

Geopolitical Risk and Environmental, Social, and Governance (ESG) practices of listed companies in Vietnam

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ABSTRACT

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The intensifying geopolitical risk (GPR) across major countries has raised concerns about how firms can navigate the uncertainties that arise from it. This paper is the first effort to provide evidence that companies in Vietnam engage in Environmental, Social, and Governance (ESG) practices to mitigate GPR. Utilizing a unique dataset of ESG performance of publicly listed companies on the Vietnam stock markets from 2018 to 2023, the study demonstrates that increasing levels of GPR, both globally and in eight major economies, lead to heightened ESG activities among firms. Specifically, the result shows that a one-unit increase in GPR is associated with an increase in ESG by 4,895 units. While GPR significantly influences environmental and social initiatives, governance activities show insignificant influence. Moreover, firms categorized as high-risk exhibit a more pronounced increase in ESG efforts in response to GPR compared to their low-risk counterparts, suggesting that these companies strategically use ESG to manage GPR. This study offers crucial insights for firms in Vietnam, highlighting the benefits of adopting ESG practices to safeguard against potential shocks stemming from geopolitical instability.

1. Introduction

GPR refers to the potential dangers arising from conflicts, acts of terrorism, and state tensions that disrupt the stability and peaceful interactions between nations (Caldara & Iacoviello, 2022). The significant rise in the occurrence of adverse geopolitical events, such as the US-China trade war, Brexit, the Russian-Ukrainian military conflict, and associated nuclear threats, are merely a few instances of geopolitical tensions that corporations, institutional investors, and individual savers have recently encountered, has garnered the interest of policymakers and scholars in GPR. Addressing geopolitical risk poses a significant challenge for all market participants. Every stakeholder, from multinational corporations to local businesses and investors, must navigate the complexities and uncertainties that arise from political tensions, conflicts, and global instability.

One effective mechanism for mitigating geopolitical risk is investing in ESG initiatives (Abdulla et al., 2024; Alnafrah, 2024). By prioritizing ESG practices, companies can enhance their resilience against geopolitical uncertainties and build stronger stakeholder relationships. ESG investments help firms manage risks associated with environmental and social issues and foster goodwill and trust in their communities, ultimately contributing to greater stability and long-term success.

ESG, which stands for Environmental - Social - Governance, is an illustrative aspect of sustainable development in business practices. The term was first introduced at a UN Global Compact summit titled “Who cares Win” and endorsed by the UN’s principles in 2005 (Saharti et al., 2024). ESG points out the importance for businesses to evaluate not only financial indicators like profit and revenue but also non-financial metrics related to environmental and social factors based on corporate governance standards to quantify, compare, and enhance business sustainability effectively (Zarzycka & Krasodomska, 2022). Multiple research studies indicate that businesses practicing strong ESG performance can reduce encountered risks while improving overall value (Cerqueti et al., 2021; Chairani & Siregar, 2021; Verheyden et al., 2016). Moreover, influenced by global trends and changes in awareness, investors are increasingly using ESG performance as a critical criterion in formulating their investment strategies (Cabaleiro-Cerviño & Mendi, 2024). ESG is increasingly significant for business stakeholders. The necessity to comply with ESG requirements and the pressure from stakeholders compel businesses to act promptly to sustain their position and promote sustainable development (Cornell & Shapiro, 2021).

The impact of GPR on corporate ESG is complex and intricate. Some relevant studies, such as Ha and Khanh (2020), show a positive relationship between China’s GPR and CSR. In addition, Abdulla et al. (2024) found a negative relationship between GPR and the company’s ESG performance. The progression of GPR often aligns with changes in the regulatory landscape and policy framework, which may lead to the implementation of stricter ESG standards and motivate stakeholders to improve their ESG performance. In addition, comments from investors and the market concerning GPR may lead to heightened expectations for corporate ESG performance across various societal sectors. GPR can induce price volatility in energy and raw material markets, which may increase business operational costs and potentially adversely affect ESG performance. To address the cross-cultural conflicts and diversity challenges that GPR may present, companies should adopt proactive strategies to enhance their diversity and inclusivity policy frameworks and aim for strong ESG performance.

With its geographical location in the center of the East Sea and next to China, the world’s largest developing country, Vietnam’s economy is greatly affected by global geopolitical fluctuations, given its openness in trading policy and high export and import level. This directly affects entities in Vietnam on an enterprise scale. Given Vietnam’s strategic position and economic reliance on trade, the interplay between GPR and ESG performance is particularly pertinent. Vietnam has witnessed significant shifts in the geopolitical landscape, especially with the US-China trade tensions and regional dynamics in the East Sea. These factors threaten economic stability and challenge domestic businesses striving to align with ESG standards.

While numerous studies have explored the relationship between GPR and the financial factors of enterprises globally, research on the impact of GPR on firm-level factors,

specifically in Vietnam, remains limited. Truong et al. (2024) examine the short- and long-term effects of GPR on foreign direct investment in Vietnam as a broad aggregate effect. Meanwhile, Nguyen et al. (2023) investigate the dependency structure between the GPR index and stock market returns. Given Vietnam's relatively small size within the global economy and reliance on international trade, there are valid concerns regarding how GPR may influence firm performance. Additionally, it is essential to consider whether ESG strategies could serve as a protective measure for firms facing GPR challenges. Despite the significance of this inquiry, it has yet to be addressed. This study aims to fill this gap by contributing to the understanding of the factors influencing ESG performance among Vietnamese enterprises. Specifically, this study will investigate the impact of global geopolitical risks on ESG activities, exploring the effects of GPR of major economies on ESG activities of Vietnamese companies, taking into account the interrelation between Vietnam and its counterparts. Furthermore, this study provides evidence that firms use ESG as a risk mitigation for GPR.

Understanding how GPR influences ESG performance in Vietnam is crucial for several reasons. First, as international stakeholders increasingly prioritize ESG metrics, Vietnamese enterprises must adapt to remain competitive and attractive to foreign investment. A robust ESG performance can serve as a buffer against the volatility created by geopolitical tensions, ultimately enhancing resilience and sustainability. Moreover, by examining the unique context of Vietnam, this study will fill a gap in existing literature, which has largely overlooked the specific impacts of GPR on ESG in emerging markets. Insights from this research could guide policymakers and business leaders in formulating strategies that mitigate risks and promote sustainable practices in response to the evolving geopolitical climate. By investigating this critical relationship, the article aims to contribute to a deeper understanding of how geopolitical factors shape corporate governance and sustainability efforts in Vietnam, offering valuable lessons for other nations facing similar challenges. This study underscores the urgency for Vietnamese enterprises to prioritize ESG frameworks, ensuring they can navigate the complexities of GPR while fostering long-term sustainable development.

The remaining sections of this paper unfold as follows: Section 2 develops testable hypotheses; Section 3 presents the sample and empirical model; Section 4 discusses the results; and Section 5 concludes the study.

2. Testable hypothesis

2.1. Geopolitical risk and its impacts on businesses

Geopolitical risk arises from the interplay between geographical factors and political actions, including conflicts, changes in government, trade disputes, and international relations. Geopolitical risk can manifest in various forms, such as military conflicts, economic sanctions, regulatory changes, and social unrest.

Geopolitical risk could come from several sources (Caldara & Iacoviello, 2022). Political instability due to changes in government, civil unrest, or authoritarian regimes can create an unpredictable environment for businesses. Political upheavals can lead to abrupt changes in laws and regulations, impacting operations and profitability. The second source of geopolitical risk could be international relations, where tensions between countries, such as trade wars or diplomatic disputes, can disrupt supply chains and market access. For example, sanctions imposed by one country on another can limit a company's ability to operate in

affected markets. The third source could come from territorial conflicts with wars and territorial disputes that can pose direct threats to businesses operating in or near conflict zones.

Companies may face operational disruptions, asset risks, or reputational damage associated with being linked to contentious regions (Bouoiyour et al., 2019; Tsang et al., 2024). Economic sanctions happen when governments impose sanctions on countries or specific sectors in response to geopolitical tensions. These sanctions can restrict trade, limit financial transactions, and hinder business operations, significantly affecting firms that rely on global supply chains (Afesorghor, 2019; Caruso, 2003). Last but not least, recently, it has been seen that global health crises with events like the Covid-19 pandemic have highlighted how global health issues can intersect with geopolitical risks. Travel restrictions, lockdowns, and changes in consumer behavior can create significant challenges for businesses worldwide.

Geopolitical tensions can lead to supply chain interruptions, affecting production and delivery schedules. Firms may face rising costs due to the need for security measures, insurance premiums, or compliance with new regulations arising from geopolitical events. Companies operating in volatile regions may find it increasingly difficult to enter or remain in specific markets, leading to reduced growth opportunities. Businesses associated with politically sensitive regions or regimes may suffer reputational harm, impacting customer trust and brand loyalty (Bednarski et al., 2024; Olasehinde-Williams & Balcilar, 2022; Sohag et al., 2022).

2.2. ESG as strategies for mitigating geopolitical risk

Mitigating geopolitical risk requires a broad strategic view encompassing diverse issues across national boundaries (Smith & Fischbacher, 2009). Geopolitical risk is an inherent aspect of the global business landscape, influencing decision-making and strategic planning for companies operating across borders. Understanding and effectively managing these risks is crucial for sustaining growth and resilience in an increasingly interconnected world. By adopting proactive strategies and maintaining flexibility, businesses can better navigate the complexities of geopolitical dynamics and safeguard their interests.

ESG strategy has recently been mentioned as one of the proactive strategies toward sustainable development for firms. De Giuli et al. (2024) systematically review studies on the relationship between ESG and risk. They have pointed out a strong stream of rich findings that firms with high-ESG activities are strong in risk management and governance. These firms are also having a lower exposure to systematic risk. Firms use ESG to control their risk as they use ESG as an insurance mechanism against risk. Sassen et al. (2016) find that environmental performance generally decreases idiosyncratic risk.

In contrast, total and systematic risks are only affected in environmentally sensitive industries, and they fail to detect a significant effect of corporate governance performance on firm risk. Mefteh-Wali et al. (2024) and Clément et al. (2022) shed new light on how CSR can be integrated into any risk management strategy to speed the transition to a more sustainable, low-carbon economy. Research has shown that companies with high ESG scores tend to have lower capital costs and reduced volatility in financial performance. For example, a study by Gibson Brandon et al. (2021) found that firms with strong ESG performance faced lower capital constraints, indicating lower financial risk.

Additionally, ESG risks, such as environmental risks (including climate change and natural disasters), social risks (including health risks) together, and safety risks (including cybercrimes, wars fraud, terrorist acts, and trade policy) are found to be interrelated with

geopolitical risks that can affect the overall market conditions and, consequently, portfolio risks and performance (Caldara & Iacoviello, 2022). The comprehensive evidence suggests that engaging in ESG practices can provide firms with a means to hedge against geopolitical risks. Consequently, it is hypothesized that rising geopolitical risks will prompt firms to adopt ESG initiatives as a risk management strategy proactively.

Hypothesis: Increasing geopolitical risks will prompt firms to adopt ESG initiatives more actively

3. Sample and empirical model

Based on the VNX-Allshare index, announced at the end of the first quarter of each year, we select a group of 150 firms of three group sizes based on market capitalization value: large-cap, mid-cap, and small-cap firms. To build an ESG database, we use the criteria developed by Kinder, Lydenberg, and Domini (Eccles, 2018; Kinder et al., 1993), which was lately adopted by MSCI and recently known as MSCI ESG KLD index (Li & Wu, 2020). The index has 80 criteria, including 07 topics. Of these topics, one topic, human rights, does not apply to countries except Mexico and countries in Africa. Therefore, in the case of Vietnam, only 06 topics are included in the ESG scale, including Community, Governance, Diversity, Employee, Environment, and Products. For this study, we restructured these six components into three categories. We named them E (Environment-component), S (Social component), and G (Governance component), following the methodology of MSCI's ESG score pillars. Specifically, we retained the Environment component defined initially in the KLD index. We combined some aspects of Diversity (including items related to the CEO, promotions, and the board of directors) with Product Quality and Corporate Governance to form the G component. The remaining aspects of Diversity, along with the Community and Employee Relations components, were grouped into the S component. The source of information for the assessment includes publicly available corporate reports, such as annual reports, sustainability reports, corporate governance reports, and other documents and materials provided for shareholders at the Annual General Meeting of shareholders. We apply the assessment for the period from 2018 to 2022. Due to the delisting of stocks and inadequate disclosures of annual reports and other key corporate reports during the period, the final sample of the ESG database decreased to 139 firms, which gives us an unbalanced panel dataset of 694 ESG firm-year observations. Accounting data is obtained from the Refinitiv Eikon database.

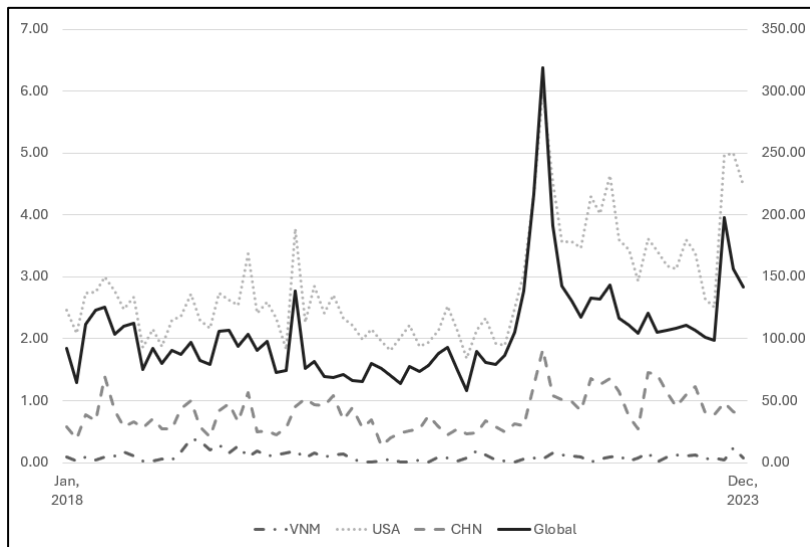
The GPR index¹, obtained from the dataset developed by Caldara and Iacoviello (2022), serves as our proxy for geopolitical risk. According to these authors, geopolitical risk encompasses “the threat, realization, and escalation of adverse events associated with wars, terrorism, and tensions among states, as well as political factors that impact the peaceful course of international relations.” (Caldara & Iacoviello, 2022, p.1195). This index quantifies the monthly frequency of articles mentioning adverse geopolitical events and associated risks across 44 countries. It categorizes these events into eight groups, including war threats, terrorism, and military buildups, by analyzing content from ten newspapers through an automated text-search algorithm. This measure offers valuable insights into the potential and escalation of events that could adversely affect international relations. We take the log of average monthly GPR to derive the GPR for the year for the Global economy and

¹Data downloaded from <https://www.matteoiacoviello.com/gpr.htm> on Oct 01, 2024

the study countries.

Figure 1

Geopolitical Risk of Some Regions from 2018 to 2023²



Note. Author, constructed from the GPR index by Caldara and Iacoviello (2022)

Figure 1 shows an overview of geopolitical volatility on the global scale and in some countries like Vietnam, the United States, and China from January 2018 to December 2023. The Leftist axis is for the GPRs of the three countries, and the right axis is for the global GRP. Although each region’s geopolitical risk has its trend, simultaneous fluctuations at specific points in time have been evidenced, indicating the synchronous response of the areas to external events or shocks affecting each country and the globe. While the volatility of the United States, China, and the whole world is high, the GPR of Vietnam fluctuates at a much lower level, showing the potential advantages of the country’s stable politics.

Following Abdulla et al. (2024), who investigated the impact of geopolitical risk on firm-level environmental, social, and governance performance by using an indicator of geopolitical risk across 41 countries, we set up a model to investigate the impact of Vietnam’s geopolitical risk on Vietnamese companies ESG activities and performance.

$$ESG_{it} = \alpha + \beta GPR_t + \theta X_{it} + Industry\ FE + Year\ FE + \varepsilon_{it} \quad (1)$$

ESG is the ESG Score of Vietnamese companies, *GPR* is geopolitical risk, and *X* is firm-level control variables.

We use a list of firm variables to control for firm characteristics, including *SIZE*, measured by the natural logarithm of the total assets; *Leverage* is the financial leverage of firms, measured by the ratio of long-term debt on total assets; *FS* is the economic slack, measured by the ratio of cash and short-term investments on total assets; *COD* is the cost of debt and can be measured by dividing interest expense by total debt; *CAPEX* is capital expenditures over total assets; *CASH* is cash and equivalent to total assets and *GPDgrowth* is the annual gross domestic product growth. Return on average asset, ROAA measures firm performance. To control for endogeneity, we use the lagged values of the control variables in

²Global geopolitical risks correspond to the right horizontal axis

all the regressions.

First, we will assess the impact of geopolitical risks in Vietnam on firms' ESG performance, controlled for global geopolitical risks, firm size control variables, and finally, GDP growth, respectively. Second, we will test the impact of global geopolitical risk (*GPRGlobal*) on the ESG of Vietnamese firms. We also use equation (1) to test the effect of the firm's separate E, S, and G activities.

Then, to understand the relative impact of geopolitical risk on Vietnamese firms' ESG performance in a broader context, we investigate the impact of geopolitical risk of some countries on the ESG Score of Vietnamese companies. Statistics from the General Department of Vietnam Customs indicate that from 2020 to 2023, the four nations with the highest overall import and export volume to Vietnam are China, South Korea, Japan, and Hong Kong. During the initial nine months of 2024, a significant shift occurred, with the Netherlands, Germany, and the United Kingdom emerging as the three nations with the highest overall import and export volume to Vietnam. Consequently, we evaluate the geopolitical influence of these seven countries on Vietnamese businesses' ESG performance. Furthermore, we analyze the impact of the United States, as this economy is believed to have a significant effect on a global scale through its financial, monetary, and military policies. In doing that, we use *GPRUSA*, *GPRNLD*, *GPRDEU*, *GPRGBR*, *GPRCHN*, *GPRKOR*, *GPRJPN*, and *GPHKD* for geopolitical risk of United States, Netherlands, Deutsch, United Kingdom, China, Korea, Japan, and Hong Kong, respectively.

Table 1 presents a summary of the descriptive statistics for the firm-year observations in our sample, and Table 2 presents peer-wise correlation coefficients of the variables in the model.

Table 1

Summary Statistics of Variables

| | N | Mean | p25 | Median | p75 | Std. Dev. |
|-------------|----------|-------------|------------|---------------|------------|------------------|
| ESG_Score | 694 | 6.692 | 3.000 | 6 | 10 | 5.122 |
| E_Component | 694 | 1.218 | 0.000 | 1 | 2 | 1.342 |
| S_Component | 694 | 3.803 | 2.000 | 3 | 6 | 2.649 |
| G_Component | 694 | 1.671 | 0.000 | 1 | 3 | 2.45 |
| Size | 682 | 30.224 | 29.134 | 29.891 | 31.023 | 1.705 |
| Leverage | 682 | .551 | 0.410 | .577 | .697 | .226 |
| FS | 582 | .169 | 0.038 | .106 | .224 | .183 |
| ROAA | 683 | .047 | 0.017 | .04 | .067 | .045 |
| COD | 574 | .067 | 0.039 | .057 | .077 | .048 |
| CAPEX | 680 | .031 | 0.002 | .008 | .039 | .05 |
| Cash | 607 | .059 | 0.019 | .042 | .082 | .057 |
| GDP growth | 694 | .087 | 0.055 | .1 | .114 | .032 |
| GPRGlobal | 694 | 4.583 | 4.408 | 4.51 | 4.591 | .252 |
| GPRCHN | 694 | .762 | 0.689 | .705 | .737 | .188 |

| | N | Mean | p25 | Median | p75 | Std. Dev. |
|--------|----------|-------------|------------|---------------|------------|------------------|
| GPRDEU | 694 | .491 | 0.348 | .359 | .367 | .286 |
| GPRGBR | 694 | .615 | 0.465 | .546 | .548 | .237 |
| GPRHKG | 694 | .104 | 0.072 | .107 | .127 | .049 |
| GPRJPN | 694 | .257 | 0.186 | .24 | .301 | .096 |
| GPRKOR | 694 | .417 | 0.261 | .443 | .496 | .168 |
| GPRNLD | 694 | .075 | 0.045 | .064 | .066 | .042 |
| GPRUSA | 694 | 2.689 | 2.374 | 2.428 | 2.5 | .689 |

Note. Author

Finally, we assess the impact of geopolitical risks on firms' ESG performance according to their risk appetite. To determine whether firms are in the low- or high-risk appetite group, we define the Z-Score, which represents the firm's risk tolerance (Bhagat et al., 2015; Llanos-Contreras et al., 2021), measured by the firm's Return on Assets (ROA) plus the minimum Capital Adequacy Ratio (CAR) divided by the annual standard deviation of the firm's return on assets. The lower the Z-score, the higher the firm's risk appetite, and vice versa. Based on the Z-score, we classify firms into two groups, the group with high-risk appetite (low Z-score) and the group with low-risk appetite (high Z-score), and then apply formula (1) to conduct the regression assessment.

4. Empirical results and discussions

4.1. GPR global, GPR of Vietnam, and ESG of firms

Table 3 presents the results of the baseline control regression, evaluating the influence of Vietnam's geopolitical risk (GPRVNM) on the ESG performance of Vietnamese enterprises. In the initial model (Column 1), only GPRVNM is incorporated without further controls. The coefficient of GPRVNM lacks statistical significance in this model. Column 2 regresses GPRVNM against GPRGlobal as a control variable, yielding consistent results; GPRGlobal exhibits a strong positive correlation with ESG scores, although GPRVNM remains negligible. A one-unit increase in GPR is associated with an increase in ESG by 3,048 units. Column 3 incorporates supplementary firm-level controls, such as size, leverage, financial slack, return on average assets, cost of debt, capital expenditure, and cash holdings. The result shows that a one-unit increase in GPR is associated with an increase in ESG by 2,605 units. The favorable and substantial influence of GPRGlobal on ESG ratings continues, although GPRVNM remains statistically insignificant. Column 4 incorporates GDP growth as an extra control variable. The result shows that a one-unit increase in GPR is associated with an increase in ESG by 4,895 units. The influence of GPRGlobal is consistently positive and markedly significant, corroborating the conclusion that global geopolitical risk substantially enhances ESG activities. Concurrently, GPRVNM has a negligible correlation with ESG ratings. The findings indicate that global geopolitical risks substantially influence the ESG performance of Vietnamese companies, while domestic geopolitical risks do not seem to exert a significant effect.

4.2. GPR and ESG in components

Table 4 presents the results of regression analyses examining the impact of global geopolitical risk (GPRGlobal) on various dimensions of ESG performance in domestic companies, with the dependent variables being the overall ESG score (Column 1), environmental component (Column 2), social component (Column 3), and governance component (Column 4).

Table 2*Pairwise Correlation*

| Variables | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) | (13) |
|-----------------|---------|--------|--------|---------|---------|---------|---------|---------|---------|--------|--------|--------|-------|
| (1) ESG_Score | 1.000 | | | | | | | | | | | | |
| (2) E_Component | 0.696* | 1.000 | | | | | | | | | | | |
| (3) S_Component | 0.846* | 0.487* | 1.000 | | | | | | | | | | |
| (4) G_Component | 0.795* | 0.381* | 0.420* | 1.000 | | | | | | | | | |
| (5) Size | 0.560* | 0.342* | 0.486* | 0.457* | 1.000 | | | | | | | | |
| (6) Leverage | 0.241* | 0.094* | 0.228* | 0.206* | 0.570* | 1.000 | | | | | | | |
| (7) FS | 0.134* | -0.023 | 0.111* | 0.174* | -0.008 | -0.259* | 1.000 | | | | | | |
| (8) ROAA | 0.150* | 0.123* | 0.141* | 0.093* | -0.098* | -0.454* | 0.327* | 1.000 | | | | | |
| (9) COD | -0.097* | -0.060 | -0.077 | -0.086* | -0.223* | -0.166* | -0.103* | -0.148* | 1.000 | | | | |
| (10) CAPEX | 0.020 | 0.146* | -0.048 | 0.013 | -0.037 | -0.001 | -0.157* | 0.113* | -0.151* | 1.000 | | | |
| (11) Cash | 0.090* | 0.049 | 0.029 | 0.131* | 0.100* | -0.134* | 0.394* | 0.163* | -0.150* | 0.016 | 1.000 | | |
| (12) GDP growth | 0.068 | 0.085* | 0.044 | 0.048 | -0.012 | -0.040 | -0.015 | -0.007 | 0.066 | 0.037 | -0.004 | 1.000 | |
| (16) GPRGlobal | 0.161* | 0.185* | 0.115* | 0.110* | 0.054 | -0.037 | 0.016 | -0.033 | 0.057 | -0.017 | -0.004 | 0.815* | 1.000 |

Note. *** p < 0.01, ** p < 0.05, * p < 0.1. Author

The results indicate a significant positive relationship between GPRGlobal and ESG performance in Column 1, suggesting that an increase in global geopolitical risk is associated with a higher overall ESG score among Vietnamese companies. Specifically, the impact of GPRGlobal on ESG_Score is 3.801, which is positive and significant at the 1% level. This trend is consistent across the environmental and social components (E_Component and S_Component, respectively), with GPRGlobal showing positive and significant coefficients of 1.429 and 1.260 in Columns 2 and 3, respectively. However, the impact on the governance component (G_Component, Column 4) is positive but not statistically significant, implying that GPRGlobal significantly influences environmental and social practices but insignificant on governance practices among Vietnamese firms. We do a robustness check on the sensitivities of governance practices on geopolitical risk by running regressions on sub-groups of firms with high (low) governance performance, and we found similar insignificant results in each group.

Table 3*Baseline Regression*

| VARIABLES | (1) GPRVNM | (2) Control with GPRGlobal | (3) Add firm- controls | (4) Add control GDP growth |
|--------------------|---------------------|----------------------------------|------------------------------|----------------------------------|
| GPRVNM | -3.072 (-1.02) | -2.038 (-0.69) | -0.827 (-0.28) | 2.904 (0.85) |
| GPRGlobal | | 3.048*** (4.94) | 2.605*** (4.29) | 4.895*** (3.93) |
| Lagged Size | | | 1.492*** (9.01) | 1.437*** (8.59) |
| Lagged Leverage | | | 1.042 (0.82) | 1.074 (0.84) |
| Lagged FS | | | 0.744 (0.41) | 0.439 (0.24) |
| Lagged ROAA | | | 14.853** (2.54) | 14.632** (2.51) |
| Lagged COD | | | 2.942 (0.67) | 2.168 (0.49) |
| Lagged CAPEX | | | 2.572 (0.78) | 2.918 (0.88) |
| Lagged Cash | | | 6.388* (1.84) | 7.732** (2.19) |
| GDP growth | | | | -21.052** (-2.11) |
| Constant | 7.057*** (20.47) | -7.016** (-2.45) | -51.887*** (-9.64) | -59.267*** (-9.25) |
| Observations | 681 | 681 | 525 | 525 |
| Adjusted R-squared | 0.357 | 0.380 | 0.498 | 0.502 |
| Industry FE | Yes | Yes | Yes | Yes |
| Year FE | No | No | No | No |

Note. *** p < 0.01, ** p < 0.05, * p < 0.1. Author

The insensitivity of governance to the GPR is similar to the finding of Sassen et al. (2016), who looked at the three dimensions of ESG and found that social performance has a significantly adverse effect on all three risk measures; environmental performance generally decreases idiosyncratic risk, whereas total risk and systematic risk are only affected in environmentally sensitive industries. In contrast, they found no significant effect of corporate governance performance on firm risk.

These findings highlight that geopolitical risk is an essential driver of the ESG performance of Vietnamese companies, particularly in environmental and social aspects. Larger, profitable companies with significant cash reserves and capital expenditures are likelier to exhibit higher ESG scores. Vietnamese companies may adopt more robust ESG practices to respond to external geopolitical pressures, potentially as a strategy to align with international standards or attract foreign investment in a volatile global environment.

Table 4

Impact of Global Geopolitical Risk on Vietnamese Companies' ESG and Its Components

| VARIABLES | (1) | (2) | (3) | (4) |
|-----------------|-----------------------|-----------------------|-----------------------|-----------------------|
| | ESG | E_Component | S_Component | G_Component |
| GPRGlobal | 3.801*** (2.83) | 1.429*** (3.82) | 1.269* (1.65) | 1.103 (1.52) |
| Lagged Size | 1.547*** (8.28) | 0.460*** (8.85) | 0.685*** (6.42) | 0.402*** (3.98) |
| Lagged Leverage | 1.623 (1.15) | 0.213 (0.54) | 1.814** (2.25) | -0.404 (-0.53) |
| Lagged FS | 0.885 (0.44) | -0.879 (-1.56) | -0.490 (-0.43) | 2.254** (2.07) |
| Lagged ROAA | 19.013*** (2.92) | 0.354 (0.20) | 16.771*** (4.50) | 1.888 (0.54) |
| Lagged COD | 5.088 (1.03) | 1.128 (0.82) | 0.492 (0.17) | 3.468 (1.30) |
| Lagged CAPEX | 3.182 (0.87) | 1.970* (1.94) | -0.719 (-0.34) | 1.930 (0.98) |
| Lagged Cash | 8.042* (1.75) | 3.136** (2.46) | -0.364 (-0.14) | 5.270** (2.13) |
| GDP growth | -11.212 (-0.98) | -4.038 (-1.27) | -4.042 (-0.62) | -3.132 (-0.51) |
| Constant | -58.884*** (-8.22) | -18.877*** (-9.46) | -23.983*** (-5.86) | -16.024*** (-4.14) |

| VARIABLES | (1) | (2) | (3) | (4) |
|--------------------|-------|-------------|-------------|-------------|
| | ESG | E_Component | S_Component | G_Component |
| Observations | 419 | 419 | 419 | 419 |
| Adjusted R-squared | 0.516 | 0.536 | 0.400 | 0.391 |
| Industry FE | Yes | Yes | Yes | Yes |
| Year FE | No | No | No | No |

Note. *** p < 0.01, ** p < 0.05, * p < 0.1. Author

4.3. GPR of major economies and ESG of firms

In a broader context, we investigate how the geopolitical situation of other countries affects the ESG activities of domestic enterprises, especially major countries that influence other countries in the world and countries that have regular import-export relations with Vietnam. Table 5 presents regression results analyzing the impact of geopolitical risk from various countries on the ESG scores of Vietnamese companies. Each column represents a separate regression model for the GPR of a specific country, indicating how geopolitical tensions and uncertainties in these nations may influence the sustainability performance of Vietnamese companies.

The results show a significant positive relationship between the GPRUSA and the ESG score of Vietnamese companies, with a coefficient of 1.220 at the 1% significance level. This implies that when geopolitical risk increases in the United States, Vietnamese firms tend to show higher ESG scores, possibly as a response to mitigate foreign investors' concerns regarding sustainability. A similar pattern is observed with the geopolitical risk from the Netherlands (with a coefficient of 19.887), Germany (2.437), the United Kingdom (3.766), China (3.646), and Japan (11.255), all showing significant positive associations. Hong Kong's GPR presents a positive coefficient but is not substantial. Conversely, South Korea's GPR presents a negative coefficient (-5.190), indicating that higher geopolitical risk in South Korea is associated with lower ESG scores for Vietnamese firms, significant at the 10% level.

The geopolitical risks from Western countries and China tend to positively influence the ESG of Vietnamese companies, perhaps reflecting an adaptive strategy to appeal to investors concerned with sustainability. Conversely, increased geopolitical risk in South Korea appears to hurt the ESG; this may indicate a distinct regional effect, as South Korea is the leading foreign investor in Vietnam (with cumulative investment capital of 86.5 billion USD in 2022 and 81.3 billion USD in 2023); however, it does not rank among the top trading partners of Vietnam.

The regression results for Vietnam's GPR and other countries' GPR show that Vietnamese enterprises tend to carry out more ESG activities when the geopolitical situation in Vietnam and the world becomes more complicated. ESG activities at this time become a shield to protect enterprises from the impacts of geopolitical instability, helping enterprises survive and develop more sustainably during and after these unstable periods.

4.4. GPR, ESG and risk appetite

To better understand how a company's risk appetite affects its ESG performance in different risk contexts, we evaluate the ESG scores of companies of varying risk appetites in response to GPR. Firms are grouped into high-risk (low-risk) appetite firms and low (high) z-score values.

Table 5*Impact of Some Countries' Geopolitical Risk on ESG Scores of Vietnamese Companies*

| VARIABLES | (1) USA | (2) NLD | (3) DEU | (4) GBR | (5) CHN | (6) KOR | (7) JPN | (8) HKG |
|------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| GPRUSA | 1.220*** (2.95) | | | | | | | |
| GPRNLD | | 19.887*** (2.95) | | | | | | |
| GPRDEU | | | 2.437*** (2.90) | | | | | |
| GPRGBR | | | | 3.766*** (2.95) | | | | |
| GPRCHN | | | | | 3.646*** (2.82) | | | |
| GPRKOR | | | | | | -5.190* (-1.72) | | |
| GPRJPN | | | | | | | 11.255** (2.09) | |
| GPRHKG | | | | | | | | 3.189 (0.70) |
| Lagged Size | 1.554*** (8.34) | 1.555*** (8.35) | 1.548*** (8.29) | 1.549*** (8.31) | 1.565*** (8.41) | 1.570*** (8.35) | 1.592*** (8.53) | 1.607*** (8.56) |
| Lagged Leverage | 1.604 | 1.603 | 1.617 | 1.611 | 1.600 | 1.665 | 1.614 | 1.652 |

| VARIABLES | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
|--------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|
| | USA | NLD | DEU | GBR | CHN | KOR | JPN | HKG |
| Lagged FS | (1.14) 0.998 (0.50) | (1.14) 1.014 (0.50) | (1.14) 0.894 (0.44) | (1.14) 0.926 (0.46) | (1.13) 1.174 (0.59) | (1.17) 1.221 (0.60) | (1.14) 1.586 (0.79) | (1.16) 1.790 (0.89) |
| Lagged ROAA | 18.534*** (2.85) | 18.497*** (2.84) | 18.891*** (2.90) | 18.739*** (2.88) | 18.219*** (2.79) | 19.259*** (2.93) | 17.900*** (2.73) | 18.252*** (2.76) |
| Lagged COD | 4.841 (0.98) | 4.834 (0.98) | 4.992 (1.01) | 4.907 (0.99) | 4.849 (0.98) | 5.870 (1.18) | 5.247 (1.05) | 5.907 (1.18) |
| Lagged CAPEX | 2.891 (0.79) | 2.861 (0.79) | 3.126 (0.86) | 3.038 (0.83) | 2.602 (0.71) | 2.956 (0.80) | 2.087 (0.57) | 2.027 (0.55) |
| Lagged Cash | 7.925* (1.73) | 7.903* (1.73) | 8.046* (1.76) | 8.016* (1.75) | 7.671* (1.68) | 7.420 (1.61) | 7.009 (1.53) | 6.598 (1.43) |
| GDP growth | -5.744 (-0.61) | -3.658 (-0.41) | 0.516 (0.07) | -8.007 (-0.80) | 0.050 (0.01) | 34.055*** (3.13) | -17.501 (-1.00) | 18.599*** (3.45) |
| Constant | -45.427*** (-8.44) | -43.904*** (-8.11) | -43.696*** (-8.06) | -44.150*** (-8.17) | -45.701*** (-8.48) | -44.073*** (-8.03) | -45.203*** (-8.34) | -46.077*** (-8.37) |
| Observations | 419 | 419 | 419 | 419 | 419 | 419 | 419 | 419 |
| Adjusted R-squared | 0.517 | 0.517 | 0.517 | 0.517 | 0.516 | 0.510 | 0.512 | 0.506 |
| Industry FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Year FE | No | No | No | No | No | No | No | No |

Note. *** p < 0.01, ** p < 0.05, * p < 0.1. Author

Table 6, Column 1 indicates that enterprises that exhibit a high corporate risk appetite invest more in ESG practices to shield from the risk of GPRGlobal compared to firms with low corporate risk appetite, reflected by a higher coefficient of 5.83 ($p < 0.01$) of the earlier group versus 3.323 ($p < 0.10$) of the latter group. This indicates that companies with a high-risk tolerance are likely to improve their ESG performance as global threats escalate. One possible view is that these enterprises may use more aggressive ESG policies to safeguard against the elevated risks they encounter, especially in an emerging country such as Vietnam, where geopolitical uncertainty can profoundly affect company stability.

Table 6

Impact of Geopolitical Risk on High- and Low-risk Appetite Companies' ESG Activities

| Variables | (1) | (2) |
|--------------------|----------------------|-----------------------|
| | High-risk appetite | Low-risk appetite |
| GPRGlobal | 5.83*** (3.03) | 3.323* (1.91) |
| Size | 1.49*** (5.46) | 1.844*** (8.55) |
| Leverage | 1.401 (0.48) | 0.205 (0.12) |
| FS | 1.618 (0.86) | 3.888** (2.44) |
| ROAA | 34.085*** (3.10) | 14.991** (2.60) |
| COD | 10.024 (1.20) | -6.87 (-1.25) |
| CAPEX | -0.249 (-0.05) | 4.35 (0.87) |
| Cash | 6.709 (0.95) | -.971 (-0.21) |
| GPDgrowth | -28.203* (-1.80) | -.799 (-0.06) |
| Constant | -65.847*** (6.18) | -64.933*** (-7.61) |
| Observation | 238 | 289 |
| Adjusted R-squared | 0.250 | 0.377 |
| Industry FE | Yes | Yes |
| Year FE | No | No |

Note. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Author

5. Conclusion

This study illustrates the substantial impact of GPR on the ESG practices of publicly listed firms in Vietnam, with GPR identified as a pivotal element in determining corporate sustainability initiatives. The findings indicate that firms operating in high-risk settings are more aggressive in implementing ESG practices, possibly employing these strategies as a means of risk management to alleviate the effects of geopolitical instability. The link is especially evident for organizations exhibiting greater corporate risk tolerance (low Z-score), where geopolitical risk positively and statistically significantly impacts ESG performance. This indicates that these companies may use ESG to safeguard against operational uncertainties and reputational risks associated with geopolitical instability, bolstering resilience and attracting investment.

Furthermore, the data underscores business size and profitability as reliable drivers of elevated ESG ratings, confirming that bigger and financially sound organizations are more likely to participate in ESG initiatives. This tendency aligns with global assessments that indicate more capable organizations prioritize sustainability, adhere to regulatory norms, and meet stakeholder expectations. ROAA indicates that firm profitability significantly influences ESG scores, highlighting that profitable companies possess a greater ability to invest in sustainability initiatives, thereby fostering a beneficial cycle between financial robustness and corporate accountability.

The analysis indicates that geopolitical risk exerts a more significant impact on the environmental and social aspects of ESG than on governance. This conclusion suggests that Vietnamese enterprises may implement observable ecological and social actions to address pressing stakeholder issues associated with GPR. The relatively low responsiveness in governance procedures points to a potential deficiency, suggesting that improvements in governance could further strengthen the overall ESG resilience and stability of organizations.

Using the sample of Vietnamese companies who do business in a developing country, our finding is opposite to the study by Saharti et al. (2024), who investigated the impact of GPR on the ESG performance of 79 countries and found strong effects for developed countries that if a country is in a geopolitical conflict, their firms are impacted in the form of lower E, S and G performance and overall ESG performance. However, our finding is similar to two other studies by Abdulla et al. (2024) and Sassen et al. (2016).

Abdulla et al. (2024) studied 41 countries in the 2002 - 2021. They found that geopolitical risk is positive for countries with lower geopolitical risk and high peace, indicating that relatively stable environments can incentivize firms to enhance their sustainability practices. Given that Vietnam has a low GPR environment, Abdulla et al. (2024) implied that Vietnamese firms enjoy more incentives to invest in sustainability and use it as a shield against potential GPR. Sassen et al. (2016) looked at the three dimensions of ESG and found that social performance has a significantly adverse effect on risk measures; environmental performance generally decreases idiosyncratic risk, whereas total risk and systematic risk are only affected in environmentally sensitive industries; in contrast, no significant effect of corporate governance performance on firm risk.

Our study's conclusions are essential for Vietnamese companies operating in an increasingly unstable geopolitical landscape. Considering Vietnam's crucial economic role in

Southeast Asia and its dependence on international commerce, incorporating ESG principles is essential for risk reduction and long-term competitiveness. By fortifying ESG processes, companies may augment their attractiveness to overseas investors who prioritize sustainability, cultivate stakeholder confidence, and safeguard themselves from the repercussions of geopolitical disturbances. The fact that there is a positive link between GPR from countries like the US, China, and European countries and the ESG scores of Vietnamese companies shows that changes in foreign politics force Vietnamese companies to strengthen their ESG commitments, making them more in line with global sustainability standards.

This study highlights the essential function of ESG as a strategic instrument for Vietnamese companies confronting global challenges. Companies with diverse risk tolerances exhibit differing degrees of response to geopolitical risk (GPR). However, using ESG principles may mitigate geopolitical risks, improve reputation, and promote sustainable growth. This study urges corporate executives and policymakers in Vietnam to prioritize ESG integration as a fundamental aspect of company strategy, enhancing resilience, attracting investment, and facilitating sustainable growth amid increased geopolitical complexity. The unique sample of the ESG database being built for Vietnam allows us to put critical first findings on this crucial issue, which is also the limitation of our finding due to the small sample size. This study puts necessary first evidence for ESG being used as a shield against GPR, which could open opportunities for future research that further explores and elaborates by looking into the impact of ESG as a moderating factor to mitigate various risks, such as stock price volatilities or idiosyncratic risks of firms.

NO CONFLICT OF INTEREST STATEMENT

The authors commit to owning the article's legal copyright, committing that the article has never been published before, and not submitting the article to another journal during the review period.

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