

**Title :** Application of Prais-Winsten Regression in Analyzing the Relationship Between Natural Disasters and Stock Markets.

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## ABSTRACT

*This study analyzes the relationship between natural disasters, specifically storms, earthquakes, and droughts, on the stock indices of the world's five large stock markets: the United States, China, Japan, Germany, and India. By analyzing year-end closing prices from 2004 to 2022 across major indices, including the S&P 500, CSI 300, DAX, Nikkei 225, and BSE Sensex, we assess how these events influence investor behavior. Using panel regression analysis and the Prais-Winsten regression technique to address possible autocorrelation, our findings reveal that earthquakes significantly negatively affect stock markets, leading to an average decrease of 0.0745% in stock indices. In contrast, there is no evidence supporting the impact of storms and droughts on these markets.*

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