Geopolitical Analysis of Southeast Asian Countries due to the Russian Invasion of Ukraine

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ABSTRACT

Prior studies have argued that there is a significant relationship between geopolitical risks and stock market volatility. Geopolitical risk is the threat posed to international stability on the socioeconomics by events, i.e., war tension, rampant of terrorism, natural disasters and bilateral and multi-lateral diplomatic vulnerabilities. It is believed that any ecopolitical risk issues directly or indirectly impact the economic and financial environment. This study examined the relationship between geopolitical risk (GPR) and the dynamic effect of the stock market (SM) in four Southeast Asian countries, Indonesia, Malaysia, the Philippines and Thailand. The study sample covered annual frequency data from January 2000 to March 2022. This study deployed Ordinary Least Square (OLS) econometric approaches to examine the focused variables. The estimations found that GPR was negative and significant on the stock market in Indonesia and Thailand. It means that the highest the GPR in Indonesia and Thailand, the lower the investor investing in the stock market. On the other hand, GPR has minimal impacts on the stock markets of Malaysia and the Philippines. The findings of this study might be helpful for investors aiming to maximise their premium from the stock markets of the countries.

Keywords: Geopolitical Risk, Stock Market Volatility, OLS, Southeast Asia

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BACKGROUND

Geopolitical risks (GPR) including war tension, the tension between states, and the rise of terrorism, are highly detrimental to the global economy (Sweidan, 2021; Caldara & Iacoviello, 2022; Steinbock, 2018). The global geopolitical risks have risen again recently due to the USA-China trade war, China-Taiwan-USA and Russia-Ukraine war (Lee et al., 2021; Wang, Su & Umar, 2021). The leading economies are involved in the conflict, which sees animosity between the United States, China, and Russia spread to other nations, while the Southeast Asian region is not exceptional. The Southeast Asian region is one of the emerging global economic hubs and is highly connected with global economic giants following open economic policies (Hui, 2021; Kuik, 2016). Therefore, any global issue or geopolitical tension impacts the economy of the Southeast Asian region in a short time.

Historically the Asian region has experienced some geopolitical events nationally and internationally. For example, Malaysia and Indonesia's confrontation in 1960, the political crisis in East Timor in 1999, and the ongoing civil war in Myanmar in 2022 are notable (Mostafanezhad & Evrard, 2018; Aysan et al., 2022). The Southeast Asian region faces significant challenges today as the United States and China compete for strategic influence in the Asia-Pacific region. The two superpowers intensified their strategic rivalry and launched a new cold war (Lee et al., 2021). The Southeast Asian region is caught in a strategic tug of war that threatens to destabilise the entire regional integrity if it fails to navigate the geopolitical challenge effectively, and that would be a great catastrophe for the economy. Besides, there are significant challenges related to territorial disputes in the South China Sea, border disputes, Scarborough Shoal and the Paracel Islands and concerning the issue of the damming of the Mekong River (Hui, 2021; Wang, Su & Umar, 2021).

The Southeast Asian countries are highly cooperative in economics and regional integrity in modern times (Ishikawa, 2021; Shimizu, 2021). Though, the region was one of the hotbeds of geopolitical risk during the Cold War (Yeoh, Chang & Zhang, 2018; Hui, 2021). The region still has territorial disputes between the countries that sometimes trigger territorial tension (Hui, 2021; Lee et al., 2021). Since the region is one of the emerging economies along with the strategic location, the superpowers are highly motivated to keep the region in favour of them as an economic partner. Moreover, the region has one of the busiest trade routes, the straits of Malacca, which is not only bought for global trade routes but is crucial for geopolitical importance (Hui, 2021).

As a persistent issue, geopolitical risks, both internationally and locally, have a considerable impact on economic activity, i.e., oil price fluctuation, food insecurity, consumer price volatility, exchange rate volatility, stock market fluctuations and other economic parameters (Kisswani & Elian, 2021; Shimizu, 2021; Adam, 2020). In light of such uncertainties in the context of the Southeast Asian region, examining the impacts of geopolitical risks on economic and financial issues is highly relevant. The current study focussed on a specific aspect of the economic factors: the stock market of the Southeast Asian region.
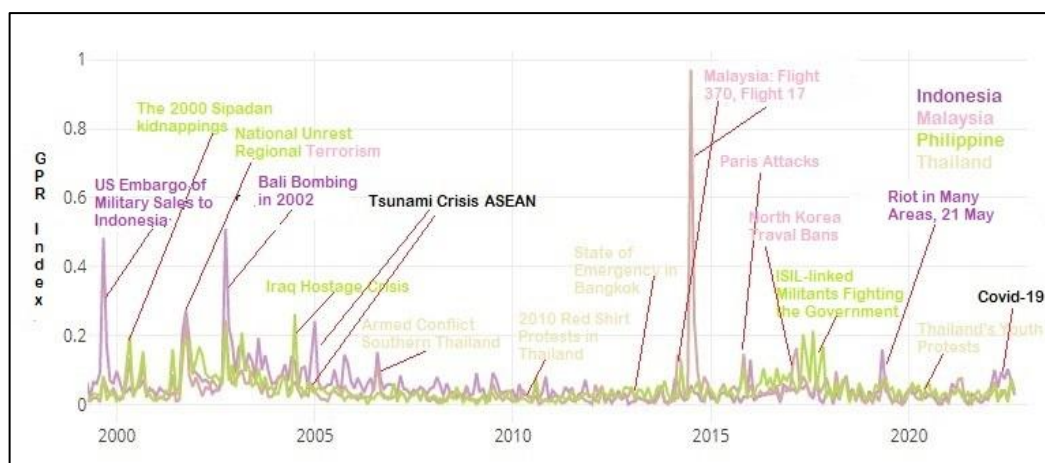

Figure 1: The GRP Indices of Southeast Asian Countries from 2000 to 2021

Figure 1 demonstrates that Indonesia experienced a higher GPR in the Southeast Asian region than other countries. Salisu et al. (2022) reported that high GPR events have an immediate negative impact on the stock market of the country. Hoque & Zaidi (2020) argued that GPR has an asymmetric relationship with the stock market of Indonesia, but the resilience of the stock market is also quicker due to the strongholds of the government. However, the country often faces GRP issues due to a weak democracy, the prevalence of terrorism, high corruption and other reasons, which were also confirmed by the previous study (Lee, Olasehinde-Williams & Akadiri, 2021). Figure 1 shows some examples, i.e., the US embargo of military sales, the Bali bombing in 2002, the tsunami crisis in 2004, regional terrorism, election year riots in a number of areas in May 2019 and COVID-19 issues that might have impacted on the stock market.

Malaysia experienced the dreadful GPR in 2014 when two of its passenger planes lost radar control and were shot down in Ukraine respectively. It had a big impact on both the stock market price and airline firms immediately (Adedoyin et al., 2022). According to the study, both domestic and foreign investors lose faith in the Malaysian stock market. Therefore, the stock price of Malaysia Airlines dramatically declined, and it continued for the next few years. Besides, the country also faced some other GPR issues, i.e., the outbreak of regional terrorism from 2000 to 2010, the Paris terrorism attack in 2015, the North Korea travel ban, and COVID-19 issues. The issues might have been connected with the stock market fluctuations, which needed to be examined.

The Philippines also experienced a number of considerable GPR issues during the focused period, i.e., Sipadan kidnappings in 2000, national political unrest and regional terrorism from 2003-2004, the Iraq hostage crisis in 2004, ISIL-linked militants fighting against the government in 2017. On the other hand, as shown in the Figure 1, Thailand faced some GPR events from 2005 to 2015. for example, armed conflicts in southern Thailand, the Red Shirt protest in 2010 and the state emergency in Bangkok. As shown in the Figure the country also faced youth protests against the government in 2020. However, any geopolitical issues or unrests hamper market-oriented open economies like the Philippines, Indonesia, Malaysia and Thailand (Mostafanezhad & Evrard, 2018; Aysan et al., 2022). Therefore, the issues might have some potential impacts on the national economy, financial market, and stock market. The current study examined the gross impact of GPR on the stock market in Indonesia, Malaysia, the Philippines and Thailand.

The existing studies on geopolitical risk mostly used political risk indicators developed by the International Country Risk Guide (ICRG) Database or developed their own customised geopolitical risk indicators to examine the impact (Bouraoui & Hammami, 2017; Suleman, Gupta & Balcilar, 2017; Bahmani-Oskooee et al., 2019; Abid & Rault, 2020). The current study used a specific geopolitical risk (GPR) index developed by Caldara & Iacoviello (2019). This unique data supported the current study to examine how the stock market of the Southeast Asian region responded to the region's GRP fluctuations.

The study examined the impacts of GPR on stock market exchange rates in four Southeast Asian countries based on reliable data availability. The specific Southeast Asian countries were, i.e. Malaysia, Indonesia, the Philippines and Thailand. We examined the relationship between the variables following the empirical model with the Fully Modified Ordinary Least Square (FMOLS) approach.

The following are our main contributions to the literature. First, we linked the Caldara and Iacoviello's (2019) geopolitical risk index to the stock market in the studies, which mostly ignored the previously conducted studies. While many studies have been conducted on how the geopolitical index affected other aspects of economic development in different settings (Apergis et al., 2018; Antonakakis et al., 2017; Kotcharin and Maneenop, 2020), the current study examined stock market issues considering the GPR factors in the context of Southeast Asian countries. Second, we estimated the long-run relationship of geopolitical risks with stock market volatility to the aforementioned index, which can be useful in determining the long-term implications of political events on the stock market. The existing studies mainly determined the geopolitical risk following the proxies of corruption index, inter-governance country risk guides and institutional quality, which barely provided exact GPR issues (Manasse et al., 2020; Bouraoui & Hammami, 2017; Bahmanee-Oskooee et al., 2019). Third, we examined the stock market volatility of Southeast Asian emerging economies, which have previously

received little attention in the literature. Moreover, the previous studies either examined other countries or provided a broad view in terms of panel data analyses (Suleman, 2017), making it difficult to draw policy implications for a specific country of the Southeast Asian region, where the current study contributed.

The following Section 2 presents and reviews the relevant literature to which the current study can relate and provides scopes of new findings. Following that, Section 3 provides the methodology of the study, including data and measurement and empirical setup. Section 4 presents the results and key findings. Finally, Section 5 demonstrates the conclusion, policy implications and recommendations for future studies.

LITERATURE REVIEW

In the context of the global economy, GPR has been considered extensively in the existing literature (Hailemariam & Ivanovski, 2021; Sweidan, 2021; Ivanovski & Hailemariam 2022; Dogan, Majeed & Luni, 2021). Most of the literature concentrated on the causal relationship between GPR and the economic factors of the big economies, highly geopolitically vulnerable countries, and countries involved with arms races (Anser, Syed & Apergis, 2021; Sweidan, 2021; Ivanovski & Hailemariam 2022; Dogan, Majeed & Luni, 2021). On the other hand, some other studies also examined the impacts of GPR on the share market, exchange rate regime, economic growth, and inflation in the context of nuclear power countries, highly ambitious weapon-producing countries and giant economies (Zhang et al. 2022; Olanipekun & Alola, 2020; Alqahtani, Bouri & Vo, 2020).

Prior studies acknowledged that GPR has a close connection with the economic activity of geopolitically important countries. A group of studies examined the impact of geopolitical risks on the exchange rate (Kisswani & Elian, 2021; Salisu, Cunado & Gupta, 2022). Some of the studies explored those events related to geopolitical risks havean asymmetric relationship with the stock market of the big economies (Smales, 2021; Yang & Yang, 2021; Machmuddah et al., 2020). As the oil-producing countries are prone to war and political unrest with high geopolitical vulnerabilities, some studies examined the impact of geopolitical risks and oil production, as well as the impact of geopolitical risks on global oil price volatility (Ivanovski & Hailemariam, 2022; Olanipekun & Alola, 2020). Some other studies focussed on the impact of geopolitical risks on food securities, economic growth and gold production in the context of African countries, Middle Eastern countries, East Asian countries and some other politically vulnerable countries (Triki & Maatoug, 2021; Dogan, Majeed & Luni, 2021).

Many of the existing studies ignored examining the impact of geological risks on the stock market. The existing literature on geopolitical risks and the stock market mostly considered the period of big geopolitical events, and the sample of high-war tension countries, like North and South Korea, trade wars associated USA and China, Eastern European countries and OPEC countries (Smales, 2021; Yang & Yang, 2021). However, the studies mostly ignored exploring the impact of geopolitical risks on the stock market in the context of Southeast Asian countries. Therefore, the current study aimed to contribute to the literature by exploring the impact of geopolitical risk on the stock market of Southeast Asian countries.

The stock market is highly correlated to human behaviour, while human behaviour directly connects with macro and micro-level socio-political situations (Huang, Rojas & Convery, 2020). Studies have found that stable socio-political conditions support stable investment, financial, employment, productive, and business processes (Hillier & Loncan, 2019; Khan et al., 2021). Furthermore, the stability in a country's productive and economic sectors promotes confidence among investors to invest and reinvest in the different economic sectors to leverage the benefits of the ideal money. The stock market is one of the popular investment areas where investors can invest and maximise their profit relatively quickly without taking the hassles of investments in tangible businesses and corporations (Hillier & Loncan, 2019).

Prior studies stated that the issues of geopolitical risk, i.e., national and international political unrest, war tension, the outbreak of terrorism, cross-border terrorism, political movement, natural calamity, and any other sociopolitical unrest found to have a direct and indirect impact on domestic

economic activities (Smales, 2021; Kisswani & Elian, 2021; Olanipekun & Alola, 2020). The studies also argued that the stock market is one of the prime sectors of the whole economy, which might be impacted by geopolitical risks directly or indirectly. On the other hand, any geopolitical risk issue not only disrupted economic activities but also impacted the investors' psychology in stock market investment (Hillier & Loncan, 2019). Therefore, due to a lack of trust among potential investors, geopolitical risk events can swiftly have a negative or occasionally favourable impact on the stock market index (Smales, 2021; Alkhatib et al., 2022). Some studies showed that geopolitical risks positively impacted fossil fuel sectors, gold prices, and the food market, but most other companies struggle during the events of sociopolitical unrest and geopolitical risks (Ivanovski & Hailemariam, 2022; Olanipekun & Alola, 2020).

At the present time, the world economy is recovering from the negative externalities of the COVID-19 pandemic. During the recovery period of the world economy, Russia invaded Ukraine, and the oil market heated, the gas supply was disrupted, the supply chain of the food and grain sector faced obstacles, and also the war opened up a pandora's box for the world economy (Boungou & Yatié, 2022; Sun & Zhang, 2022). Additionally, it took little time for it to have a negative effect on the financial markets and stock market in many countries (Ahmed, Hasan & Kamal, 2022). The Southeast Asian region is one of the emerging economic hubs of the world economy, and the stock markets of this area have been flourishing for a few decades. However, the COVID-19 concerns and the Russian-Ukrainian conflict indirectly or directly impacted the region's stock market. Notable is the fact that with the outbreak of the pandemic and the Russia-Ukraine conflict, the topic of geopolitical risks has once again taken precedence in academic research examining its effects on the stock market. Therefore, the current study examined the impacts of geopolitical risks on the stock markets in the context of Southeast Asian countries.

METHODOLOGY FULLY MODIFIED OLS AND DYNAMIC OLS

Data Collection and Sources

In order to estimate the dynamic impact of geopolitical risks on the stock market of four Southeast Asian countries, this study considered data from two sources. Meanwhile, the data on geopolitical risks was obtained from Caldara & Iacoviello (2022), "Measuring Geopolitical Risk," American Economic Review. In addition, data from the stock market of 4 Southeast Asian countries from DataStream of closing value in $USD was also used. The study also considered a number of control variables, i.e., GDP per capita 2015 and trade collected from the Worldwide Development Indicators (WDI-World Bank), to provide comprehensive estimations.

Geopolitical Risk Measurement: According to Caldara & Iacoviello (2022) geopolitical risk is the index by counting the number of articles related to adverse geopolitical events in each newspaper for each month (as a share of the total number of news articles). The GPR index reflects automated text-search results of the electronic archives of 10 newspapers: Chicago Tribune, the Daily Telegraph, Financial Times, The Globe and Mail, The Guardian, the Los Angeles Times, The New York Times, USA Today, The Wall Street Journal, and The Washington Post. The search is organized in eight categories: War Threats (Category 1), Peace Threats (Category 2), Military Buildups (Category 3), Nuclear Threats (Category 4), Terror Threats (Category 5), Beginning of War (Category 6), Escalation of War (Category 7), Terror Acts (Category 8).

Methods of Data Analysis

Some factors were considered in choosing the research method for this study. The first factor is the objective of this study. This study examined the relationship between Geopolitical Risk on Stock Market in 4 Southeast Asian Countries. The second factor was related to the number of variables and the complexity of the relationship. An experimental method is useful for studies with many variables and is generally reliable in control and precision. This study used Ordinary Least Square (OLS).

A mathematical method called Ordinary Least Squares (OLS) is often used for linear regression analysis (Haupt et al., 2014). Linear regression aims to model the link between a variable being studied and one or more variables not being studied by fitting data to a linear equation. The OLS method is used to guess the linear regression model's parameters.

$$Y_t = \beta_0 + \vec{\beta}X + \varepsilon \dots \dots \dots \quad (1)$$
Where:

- Y is the dependent variable,
- X is the independent variable,
- β_0 is the intercept (constant term),
- β_1 is the slope coefficient, and
- ε is the error term.

Figure out the factors ($\beta0^20$ and $\beta1^21$) with OLS. OLS tries to get the sum of the squared differences between what was seen and what was forecast for the dependent variable to be as small as possible. OLS is a method used to estimate the parameters ($\beta0\beta0$ and $\beta1\beta1$) of the linear regression model. The goal is to find the values of these coefficients that minimize the sum of the squared differences between the observed values of the dependent variable and the values predicted by the model. The OLS method minimizes the sum of squared residuals (differences between observed and predicted values), expressed as: Minimize: $\sum i=1n(Yi-Y\hat{}i)2$ Minimize: $\sum i=1n(Yi-Y\hat{}i)2$ where nn is the number of observations, $YiYi$ is the observed value, and $Y\hat{}iY\hat{}i$ is the predicted value. OLS provides estimates for the intercept ($\beta0\beta0$) and slope ($\beta1\beta1$) that best fit the observed data.

FINDING AND DISCUSSION

Descriptive Statistic

Table 1 describes the descriptive statistic of the variables included in the model. Descriptive statistics provide the basic features of data; for instance, it gives minimum, mean, and maximum values for each data indicator. The descriptive statistic also provides the standard deviation value that shows the data spread. Table 1 exhibits the descriptive statistics of the geopolitical, stock market and control variables, including Gross Domestic Product, and Trade from 2000 to 2022. The mean value of the focus countries was 0.04 for GPR and 124.26 for 124.26. At the same time, the mean value of control variables was 3.91 and 18.12 for GDP, and trade, respectively.

Table 1: Descriptive Statistic

Variable	Observation	Mean	Std. dev.	Min	Max
Geopolitical Risk (GRP)	92	0.04	0.02	0.01	0.15
Stock Market (SM.)	92	124.26	158.55	0.06	563.08
GDP	92	3.91	2.32	1.43	1.10
Trade	92	18.12	7.44	3.60	33.65

Correlation Analysis

Pearson Correlation, known as the Pearson Product-Moment Correlation Coefficient, is used to measure the association of two variables in this study. This analysis is used to measure the linear relationship between two variables. For this study, the association between independent Geopolitical Risk (GPR) variables will be measured by looking at their linearity with the dependent variable, the Stock Market (SM). According to Hinkle, Wiersma, and Jurs (1997), a correlation coefficient (r) value between .70 to .90 indicates a high correlation between variables. To illustrate the association between the variables tested in this study, Table 2 shows the correlation level between variables.

Table 2: Correlation Analysis

SM	GPR	GDP	Trade
SM	1.0000		
GPR	-0.0936	1.0000	
	0.3749	0.4749	
GDP	-0.1064	-0.3914	1.0000
	0.3129	0.0001	0.3055
Trade	-0.0122	0.4905	0.2055
	0.9084	0.0000	0.0495

Table 2 shows the correlation matrix along with the level of significance (p-values) of all variables. Overall findings showed a strong and significant positive relationship between GPRvariables and *SM*. The sign of all variables included in the model was according to our expectations. However, this matrix only provided the initial indication of the independent variables' possible effect on the dependent variable. The GPR showed a high positive correlation with SM, GDP, and Trade.

Unit Root Test

Table 3: Unit Root Test

Variables	Level	1st Difference
GPR	-0.727	-6.814***
SM	1.751	-3.924***
GDP	0.822	-2.823***
Trad	-0.563	-6.553***

We executed the panel unit root test to examine a series of interests to conclude the respective order of integration. It is also necessary to note no variable over integration order I (1) to avoid false results (Pesaran & Pesaran, 1997). Furthermore, checking the order of integrating the variables to choose the suitable econometric model is essential. The results of panel unit-root tests are presented in Table 4. Im et al. (2003) showed that the test accepted the null hypothesis of unit-root presence on the respective variables. As a result, all variables are stationary at the second difference level, which authenticates the appropriateness of the FMOLS approach to be applied for analyzing data. For this study, the IPS unit root test checked the order of integrating variables in the model. We found mixed order of integration for all variables. All the variables were stationary at first difference. As shown in Table 4 GPR, SM, GDP, and Trade were stationary at the first difference.

Finding from DOLS and FMOLS

The GPR mostly impacted the SM negatively due to the vulnerabilities in the world market and the domestic market, which many studies confirmed. For example, Balcilar et al. (2018) examined the effect of geopolitical uncertainty on return and volatility dynamics in the BRICS stock markets via nonparametric causality-in-quantiles tests. They found that the influence of geopolitical risks (GPR) was found to be heterogeneous across the stock markets of Brazil, Russia, India, China, and South Africa (BRICS). The study indicated that news regarding geopolitical tensions does not have a consistent effect on the return dynamics of these markets. In general, GPR was found to influence stock market volatility measures rather than returns and frequently at return quantiles below the median, indicating their role as a driver of undesirable volatility in these markets.

Table 4: The Relationship between Geopolitical Risk on Stok Market (Indonesia)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GPR	-1.813817	0.555336	-3.266161	0.0041
GDP	5.11E-13	2.00E-13	2.559709	0.0192
TRADE	0.009285	0.013799	0.672850	0.5091
C	-0.057837	0.269983	-0.214223	0.8327
R-squared	0.828210	Mean dependent var		0.293572

*Significance level: *** p<0.01, ** p<0.05, * p<0.1*

Table 4 illustrates the regression results of the considered variables in the context of Indonesia. The negative coefficient of GPR which was -1.813 was statistically significant at the 1% significance level. This implied that there was a significant negative relationship between Geopolitical Risk and the Stock Market. As GPR increased, the Stock Market tended to decrease. Besides, the coefficient for GDP was statistically significant at the 5% significance level. This suggested that Gross Domestic Product had a significant positive relationship with the Stock Market. In addition, the coefficient for TRADE was not statistically significant at the 10% significance level. This suggested that Trade may not have a significant impact on the Stock Market in this model. Based on the research objective, the study found that geopolitical risks negatively influenced the stock market of Indonesia. Any geopolitical crisis that arose in Indonesia undermined investor confidence and instils panic among stock market participants.

This finding is supported by several studies such as (Haque and Kneller, 2015, Ndako et al., 2021, Oad Rajput et al., 2019). Haque & Kneller (2015) stated that global geopolitical risk uncertainty could positively and negatively affect stock market performance, depending on contemporaneous time, lag time, volatility regimes, and the stock market. Three-regime Markov-switching approach, this study examined the nonlinear effects of global and country-specific geopolitical risk uncertainty on the stock returns of Brazil, India, Indonesia, South Africa, and Turkey. The Markov-switching model captured the effects of global and country-specific geopolitical risk uncertainty on the stock returns of all fragile emerging economies, whereas the linear framework did not. Therefore, the effects of both risk factors on stock market returns were nonlinear and asymmetric. The results also indicated that country-specific geopolitical unrest negatively affected the stock market performance of four fragile emerging economies, with the exception of the performance of the Indian stock market. Before taking the risk of global and domestic geopolitical unpredictability, investors should therefore observe market volatility.

Another study by Ndako et al. (2021) examined the predictive power of geopolitical risk (GPR) for the return volatility of Islamic stocks in Indonesia and Malaysia. Whether global or country specific, GPR data increased the return volatility of Islamic stocks in both countries, with Indonesia bearing the greater impact. With the addition of GPR data to the predictive model of the return volatility of Islamic stocks, additional analyses reveal enhanced out-of-sample forecast gains. This study, supported by Oad Rajput et al. (2019) and the study, argued that geopolitical risk was discovered to be a significant factor in investors' selection of Islamic stock investments. This study examined the short- and long-term asymmetries of geopolitical risk's impact on Islamic stock market returns. The Nonlinear Autoregressive Distributive Lag (NARDL) model has been utilised for Saudi Arabia, Malaysia, Turkey, and Indonesia.

Table 5: The Relationship between Geopolitical Risk on Stok Market (Malaysia)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GPR	324.4044	741.0245	0.437778	0.6665
GDP	7.58E-10	4.42E-10	1.717559	0.1021
TRADE	0.465001	6.974421	0.066672	0.9475
C	155.7978	261.7949	0.595114	0.5588
R-squared	0.587021			

*Significance level: *** p<0.01, ** p<0.05, * p<0.1*

In the context of Malaysia, the coefficient of GPR was 324.40 which was not statistically significant at the 10% significance level shown by the Table 5. This suggested that there was no significant relationship between Geopolitical Risks and the Stock Market in Malaysia based on the given model. It also implied that any exogenous geopolitical shock like Russia-Ukraine conflict barely impacts the stock market of Malaysia. Based on the research objective, the study found that geopolitical risks barely affected the stock Market in Malaysia. A group of studies also argued that Malaysia experienced few geopolitical risk events, which have barely any major impact on the domestic economy as well as on the stock market (Enamul Hoque et al., 2019, Kannadhasan and Das, 2020). Enamul Hoque et al. (2019) investigated the effects of geopolitical risk, global economic policy uncertainty, and oil price shocks on Malaysian stock prices using the factor-augmented SVAR method. The findings indicated that while geopolitical risks had no significant direct impact on the stock market, its indirect effects were significant and transmitted through the channels of global economic policy uncertainty and oil shocks.

Kannadhasan and Das (2020) examine the effects on emerging stock markets of international (US-based) economic policy uncertainty, geopolitical risks, and financial stress. Researchers examined 24 emerging markets to determine their susceptibility to various US-based macroeconomic shocks. The study used monthly data from January 1997 to May 2018 and employs the nonparametric causality-in-quantiles test as their methodology. In terms of causality and magnitude, the effects of these shocks were heterogeneous across markets.

Table 6: The Relationship between Geopolitical Risk on Stok Market (PHILIPINES)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GPR	-215.8955	201.8479	-1.069595	0.2982
GDP	4.70E-10	9.65E-11	4.867675	0.0001
TRADE	5.439626	4.098112	1.327349	0.2001
C	-95.80342	45.43048	-2.108792	0.0485
R-squared	0.827569			

Significance level: *** p<0.01, ** p<0.05, * p<0.1

As demonstrated in Table 6, the coefficient of GPR was -215.89 and the coefficient was not statistically significant. This suggested that there was no significant relationship between Geopolitical Risks and the Stock Market in the Philippines based on the given model. According to the research objective, the study found that Geopolitical Risks had not influenced the stock market in the Philippines. This finding is supported by several studies (Das et al., 2019, Kannadhasan and Das, 2020, Ndako et al., 2021, Emsen, 2022, Salisu et al., 2022). According to Emsen (2022), There were significant and meaningful connections between economic activities and risks and uncertainties. In this context, geopolitical risks (GPR) and global economic and political uncertainty (WUI) can significantly impact the behaviour of financial markets and investors. In this study, the effects of GPR and WUI on the stock markets of ten developing Asian nations from 2001:M07 to 2020:M12 were examined. Cross-section dependence was investigated with LM and tests, series stationarity with the Hadri and Kurozumi (2012) test, co-integration relations with the Westerlund (2006) co-integration with multiple structural breaks method, and regression analyses with the Eberhardt and Bond (2009) method.

It has been determined that a high GPR decreased the stock market index in Turkey, Korea, Russia, Indonesia, and Malaysia but increased it in India, Thailand, and the Philippines. It was discovered that a high geopolitical tension lowered the stock market index in Korea, China, Indonesia, and Thailand, whereas it raised the index in Turkey, India, and Malaysia. In contrast, the change in GPR decreased the stock market returns in Turkey, Korea, Russia, Indonesia, and Malaysia, while it increased in India, Thailand, and the Philippines. It was discovered that a high geopolitical issue lowered the stock market index in Korea, China, Indonesia, and Thailand, whereas it raises the index in Turkey, India, and Malaysia. In contrast, the change in GPR decreases the stock market returns in Turkey, Korea, Russia, Indonesia, and Malaysia, while it increases in India, Thailand, and the Philippines. The Dumitrescu and Hurlin (2012) method was used to look for causal relationships between all of the countries in the panel. A causal relationship was only found between a high geopolitical issue and a high stock market index.

Table 7: The Relationship between Geopolitical Risk on Stok Market (THAILAND)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GPR	-105.1281	71.94215	-1.461287	0.0403
GDP	1.91E-10	1.41E-11	13.56743	0.0000
TRADE	0.116535	0.300963	0.387208	0.7029
C	-35.03098	10.48968	-3.339567	0.0034
R-squared	0.858519			

Significance level: *** p<0.01, ** p<0.05, * p<0.1

As demonstrated in Table 7, the coefficient of GPR or geopolitical risks was -105.12. The result was statistically negative and significant at the 10% significance level. The result implied that geopolitical events played an important role for the stock market of Thailand. Like Russia-Ukraine conflict shrank investors' confidence to invest in the stock market which created a sharp fall in the stock market of Thailand. Interestingly, this finding was similar in Indonesia. Based on the research objective, the study found that geopolitical risks had a significant negative impact on the stock market of Thailand. This finding was supported by several studies such as Kumar et al. (2021) and Choi (2022). According to Kumar et al. (2021) there was positive and negative relationship between GPR and share market. Due to the fact that geopolitical risk leads to high directional predictability spill over from oil to oil-exporting and oil-importing stock markets, investors and portfolio managers should be cautious when formulating portfolios and developing effective hedging strategies. While Indonesia and Thailand were highly dependent on oil exports, besides the domestic and foreign investors might feel insecure in investing during geopolitical crisis events, which might be the cause of the stock market to fall during the events Choi (2022).

Additionally, the geopolitical scenarios in Malaysia and Philippines were stable compared to Indonesia and Thailand. Though, the countries faced a number of GPR issues, they recovered from the negative externalities in a short period of time and managed to retain investor confidence. Therefore, the GPR events barely affected the stock markets of Malaysia and Philippines, but the stock markets had a slightly positive impact throughout the time. However, some studies found similar results regarding the GPR and stock markets in the context of Malaysia and Philippines (Yang & Yang, 2021; Khan et al., 2021).

Table 8: Overall Relationship between Geopolitical Risks on Stok Market as Robustness Check Considered in all Countries

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GPR	-422.6382	556.9040	-1.118035	0.0566
GDP	-9.66E-11	8.44E-11	-1.144839	0.2554
TRADE	8.435117	2.614006	3.226893	0.0018
C	36.86341	82.13055	0.448839	0.6547
R-squared	0.859302			

Significance level: *** p<0.01, ** p<0.05, * p<0.1

Table 8 provides the overall picture of the geopolitical risks and stock market dynamics of Southeast Asian Countries. The coefficient for GPR was marginally significant at the 10% significance level. This suggested that there might be a potential negative relationship between Geopolitical Risks and the Stock Market, but it was not statistically strong enough to be considered significant at the 5% level. The coefficient for GDP was not statistically significant at the 10% significance level. This implied that there was no significant relationship between Gross Domestic Product and the Stock Market based on the given model. In addition, the coefficient for TRADE was statistically significant at the 1% significance level. This suggested that Trade had a significant positive relationship with the Stock

Market. The individual analysis showed that some of the countries had significant negative impact of geopolitical risks on the stock market, while some of them had neutral impacts. At the same time, the study provided an overall impact and as shown in Table 8, the geopolitical risks had a minimal impact on the stock market. The result was minimal due to the negative and positive impacts from the from different countries of the region. Therefore, stock market investors of the region should be more defensive during any national and international geopolitical event.

CONCLUSION

This study investigated the dynamic effects of GPR on the stock market in four Southeast Asian countries, Indonesia, Malaysia, Philippines and Thailand. The study sample covered annual frequency data from January 2000 to March 2022. The summary of the empirical results is as follows. In Indonesia and Thailand, the GPR had a negative and significant impact on the stock market. This implied that the stock markets of the countries were highly volatile or responsive with the geopolitical events. At the same time, the stock markets of Malaysia and Philippines were more stable than the Indonesia and Thailand. Even the geopolitical events often impacted the stock markets positively in Malaysia and Philippines. The results of this study are in inline with the number of previous studies (Yang & Yang, 2021; Khan et al., 2021). Control variables also had an essential role in this study. There are two control variables: GDP and Trade. These empirical findings demonstrated that each stock market of fragile emerging economies adapted uniquely to global geopolitical unrest, depending on the regime's volatility state. The findings suggested that investors must exercise caution and monitor stock market volatility when taking geopolitical risks.

As markets such as Indonesia and Thailand offer a risk premium of global geopolitical risk, this could be advantageous for international investors and policymakers seeking to diversify risk and profit from global geopolitical risk. In addition, the effects of domestic geopolitical risk suggest that investors should not take country-specific geopolitical risks in all fragile emerging economies, despite the Southeast Asian stock market's positive response to domestic geopolitical uncertainty and unrest. In actuality, the perception that political decisions are always made for the benefit of economic agents is the only one that will evolve. Thus, it was stated that domestic geopolitical unpredictability is detrimental to all stock market activities because it reduces stock market participation and lowers stock prices. Therefore, investors' risk-taking in domestic geopolitical uncertainty will be punished.

There are a few important limitations to be aware of, even if this study offers insightful information about the connection between geopolitical risk and stock market dynamics in Southeast Asian nations. The first is that the study's emphasis on four nations—Indonesia, Malaysia, the Philippines, and Thailand—may have limited the findings' applicability to other areas. Furthermore, since global events are dynamic, the analysis only looked at events from January 2000 to March 2022; hence, the results may not include more current happenings. Additionally, as the study only used annual frequency data, it may have ignored shorter-term variations that could offer a more complex picture of how geopolitical risk affects stock markets right away.

Future studies in this field could broaden their coverage by analysing a larger number of Southeast Asian nations or, for a more thorough perspective, by expanding their analysis to a global scale. More recent data might be included by researchers in order to better understand how the geopolitical environment is changing and how it affects stock markets. Furthermore, a data frequency with different dimensions, such as quarterly or monthly, can provide a more thorough analysis of the stock markets' immediate responses to geopolitical developments. Further investigating the impact of additional control variables and taking into account distinct econometric techniques could improve the resilience and relevance of the results. Finally, during periods characterized by greater geopolitical risk, qualitative research techniques like surveys and interviews may offer deeper insights into investor feelings and decision-making processes.

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