



Geopolitical Conflicts and Stock Market Performance: Evidence from Pakistan

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Abstract

The study examines the impact of geographical risk on the performance of stock market. The study used geographical risk as explanatory variable while inflation, interest rate and exchange rate were used as peripheral variables. The study used data of PSX-100 index companies for four years ranging from 2021-24. Multiple regression analysis was conducted to reach conclusion about the relationships of variables. Before starting the regression analysis, the data was tested for OLS assumption like multicollinearity for unbiased results. The results of the model indicate that the relationship between geopolitical risk and stock market performance is statistically significant and negative, suggesting that higher geopolitical risk reduces PSX returns. The results also show that inflation has a significant negative impact on stock market performance. For the other control variables, exchange rate exhibits a negative and statistically significant relationship with stock returns, while interest rate also has a negative relationship but this relationship is not statistically significant. The model has an R^2 of 0.62, indicating that 62% of the variation in stock market performance is explained by the independent and control variables included in the analysis.

Keywords: Geographical Risk, PSX 100 Index, Interest, Inflation, Exchange rate.

Introduction

Financial markets across the world are very responsive to the international conflicts and other major events. Geopolitical risks emanating from the terrorists' attacks, diplomatic rifts and wars increase the volatility into the economic environment which is trickle down to the financial markets. Investors tend to react immediately to such events, adjusting their portfolios to mitigate perceived risks. These reactions can lead to disruptions in trade, fluctuations in investment flows, and overall declines in market confidence.

Developing economies, including Pakistan, are particularly vulnerable to international conflicts due to their less developed financial systems, higher political and economic uncertainty, and reliance on external trade and energy imports. Pakistan's strategic geographic location offers many advantages, but it also brings significant challenges. This combination of opportunities and risks exposes the country to regional tensions and potential conflicts. Consequently, international conflicts and regional instability can have a strong impact on the



performance of the Pakistan Stock Exchange (PSX), affecting both stock returns and market volatility.

The whole is coin as global village due to the interconnectivity of global financial markets. geopolitical shocks emanating outside Pakistan can quickly spread to domestic markets, affecting investor sentiment and market stability. It is very important for investor, policy makers, regulators and managers to comprehend how international conflicts influence stock market performance and develop strategies to mitigate potential risks.

This study investigates the effect of international conflicts on the performance of Pakistan's stock market, focusing on stock returns. By analyzing these dynamics, the research seeks to contribute to the comprehension of how geopolitical risk affects developing financial markets and to provide insights into risk management strategies in the context of Pakistan.

Literature Review

The role of international and geopolitical conflicts in the performance of a country's stock market cannot be overlooked. Turbulent conditions arising from terrorist attacks, wars, and diplomatic or regional disputes create significant uncertainty in the economic environment. Such instability often leaves a profound impact on the overall economy, including financial markets. Investors, particularly those participating in financial markets, are highly sensitive to these events and tend to react immediately to emerging geopolitical risks. These reactions are typically reflected in the form of increased market risk, disruptions in trade and investment flows, and a decline in investor confidence.

Numerous studies have examined the relationship between geopolitical risks and stock market performance. Dario Caldara and Matteo Iacoviello (2022) found that geopolitical and international conflicts increase the risk of doing business, which is often reflected in higher share price volatility in financial markets. Their study further suggests that such conflicts negatively affect corporate earnings and reduce the overall volume of business activities.

Similarly, Markus Brückner and Antonio Ciccone (2011) argue that stock markets respond strongly to unexpected geopolitical events. They emphasize that political violence and armed conflicts can hinder economic growth and weaken the performance of financial markets. Wars and political tensions create uncertainty in the economic environment, which adversely affects investor confidence and destabilizes macroeconomic conditions.

The impact of international conflicts is often more profound in emerging economies such as Pakistan due to relatively less developed financial structures and higher levels of uncertainty. Pakistan's geographical location provides certain strategic advantages; however, it also exposes the country to regional tensions and geopolitical conflicts. As a result, Pakistan frequently faces security and political challenges that affect its economic environment. These vulnerabilities often influence the performance of the country's financial markets. Empirical studies generally support the view that the Pakistan Stock Exchange experiences higher volatility during periods of political instability, regional tensions, and security threats. Such conditions tend to increase market uncertainty and negatively affect investor confidence.

The research conducted by Muhammad Shahbaz, Syed Jawad Hussain Shahzad, and Muhammad Aamir (2013) examined the impact of political and macroeconomic factors on the performance and development of Pakistan's



financial market. The findings of their study revealed that political instability and conflict negatively affect investor confidence and hinder the development of the financial market. A similar study was conducted by Aviral Kumar Tiwari and Muhammad Shahbaz (2014). Their findings largely support the results of the earlier study, indicating that political instability and political turbulence increase share price volatility in Pakistan's stock market.

The impact of international conflict on Pakistan's economy and financial markets is significant. These conflicts affect financial markets through various channels, including trade disruptions, fluctuations in oil prices, and changes in international capital flows. For instance, conflicts in the Middle East can directly influence Pakistan's economic conditions because the country heavily relies on energy imports from Gulf states. Consequently, any instability in this region often leads to higher energy costs and economic uncertainty in Pakistan. Empirical evidence also suggests that global economic shocks, including geopolitical crises, significantly influence stock returns and market volatility in Pakistan, (Nadeem Ul Hassan & Imran Khan 2019).

According to Rizwan Raheem Ahmed, Hafiz Muhammad Arshad, and Abdul Waheed (2018), the financial markets of developing countries tend to react more vigorously to conflicts or crises compared to those of developed economies. This heightened sensitivity is largely due to relatively less efficient financial structures and greater exposure to geopolitical and economic shocks. Such shocks increase uncertainty and significantly reduce investor confidence in Pakistan's financial markets.

Overall, the literature proposes that international conflicts have a significant impact on stock market performance, particularly in emerging economies like Pakistan. The Pakistan Stock Exchange is highly sensitive to geopolitical developments because of the country's regional security environment and economic vulnerabilities. Most empirical studies conclude that conflict events increase market volatility and lead to short-term declines in stock prices, although markets may gradually stabilize once uncertainty diminishes.

Methodology

In this section the research framework has been developed which offer basis for the selection of research method and hypothesis development. The operational definitions and calculations of outcomes and explanatory variables of the underlying study have been established by using standard procedures. The study will adopt quantitative research approach to examine the impact of geopolitical conflict on the performance of Pakistan Stock Exchange.

Methods

This study uses panel data for a four-year period from 2021 to 2024. The dependent variable is stock market performance, measured by the monthly returns of the PSX-100 Index. The independent variable is geopolitical risk, which is captured using the Global Geopolitical Risk (GPR) Index. This index includes indicators such as political instability, wars, and terrorism. Additionally, the study incorporates control variables which include inflation, interest rate, and exchange rate to account for other factors that may influence stock market performance and to ensure the robustness of the analysis. The study uses the population of all the companies listed PSX-100 index on a specific period for analysis. The list of study population is given in appendix-1.



To determine the impact of geopolitical risk on stock market performance, a multiple regression model including all theoretically relevant variables will be estimated. The model is presented in Equation 1.

$$R_t = \alpha + \beta_1 GPR_t + \beta_2 INF_t + \beta_3 EXR_t + \beta_4 IT_t + e_t \dots \dots \dots \text{(Equation-1)}$$

Before predicting the impact of geographical risk on the performance of stock market, there is a need to detect either the data met the important OLS assumption like multicollinearity, if not the unbiasedness of the results may question. Variance inflation factor (VIF) is a technique used to detect the multicollinearity. The results of the VIF test are provided in table-1.

Table 1: VIF Results

Variables	Co-efficient Variance	Uncentered VIF	Centered VIF
Geopolitical Risk	0.001	1.5912	1.0234
Inflation R _{tae}	0.0073	1.3276	1.1066
Interest R _{tae}	0.007	1.5123	1.1433
Exchange Rate	0.006	1.2436	1.0222
C	0.0004	4.6611	0.0000

According to the Variance Inflation Factor (VIF) test, a variable with a VIF value greater than 10 indicates the presence of multicollinearity and may be excluded from the analysis. In this study, the highest VIF value is 1.5912 for the geopolitical risk variable, which is well below the threshold of 10. Therefore, it can be concluded that multicollinearity is not a concern in the model.

Now the model provided in equation-1 is estimated.

Table 2: Results

Variables	Co-efficient	Standard Error	t-stats	p-value
Geopolitical Risk	.0.045	0.012	-3.75	0.000
Inflation R _{tae}	-0.008	-0.004	-2.00	0.046
Interest R _{tae}	-0.010	-0.006	-1.67	0.096
Exchange Rate	-0.015	0.007	-2.14	0.033
C	0.012	0.005	2.40	0.018

R-square = 0.62 Adjusted R-Square = 0.59

The results of the model presented in Table 2 indicate that the relationship between geopolitical risk and stock market performance is statistically significant and negative, suggesting that higher geopolitical risk reduces PSX returns. The results also show that inflation has a significant negative impact on stock market performance. For the other control variables, exchange rate exhibits a negative and statistically significant relationship with stock returns, while interest rate also has a negative relationship but is not statistically significant. The model has an R² of 0.62, indicating that 62% of the variation in stock market performance is explained by the independent and control variables included in the analysis.

Discussion

The underlying study presents substantial evidence that geographical risk impacts the stock market performance in Pakistan significantly. The regression results portray that geographical risk impact on stock market return is negative and statistically significant. The plausible explanation for this is that increasing geopolitical tensions reduce investor confidence which lead to plunge in stock



market returns. The finding related to the geographical risk is aligned with some important previous studies which provide evidence about the occurrence of terrorist's attack, skirmishes and other regional tensions increase market uncertainty and disrupt financial activities (Caldara & Iacoviello, 2022; Brückner & Ciccone, 2011).

The study also highlights that **inflation** negatively affects stock market performance in Pakistan, consistent with prior studies that link rising inflation to decreased investor confidence and lower returns (Shahbaz, Shahzad, & Aamir, 2013). Similarly, the **exchange rate** exhibits a significant negative impact on stock returns, reflecting the sensitivity of Pakistan's stock market to external economic conditions, especially given the country's dependence on imports and exposure to global financial shocks (Nadeem Ul Hassan & Imran Khan, 2019). On the other hand, the **interest rate** showed a negative but statistically insignificant effect, suggesting that short-term fluctuations in interest rates may not directly influence stock market performance in the same way that geopolitical and macroeconomic shocks do.

The results of this study back the argument that developing countries economies are more vulnerable to geographical shocks as compare to the advance countries due to the less developed financial infrastructure and lack of financial literacy, higher political and economic uncertainty and dependence on foreign trade and imports in the emerging countries like Pakistan (Ahmed, Arshad, & Waheed, 2018). The study also pointed out that Pakistan's strategic geographic location is offering opportunities and challenges simultaneously, which can quickly transmit shocks to domestic financial markets. The findings of this study are consistent with earlier research by Shahbaz et al. (2013) and Tiwari and Shahbaz (2014).

The high **R² value of 0.62** indicates that the model explains a substantial portion of the variation in PSX returns. This suggests that geopolitical risk, along with macroeconomic control variables, is a key determinant of stock market performance. The results also demonstrate that even short-term geopolitical events and international crises can have an immediate and measurable impact on emerging financial markets. This observation is consistent with the "global village" concept discussed in the introduction, highlighting the interconnectedness of global financial markets and the speed at which international shocks propagate (Caldara & Iacoviello, 2022).

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Appendix 1: Listed Companies of PSX-100 Index

1. Allied Bank Limited	2. Abbott Laboratories Limited	3. AGP Limited	4. Adamjee Insurance Company Limited
5. Air Link Communication Limited	6. Askari Bank Limited	7. Attock Petroleum Limited	8. Atlas Honda Limited
9. Attock Refinery Limited	10. Bank Alfalah Limited	11. Bank AL Habib Limited	12. Bannu Woollen Mills Limited
13. The Bank of Punjab	14. Bestway Cement Limited	15. Cherat Cement Company Limited	16. Cnergyico PK Limited
17. Colgate-Palmolive (Pakistan) Limited	18. Citi Pharma Ltd.	19. Dolmen City REIT	20. D.G. Khan Cement Company Limited
21. DH Partners Limited	22. Engro Fertilizers Limited	23. Engro Holdings Limited	24. Faysal Bank Limited
25. Fatima Fertilizer Company Limited	26. Fauji Cement Company Limited	27. Fauji Fertilizer Company Limited	28. Fauji Foods Limited
29. First Habib Modaraba	30. Gadoon Textile Mills Limited	31. Ghandhara Automobiles Limited	32. Ghani Glass Limited
33. Ghandhara Industries Limited	34. GlaxoSmithKline Pakistan Limited	35. Haleon Pakistan Limited	36. Habib Bank Limited
37. Honda Atlas Cars (Pakistan) Limited	38. HBL Growth Fund	39. Highnoon Laboratories Limited	40. Habib Metropolitan Bank Limited



41. The Hub Power Company Limited	42. Hum Network Limited	43. Ibrahim Fibres Limited	44. Interloop Limited
45. Indus Motor Company Limited	46. International Industries Limited	47. International Steels Limited	48. JDW Sugar Mills Limited
49. Javedan Corporation Limited	50. Kot Addu Power Company Limited	51. K-Electric Limited	52. Kohat Cement Company Limited
53. Kohinoor Textile Mills Limited	54. Lucky Core Industries Limited	55. Lotte Chemical Pakistan Limited	56. Lucky Cement Limited
57. Mari Energies Limited	58. MCB Bank Limited	59. Meezan Bank Limited	60. Mehmood Textile Mills Limited
61. Maple Leaf Cement Factory Limited	62. Millat Tractors Limited	63. Murree Brewery Company Limited	64. National Foods Limited
65. National Bank of Pakistan	66. Nestle Pakistan Limited	67. Nishat Mills Limited	68. Oil & Gas Development Company Limited
69. Pakistan Aluminium Beverage Cans Limited	70. Pak Elektron Limited	71. Pakistan Tobacco Company Limited	72. Pak-Gulf Leasing Company Limited
73. Pakistan International Bulk Terminal	74. Pioneer Cement Limited	75. Pakgen Power Limited	76. Packages Limited
77. Pakistan Oilfields Limited	78. Pakistan Petroleum Limited	79. Pakistan Services Limited	80. Pakistan State Oil Company Limited
81. Pakistan Stock Exchange Limited	82. Pakistan Telecommunication Company Ltd	83. Rafhan Maize Products Company Limited	84. Sazgar Engineering Works Limited
85. Standard Chartered Bank (Pakistan) Ltd	86. The Searle Company Limited	87. Shifa International Hospitals Limited	88. Sui Northern Gas Pipelines Limited
89. Service Industries Limited	90. Sui Southern Gas Company Limited	91. S.S.Oil Mills Limited	92. Systems Limited
93. Tariq Glass Industries Limited	94. Thal Limited	95. TPL REIT Fund I	96. TRG Pakistan Limited



97. United Bank Limited	98. Unity Limited	Foods	99. Unilever Pakistan Limited	Foods	100. Yousaf Weaving Mills Limited
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