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The Moderating Effect of Firm Size on the Relationship Between Environmental, Social, and Governance Factors and Firm Value: Evidence from Asia

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ABSTRACT

This study investigates the influence of environmental, social, and governance (ESG) factors on firm value, focusing on companies in Asia from 2019 to 2022. Using a quantitative approach with a sample of 919 companies (resulting in 3,676 observations), this study employs moderated regression analysis (MRA) to examine the relationships. The findings reveal a significant impact of ESG factors on firm value, highlighting their relevance in the contemporary business landscape. Moreover, this study identifies a crucial yet underexplored aspect: the moderating role of firm size in the relationship between ESG factors and firm value, particularly within the Asian context. The results suggest that while ESG factors are universally influential, their effects may vary depending on firm size. These findings contribute to a deeper understanding of corporate sustainability practices and align with key theoretical perspectives, including signaling theory, stakeholder theory, and legitimacy theory. The study underscores the importance of transparent communication and ESG disclosure in enhancing firm value.

Keywords:
Environmental, social, and governance (ESG), disclosure, firm size, firm value

Efek Moderasi Ukuran Perusahaan terhadap Hubungan antara Faktor Lingkungan, Sosial, dan Tata Kelola dengan Nilai Perusahaan: Bukti Empiris dari Asia

ABSTRAK

Penelitian ini bertujuan untuk menentukan pengaruh faktor lingkungan, sosial, dan tata kelola (ESG) terhadap nilai perusahaan, khususnya dalam konteks perusahaan di Asia dari tahun 2019 hingga 2022. Melalui analisis kuantitatif terhadap sampel 919 perusahaan di Asia (3.676 observasi), penelitian ini menggunakan analisis regresi termoderasi (Moderated regression analysis/ MRA). Hasil penelitian menunjukkan dampak substansial faktor ESG terhadap nilai perusahaan, yang menggarisbawahi relevansinya dalam lingkup bisnis kontemporer. Lebih jauh, penelitian ini mengungkap efek moderasi ukuran perusahaan pada pengaruh antara ESG dan nilai perusahaan. Penelitian ini juga menunjukkan bahwa meskipun faktor ESG berpengaruh secara universal, dampaknya dapat bervariasi berdasarkan ukuran perusahaan. Hasil penelitian ini berkontribusi terhadap pemahaman tentang praktik keberlanjutan perusahaan, selaras dengan teori signaling, teori pemangku kepentingan, dan teori legitimasi. Penelitian ini juga menekankan pentingnya komunikasi yang transparan dan pengungkapan informasi ESG oleh perusahaan.

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1. Introduction

One of a company's primary purposes is to maximize shareholder value (Brigham & Daves, 2019; Damodaran, 2015). The maximization of the welfare of company owners can be reflected in rising stock prices and boosting the growth of the company's assets. The share price reflects whether a company's value is undervalued or overvalued. The price of shares owned is valued in the shareholder section according to the market price.

Overall, the world economy is in flux and may be experiencing a slowdown. This is due to the geopolitical conflict between Russia and Ukraine in 2022, which has caused a worsening energy crisis since mid-2021 and shook the world economic recovery that is still recovering from the Covid-19 pandemic. In addition, high inflation has caused the Gross Domestic Product (GDP) of some developed countries, such as the UK and the US to decline dramatically. Developing countries that depend on the import of energy commodities also experience the same thing. This inevitably impacts the capital markets of several countries. A decline in the market capitalization of indices in some countries indicates that the total value of shares listed on the exchange decreased compared to the previous year. This leads to a decline in the value of shares.

The rise in stock prices indicates that shareholders' wealth will increase as the value of the stock rises, which affects investors' confidence in investing in company stocks. However, according to data from the Indonesia Financial Services Authority (2022), stock indices on some significant exchanges have fluctuated, mainly in 2020 and 2021. Indices for some exchanges have declined, such as the SETI (-4.6%), KOSPI (-7.81%), HIS (-24.89%), Nikkei 225 (-15.89%), Dow Jones (-22.40%), FTSE (-8.78%), and SHComp (-7.17%). Therefore, if this is left, the price of the stock will decrease, which is detrimental to investors or companies. This would have an impact on a company's decline in value. The company's value is measured using Tobin's Q; a good value is > 1, which indicates that the asset is valued higher because the stock market value is more significant than its intricate value.

Recent studies, based on Rodríguez-Fernández et al. (2019), show that developed countries are more likely to have a Tobin’s Q value of more than one (Q > 1). Research conducted by Haron et al. (2021) and Rahman et al. (2021) showed that the firm value projected by Tobin's Q in developing countries has an average above (Salehi et al., 2017) and an average Tobin's Q of less than 1 (Cristea et al., 2022).

ESG is rapidly becoming the focus of attention after the United Nations targets the 17 Sustainable Development Goals (SDGs) by 2030. Referring to the signaling theory and the theory of stakeholders, the higher the ESG disclosure in a company, the better the signal because the disclosure of ESG shows that the company cares not only about the company but also about each stakeholder so that investors will choose ESG-based investment. ESG-based investment is an activity that not only considers the financial aspects of making investment decisions but also considers ESG as a non-financial factor. This factor considers a company's risks, sustainability, and growth potential. ESG has become the most widely used sustainability standard measure for demand accountability. The better a company reports its ESG, the more investors will be attracted to the company. Henisz et al. (2019) revealed a clear link between a company's financial goals and its reputation in ESG, which meets the community's needs and exceeds the requirements of regulations and industry norms.

Research on OECD countries shows that ESG positively influences the value of companies throughout the PBV model and Tobin's Q (Aras & Kazak, 2022). In Europe, the US, and Asia, ESG positively influences firm value (Ionescu et al. 2019). Previous research has shown that ESG positively affects firm value among others in (Abdi et al., 2022; Alareeni & Hamdan, 2020). Derrien et al. (2022), Buallay (2019), and Duque-Grisales & Aguilera-Caracuel (2021) produced different research results that show a negative relationship between ESG and company value. This negative direction is due to the costs associated with this implementation not being done correctly, or because there is insufficient institutional support to make it more visible, thus not ensuring the consent of stakeholders. Some researchers have found no particular relationship between ESG and firm value, because the costs involved in this activity are paid for by its benefits (Lahouel, 2019). Other research results document contradictory results or mixed findings that ESG/CSR activities can add value to a company only under certain conditions (Buchanan et al., 2018). Junius et al. (2020) show that ESG does not affect a company's value.

Based on previous studies that show inconsistent results, there is still a need to discuss the moderating effect of firm size. This study attempts to reexamine corporations in Asia. This is done given the importance of implementing enterprise ESG, which is one of the keys to the company's success in growing and succeeding in the long term, while being able to compete with other companies, so it will attract investors to invest. A company that reveals this ESG will be a matter of consideration for investors when making investment decisions. The global value of ESG investments has steadily increased over the past eight years. This ESG investment not only pursues profit but also looks at the benefit of the enterprise to the environment, community, and government so that it can increase firm value.

When discussing the direct relationship between the social and financial dimensions, various organizational attributes may moderate this relationship. Therefore, it is important to investigate this issue further. Roberts (1992) discussed how size and age serve as firm-level characteristics that can influence a firm's contribution to sustainability activities. This will help us to better understand the ESG-FP relationship. Although the significant effects of these two variables were recently tested and confirmed by D'Amato and Falivena (2020) for a sample of firms in Western Europe, to the best of our knowledge, no specific research has been conducted in Asia. Therefore, this study provides evidence of the moderating effect of firm size in the context of Asian firms.

Based on previous research results that are still inconsistent, few studies discuss the moderating effect of company size. Therefore, the authors conducted a review of the moderation of company size in companies in the Asian region. This is based on the opinion that we develop a theory of the two-stage CSP-CFP relationship, in which the size effect is considered an appropriate moderator (Abdi et al., 2022). This is done considering the importance of the implementation of ESG in the company, which is one of the keys to the success of the company to grow and succeed in the long term while being able to compete with other companies, which attracts investors to invest. Companies that disclose ESG will be a consideration for investors when making investment decisions. The global value of ESG investment has continued to increase over the past eight years. ESG investment involves not only pursuing profits but also looking at the benefits of business for the environment, society, and government so that it can increase the value of the company. Companies in Spain say that MSMEs that undertake economic, social, and environmental or CSR actions improve their economic performance, and that this relationship is governed by organizational size; larger organizations have a stronger relationship (Juan et al., 2019).

The size of the company can be seen in total assets, sales, and market capitalization. Large companies have more resources at their disposal, which improves their operations. Thus, with more resources, they will be able to invest more in ESG (D’Amato & Falivena, 2020). The larger the size of a company, the more it shows its growth, which will attract investors to invest. High investor confidence ultimately increases the value of a company (Hashmi et al., 2020). The larger the company, the greater the resources so that it will affect the policies set related to ESG, as well as wider, so that it will increase investor confidence, which has an impact on increasing company value. Some researchers such as Consuelo et al. (2019), Dang et al. (2019) and Cheng (2008) argue that larger companies have a higher firm value. Therefore, this study examines whether company size affects the effect of ESG on firm value. However, in contrast to Román (2014), small companies have more productive resources based on their capacity to generate more revenue per unit of resources compared to large companies.

This research is novel in that it explains the moderating effect of company size on the influence of ESG on firm value, where this research was conducted in several Asian countries that have different characteristics. The Asian region is a developing country that is experiencing rapid development and growth. This will provide insight into how ESG affects firm value under company conditions with many different characteristics. This research contributes to companies and governments in their decision-making.

This study has two objectives. The first objective of this study was to examine how ESG activities affect firm value. Second, we explain how size moderation affects the effect of ESG on firm value. Therefore, this study can help executives better allocate available corporate resources to corporate sustainability activities through more effective and efficient ESG application and implementation. The paper is organized as follows: Section 2 sets out the theoretical framework and literature review. Section 3 discusses the research design and methodology. Sector 5 exhibits the research results, their interpretation and discussions. Finally, conclusions, research limitations and suggestion for future research are presented in Section 6.

2. Theoretical framework and hypotheses development

2.1 Theoretical Framework

Signal theory, posits that the sender, typically the owner of the information, communicates signals or cues in the form of data indicating the company's condition, particularly its profitability, to potential investors. Brigham & Houston (2018) further elaborate on this theory, stating that it elucidates how management perceives a company's future growth trajectory, which significantly influences investor reactions. These signals are indicative of the management's endeavors to align with the owner's objectives. Investors and business professionals cannot overstate the importance of this information when making investment decisions. Signaling theory, as emphasized by Seifert et al. (2004), focuses on reducing the information asymmetry between a company's internal operations and external perceptions. Market participants who receive these signals engage in interpretation and analysis to discern their implications.

Signaling theory underscores the role of information transmission in shaping investors' perceptions and decisions. This highlights the significance of the signals provided by company management in influencing market behavior and reducing uncertainty. By conveying information about a company's condition and future prospects, these signals serve as a mechanism for aligning the interests of owners and investors. The effectiveness of signaling theory lies in its ability to mitigate information asymmetry, thereby facilitating informed decision-making among market participants. By providing insights into a company's performance and prospects, these signals enable investors to gauge the risks and returns associated with their investment decisions. Moreover, signal theory emphasizes the role of signaling efforts by management in conveying credible information to the market. Through transparent communication and disclosure practices, companies can enhance their credibility and reputation, thereby fostering investor confidence and trust.

The concept of environmental social and governance (ESG) has gained traction, often synonymous with stakeholder theory, which encompasses policies and practices aimed at addressing the interests of various stakeholders. The stakeholder theory posits that value is inherently embedded in business activities, underscoring the interconnectedness between business success and stakeholder well-being, as articulated by Freeman (2004). By contrast, Friedman (1970)contends that companies primarily focus on profit maximization, relegating broader societal concerns to governmental intervention.

Stakeholder theory posits that businesses are responsible not only to their shareholders but also to a broader range of stakeholders, including employees, customers, suppliers, and the community. By recognizing the interconnectedness of these stakeholders and the impact of business decisions on their well-being, stakeholder theory advocates for a more inclusive approach to corporate governance. The rise of stakeholder theory reflects growing recognition of the multifaceted role that businesses play in society. Beyond profit generation, companies are expected to contribute positively to social and environmental outcomes, reflecting a broader shift towards sustainable and responsible business practices. The stakeholder theory emphasizes the importance of stakeholder engagement and dialogue in decision-making processes. By actively involving stakeholders in corporate governance, businesses can better understand their needs and priorities, leading to more informed and socially responsible decision making. Stakeholder theory highlights the potential benefits of aligning business interests with broader societal goals. By addressing stakeholders' concerns and contributing to social and environmental progress, companies can enhance their long-term viability and reputation, thereby fostering trust and goodwill among stakeholders. The stakeholder theory presents a fundamental shift in how businesses perceive their roles in society. It posits that companies are not merely profit-maximizing entities, but rather entities with a broader responsibility to serve the interests of all stakeholders involved in their operations. This concept suggests that businesses must prioritize the well-being of stakeholders beyond that of shareholders, including employees, customers, suppliers, local communities, and society at large.

Central to the stakeholder theory is the idea that stakeholders wield varying degrees of power to influence or control a company's actions and decisions. This power dynamic is often tied to the stakeholders' level of control over the economic resources utilized by the company. The power dynamics within stakeholder relationships are complex and multifaceted. Stakeholder power may be influenced by factors such as legal rights, financial leverage, access to information, social influence, and the importance of stakeholders' contribution to the company's operations. Understanding and managing stakeholder power is essential for companies seeking to build sustainable and mutually beneficial relationships with stakeholders. By recognizing the interests and concerns of stakeholders and actively engaging with them in decision-making processes, companies can foster trust, loyalty, and cooperation, ultimately enhancing their long-term success and reputation.

The results of Damayanti et al. (2024) clearly show that companies that implement ESG practices have a competitive advantage in formulating investment decisions, which is in line with our expectations and stakeholder theory that companies with high ESG performance tend to experience increased stakeholder alignment and reduced information asymmetry, which encourages good investment policies. Research conducted over the past 10 years shows that Environmental, Social and Governance factors have a positive effect on firm value. Several studies related to ESG and firm value show that ESG has a positive effect on firm value (Abdi et al., 2022; Aouadi & Marsat, 2018; Fatemi et al., 2018; Feng & Wu, 2023; Jamali et al., 2020; Wong et al., 2021; Zhang & Jung, 2020).

However, the negative relationship between ESG, financial performance, and firm value has been extensively studied. Other empirical results show a negative relationship between ESG-FP and value (Buallay, 2019; Duque-Grisales & Aguilera-Caracuel, J., 202). et al., 2019). This negative direction is due to the costs associated with this implementation not being done in the right way, or because there is not enough institutional support to make it more visible, thus not ensuring buy-in from stakeholders.

Some researchers also found no specific relationship between ESG-FP and value because the costs involved in these activities are paid for by the benefits (Lahouel, 2019). Other studies document contradictory results or mixed findings that ESG/CSR activities can add value to a company, but only under certain conditions (Buchanan et al., 2018; Servaes & Tamayo, 2013). And the results of research by Junius et al. (2020) show that ESG has no effect on firm value.

Although ESG practices can positively contribute to overall firm valuation, the magnitude of this impact may vary depending on the size and scale of the firm. The moderating role of firm size highlights the importance of considering contextual factors when assessing the relationship between ESG performance and firm value. Firm size is a significant determinant of investor performance and attractiveness. Larger companies are better equipped to implement ESG initiatives, strengthening the positive relationship between ESG and firm value. Total assets, sales, and market capitalization are some ways to measure company size. Large companies can increase their operations using more resources. They will be able to make greater investments in ESG with more resources (D'Amato & Falivena, 2020). Larger companies will show more growth and provide confidence to investors, attracting investors to invest to increase the value of the company (Hashmi et al., 2020). Larger companies have greater resources that impact the policies set regarding ESG more widely and increase investor confidence which ultimately increases the value of the company. According to some researchers, larger companies have greater value (Cheng, 2008; Consuelo et al., 2019; Dang et al., 2019). Therefore, this study discusses how the effect of ESG on firm value is influenced by firm size.

2.2 Hypotheses Development

Environmental, Social, and Governance (ESG) Effects on Firm Value

The signaling theory suggests that companies provide information to stakeholders as signals, aiming for positive responses. This information includes not only financial data but also non-financial information, such as Environmental, Social, and Governance (ESG) disclosures. ESG represents a strategic approach that not only generates profits but also demonstrates corporate responsibility towards stakeholders, encompassing concerns for the environment, society, and governance (Paris et al., 2021).

By engaging in ESG practices, companies address the legitimacy gap and garner support from the community, which is crucial for their long-term survival. This aligns with both stakeholder theory and legitimacy theory, which emphasize the importance of maintaining positive relationships with stakeholders and ensuring the perceived legitimacy of the organization's actions. ESG disclosure serves as a mechanism for increasing stakeholder confidence, including that of investors. When companies are transparent about their ESG practices, investors are more inclined to invest, leading to an increase in company value. Several previous studies, including those by Aras & Kazak (2022), Abdi et al. (2022), Qureshi & Siddiqui (2021), and Yip & Lee (2018), have demonstrated the impact of ESG on firm value, providing empirical evidence for this relationship. Igbinovia & Agbadua (2023) show that, ESG disclosure lowers agency costs, increases data transparency, and lowers the risk of bankruptcy, effective responsible practices yield clear benefits that outweigh the underlying costs. it increases the value of the company.Igbinovia & Agbadua (2023) show that, ESG disclosure lowers agency costs, increases data transparency, and lowers the risk of bankruptcy, effective responsible practices yield clear benefits that outweigh the underlying costs. so that it will increase the value of the company. Therefore, based on the described relationship between ESG practices and firm value, the hypothesis can be formulated as follows:

H1: ESG has an influence on firm value.

Firm Size moderates the Influence of ESG on Firm Value

A firm's size, often measured by metrics such as total assets, sales, and market capitalisation, is an indication of its resources and capacity to perform. Larger companies typically have greater resources, which allows them to operate more effectively and achieve higher levels of performance. This size factor is often perceived positively by investors, as it indicates growth and stability in the company's operations. Indeed, a company's size serves as a signal of its growth trajectory and profit potential, making it an attractive investment opportunity for shareholders. The larger scale and scope of a company's operations imply a certain degree of resilience and competitiveness in the market, which resonates positively with investors seeking stable returns. Therefore, firm size has a moderating effect on the relationship between RC and several performance-related variables (Corvino et al. 2019). Moreover, in the air transport industry, firm size serves as a relevant moderator for the relationship between sustainability disclosure and firm value, as well as financial performance Abdi et al. (2022). Therefore, we suggest that management's strategy for participating in this initiative be tailored to the company's total assets as a representation of its size. Moreover, D'Amato & Falivena (2020) suggest that larger companies are better positioned to implement Environmental, Social, and Governance (ESG) initiatives than smaller firms. Greater financial and organizational resources available to larger corporations facilitate the adoption and integration of ESG practices into their business operations. Consequently, a company's size serves as a positive signal for investors, strengthening the perceived impact of ESG on the company's overall value.

H2: Firm size moderates ESG's influence on firm value.

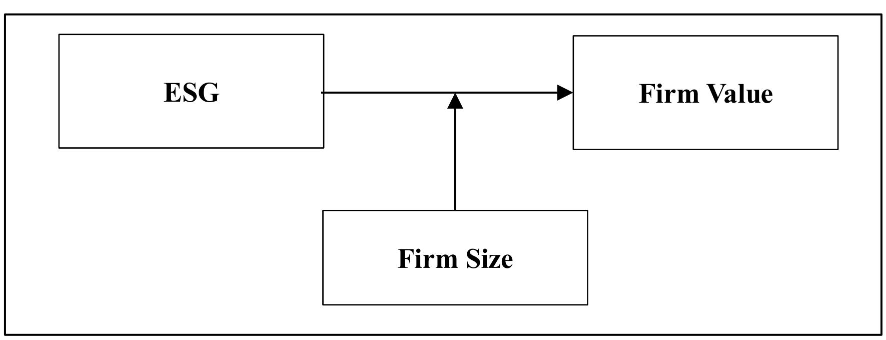

Figure 1. Conceptual Framework

3. Research method

This study undertook a comprehensive examination of 919 companies spanning various industries and sectors operating within the dynamic economic landscapes of 20 Asian nations. The selection of this diverse sample size was driven by the aim of capturing a broad spectrum of organizational characteristics and geographical contexts, ensuring a representative portrayal of the Asian business environment. To facilitate data collection, a documentation technique was employed, which is well known for its reliability and efficiency in compiling extensive datasets. Leveraging this approach, the research team meticulously gathered information from the years 2019 to 2022, harnessing the wealth of financial and operational data available through the reputable platform, https://www.refinitiv.com. The resulting dataset comprised 3,676 observations, encompassing a wealth of information pertaining to companies' environmental, social, and governance (ESG) performance, financial metrics, and organizational attributes. Table 1 serves as a cornerstone of the research endeavor, presenting a comprehensive synthesis of all variables scrutinized throughout the study.

A quantitative approach was adopted in terms of methodology, aligned with the objectives of the study and the nature of the variables under examination. Analysis of the amassed data was conducted using moderated regression analysis (MRA), a widely recognized statistical technique for exploring the relationships between variables. Process V4.2 model 1 was used to rigorously test the hypotheses delineated within the paradigm framework. Descriptive analysis was used to analyze the data used for each research variable. The descriptive analysis in this study analyzes data by describing them without making general conclusions or generalizing. Then, from the collected data, both independent and dependent variables were analyzed. This was done by calculating the average, minimum, and maximum values, standard deviation, and creating graphs.

The key variables scheduled to be examined were at the center of the research framework. Environmental, Social and Governance (ESG) factors are the focal points, which are the dependent variables. The ESG Indicator Score provides a comprehensive metric for assessing companies' performance in this domain, reflecting their commitment to sustainability and responsible business practices. This is as done by Abdi et al. (2022) and Qureshi & Siddiqui (2021). Furthermore, firm value appears as an independent variable, with Tobin's Q indicator as a proxy. Tobin's Q, which is calculated as the ratio of market capital plus liabilities to total assets, offers valuable insights into market valuation and the financial health of the firm. This is as done by Yeon (2016) and Fernández-Temprano & Tejerina-Gaite (2020). In addition, firm size, measured by the logarithm of total assets (LnAssets), is considered significant as a covariate, which affects the dynamics between ESG factors and firm value (Buallay, 2019; Corvino et al., 2019).

Table 1. Number of Sample

No	Country of Exchange	Number Of Company
1	China	274
2	Hong Kong	98
3	India	101

No	Country of Exchange	Number Of Company
4	Indonesia	15
5	Israel	5
6	Japan	195
7	Jordan	1
8	Korea; Republic (S. Korea)	40
9	Kuwait	4
10	Malaysia	21
11	Oman	1
12	Philippines	12
13	Qatar	6
14	Saudi Arabia	11
15	Singapore	13
16	Taiwan	69
17	Thailand	24
18	Turkey	18
19	United Arab Emirates	10
20	Vietnam	1
Total		**919**

By elucidating the relationships between these variables, the study endeavours to uncover the nuanced interplay between ESG performance, firm value, and organizational characteristics. Through rigorous analysis and interpretation, the research aims to contribute to the existing body of knowledge surrounding sustainable finance and corporate governance in the Asian context.

Table 2. Variable Indicators

Variable	**Measurement**
ESG	ESG Score based on Refinitiv (https://eikon.refinitiv.com/)
Firm Size	Natural Logarithm of Total Assets
Firm Value	Tobin Q = (Market Capitalisation + Total Debt) / Total Assets

The moderated regression model equation based on Hayes (2022) is as follows:

$$\hat{Y} = i_Y + b_1X + b_2W + b_3XW + e_Y$$

$$Tobin\ Q = i_Y + b_1ESG + b_2FS + b_3ESG * FS$$

4. Results and discussion

The study delves into the complex interplay among environmental, social, and governance (ESG) factors, firm size, and company value across Asian nations during the period spanning 2019 to 2022. Employing both descriptive analysis and quantitative methodologies, it uncovers significant insights into how these variables influence corporate performance and shape investor sentiments. By scrutinizing this nexus, the research sheds light on the evolving landscape of sustainable business practices and the shifting dynamics within the investment realm. Such findings not only enrich our understanding of the interconnectedness of ESG criteria and financial outcomes but also provide valuable guidance for businesses and investors navigating the increasingly nuanced terrain of responsible investment and corporate governance in Asia. Table 3 provides a descriptive overview of the study.

Table 3. Descriptive statistics results

	Minimum	**Maximum**	**Mean**	**Std. Deviation**
Firm Value	**0.38**	**25.18**	**2.07**	**2.19**
ESG	8.15	94.29	56.11	17.98
Firm Size	19.12	29.38	23.39	1.70

In Table 3, the outcomes of descriptive computations are detailed, providing insights into the state of firms across Asia. The average firm value, as represented by a Tobin Q metric of 2.07, suggests a tendency toward overvaluation, where market valuations exceed book values. Such overvaluation often triggers emulation among other firms and could serve as an impetus for the adoption of Environmental, Social, and Governance (ESG) practices, given their potential to enhance market appeal and justify higher valuations. Conversely, firms with a minimum Tobin's Q of 0.38 are classified as undervalued, indicating that their book value surpasses market worth. This designation positions them as affordable investment opportunities, potentially attracting the interest of prospective shareholders seeking value investments. These findings underscore the importance of considering not only financial metrics but also ESG factors when evaluating investment opportunities, highlighting the evolving landscape of sustainable investment practices in the Asian market.

In terms of ESG scores, the average is 56.11%, reflecting a moderate level of ESG implementation among the surveyed companies. This indicates varied but overall positive engagement with ESG initiatives across the board. The range spans from a minimum score of 8.15%, indicating minimal ESG integration, to a maximum of 94.29%, showing comprehensive ESG integration efforts by some companies. Additionally, the average firm size, represented by Ln 23.39, signifies a logarithmic transformation applied to firm size with a standard deviation smaller than the mean. This suggests a relatively uniform distribution of firm size within the dataset, indicating a lack of significant outliers that may skew the data. This uniformity implies a stable and balanced representation of firms across different size categories, contributing to the reliability of the dataset's findings regarding the relationship between firm size and other variables, such as ESG implementation and market valuation.

In summary, the descriptive analysis underscores the prevalent trend of overvaluation in Asian companies, along with the diverse levels of ESG implementation and consistent distribution of firm size within the dataset. Such insights offer valuable guidance for investors and policymakers, enabling informed strategic decision-making. Understanding the landscape of overvaluation can aid investors in assessing risk and potential returns more accurately, whereas insights into ESG implementation levels can inform investment decisions aligned with sustainability goals. Moreover, recognizing the uniform distribution of firm size enhances the reliability of the analysis, facilitating more robust policymaking. Considering these findings, stakeholders can navigate the Asian market with greater awareness and optimize investment strategies and policy interventions to promote sustainable growth and responsible corporate practices.

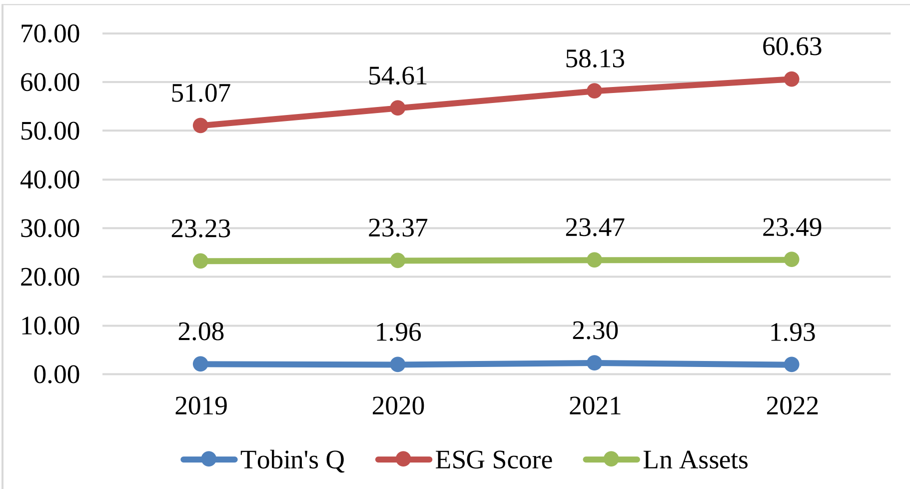

Figure 2. The Average of Firm Value, ESG, and Firm Size in Asia 2019-2022

The dynamics of firm value, environmental, social, and governance (ESG) metrics, and firm size across Asian nations from 2019 to 2022, exhibit fluctuating trends, as depicted in Figure 2. Notably, during this period, there was negligible growth in ESG scores and total assets, with the latter experiencing a mere 0.01 increment. Conversely, firm value, as indicated by Tobin's Q metric, decrease by 0.07. This suggests a nuanced landscape in which certain aspects remain relatively stagnant, while others experience slight declines.

From Table 1, it becomes apparent that the average firm value observed in Asian countries consistently exceeds 1. This finding resonates with the conclusions drawn by Rahman et al. (2021) which highlight that firm valuation in developing nations tends to surpass those of more developed counterparts, as illustrated in Figure 2.

These findings underscore the complexity of the economic landscape in Asian countries, where firm valuations exhibit resilience despite marginal fluctuations in key indicators like ESG scores and total assets. Such insights are crucial for policymakers, investors, and analysts alike, as they navigate the intricate dynamics of the regional economy. Understanding these trends can aid in formulating informed strategies to foster sustainable growth and investment opportunities, while addressing environmental and social concerns.

Table 4. Descriptive Analysis of Countries

No	Country of Exchange	Firm Value	ESG Score	Firm Size
1	China	2.48	43.48	23.27
2	Hong Kong	1.61	56.85	23.69
3	India	3.44	56.13	22.61
4	Indonesia	2.48	65.04	23.10
5	Israel	1.02	69.75	25.10
6	Japan	1.50	63.07	23.69
7	Jordan	0.86	62.91	24.79
8	Korea	1.36	69.65	23.84
9	Kuwait	1.13	58.79	23.42
10	Malaysia	2.03	64.39	23.23
11	Oman	0.93	53.15	24.22
12	Philippines	1.40	59.22	23.41
13	Qatar	1.18	48.78	24.03
14	Saudi Arabia	1.81	50.56	24.18
15	Singapore	1.25	61.31	23.89
16	Taiwan	1.78	64.81	23.12
17	Thailand	2.18	63.47	23.24
18	Turkey	1.29	75.22	23.32
19	United Arab Emirates	1.19	51.26	24.19
20	Vietnam	3.86	64.53	21.46

Table 4 reveals intriguing insights into ESG implementation, firm size, and firm value across 20 countries. Remarkably, Turkey has the highest average ESG implementation score of 75.22%, indicating strong adherence to governance, social, and environmental responsibilities bolstered by governmental support. Israel, on the other hand, has the largest average company size, reflecting substantial total assets among Israeli businesses. These data show that all Asian countries have implemented ESG above 50%, indicating that ESG implementation is good. In fact, the graph shows the growth in ESG implementation, which reflects the company's concern not only for its own interests but also for the interests of its stakeholders.

Notably, Vietnam's highest-ranking typical business exhibited a Tobin's Q value of 3.86, suggesting a significant investor valuation of the company's worth. This indicates that Vietnamese investors assign a premium to companies that value them higher than their book value. Such findings underscore the diverse economic landscapes and investor sentiments prevailing across these nations, shedding light on the varying levels of ESG integration, firm size, and investor perceptions of firm value. Understanding these nuances can inform strategic decision-making for businesses, investors, and policymakers seeking to navigate and capitalize on opportunities within these markets.

Table 5. F-statistic result

R	R-sq	MAP	F	p
0.4820	0.2323	3.6934	370.2753	0.0000

The results of the data analysis in Table 5 show that the statistical probability of F is 0.0000, which is less than 0.05, indicating that the alternative hypothesis is accepted. Environmental, social, and governance (ESG) significantly influence firm value. This is in line with signaling theory, where the information provided by the company (i.e., ESG disclosures) will be positively or negatively received by investors. This is because, with disclosure, ESG provides information that the company cares about its organization as well as stakeholders such as shareholders, investors, and the public. These results also support the theory of stakeholders and their legitimacy. If people believe in a company, they will be able to survive the sustainability of their business. The results of this study align with those of Aras and Kazak (2022) in OECD countries and Salzmann et al. (2005) in Europe, the US, and Asia, who point out that ESG influences firm value.

The findings also show that firm size significantly negatively influences firm value. This means that the larger the company size is, the lower the company value will be. The value of a company is negatively impacted by its size, and this effect can also be attributed to investors' belief that larger companies typically set higher retained earnings than dividends paid to shareholders. Investor view that the significant assets owned by the company are not necessarily used optimally by the company because many of them could be more productive. Moreover, in this study, firm size increased by only 1% in the Asian region. Overall, although companies may experience a small increase in size, insignificant growth is often insufficient to cause a large change in company value. Additional factors and conditions also play an important role in company valuation. The findings of this study are consistent with those of studies conducted by Ciftci et al. (2019), Uddin et al. (2021), Anas et al. (2022), and Aqabna et al. (2023) which found a significant inverse relationship between a company's size and value.

Table 6. Regression analysis

	Coeff	SE	t	p
Constant	19.9910	1.4611	13.6826	0.0000
ESG	-0.0589	0.0252	-2.3421	0.0192
Ln Size	-0.7730	0.0637	-12.1426	0.0000
ESG x Ln Size	0.0026	0.0011	2.4183	0.0156

Table 6 serves as an important tool for understanding how company size can moderate the impact of environmental, social, and governance (ESG) factors on company value. Specifically, the probability of interaction between ESG and firm value is 0.0156, which is smaller than the conventional threshold of 0.05. This shows that company size moderates the influence of ESG on company value, this finding is in line with previous research conducted by Hirdinis (2019), Corvino et al. (2019), and D'Amato & Falivena (2020).

The results of Moderated Regression Analysis (MRA) further confirm this, revealing a statistically significant probability value of 0.0156 for the interaction between company size and ESG on company value. This value is below 0.05, meaning that company size significantly moderates the influence of ESG on company value. The moderating effect is that company size strengthens the influence of ESG on company value. This means that the influence of ESG will become more effective on company value as the size of the company increases.

The bigger the company, the more complex the company's problems and activities are and the more shareholders and stakeholders there are, so the stakeholders want company accountability, which can be seen from the ESG score can provide information as expected. The better ESG is implemented by a company, the better it will have an impact on increasing company value. Interestingly, parallel studies conducted by D'Amato & Falivena (2020) support the idea that company size strengthens the relationship between ESG practices and company value. This study provides new references and insights into ESG, firm value, and firm size. The results of this study support previous research which shows that ESG as a signal to increase firm value. The company that wants to increase firm value can consider these variables. and this can also be taken into consideration for the government to strengthen ESG education. compared to previous research, this study discusses firm value in the Asian region which has different characteristics but supports the results of research in other countries.

Based on signaling theory, this study highlights how a company's non-financial disclosures, such as ESG initiatives, can impact investor and stakeholder perceptions, thereby influencing company value. This is in line with existing research findings, such as those conducted by Derrien et al. (2022) who identified a negative correlation between company value and ESG-Financial Performance (FP). Quantitatively, the adverse impact of ESG-related news on company value is caused by estimate revisions in Europe, as highlighted by (Buallay, 2019). Similarly, Duque-Grisales & Aguilera-Caracuel (2021) observed a statistically significant negative correlation between ESG and FP scores in Latin American countries, including Brazil, Chile, Colombia, Mexico, and Peru.

The diminished influence of ESG implementation on company value can result from various factors, such as the high costs linked with insufficient implementation or a dearth of institutional support to bolster visibility and garner stakeholder backing. Consequently, investors might perceive the company as less appealing, leading to a detrimental effect on its overall value. This underscores the importance of robust and comprehensive ESG strategies, supported by adequate resources and institutional frameworks, to enhance corporate attractiveness and bolster long-term value creation. By addressing these challenges and prioritizing sustainable practices, companies can better position themselves to attract investors and realize the full potential of their ESG initiatives.

Essentially, these findings underscore the complex relationship between ESG practices, company size, and company value. Understanding how these factors interact is critical for investors, policymakers, and corporate leaders as they navigate the evolving landscape of sustainable finance and corporate governance. By recognizing the nuances of these relationships, stakeholders can make informed decisions to drive sustainable value creation while addressing broader environmental and social issues. This holistic approach is critical to driving long-term business resilience and societal well-being in an increasingly interconnected world.

5. Conclusions

The research findings elucidate the detrimental impact of environmental, social, and governance (ESG) factors on company value. They underscore the significance of considering ESG performance metrics in assessing the financial health and sustainability of companies. Notably, the study reveals that company size acts as a moderating factor, attenuating the influence of ESG factors on firm value. This implies that larger corporations may possess greater resources and capabilities to address ESG concerns, thus mitigating their impact on valuation compared to smaller firms. Conducted in Asia, this research offers valuable insights into the region's unique challenges and opportunities concerning ESG integration. The findings highlight the pressing need for companies in Asia to prioritize ESG initiatives to safeguard their long-term financial performance and enhance stakeholder trust.

Looking ahead, this study sets the stage for future assessments to broaden their scope and explore alternative strategies for increasing firm value on a global scale. By expanding beyond the confines of Asia, researchers can gain a more comprehensive understanding of how different regions and industries respond to ESG considerations. This broader perspective is essential for developing robust frameworks and best practices that transcend geographical boundaries and promote sustainable value creation. Recognizing the imperative of enhancing ESG performance, companies have been poised to improve their implementation of ESG principles. By doing so, they can not only elevate their ESG scores but also positively impact their overall firm value. This strategic focus on sustainability aligns with evolving market expectations and regulatory requirements, positioning companies to thrive in an increasingly interconnected and socially conscious business landscape.

However, it is important to acknowledge the limitations inherent in this study. The research is constrained by the scope of variables used to test hypotheses and analyze the phenomenon under investigation. Furthermore, the temporal dimension of the data is restricted, encompassing only the years 2019 to 2022. Consequently, the generalizability of the findings may be limited and the dynamics between ESG factors and company value may evolve over time. To address these limitations and enrich scholarly discourse, research recommendation advocates several key initiatives. First, adding additional research years would enable a longitudinal analysis of trends and patterns in ESG performance and firm valuations. This longitudinal perspective is essential to capture the dynamic nature of ESG integration and its impact on corporate outcomes.

Moreover, the recommendation underscores the importance of separately examining the pillars of ESG: Environmental, Social, and Governance. By disaggregating these components, researchers can delve more deeply into the specific drivers and mechanisms underlying the relationship between ESG performance and firm value. This granular approach facilitates a more nuanced understanding of how the different aspects of sustainability influence corporate outcomes, thereby informing targeted interventions and policy measures. This research represents a significant step towards elucidating the complex interplay between ESG factors and company value, particularly in the Asian context. By leveraging the insights gained from this study and embracing a forward-looking perspective, stakeholders can chart a course towards sustainable value creation that transcends geographical and temporal boundaries.

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