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CLIMATE CHANGE MITIGATION DISCLOSURE IN ASEAN ENERGY: DOES OWNERSHIP STRUCTURE HAS AN IMPACT?

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ABSTRAK

Penelitian ini bertujuan untuk menganalisis pengaruh struktur kepemilikan (blockholder, domestik, pemerintah, asing, dan institusional) terhadap pengungkapan perubahan iklim pada sektor energi di Asia Tenggara, mengisi kesenjangan penelitian tentang praktik pengungkapan di sektor dengan dampak lingkungan tinggi di negara berkembang. Menggunakan pendekatan kuantitatif, studi ini menganalisis data dari 113 perusahaan energi di enam negara ASEAN (2017-2021) melalui regresi data panel dengan indeks TCFD sebagai pengukur pengungkapan. Hasil menunjukkan kepemilikan domestik dan pemerintah berpengaruh positif signifikan terhadap pengungkapan perubahan iklim, sementara kepemilikan institusional berpengaruh negatif signifikan. Kepemilikan blockholder dan asing tidak menunjukkan pengaruh signifikan. Penelitian ini memperluas teori stakeholder dengan memberikan bukti empiris tentang peran struktur kepemilikan dalam membentuk praktik pengungkapan lingkungan di negara berkembang, khususnya di sektor energi.

Kata Kunci: pengungkapan perubahan iklim, kepemilikan pemerintah, kepemilikan institusional, kepemilikan asing, kepemilikan domestik, kepemilikan blockholder

ABSTRACT

This study aims to analyze the influence of ownership structure (blockholder, domestic, government, foreign, and institutional) on climate change disclosure in the energy sector in Southeast Asia, filling the research gap on disclosure practices in sectors with high environmental impacts in developing countries. Using a quantitative approach, this study analyses data from 113 energy companies in six ASEAN countries (2017-2021) through panel data regression with the TCFD index as a disclosure measure. The results show that domestic and government ownership have a significant positive effect on climate change disclosure, while institutional ownership has a significant negative effect. Blockholder and foreign ownership do not show a significant effect. This study extends stakeholder theory by providing empirical evidence on the role of ownership structure in shaping environmental disclosure practices in developing countries, particularly in the energy sector.

Keywords: climate change disclosure, government ownership, institutional ownership, foreign ownership, domestic ownership, blockholder ownership

1. Introduction

Climate change has become one of the most pressing global issues due to its significant impact on the balance of nature and human life's social and economic aspects (Maji & Kalita, 2022). This is mainly triggered by increased industrial activity, such as fossil consumption, excessive deforestation, and increased greenhouse gas emissions, which substantially contribute to global warming (UNFCCC, 2002). In response to this situation, the United Nations (UN) launched the Paris Agreement in 2015, emphasizing the importance of international collaboration in mitigating the impacts of climate change (de Grosbois & Fennell, 2022). The impact of climate change is not only limited to environmental degradation but also clearly affects public health and global welfare. World Health Organization (WHO) data shows that air pollution linked to climate change caused 7 million deaths worldwide in 2016. Furthermore, the increasingly severe impacts of climate change have triggered extreme weather that disrupts natural ecosystems and global economic activity (Amran et al., 2014). Given the complexity of this issue, collaboration among various stakeholders is essential to address the impacts of climate change effectively and systematically.

The problem of climate change is increasingly complex because global economic growth is still highly dependent on exploiting natural resources. This dependence is evident in industrial and development activities in developed and developing countries, posing significant risks to environmental sustainability and accelerating global environmental degradation (Pietrobelli et al., 2018). In this context, energy companies play a contradictory dual role - on the one hand, they act as the main driver of economic growth, but on the other hand, they are the main contributors to environmental damage (Marimuthu et al., 2021). Their operational activities, especially in mining and utilizing natural resources, often result in severe environmental degradation and negatively impact human life (Giannarakis et al., 2017). As major players in economic activities, companies bear a moral and social responsibility to minimize the adverse impact of their operations on the environment. This is even more crucial, considering previous research shows that increased corporate assets often correlate with greater environmental damage and higher rates of climate change (Dutta & Dutta, 2021). To promote environmental sustainability, companies must increase transparency in disclosing their strategies for mitigating the impacts of climate change, as this openness is essential for building public trust and strengthening the company's reputation in the eyes of stakeholders (Halkos & Skouloudis, 2016).

Faced with this challenge, an understanding of stakeholder theory becomes very relevant. In this theoretical framework, a company's success is determined by its financial performance and ability to meet the needs and expectations of various stakeholders, including investors, regulators, local communities, and environmental organizations (Freeman, 1984). Transparency in sustainability disclosure is the primary mechanism for companies to fulfill their stakeholder responsibilities. This disclosure plays an important role in reducing information asymmetry between companies and external parties and strengthening strategic relationships with stakeholders (Deegan, 2019). Furthermore, sustainability disclosure helps increase the legitimacy of organizations through effective

communication regarding the company's commitment to sustainability practices (Cai et al., 2019; Luo et al., 2022).

In line with the stakeholder theory perspective, increasing demands for transparency have encouraged companies to not only disclose carbon emissions but also to provide more comprehensive information, including environmental risks, financial impacts, and relevant mitigation strategies (Hammami et al., 2020; Kılıç & Kuzey, 2019). This information is increasingly considered crucial by creditors and investors who now prioritize environmental factors in their funding decisions (Kim et al., 2021). In this context, sustainability disclosure is evolving beyond its function as a mere communication tool, becoming a strategic element that enhances the company's reputation in the global market and strengthens the organization's legitimacy in accordance with stakeholder expectations.

To understand the factors that influence corporate environmental disclosure, previous research has identified several important variables such as company size, profitability, company age (Desai, 2022; Kılıç & Kuzey, 2019), as well as board characteristics such as the presence of foreign and female directors (Ali et al., 2022; Nathalia & Setiawan, 2022; Octavio & Setiawan, 2024). Specifically in the context of ownership structure, research shows diverse and interesting results Bedi & Singh (2024) found that foreign ownership positively affects carbon emission disclosure, while blockholder ownership has a negative effect. Similar findings also emerge in the ASEAN context, where Ika et al. (2022) documented the positive influence of foreign ownership on carbon emission reporting in high-profile companies. Giannarakis et al. (2017) confirmed the positive role of government ownership in encouraging climate change disclosure. However, there are still important gaps in the literature because previous research has focused more on the financial and service sectors (Octavio & Setiawan, 2024). In addition, existing research has not examined in depth how the interaction of various types of ownership (foreign, government, blockholder, and domestic) simultaneously affects climate change disclosure, especially in the energy sector, which has a significant environmental impact. This gap is particularly evident in developing countries such as Southeast Asia, where unique ownership characteristics can affect disclosure practices differently from those in developed countries.

In the Southeast Asia context, the ownership structure has unique characteristics that differ from other countries, characterized by a high concentration of ownership where a significant portion of ownership is held by the largest shareholders, predominantly institutional investors (Syukur et al., 2022). This uniqueness is increasingly evident from data showing that concentrated ownership structures are prevalent in the region, which is often organized in the form of a pyramid with a dominant controlling shareholder (Shah et al., 2020). This characteristic has significant implications for corporate governance and disclosure practices, including the potential for tunneling practices where controlling shareholders can engage in self-serving transactions at the expense of minority shareholders (Fu et al., 2022). Furthermore, this concentrated ownership structure directly affects the company's strategic decision-making, including environmental and social information disclosure (Matondang et al., 2022). Recent research shows that companies with concentrated ownership tend to prioritize short-term financial gains over long-term

sustainability, which can affect the practice and quality of corporate disclosure (Simanullang, 2023; Srivastava et al., 2019; Tran & Freel, 2022).

Based on these conditions, this study is important for several critical reasons. First, the energy sector is a major contributor to carbon emissions and environmental damage, but studies on climate change disclosure in this sector are still very limited. Second, as a developing country, Southeast Asia has unique characteristics in its ownership structure, with ownership concentrated in the three largest shareholders, which can significantly influence environmental disclosure practices. Third, previous research has not comprehensively examined how the interaction of different types of ownership (foreign, government, blockholder, institutional, and domestic) simultaneously influences climate change disclosure in the energy sector.

To address these research gaps, this study analyses data from 113 mining companies in Southeast Asia from 2017-2021 to evaluate the relationship between ownership structure and sustainability disclosure. Using a stakeholder theory approach, this research contributes to the development of accounting, social, and environmental literature by providing deeper insights into the role of ownership structure in promoting corporate transparency. To provide a systematic understanding, this article is organized into several sections: Section 2 reviews relevant literature and theoretical frameworks, Section 3 outlines the research methodology in detail, Section 4 presents the results of comprehensive data analysis, Section 5 discusses the theoretical and practical implications of the research findings, and Section 6 concludes the main findings and provides recommendations for further research.

This study seeks to make several important contributions to the literature through in-depth analysis. First, from a theoretical perspective, this study enriches the Stakeholder Theory by showing how various types of ownership (foreign ownership, stockholders, government ownership, and domestic ownership) as key stakeholders influence corporate climate change disclosure in Southeast Asia. Second, this study provides new insights into the role of these various ownership structures in the context of developing countries, specifically how foreign and domestic ownership and blockholders influence climate change disclosure practices. Third, this study presents comprehensive empirical evidence on how the interaction between foreign, domestic, government, and blockholder ownership influences the level of climate change disclosure in Southeast Asia's energy sector. Fourth, this study provides a new, in-depth understanding of how the different characteristics of these shareholders shape climate change disclosure practices in the context of developing countries.

2. Theoretical Review and Hypothesis Development

Public awareness of sustainability issues, particularly climate change and corporate transparency, has grown significantly. Companies are increasingly expected to enhance their sustainable business practices and transparently disclose relevant information. Previous studies have investigated various factors influencing the quality of disclosure, including the impact of corporate governance (Guo et al., 2022; Martín & Herrero, 2020). However, a notable gap exists in prior research, as most studies have concentrated on specific industries, such as banking and hospitality (Caby et al., 2020; de Grosbois &

Fennell, 2022; Kılıç & Kuzey, 2019). Research on the energy sector remains relatively scarce, despite the sector's significant vulnerability to climate change.

Climate change mitigation action transparency, in the form of corporate disclosure, is no longer perceived merely as an obligation to comply with regulations. Instead, it is increasingly viewed as a strategic tool to build corporate legitimacy in the public eye. Octavio & Setiawan (2025) highlight that sustainability disclosure can enhance stakeholder trust and reduce reputational risks for companies. Furthermore, previous studies have emphasized the importance of information transparency in supporting strategic decision-making by shareholders and other stakeholders (Acar et al., 2021; Wang et al., 2023). Nevertheless, such disclosures are often influenced by various internal and external factors, including corporate governance and ownership structure.

Corporate decisions regarding the transparency of business practices are presumed to be influenced by ownership structure. Ownership structures such as government, institutional, foreign, domestic, and blockholder ownership have varying implications for how companies manage information disclosure. Alshbili et al. (2019) revealed that institutional ownership tends to promote greater transparency in disclosure due to investor pressure to reduce information asymmetry. Interestingly, blockholder ownership was found to decrease corporate transparency. This decline in transparency is attributed to the tendency of majority shareholders to prioritize their interests (Muttakin et al., 2015). This study aims to deepen the understanding of the relationship between ownership structure and transparency, particularly in the context of climate change-related disclosures.

The ASEAN region presents an intriguing area of study due to its highly diverse socio-economic characteristics. ASEAN countries have committed to addressing significant risks posed by climate change, including natural disasters and economic impacts. According to the ASEAN State of Climate Change report (ASEAN Report, 2022), countries in the region are urged to enhance climate change mitigation efforts through more transparent and integrated policies. However, research on climate change disclosure in this region remains limited, particularly in the energy sector, which is one of the largest contributors to carbon emissions and is highly vulnerable to the impacts of climate change.

Research on climate change disclosure has predominantly focused on sectors that are less sensitive to environmental issues, such as hospitality and banking (Caby et al., 2020; Kılıç & Kuzey, 2019). Attention to more environmentally sensitive sectors with significant carbon emission contributions, such as the energy sector, remains relatively scarce, particularly in emerging markets like ASEAN. Companies in the ASEAN region, especially in the energy sector, face significant challenges regarding sustainability issues and the demand to transition to more environmentally friendly energy sources. However, in-depth studies on these issues are still limited. Previous research has indicated that ownership structure can drive greater transparency in sustainability disclosure (Abbas et al., 2019; Bose et al., 2024; Bui et al., 2021; Octavio & Setiawan, 2024). By focusing on the energy sector in the ASEAN region, this study seeks to bridge the gap in the literature and provide new insights to support policy formulation, more effective governance strategies, and the strengthening of internal corporate capacities in promoting sustainability practices and climate change adaptation (Islam & Hossain, 2022).

In ASEAN, the regulatory framework for environmental disclosure has undergone a significant transformation, marked by the implementation of comprehensive policies such as OJK Regulation No. 51/POJK.03/2017 and POJK No. 16/POJK.04/2021 in Indonesia, Thailand's SEC Notification No. Tor Jor. 20/2564, Singapore Exchange Rules 711A/B, and Bursa Malaysia's Sustainability Reporting Framework. These regulations require public companies to disclose environmental information in sustainability reports, which align with the ASEAN Community Vision 2025 and ASEAN Joint Statement on Climate Change regional commitments. As a region with dynamic economic growth but still dependent on carbon-intensive industries, ASEAN faces an institutional dilemma in balancing economic expansion with environmental sustainability. The ownership structure in ASEAN, which is dominated by concentrated and family ownership, influences the significance of environmental disclosure practices. International institutional investors act as catalysts for adopting global standards such as GRI and TCFD through normative pressure to increase transparency. In parallel, state-owned enterprises in various ASEAN countries are regulated through special mandates such as Law No. 19/2003 and SOE Ministerial Regulation No. PER-05/MBU/04/2021 in Indonesia is a policy instrument for achieving national sustainability targets that support the ASEAN Plan of Action for Energy Cooperation 2021-2025. In contrast, entities with block holder and family ownership show a short-term financial orientation that can hinder a commitment to comprehensive environmental disclosure. The heterogeneity of this ownership structure makes ASEAN an ideal empirical laboratory for investigating how ownership characteristics affect the quality of climate change disclosure in emerging economies that face homogeneous environmental challenges but with varying levels of institutional development.

Stakeholder theory provides a conceptual framework for understanding the relationship between stakeholders and a company. Stakeholders are defined as individuals or groups with an interest in or affected by the company's activities, decisions, or policies (Gibson, 2000). This theory emphasizes that companies hold responsibilities not only to shareholders but also to other stakeholders, such as governments, communities, and investors, who have a vested interest in the sustainability of the company's operations. A company's success is determined by its ability to balance the interests of its stakeholders while maintaining legitimacy (Donaldson & Preston, 1995). Clarkson (1995) classified stakeholders into two main categories. The first category is primary stakeholders, which includes groups whose involvement is critical for the company's continued operations. Without their support, the company cannot sustain its activities. The second category is secondary stakeholders, which includes groups that influence the company indirectly, despite not being directly involved in its activities.

In the context of information disclosure, stakeholder theory provides a conceptual framework for understanding how pressures from various stakeholder groups influence corporate disclosure policies. Freeman (1984) argues that information disclosure is one of the ways companies respond to increasingly complex stakeholder demands. Guthrie et al. (2004) emphasize that transparent information disclosure is not only critical for fulfilling stakeholders' informational needs but also represents a company's ethical responsibility. Hörisch et al. (2014) further suggest that fostering positive relationships with stakeholders can create long-term value for both companies and society. However, prior literature

indicates that corporate information disclosure is often shaped by the power and demands of specific stakeholder groups, particularly those with significant influence on the company's operational sustainability Yunus et al. (2020). In the context of climate change, information disclosure becomes increasingly critical due to its relevance in demonstrating a company's commitment to environmental and social sustainability.

Previous studies highlight the widespread application of stakeholder theory in research on corporate information disclosure. However, certain gaps remain. Much of the existing research focuses on industries like banking and hospitality (Burritt et al., 2016; García-Sánchez et al., 2020), leaving the energy sector an industry particularly vulnerable to climate change underexplored. Similarly, studies on climate change-related information disclosure in the ASEAN region are limited, despite the region's high exposure to climate risks and its pivotal role in global carbon reduction efforts (ASEAN Report 2022). This study aims to address these gaps by applying stakeholder theory to a less examined context: the energy sector in the ASEAN region.

Stakeholder theory provides a framework for understanding how ownership structure influences climate change-related information disclosure, particularly in the energy sector of the ASEAN region (Kazumi, 2020). Government ownership is frequently linked to stringent regulatory oversight and heightened transparency requirements, aligning with the sustainability objectives of public policies (Octavio & Setiawan, 2024; Tian & Estrin, 2008). Institutional investors, by contrast, often prioritize corporate accountability through rigorous monitoring mechanisms. This emphasis not only enhances corporate governance but also leads to more comprehensive sustainability disclosures (Bokpin et al., 2015; Lee, 2016). Additionally, the involvement of foreign investors exerts further pressure on local companies to adopt reporting practices consistent with global standards. This dynamic is particularly critical in emerging markets like ASEAN, where transparency is an essential factor in addressing global environmental challenges (Alshirah & Alshira'h, 2023; Zhang & Cang, 2021).

The dynamics of ownership structures are not without complexity. Blockholder ownership, for instance, while potentially enhancing corporate oversight, often introduces conflicts of interest with minority shareholders, which can negatively impact climate change-related information disclosure practices (Jiang & Habib, 2009). Similarly, domestic ownership reflects the influence of local stakeholders shaped by the socio-political dynamics of the ASEAN region, where integrating sustainability into business operations remains a significant challenge (Haron et al., 2021). In the context of ASEAN's energy sector, balancing economic development goals with sustainability commitments is a persistent issue (ASEAN Report, 2022). Climate change-related information disclosure serves not only as a response to stakeholder pressures but also as a strategic tool for companies to demonstrate their commitment to sustainability while supporting long-term economic growth aligned with regional priorities. By integrating stakeholder theory and focusing on the ASEAN energy sector, this study broadens the application of the theory in disclosure literature. Additionally, it offers new insights into the complexities of corporate environmental responsibility disclosure, particularly in emerging markets with unique socio-economic and environmental challenges.

Block holder ownership is a form of ownership structure in which an investor or group of investors holds a significant portion of shares, giving them substantial power to influence company decisions. In the stakeholder theory framework, a company's long-term success depends on its ability to balance the interests of various parties (Freeman, 1984). The existence of block holders often creates an imbalance in decision-making, where their financial interests dominate while the needs of other stakeholders, such as the community and regulators, are neglected (Kang et al., 2018). Empirical studies prove block holder ownership prioritizes financial performance over transparency, especially when sustainability disclosure is seen as a cost burden with no direct financial benefits (ElKelish, 2017; Wicaksono & Setiawan, 2024b). In the context of climate change, information disclosure is an important element in demonstrating corporate responsibility for environmental sustainability. However, companies dominated by block holders often show a lower level of disclosure, especially in emerging markets where sustainability reporting standards are still inconsistent (H. Al Amosh & Khatib, 2022). Block holders generally focus on short-term profits, which conflicts with the need to address global and long-term climate change issues (Kang et al., 2018).

High ownership concentration also encourages related party transactions that benefit block holders, so companies limit information disclosure to avoid scrutiny from other stakeholders (Chithambo & Tauringana, 2014; Kang et al., 2018). The negative relationship between blockholder ownership and climate change disclosure can be explained by blockholders' direct access to company information, reducing public disclosure's need. Disclosure of climate change information requires substantial investment that can reduce short-term profits, while disclosure of climate change risks can expose company vulnerabilities that blockholders want to avoid. Based on these arguments, this study proposes the following hypothesis:

H_1: Blockholder ownership has a negative effect on the level of disclosure of climate change information in the energy sector

Domestic ownership is a form of ownership structure where investors or investor groups come from the same geographical area as the company, which gives them an advantage in monitoring and influencing the company's activities. Stakeholder theory emphasizes that stakeholders who have a close and direct involvement with the company will have a greater interest in ensuring the long-term sustainability of the company (Freeman, 1984). Domestic shareholders, as stakeholders with the exact location of the company, have a strong incentive to encourage corporate transparency because they directly feel the impact of the company's decisions on the environment and local community (Yang et al., 2020). Empirical studies prove domestic ownership encourages sustainability disclosure as a form of corporate accountability to local communities (Eng et al., 2021; Rio et al., 2023).

Information disclosure is a focus for domestic shareholders in climate change because they understand the direct impact of climate change risks on company operations and the welfare of surrounding communities, especially in emerging markets (Adedeji et al., 2020). The long-term nature of domestic investment encourages greater attention to sustainability issues than short-term profits alone (Grewal et al., 2019). Companies with high domestic

ownership firmly commit to environmental information disclosure due to direct pressure from local communities (Alodat et al., 2023; Chung et al., 2022). The positive relationship between domestic ownership and climate change disclosure can be explained by the more effective oversight mechanism of domestic shareholders and the company's need to maintain its social legitimacy in the eyes of local stakeholders. Disclosure of climate change information is an important instrument for companies in building trust and support from domestic stakeholders with a long-term interest in the company's sustainability. Based on this argument, this study proposes the following hypothesis:

H_2: Domestic ownership has a positive effect on the level of disclosure of climate change information in the energy sector

Government ownership reflects government control over company policy, where the government owns a portion of the shares, giving it the right to direct the company's strategic decisions (Sari et al., 2021). Stakeholder theory emphasizes the dual role of the government as regulator and shareholder, which gives it greater power to encourage corporate policies to address the impact of climate change (Freeman, 1984). Government ownership encourages companies to align their operations with society's needs, especially regarding the environment and transparency of reporting (Alshbili et al., 2019; Ghazali, 2007). Empirical studies prove that government-owned companies tend to be more compliant with environmental disclosure and regulatory standards due to the dual pressures of being both a business entity and an extension of the government (Alfraih & Almutawa, 2017; Zamil et al., 2021).

In the context of climate change, information disclosure is a priority for government-owned companies because they must demonstrate leadership in implementing national environmental policies. Government-owned companies are instrumental in achieving emission reduction and environmental sustainability targets (H. A. Amosh & Mansor, 2020; Haj-Salem et al., 2019). Government-owned companies show a higher level of transparency in disclosing environmental information, especially in developing countries with an agenda for tackling climate change (Alshbili et al., 2019; Putri, 2023). The relationship between government ownership and climate change disclosure can be explained by the dual mandate of companies to achieve business performance while supporting government environmental policies. The disclosure of climate change information proves the company's commitment to supporting the national sustainability agenda and meeting public expectations of government-owned entities. Based on this argument, this study proposes the following hypothesis:

H_3: Government ownership has a positive effect on the level of disclosure of climate change information in the energy sector

Foreign ownership refers to shared ownership by individuals or groups outside the company's operational territory (Chen, 2019). Stakeholder theory explains that stakeholders have different characteristics and demands that influence behavior. In contrast, foreign investors as external stakeholders have a higher need for information to overcome the constraints of distance and institutional differences (Freeman, 1984). Foreign ownership creates additional pressure for companies to improve the disclosure quality, as

foreign investors tend to have higher standards in environmental reporting practices based on their experience in global markets (Adel et al., 2019; Alshbili et al., 2019).

Empirical studies show that geographical distance and cultural differences encourage foreign investors to demand more detailed sustainability information as a monitoring mechanism (Baba & Baba, 2021; Kim et al., 2021). In climate change, information disclosure is important for foreign investors in assessing companies' environmental commitments and performance (Wicaksono & Setiawan, 2022). Foreign investors often integrate environmental criteria into their investment decisions as part of risk management (Honggowati et al., 2019; Setiawan et al., 2021). Companies with substantial foreign ownership show an improvement in disclosure practices due to higher demands for transparency and accountability (Gaffar, 2024; Wulansari & Adhariani, 2023). The relationship between foreign ownership and climate change disclosure can be explained through stricter supervision from foreign investors and the need for companies to meet international standards in environmental reporting. Disclosure of climate change information is a means for companies to demonstrate their commitment to sustainable business practices and maintain the trust of foreign investors. Based on this argument, this study proposes the following hypothesis:

H_4: Foreign ownership has a positive effect on the level of disclosure of climate change information in the energy sector

Institutional ownership refers to shared ownership by professional investors, such as insurance companies, banks, and other institutions, which significantly affects the disclosure of climate change mitigation. Companies strive to ensure that their operations are viewed as being in line with societal values and norms (Suchman, 1995). Environmental disclosure is a means for companies to gain legitimacy. However, institutional ownership is often associated with a short-term performance orientation that can weaken the motivation of companies to allocate resources to comprehensive climate change disclosure. Stakeholder theory complements this understanding by highlighting institutional investors' position as stakeholders with excellent financial capabilities but often have short-term performance preferences over long-term sustainability agendas (Freeman, 1984). Empirical studies show mixed results on the effect of institutional ownership on environmental disclosure. Some studies find that institutional investors can improve oversight and transparency (Zouari & Dhifi, 2022), but other studies indicate a negative effect, especially in weakly regulated markets (Wicaksono & Setiawan, 2024a). In the context of climate change disclosure, misalignment often occurs between the short-term focus of institutional investors and the long-term nature of investments related to environmental sustainability (Haj-Salem et al., 2019). This is supported by the finding that institutional ownership can reduce the level of voluntary disclosure (Alhazaimeh et al., 2014; Aluchna et al., 2022), especially in the capital-intensive energy sector where institutional investors prioritize investment returns over the allocation of resources for climate change disclosure (Acar et al., 2021). The negative relationship between institutional ownership and climate change disclosure can be explained by the short-term performance pressures companies face, reducing the incentive for comprehensive

environmental disclosure practices. Based on this argument, this study proposes the following hypothesis:

H_5: Institutional ownership has a negative effect on the level of disclosure of climate change information in the energy sector

3. Research Method

This study utilizes data collected from annual reports, sustainability reports, and corporate websites. The research objects are energy sector companies listed on stock exchanges in ASEAN countries during the 2018–2022 period. The initial sample comprises 113 companies, with a detailed distribution provided in Table 1, yielding a final sample of 565 firm-year observations.

Table 1. Samples Distribution

Country	Number of Firm
Indonesia	40
Malaysia	21
Philipina	10
Thailand	17
Singapore	19
Vietnam	6
Total	113

Source: Author

The study employs panel data analysis and adopts a quantitative approach, using STATA as the primary analytical tool. The energy sector is selected due to its high sensitivity to environmental issues, particularly climate change. This research aims to contribute to corporate efforts in promoting environmental sustainability, focusing on the urgent challenge of climate change. To empirically analyze the influence of stakeholders on climate change-related disclosures in the energy sector, the study employs the following model:

$$\mathbf{CCDI} = \beta0 + \beta1\text{BLkOWN} + \beta2\text{DOMOWN} + \beta3\text{FOWN} + \beta4\ \text{INSOWN} + \beta5\text{BLKOWN} + \beta6\text{DOMOWN} + \beta7\text{ROA} + \beta8\text{LEV} + \beta9\text{AGE} + \beta10\text{SIZE} + \varepsilon$$

Where **CCDI** represents the Climate Change Disclosure Index, serving as the dependent variable to measure the extent of climate change-related disclosures. **GOVOWN** refers to government ownership, **INSTOWN** represents institutional ownership, **FOROWN** reflects foreign ownership, **BLKOWN** captures blockholder ownership, **DOMOWN** denotes domestic ownership, **SIZE** indicates company size, **ROA** represents return on assets, **AGE** refers to company age and **LEV** captures financial leverage.

This study employs climate change disclosure as the dependent variable, measured using an index developed by the Task Force on Climate-related Financial Disclosures (TCFD). The TCFD index comprises four primary dimensions: Governance, Strategy, Risk

Management, and Metrics and Targets. Each item in the TCFD index is evaluated based on whether the item is disclosed in the company's report A score of 1 is assigned if the item is disclosed, and a score of 0 is assigned if it is not disclosed. The total TCFD index score ranges from 0 (indicating no disclosure) to 11 (indicating maximum disclosure). The TCFD index has been widely adopted in prior research, such as studies by Maji & Kalita (2022) and Nathalia & Setiawan (2022), underscoring its validity and relevance for assessing transparency in climate change-related disclosures. In this study, the disclosure assessment is conducted using the TCFD index items, which are summarized in Table 2 Panel A. Through the use of this index, the research aims to analyze and measure the level of climate change disclosures made by companies, with a focus on the various aspects outlined in the four dimensions established by the TCFD. This approach allows for a comprehensive evaluation of corporate transparency regarding climate-related governance, strategic planning, risk management, and the use of metrics and targets.

Table 2 Panel B presents the measurement of the independent variables. Wicaksono & Setiawan (2022) suggest that measuring government ownership using the percentage of share ownership is more appropriate than employing a dummy variable. This approach allows for a more precise assessment of the impact of ownership size on disclosure levels, capturing the influence of both large and small ownership stakes on corporate disclosure practices. Similarly, institutional ownership and foreign ownership are measured using the percentage of share ownership, following the methodology adopted by Kabir et al. (2020). For blockholder ownership, the measurement is based on share ownership of 5% or more, consistent with the definition provided by ElKelish (2017). Meanwhile, domestic ownership is measured as the percentage of shares held by individuals or groups located within the same geographic area as the company, as outlined by Nagata & Nguyen (2017). This detailed measurement approach provides a robust foundation for analyzing the influence of different ownership structures on corporate disclosure levels. By utilizing share ownership percentages, the study ensures a more accurate representation of the potential effects of various ownership types on disclosure practices.

This study incorporates four control variables: firm size, profitability, firm age, and creditor power. In this context, larger firms are considered to have greater resources, enabling management to identify risks and opportunities related to climate change and providing the capacity to disclose relevant information to stakeholders (Ararat & Sayedy, 2019). Firm size is measured using the natural logarithm of total revenue. Additionally, firm profitability, measured by Return on Assets (ROA), is expected to reflect a company's ability to manage its assets while considering environmental issues (Kılıç & Kuzey, 2019). Firm age, measured by the number of years since its establishment, is also a key factor considered in this study. These control variables were selected based on their potential to influence a firm's ability and inclination to disclose climate change-related information. Through this approach, the study aims to explore deeper relationships between these variables and the level of climate change disclosure, providing a more comprehensive understanding of the factors influencing corporate transparency in environmental issues.

Table 2. Variable Measurement

Panel A. TCFD Climate Change Disclosure Measurement	
Category	**Item Indeks**
Governance	1. Describe Board of Directors conducts supervision of risks and opportunities related to climate change. 2. Describe the contribution of management in evaluating and handling climate-related risks and opportunities.
Strategy	1. Describe the climate-associated risks and opportunities that the organization has recognized across short-term, medium-term, and long-term periods. 2. Describe the effects of climate-associated risks and opportunities on the organization's business operations, strategic planning, and financial forecasting. 3. Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.
Risk Management	1. Describe the organization's processes for identifying and assessing climate-related risks. 2. Describe the organization's processes for managing climate-related risks. 3. Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management.
Metrics and Targets	1. Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process. 2. Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks. 3. Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets.
Panel B. Independent Variable Measurement	
Variable	**Measurement**
Government Ownership	Percentage of shares owned by the government (Wicaksono & Setiawan, 2022)
Institutional Ownership	Percentage of shares owned by financial institutions (Kabir et al., 2020)
Foreign Ownership	Percentage of shares owned by individuals/groups geographically distinct from the company. (Kabir et al., 2020)
Block Holder Ownership	Percentage of the largest ownership (ElKelish, 2017)
Domestic Ownership	Percentage of shares owned by individuals/groups geographically aligned with the company (Nagata & Nguyen, 2017).

4. Results and Discussion

Table 3 presents the descriptive statistics that explain the distribution of data for the variables used in this study. The dependent variable, Climate Change Disclosure (CCD), has a maximum value of 9 and a minimum value of 1, with a mean of 4.31 and a standard deviation of 1.732. This indicates that the level of climate change disclosure among the sampled companies is still relatively low. For the independent variables, the average values for Government Ownership (GOWN), Foreign Ownership (FOWN), Institutional Ownership (INSOWN), Domestic Ownership (DOMOWN), and Blockholder Ownership (BLOKOWN) are 0.042, 0.128, 0.507, 0.487, and 0.47, respectively. The distribution of values shows a minimum score of 0 for all variables, while the maximum scores are 0.759, 0.998, 0.999, 1, and 0.957, respectively. These results indicate variability in ownership structures among the energy companies included in the sample. Additionally, the study incorporates several control variables, namely Leverage (LEV), Firm Age (AGE), Firm Size (SIZE), and Return on Assets (ROA). The mean values for these control variables are 3.984, 33.327, 19.299, and -6.367, respectively. These statistics provide insights into the characteristics of the energy companies analyzed in the study.

Table 3. Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
CCD	561	4.31	1.732	1	9
GOWN	561	0.042	0.151	0	0.759
FOWN	561	0.128	0.187	0	0.998
INSOWN	561	0.507	0.33	0	0.999
DOMOWN	561	0.487	0.353	0	1
BLOKOWN	561	0.47	0.212	0	0.957
LEV	561	3.984	6.388	0.64	7.51
AGE	561	33.327	21.673	4	128
Size	561	19.299	2.176	7.053	23.884
ROA	561	-6.367	82.092	-11.402	62.463

Notes: *** p<0.01, ** p<0.05, * p<0.1

CCDI: Change Disclosure Index, GOVOWN: government ownership, INSTOWN: institutional ownership, FOROWN: foreign ownership, BLKOWN: blockholder ownership, DOMOWN: domestic ownership, SIZE: company size, ROA: return on assets, AGE: company age, LEV: captures financial leverage.

Table 4 presents the correlation matrix between the key variables of this study. The matrix indicates that the Climate Change Disclosure Index (CCD) has a positive correlation with domestic ownership (DOMOWN) with a correlation coefficient of 0.0108. Conversely, CCD shows a negative correlation with institutional ownership (INSOWN), with a correlation coefficient of -0.111. Additionally, CCD exhibits a positive correlation with the control variable firm size (SIZE), with a correlation coefficient of 0.171.

Further analysis reveals that all correlation values in the matrix are below 0.8, indicating no significant signs of multicollinearity (Gujarati, 2004). Moreover, the tolerance values and Variance Inflation Factors (VIFs) for all predictor variables in the regression model show tolerance values above 0.1 and VIFs below 10. These results confirm that there are no serious multicollinearity issues that could affect the reliability of the regression analysis. Based on these findings, it can be concluded that this study does not face serious multicollinearity issues, and the regression analysis results can be considered reliable.

Table 4. Pairwise Correlations

Correlation / Probability	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
(1) CCD	1.000									
(2) BLOKOWN	0.004	1.000								
(3) DOMOWN	0.108**	0.074*	1.000							
(4) GOWN	0.053	0.206***	-0.067	1.000						
(5) FOWN	0.011	0.105**	-0.121***	-0.051	1.000					
(6) INSOWN	-0.112***	0.219***	-0.235***	-0.293***	0.192***	1.000				
(7) ROA	-0.025	0.006	0.099**	0.037	0.074*	-0.062	1.000			
(8) LEV	0.065	-0.015	-0.012	-0.006	-0.028	-0.051	0.003	1.000		
(9) AGE	0.048	0.195***	-0.067	-0.026	0.046	0.022	-0.099**	-0.061	1.000	
(10) SIZE	0.172***	0.019	0.031	-0.077*	0.186***	-0.052	0.458***	0.058	0.077**	1.000
VIF	1.260	1.153	1.276	1.096	1.378	1.316	1.014	1.091	1.360	1.260

Notes: *** p<0.01, ** p<0.05, * p<0.1

CCDI: Change Disclosure Index, GOVOWN: government ownership, INSTOWN: institutional ownership, FOROWN: foreign ownership, BLKOWN: blockholder ownership, DOMOWN: domestic ownership, SIZE: company size, ROA: return on assets, AGE: company age, LEV: captures financial leverage.

Table 5 presents the results of regression analysis with a random effect model that has been identified as the best model based on the Chow and Hausman tests. The regression results show that ownership variables have varying effects on climate change disclosure. H1 predicts that blockholder ownership (BLOKOWN) has a negative effect on climate change disclosure. Although the coefficient shows a negative direction ($\beta = -0.078$; $t = -0.209$), the effect is not statistically significant ($p > 0.05$), so H1 is not supported, possibly because blockholder shareholders in ASEAN have diverse priorities that do not consistently reduce disclosure. H2 predicts that domestic ownership (DOMOWN) has a positive effect on climate change disclosure. The results show a positive and significant coefficient ($\beta = 0.606$; $t = 2.809$; $p < 0.01$), thus supporting H2, reflecting the long-term interest of local investors in environmental sustainability in their areas of operation. H3 predicts that government ownership (GOWN) has a positive effect on climate change disclosure, and the results show a positive and significant coefficient ($\beta = 1.009$; $t = 1.909$; $p < 0.1$), thus supporting H3, indicating the effectiveness of the government's role in

encouraging environmental transparency through direct ownership. H4 predicts that foreign ownership (FOWN) has a positive effect on climate change disclosure. Although the coefficient shows a positive direction (β = 0.052; t = 0.143), the effect is not statistically significant (p > 0.05), so H4 is not supported, indicating that foreign investors may not have effectively integrated environmental disclosure expectations in the ASEAN market. H5 predicts that institutional ownership (INSOWN) has a negative effect on climate change disclosure, and the results show a negative and significant coefficient (β = -0.250; t = -0.995; p < 0.05), thus supporting H5, reflecting the tendency of institutional investors to prioritize short-term financial performance over investment in environmental disclosure.

Table 5. Regression Results

Variable	Model 1 *Coeff.* (t-Statistic)	Model 2 *Coeff.* (t-Statistic)	Model 3 *Coeff.* (t-Statistic)	Model 4 *Coeff.* (t-Statistic)	Model 5 *Coeff.* (t-Statistic)	Model 6 *Coeff.* (t-Statistic)
BLOKOWN	-0.078	0.071				
	(-0.209)	(0.205)				
DOMOWN	0.606		0.624			
	(2.809)***		(3.077)***			
GOWN	1.009			1.040		
	(1.909)*			(2.193)**		
FOWN	0.052				-0.206	
	(0.143)				(-0.574)	
INSOWN	-0.250					-0.550
	(-0.995)**					(-2.531)**
ROA	-0.003	-0.002	-0.003	-0.002	-0.002	-0.002
	(-2.559)**	(-2.104)	(-2.367)**	(-2.267)**	(-2.103)	(-2.205)**
LEV	6.135	0.000	0.000	0.000	0.000	0.000
	(0.579)	(0.541)	(0.621)	(0.533)	(0.523)**	(0.458)
AGE	0.001	0.000	0.001	0.000	0.000	0.000
	(0.236)	(-0.044)	(0.161)	(0.012)	(0.011)	(0.053)
SIZE	0.196	0.189	0.190	0.197	0.192	0.185
	(5.113)***	(4.979)	(5.070)***	(5.195)***	(5.002)***	(4.921)***
R-squared	0.204	0.181	0.194	0.188	0.182	0.190
F-statistic	10.768	13.472	14.661	14.134	13.514	14.302
Prob(F-statistic)	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***

Notes: *** p<0.01, ** p<0.05, * p<0.1

CCDI: Change Disclosure Index, GOVOWN: government ownership, INSTOWN: institutional ownership, FOROWN: foreign ownership, BLKOWN: blockholder ownership, DOMOWN: domestic ownership, SIZE: company size, ROA: return on assets, AGE: company age, LEV: captures financial leverage.

In addition to regression analysis, this study employs a robustness test as part of the research methodology. Within this test, the independent variables are lagged by one year (t-1) to examine the relationship between ownership structure in the previous period and

current climate change disclosure practices, as explained by (Octavio & Setiawan, 2025; Zhang & Cang, 2021). Robustness testing is used to verify the reliability and consistency of the analysis results, ensuring their relevance across different scenarios or conditions. By applying a one-year lag to the climate change disclosure variable, this study aims to evaluate the long-term impact of factors influencing disclosure and to ensure that the regression results remain consistent over a broader temporal context. The robustness test results, as presented in Table 6, align with the findings of the initial regression analysis. These findings reinforce the reliability of the proposed model, particularly in the context of testing with a one-year lag for the dependent variable. The consistency of these results provides a strong foundation for supporting the study's interpretation and implications.

Table 6. Robustness Test

Variable	Model 1 Coeff. (t-Statistic)	Model 2 Coeff. (t-Statistic)	Model 3 Coeff. (t-Statistic)	Model 4 Coeff. (t-Statistic)	Model 5 Coeff. (t-Statistic)	Model 6 Coeff. (t-Statistic)
BLOKOWN	0.083	-0.004				
	0.305	-0.014				
DOMOWN	0.653***		0.692***			
	5.857		6.252			
GOWN	0.804*			0.851**		
	3.079			3.964		
FOWN	0.113				-0.186	
	0.516				-0.847	
INSOWN	-0.321*					-0.614***
	-2.909					-3.327
ROA	-0.003**	-0.003**	-0.003**	-0.003**	-0.003**	-0.003**
	-3.171	-3.468	-3.287	-3.396	-3.507	-3.582
LEV	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
	1.967	2.364	2.185	2.255	2.216	1.796
AGE	0.002	0.001	0.001	0.001	0.001	0.001
	1.17	0.573	0.903	0.608	0.611	0.637
SIZE	0.210***	0.204***	0.208***	0.211***	0.207***	0.202***
	8.842	8.234	8.145	8.525	9.458	7.88
R-squared	0.179	0.153	0.17	0.157	0.153	0.164
F-statistic	4.151	4.875	6.563	5.345	4.913	6.033
Prob(F-statistic)	0.000	0.000	0.000	0.000	0.000	0.000
Observations	445	445	445	445	445	445

Notes: *** p<0.01, ** p<0.05, * p<0.1

CCDI: Change Disclosure Index, GOVOWN: government ownership, INSTOWN: institutional ownership, FOROWN: foreign ownership, BLKOWN: blockholder ownership, DOMOWN: domestic ownership, SIZE: company size, ROA: return on assets, AGE: company age, LEV: captures financial leverage.

The research findings show the positive influence of domestic ownership on climate change disclosure, which can be explained through stakeholder theory. According to Freeman & Reed (1983) and Mitchell et al. (1997), stakeholder theory emphasizes that companies will respond to the demands of stakeholders with power, legitimacy, and

urgency. Domestic investors in the ASEAN market have unique characteristics as stakeholders embedded in the local context. Claessens et al. (2000) documented that the ownership structure in Southeast Asia is dominated by concentrated ownership, especially domestic investors. As argued by Clarkson (1995), primary stakeholders have a direct interest in the survival of the organization and influence disclosure practices. These findings are consistent with research by Chung et al. (2022), which shows that domestic shareholders have a higher demand for detailed disclosures about corporate responsibility. A study by Nagata & Nguyen (2017) also shows that domestic shareholders often require more intensive company involvement, especially regarding information disclosure. This highlights the role of domestic investors as stakeholders who use their influence to increase corporate transparency on environmental issues relevant to the local context.

Government ownership also positively influences climate change disclosure, which is consistent with stakeholder theory. In the ASEAN context, the government as a shareholder represents an influential stakeholder with a significant ability to influence corporate decisions. Pasinrangi et al. (2023) identify that government ownership remains significant in many ASEAN economies, especially in strategic natural resources and energy sectors. The government has a dual interest as an investor expecting financial returns and a regulator responsible for social welfare and environmental sustainability (Octavio & Setiawan, 2025). Consistent with stakeholder theory, these findings reinforce the research results by Sari et al. (2021) and Wicaksono & Setiawan (2022), which identify that government-owned companies in Indonesia exhibit higher levels of environmental disclosure. Similarly, Amran & Haniffa (2011) found similar results in Malaysia, where state-owned enterprises responded more to stakeholder pressure for environmental transparency. Stakeholder theory explains this phenomenon through the unique position of the government, which has not only financial interests but also broader socio-political interests (Cormier & Gordon, 2001).

In contrast to other findings, institutional ownership has a negative effect on climate change disclosure, creating a different dynamic in stakeholder theory. Ullmann (1985) explains that the economic power of stakeholders determines a company's response to their demands. Institutional investors in ASEAN, although substantial stakeholders, often have a short-term orientation and direct access to company management (Dhanda et al., 2021). This study's results align with empirical studies by Acar et al. (2021) and Aluchna et al. (2022), which found a negative relationship between institutional ownership and disclosure practices. Oikonomou et al. (2020) also found that some institutional investors, especially those focused on short-term performance, tend to be less supportive of corporate sustainability initiatives that require significant investment. This confirms the stakeholder perspective that institutional investors use their power to focus companies on short-term performance, in contrast to domestic and government ownership, which prioritizes social and environmental values.

This study also found that foreign ownership and blockholder ownership did not significantly influence climate change disclosure. This finding can be explained through stakeholder theory, where not all shareholders have the same intensity and ability to influence corporate disclosure. For foreign ownership, this result is in line with research by Zulaecha & Murtanto (2019), who identified that foreign investors in emerging markets

may face information and cultural barriers, thus reducing their ability to influence disclosure practices effectively. Dam & Scholtens (2013) also argue that foreign investors may lack an in-depth understanding of the local context, including environmental issues specific to the ASEAN region. Meanwhile, the insignificance of blockholder ownership is consistent with the findings of Wicaksono & Setiawan (2024b), which show that blockholder shareholders in ASEAN may focus more on the financial performance aspects of the company than on the environmental aspects. Through the lens of stakeholder theory, Agrawal & Knoeber (2013) explain that the interests of stockholders are often oriented towards short- and medium-term economic value, so environmental disclosure is not a priority on their oversight agenda.

The ASEAN context provides an important backdrop for the interpretation of these results. ASEAN countries have affirmed their commitment to emission reductions through the ASEAN Working Group on Climate Change (Octavio & Setiawan, 2025). Sustainability disclosure regulations have been implemented in several ASEAN markets, such as in Indonesia through POJK 51/2017, Malaysia with MCCG 2021, Singapore through SGX Listing Rules 711A/B, and Thailand with SET ESG Disclosure Framework. However, Amran et al. (2014) note that the effectiveness of implementing these regulations varies across the region. In this context, ownership structure is a key factor that complements the evolving regulatory framework.

This study conducted a series of comprehensive additional tests to analyze the difference in the level of disclosure of climate change in two different periods, namely pre-pandemic (2017-2019) and during the pandemic (2020-2021). As presented in Table 7 using multivariate regression. The COVID-19 pandemic is an unprecedented global disruption and profoundly affects companies' operations and reporting practices. According to the World Health Organization (WHO), more than 6 million people have lost their lives to the pandemic, which has created an extreme climate of economic uncertainty for businesses around the world (Kompas, 2023). Previous literature has shown the various impacts of the pandemic on corporate disclosure practices. Bahadar and Zaman (2022) found that the pandemic led to a decline in corporate voluntary disclosure as companies focused more on operational continuity and avoided the additional costs associated with broader disclosure.

In contrast to these findings, Sultana et al. (2022) argue that the increased uncertainty during the pandemic has instead encouraged companies to adopt strategic disclosure to maintain investor confidence and encourage sustainable capital investment. Our results show that companies have fundamentally reprioritized their disclosure strategies during the pandemic. They prioritize direct financial disclosures, business continuity plans, and pandemic-specific risk mitigation measures while disclosing climate change information is a secondary priority. This reprioritization occurs across firms regardless of ownership structure, which shows how severe external crises can temporarily override the influence of shareholder preferences on environmental transparency. Our findings contribute to the crisis disclosure literature by quantifying how the specific ownership effect on climate disclosure is moderated during periods of economic uncertainty.

Table 7. Additional Tests Before and After Covid-19

Variable	Model 1 (Before Covid) *Coeff.* (t-Statistic)	Model 2 (Covid) *Coeff.* (t-Statistic)
BLOKOWN	-0.018	-0.220
	(-0.105)	(-0.341)
DOMOWN	0.215	0.514
	(1.988)**	(1.334)
GOWN	0.042	0.102
	(1.983)**	(0.082)
FOWN	-0.015	0.052
	(-0.794)	(0.986)
INSOWN	-0.150	-0.253
	(-1.146)	(-0.559)
ROA	-0.001	-0.001
	(-0.653)	(-0.799)
LEV	0.000	0.000
	(1.166)	(1.422)
AGE	0.001	0.008
	(0.697)	(1.004)
SIZE	0.031	0.180
	(1.695)	(2.391)
R-squared	0.049	0.054

Notes: *** p<0.01, ** p<0.05, * p<0.1

CCDI: Change Disclosure Index, GOVOWN: government ownership, INSTOWN: institutional ownership, FOROWN: foreign ownership, BLKOWN: blockholder ownership, DOMOWN: domestic ownership, SIZE: company size, ROA: return on assets, AGE: company age, LEV: captures financial leverage.

5. Conclusion, Implications, and Limitations

Climate change, as a consequence of environmental degradation, has intensified stakeholder concerns regarding corporate sustainability. These concerns have led to heightened demands for companies to adopt environmentally responsible practices and enhance climate change disclosures. Such disclosures are crucial for ensuring that companies implement adequate mitigation strategies and planning to address climate change effectively. In response to these growing expectations, this study aims to analyze the factors influencing the level of climate change disclosure, with a particular focus on companies in the energy industry an industry highly sensitive to climate change issues. The findings reveal that domestic ownership positively impacts climate change disclosure. Domestic shareholders are generally more actively involved in monitoring corporate activities, a level of engagement influenced by their geographical proximity to the company. This proximity enables domestic shareholders to observe corporate actions more closely and demand detailed information, including corporate responsibility disclosures, to gain a comprehensive understanding of corporate behavior and practices.

Another finding of this study reveals that government ownership has a positive effect on climate change disclosure. This indicates that when the government holds shares in a company, it can exert control over corporate activities to ensure more responsible actions

that safeguard societal well-being. Additionally, institutional ownership was found to have a negative effect on climate change disclosure when tested separately with control variables. High levels of institutional ownership grant easier access to company information, which reduces the demand for climate change disclosure. Furthermore, the results indicate that blockholder ownership, foreign ownership, and institutional ownership do not have a significant impact on the level of climate change disclosure. This study also conducted additional analysis by separating the pre-Covid-19 period (2017–2019) from the Covid-19 period (2020–2021). The findings suggest that the COVID-19 pandemic significantly influenced corporate disclosure dynamics. The pandemic created high levels of uncertainty regarding corporate sustainability, prompting companies to increase their disclosures. However, as shown in Table 7, these disclosures did not directly affect climate change disclosure but were instead focused on financial risk disclosures.

This study makes several important contributions to existing literature. First, from a theoretical perspective, this study enriches stakeholder theory by empirically demonstrating how different ownership structures (foreign ownership, stockholders, government ownership, and domestic ownership) play a key role in climate change disclosure in the energy sector. These findings expand the theoretical conceptualization of how stakeholders apply their institutional pressure on companies. Second, this study provides a new context by investigating climate change disclosure practices in developing Southeast Asian countries, which differ significantly from the more researched Western context. This allows for a more nuanced understanding of how regional institutional factors influence the relationship between ownership structure and climate change disclosure. Third, this study presents a comprehensive analysis of the interaction effects of various types of ownership, revealing how the combination of foreign, domestic, government, and blockholder ownership influences the level of climate change disclosure in the energy sector. Fourth, this study has substantial practical implications for various stakeholders, such as regulators in designing more effective disclosure policies by considering the ownership structure of companies, investors in assessing the climate risk of companies based on their ownership profiles, and managers of energy companies in adopting disclosure strategies that meet the expectations of various categories of shareholders.

Despite its contributions, this study has certain limitations. First, the data were collected manually from sustainability and annual reports, leading to instances where reports from some companies were unavailable. Second, language barriers in certain countries posed challenges during data collection. For future research, it is recommended to expand the scope of analysis by incorporating various types of stakeholders that may influence climate change disclosure practices. Such an approach would offer a more comprehensive understanding, not only of the impact of shareholder ownership but also of the roles played by other stakeholders in shaping corporate transparency on climate change.

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