59
		p-value: 0.000	p-value: 0.0000

Based on the above table and the significance levels obtained from the tests, since the significance levels are less than 0.05, the null hypothesis of non-stationarity for the research variables is rejected. Therefore, the research variables are stationary.

4.3 Examination of multicollinearity among research variables

Table 3: Descriptive Statistics of Research Variables

Variables	**1**	**2**	**3**	**4**	**5**
1. Performance Disclosure	1	0.5	0.42	0.28	0.66
2. Institutional Ownership		1	0.096	0.18	0.34
3. Financial Leverage			1	0.15	0.58
4. Firm Size				1	0.088
5. Board Size					1

Based on the table, since the correlation coefficient between any two independent variables is less than 0.50, there is no multicollinearity among the independent variables.

4.4 Model selection

The F-Limer and Hausman tests select the appropriate model (Pooled or Panel).

Table 4: Results of the F-Limer and Hausman Tests

Description	**F-Limer Test**	**Hausman Test**
	F-statistic: 5.55	Chi-square: 8.03
	p-value: 0.000	p-value: 0.53

The results of the F-Limer test indicate that, based on the significance level obtained (less than 0.05), the null hypothesis of pooled data is rejected. Additionally, given that the significance level of the Hausman test is more significant than 0.05, it can be concluded that the random effects model is appropriate for this analysis.

4.5 Research hypothesis testing

Hypothesis 1: Institutional ownership influences sustainability performance disclosure.

Hypothesis 2: Institutional ownership influences sustainability performance disclosure, emphasizing the moderating role of board independence.

Table 5: Regression Coefficients for Research Hypotheses

Dependent Variable	**Independent Variable**	**B (Regression Coefficient)**	**Std. Error**	**T-statistic**	**p-value (Prob)**
Sustainability Performance Disclosure	Institutional Ownership	0.64	0.21	3.04	0.017
	Board Independence	0.43	0.20	2.15	0.021
	Institutional Ownership * Board Independence	-0.52	0.12	-4.33	0.017
	Board Size	-0.87	0.53	-2.79	0.009
	Financial Leverage	-0.47	0.24	-1.63	0.77
	Firm Size	-0.99	0.71	-1.98	0.82
	Constant	0.53	0.14	3.62	0.000
R-squared				0.71	
Adjusted R-squared				0.69	
F-statistic				358	
F-statistic Significance Level				0.000	
Durbin-Watson				1.79	

The results from Table 5 indicate that the coefficient of determination is 0.71, demonstrating that the independent variables can predict the dependent variable. Furthermore, the adjusted coefficient of determination is 0.69, and the

closeness of this value to the coefficient of determination signifies the reliability of the data and the good fit of the regression model.

Additionally, the significance level of the Fisher test is less than 5%, indicating that the model for this hypothesis is statistically significant.

Moreover, the significance levels for institutional ownership and board independence variables, below 0.05 at a 95% confidence level, demonstrate that institutional ownership and board independence positively and significantly affect sustainability performance disclosure.

The moderating role of institutional ownership and board independence in improving environmental, social, and governance (ESG) performance disclosure is also positive and significant.

5 Discussion and conclusion

The present study examined the impact of institutional ownership on ESG disclosure practices in listed companies on the Iranian stock exchange. Additionally, the study considered board independence as a moderating factor influencing the effect of institutional ownership.

The findings revealed that institutional ownership enhances companies' sustainability performance disclosure across all environmental, social, and governance (ESG) dimensions. Institutional owners appear to be key in promoting sustainability disclosure practices in emerging economies.

These results align with the evidence provided by Alhazaimeh et al. [3], Adeniyi and Adebayo [1], Mahmood et al. [13], and Rustam et al. [18].

The results also highlight the influential role of board independence in enhancing environmental, social, and governance (ESG) disclosure within companies. In this regard, it can be stated that institutional owners extensively collaborate with independent boards to strengthen governance in the companies they manage, which is reflected in improved levels of disclosure. Institutional owners also contribute to improving corporate behavior in disclosure practices [22]. Independent boards stand by stakeholders' demands and are fully aware of the importance of disseminating information about corporate environmental, social, and governance performance to prevent any tension with stakeholders. Additionally, independent boards seek to enhance their reputation through sustainability activities. They are fully aware of the significance of enhancing legitimacy and assist owners in understanding the importance of ESG disclosure in gaining shareholder trust and increasing legitimacy. Moreover, board independence influences the attitudes of institutional owners towards improving sustainability disclosure, guiding them to align their interests with those of other stakeholders to enhance corporate performance. On the other hand, institutional owners appear to support disclosure practices in the presence of independent boards. These findings have significant implications for various parties, such as policymakers, investors, and shareholders. They provide insights for regulators regarding the role of ownership structures in the ESG disclosure practices of publicly listed companies, as regulators can enact more laws to ensure board independence, thereby fostering disclosure development, transparency, and improved corporate performance. On the other hand, stakeholders and shareholders should adequately support board independence, as independent boards operate based on the diverse demands of stakeholders.

Like many empirical studies, the current study has several limitations. This research is limited to publicly listed companies. Therefore, future studies could focus on other sectors, such as banks or non-financial firms. The present study examined the impact of institutional ownership on ESG disclosure. Future research could investigate the influence of other dimensions, such as governance, ownership structure, or financial performance. The role of ownership structure can also be explored at the disclosure level for other reporting methods, such as integrated reporting.

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