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Geopolitical Risks and Equity Returns: Does Size Matter?

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Abstract: In recent years, geopolitical risks and uncertainties have increasingly disrupted financial markets by introducing vulnerabilities that affect equity investment decisions, with firm size playing a critical role in determining resilience to such shocks. This study investigates the size-specific effects of GPR on equity returns across different market conditions. To achieve the objectives of this study, size-based JSE indices are employed as proxies for firms of varying capitalisations, in conjunction with the global and country-specific GPR indices developed by Caldara and Iacoviello (2022), covering the period from 1 May 2015 to 30 April 2025. A Markov Regime-Switching model is used to distinguish between bull and bear market regimes. The analysis yields three key findings: (I) the effects of domestic and global GPR are not uniform, (II) equity return sensitivity to GPR shocks is regime-dependent, and (III) the impact of GPR varies across firm sizes. These findings underscore the importance of a multidimensional approach to risk management, whereby investors and policymakers should consider both firm size and prevailing market regimes when assessing exposure to geopolitical risk.

Keywords: Company size; Geopolitical risk; Market regime; Return; Risk management

JEL Classification: F5; G10; G11; G12

1. Introduction and Background

In recent years, financial markets have been significantly disrupted by geopolitical risks and uncertainties. Defined as the uncertainty stemming from political unrest, cross-border tensions, or unpredictable government policies, GPR includes a wide range of events such as wars, diplomatic disputes, and regime changes that have the potential to cause substantial fluctuations in market behaviour (Bouoiyour et al., 2019; Caldara & Iacoviello, 2022). Moreover, GPR comprises possible economic, political, social, and military risks attributed to a country's association with international organizations and entities (Ahmad et al., 2024). Therefore, given the interconnectedness of the modern world, GPR can have far-reaching effects on both local and global economies, significantly influencing financial markets. In particular, GPR introduces uncertainties that impact investment

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decision-making in equity markets, often triggering risk aversion and prompting investors to shift away from equities toward safer assets such as gold or government bonds (Chiang, 2021; Nasouri, 2025).

Recent literature suggests that geopolitical uncertainties lead to shifts in market conditions, subsequently influencing equity markets in varying ways. Salisu et al. (2022) find that GPR is a significant predictor of equity returns in advanced markets. Ali et al. (2023) report that the equity market in the U.S. produces significant positive returns during extreme geopolitical threats, while other key markets fail to display similar results. In terms of emerging markets, Rawat and Arif (2018) document that India and China show resilience to geopolitical shocks, whereas Brazil and Russia are more responsive to these shocks. On the contrary, Bouras et al. (2019) find that both local and global GPR do not significantly influence equity returns in emerging markets where volatility is significantly impacted. Nasouri (2025) found notable differences between emerging and advanced economies. Specifically, the study revealed that the U.S. equity market, particularly in the information technology and financial sectors, experiences positive returns during periods of high geopolitical risk, while emerging markets face increased stock market volatility. More locally, Korsah et al. (2024) document that GPR does not significantly influence short-term returns on African stock markets, however these shocks intensify in the long-term. van der Merwe et al. (2023) report that the Johannesburg Stock Exchange (JSE) responds to global political changes immediately, however, there is a delayed response to local developments. Oyadeyi et al. (2024) find that African stock markets, including the JSE, respond negatively to black-swan geopolitical events, such as the Russia-Ukraine wars.

In theory, geopolitical risks can influence stock market returns through several channels. The Efficient Market Hypothesis (EMH), formalized by Fama (1970), asserts that asset prices fully incorporate all available information immediately. This implies that new geopolitical information and events are rapidly incorporated into asset prices, reflecting updated risk perceptions. The Modern Portfolio Theory (MPT), proposed by Markowitz (1952), asserts that rational investors seek to maximize returns whilst minimizing risk through the use of diversification. Thus, risk-averse investors may rebalance their portfolios, moving toward safer assets when geopolitical risks heighten, subsequently influencing asset prices. Contrary to the EMH and MPT, Behavioural Finance Theory asserts that investor psychology affects investment decisions and market outcomes (Abdeldayem & Aldulaimi, 2024). As such, during periods of increased geopolitical risk, fear and uncertainty may impede sentiment and lead to overreaction and excess volatility. The Adaptive Market Hypothesis, proposed by Lo (2004), imply that risk premiums evolve based on market conditions. As such, the effect of GPR on returns may be state-dependent.

Interestingly, despite the extensive body of literature examining the broader effects of geopolitical risk on equity markets globally, limited attention has been given to the varying responses among firms of different sizes. This oversight is particularly important because large capitalisation companies often have more diversified operations, greater access to financing, and more resilience in the face of shocks, while small capitalisation companies may lack such buffers, making them more vulnerable to external shocks like geopolitical uncertainty (Miklian & Hoelscher, 2022). Notably, Lim and Ismail (2022) find that small capitalisation companies are likely to experience higher growth rates compared to large capitalisation companies during bullish market conditions as their smaller size makes them more responsive to market optimism. However, Selemela et al. (2021) highlight that small companies are more susceptible to volatility than large companies during bearish conditions, as investors become more risk-averse and avoid the uncertainty associated with smaller firms. The findings of these

studies, therefore, suggest that the impact of risks and uncertainties is not uniform across all firms and varies based on company size and market conditions. As such, the objective of this study is to investigate the size-specific effects of GPR on equity returns under different market conditions, specifically examining the sensitivity of small, medium, and large capitalisation stocks on the JSE.

This study offers several key contributions to the existing body of literature. While numerous studies have examined the impact of GPR on equity returns in both developed and emerging markets, this is the first to offer a comprehensive analysis of how these effects vary across firms of different sizes. Given that risk absorption capacities tend to differ between small and large firms, this distinction is critical in determining whether larger firms exhibit greater resilience to GPR shocks. Moreover, there is a scarcity of research investigating the influence of GPR under varying market conditions. Given the time-varying nature of equity returns, this study provides valuable insights into whether the impact of GPR on firms of different sizes fluctuates across different market states. Finally, although there exists literature on various forms of political risk and their influence on the JSE, to the best of the author's knowledge, no prior research has specifically isolated and examined the effects of GPR on JSE-listed companies. In light of South Africa's increasing geopolitical uncertainty - particularly stemming from recent tensions with the United States - this study holds important implications for a range of stakeholders, including investors and policymakers.

This paper is structured as follows: The next section outlines the data and methodology employed in this study. This is followed by a presentation and analysis of the results obtained. The latter part of the study concludes and provides recommendations for stakeholders.

2. Data and Methodology

2.1. Data

To achieve the objectives of this study, the following JSE equity indices are assessed: FTSE/JSE All-Share Index, FTSE/JSE Top 40 Index, FTSE/JSE Mid Cap Index, and FTSE/JSE Small Cap Index. The FTSE/JSE All-Share Index is used as a proxy for the South African equity market as a whole, while the FTSE/JSE Top 40 Index is used as a proxy for large capitalization companies. The FTSE/JSE Mid Cap Index comprises medium-sized companies, while the FTSE/JSE Small Cap Index comprises small-sized companies. The ten-year sample period ranges from 01 May 2015 to 30 April 2025. Monthly closing prices of the indices are obtained from the IRESS database. Data on the control variables are extracted from IRESS and the South African Reserve Bank (SARB).

In terms of the independent variable, GPR is measured using the GPR index created by Caldara and Iacoviello (2022), which is a news-based proxy of adverse geopolitical events and associated risks. The index is available at both country-specific and global levels, and is widely used in recent empirical studies, including Zhang et al. (2023), Ahmad et al. (2024), Ahmed et al. (2025), and Le et al. (2025). Data on the GPR index is extracted from Iacoviello's website[1].

[1] Available at https://www.matteoiacoviello.com/gpr.

2.2. Methodology

To assess the dynamic nature of equity returns, this study employs the Markov Regime-Switching model introduced by Hamilton (1989). Markov Regime-Switching models incorporate the structural changes of hidden economic states in asset price dynamics (Elliott et al., 2010). Unlike traditional models which do not account for asymmetric features present in different financial market conditions, Markov Regime-Switching models enable the assessment of the non-linear dynamics inherent to contemporary financial market states (Afreen, 2021). This advantage is desirable from an economic perspective as it enables investors and other stakeholders to account for the non-constant behaviour of asset returns. Hence, the Markov Regime-Switching model is widely used in recent literature to survey financial market returns, including studies by Bouattour and Miloudi (2024), Buthelezi (2024), and Chipunza et al. (2025). The model is estimated as follows:

$$R_t = \alpha_{St} + \beta_{1,St}R_{t-1} + \beta_{2,St}\Delta GPR_t + \beta_{3,St}\Delta GPR_{t-1} + \beta_{4,St}\Delta LQ_t + \beta_{5,St}\Delta SENT_t + \beta_{6,St}\Delta EX_t + \beta_{7,St}\Delta INT_t + e_t \qquad e_t \sim N(0, \sigma_{St}^2) \tag{1}$$

In Equation (1), R_t represents the return of the index during month t computed as the first log difference in the current and previous closing prices. GPR_t is the value of the GPR index for month t and is estimated separately for country-specific (South Africa) and global GPR. To account for alternative explanations of equity returns, the following control variables are included: liquidity (LQ_t) computed using Amihud's (2002) illiquidity measure, market sentiment ($SENT_t$) proxied by the South African Volatility Index, exchange rates (EX_t) proxied by a weighted average exchange rate of the rand against twenty currencies of its most important trading partners, and interest rates (INT_t) proxied by the 91-day treasury bill rates. α_{St} and $\beta_{1,St}$ to $\beta_{7,St}$ represent coefficients that are state-dependent. The current study employs a two-state regime model to differentiate between bull markets and bear markets. The state-dependent standard deviations ($\sigma_{S_t}^2$) are used to classify Markov regimes into market states, whereby the state with the lower standard deviation (and thus volatility) is classified as the bull market, while the bear market is the regime with the higher standard deviation and volatility.

With respect to the transition probabilities, the study employs a two-state, first-order Markov process which assumes that the likelihood of being in the current state depends on the previous state, as follows:

$$p_{i,j} = P(S_t = j | S_{t-1} = i)\ ,\ i = 1, 2,\ j = 1, 2 \tag{2}$$

where p_{ij} represents the probability of transitioning from State i in period $t-1$ to State j in period t. This leads to the following transition matrix:

$$p(S_t = 1 | S_{t-1} = 1) = p$$

$$p(S_t = 2 | S_{t-1} = 1) = 1 - p$$

$$p(S_t = 2 | S_{t-1} = 2) = q$$

$$p(S_t = 1 | S_{t-1} = 2) = 1 - q$$

The transition matrix is then used to compute the average duration of a specific regime or market state as follows:

$$D_{i,j} = \frac{1}{1 - p_{i,j}} \tag{3}$$

3. Results and Analysis

3.1. Preliminary Results

A summary of the descriptive statistics for the main variables of interest, returns and changes in GPR, is presented in Table 1. All indices exhibit positive mean returns, suggesting that the indices are profitable on average. The average monthly return for the FTSE/JSE All Share Index is 0.43% with a standard deviation of 4.14%. A comparison of the size-based indices suggests that large companies (0.47%) tend to generate higher average monthly returns relative to small (0.31%) and medium-sized (0.15%) companies trading on the JSE. The improved performance of large companies may be attributed to several including better operational efficiency due to economies of scale, access to capital at cheaper rates, global diversification of revenue streams, and greater market liquidity due to institutional investor preference. In terms of GPR, the average monthly change in the GPR index for South Africa is 0.96%, but 0.24% for the global GPR index. Although the global GPR index is impacted by key international events such as the Russia-Ukraine war, U.S.-China trade wars, and conflicts in the Middle East, South Africa's domestic issues may cause its GPR levels to be persistently high. These domestic issues include internal power struggles, corruption scandals, civil unrest and protests, expropriation without compensation policies, hosting military drills with Russia, and recent tensions with the U.S.

Table 2 presents the correlation matrix for returns and changes in GPR. The highest correlation is seen between the JSE All Share Index and the JSE Top 40 Index (0.9924), which is expected given that the largest 40 companies listed on the JSE account for approximately 80% of the total market capitalization. All the size-based indices display moderate to high positive correlations with each other, suggesting that the returns of these indices move in tandem. Changes in domestic GPR exhibit low, positive correlations with the returns of all indices except the JSE Midcap Index which displays a negative correlation (-0.0435). This suggests that an increase in South Africa's GPR is accompanied by an increase in the returns of the overall market as well as large and small JSE-listed companies, however, the returns of medium-sized companies decrease, and vice versa. On the contrary, changes in global GPR is negatively correlated with the returns of the overall market and the returns of large companies, but positively correlated with the returns of medium and small companies. These correlation statistics highlight the varying correlations between both domestic and global GPR and companies of different sizes. However, these statistics do not provide any insight into how these relationships vary with market conditions, thereby emphasising the need for regression analysis.

Table 1. Summary of Descriptive Statistics for Returns and GPR Indices

	R_ALSI	R_TOP40	R_MID	R_SMALL	ΔGPR_ZAF	ΔGPR_Global
Mean	0.0043	0.0047	0.0015	0.0031	0.0096	0.0024
Median	0.0050	0.0045	0.0034	0.0055	0.0417	-0.0137
Maximum	0.1235	0.1329	0.0954	0.1433	2.9174	0.6963
Minimum	-0.1373	-0.1182	-0.2772	-0.2490	-2.4439	-0.6002
Std. Dev.	0.0414	0.0432	0.0486	0.0459	0.7789	0.2147
Skewness	0.0097	0.2036	-1.7184	-1.2716	0.1841	0.4892
Kurtosis	3.8444	3.3915	10.8735	10.4153	5.2460	4.0680
Jarque-Bera	3.5668	1.5951	369.0168	307.2727	25.8997	10.4895
Probability	0.1681	0.4504	0.0000	0.0000	0.0000	0.0053
Observations	120	120	120	120	120	120

Table 2. Correlation Matrix for Returns and GPR Indices

	R_ALSI	R_TOP40	R_MID	R_SMALL	ΔGPR_Global	ΔGPR_ZAF
R_ALSI	1					
R_TOP40	0.9924	1				
R_MID	0.7417	0.6620	1			
R_SMALL	0.6319	0.5533	0.8014	1		
ΔGPR_Global	-0.0544	-0.0597	0.0218	0.0365	1	
ΔGPR_ZAF	0.0864	0.1042	-0.0435	0.0549	0.2158	1

Table 3. Results of the Stationarity Tests

Variable	ADF	KPSS	ADF breakpoint
R_ALSI	-11.3169***	0.2187	-12.7676***
R_TOP40	-11.4143***	0.2334	-12.4365***
R_MID	-10.4315***	0.1036	-13.9021***
R_SMALL	-9.0255***	0.2787	-12.5688***
ΔGPR_ZAF	-7.3432***	0.1520	-20.6724***
ΔGPR_Global	-14.4003***	0.0801	-14.9717***
ΔSENT	-11.2735***	0.0430	-13.8944***
ΔEX	-12.0577***	0.0356	-13.3042***
ΔINT	-7.7575***	0.1315	-8.4381***
ΔLQ_ALSI	-8.3415***	0.1446	-18.1946***
ΔLQ_TOP40	-10.1201***	0.2420	-18.8058***
ΔLQ_MID	-12.8347***	0.2044	-16.6982***
ΔLQ_SMALL	-8.3894***	0.4482	-15.6940***

****, **, and * represent statistical significance at a 1%, 5%, and 10% level of significance, respectively.*

In order to proceed with regression analysis, the stationarity of the variables needs to be confirmed. The results of the tests for stationarity are presented in Table 3. The standard ADF test rejects the null hypothesis of a unit root in the series for all the variables at a 1% level of significance. In addition, the KPSS test fails to reject the null hypothesis of stationarity in the series for all the variables. Further, to test for stationarity in the presence of structural breaks, the ADF breakpoint test is conducted. The significant ADF breakpoint test statistics reject the null hypothesis of a unit root in the series for all variables. Together, the results of the three tests for stationarity confirm that all the variables are stationarity at levels, even in the presence of structural breaks.

3.2. The Influence of Domestic GPR on Equity Returns

Before interpreting the results of the Markov Regime-Switching models, it is essential to classify the underlying market regimes. This classification is based on an analysis of regime-specific standard deviations, where the regime exhibiting a lower standard deviation is identified as the bull regime, characterised by lower volatility, while the regime with a higher standard deviation is designated as the bear regime, reflecting higher volatility. Table 4 presents the regime-specific standard deviations along with their market classifications. In addition, the transition probabilities and average durations are provided. The transition probabilities suggest that, for all indices, the probability of moving from a bear regime in period $t-1$ to a bear regime in period t exceeds the probability of moving from a bull regime in period $t-1$ to a bull regime in period t. Hence, the average duration of the bear regime exceeds the bull regime for all indices. This suggests that bear market regimes are more prominent

than bull market regimes - a pattern consistent with the high volatility typically observed in emerging markets (Karanasos et al., 2022).

Table 4. Classification of Regimes in the Domestic GPR Model

	Regime 1				Regime 2			
	Std. Dev.	**Market**	$p_{1,1}$	$D_{1,1}$	**Std. Dev.**	**Market**	$p_{2,2}$	$D_{2,2}$
R_ALSI	0.0218	Bear	0.8473	6.5489	0.0178	Bull	0.8038	5.0977
R_TOP40	0.0189	Bull	0.7924	4.8173	0.0230	Bear	0.8836	8.5938
R_MID	0.0057	Bull	0.4601	1.8522	0.0334	Bear	0.8514	6.7281
R_SMALL	0.0258	Bear	0.7939	4.8526	0.0199	Bull	0.5499	2.2223

The results for the Markov Regime-Switching models are presented in Table 5, with a clear differentiation between bull and bear market conditions. With respect to the variable of interest, domestic GPR changes (both immediate and the previous month) do not significantly impact the overall market (R_ALSI) in bull regimes. However, current GPR changes exhibit a significant, positive impact on the overall market returns during bear regimes. These findings contradict the size-based analysis. Specifically, the size-based indices are significantly and positively influenced by domestic GPR changes in bull market regimes but are immune to these shocks in bear market regimes. Further analysis reveals that large and small JSE-listed companies respond positively to immediate domestic GPR shocks (ΔGPR_ZAF_t), whereas medium-sized companies respond positively to the lagged one-month shock (ΔGPR_ZAF_{t-1}). Remarkably, the magnitude of the effect is greatest amongst small companies (0.0173). These critical findings are discussed further in Section 3.4 on the discussion of the results.

For completion, the results of the regime-switching models in Table 5 indicate the presence of significant autocorrelation (R_{t-1}) in equity returns during both bull and bear market conditions. Autocorrelation in equity returns is widely reported (McKenzie & Faff, 2003; Pan, 2010; Chowdhury et al., 2017; Zhao et al., 2021) and may be attributed to fundamental and behavioural factors. In terms of the control variables, large companies respond positively to changes in the Amihud (2002) ratio, while small and medium companies respond negatively in bull markets. Given the negative relationship between the Amihud ratio and market liquidity, these findings imply that a decrease in liquidity fosters an increase in the returns of large companies in bull markets, while an increase in liquidity promotes an increase in the returns of small and medium companies. In bear markets, only small-sized companies are influenced by changes in liquidity, and this relationship contradicts the relationship reported for bull markets. For all indices, changes in sentiment, captured through the South African Volatility Index (SAVI), exhibit a consistent negative effect on returns in both market conditions. This finding coincides with Peerbhai et al. (2024) who report that implied volatility, captured through the SAVI, exhibits a significant impact on equity returns, including size-based indices. These findings highlight the crucial role of sentiment in investment decision-making processes and subsequent trade decisions.

Changes in exchange rates and interest rates also appear to be significant determinants of equity returns. Specifically, changes in exchange rates positively impact the returns of medium and small companies in bull markets, but negatively impact the overall market in bull markets and large companies in bear markets. These findings are consistent with prior empirical studies that underscore the pivotal role of exchange rates in explaining stock return dynamics on the JSE (Barr et al., 2007; Mlambo et al., 2013; Daggash & Abraham, 2017; Naidoo et al., 2025). In addition, changes in interest rates exhibit a positive effect on the returns of small and large companies in bull markets but a

negative effect on large company returns in bear markets. These results coincide with existing literature that identifies interest rates as important determinants of stock returns on the JSE (Oberholzer & von Boetticher, 2015; Mapfumo et al., 2023; Trecy et al., 2024).

Table 5. Markov Regime-Switching Results with Domestic GPR

	R_ALSI	R_TOP40	R_MID	R_SMALL
		Bull Market Regime		
α	-0.0050	0.0127***	-0.0227***	-0.0166*
R_{t-1}	-0.2658***	0.4812***	-0.1178***	-0.3813***
ΔGPR_ZAF_t	-0.0048	0.0150**	0.0018	0.0173*
ΔGPR_ZAF_{t-1}	0.0023	-0.0051	0.0114***	-0.0079
ΔLQ_t	0.0008	0.0101***	-0.0224***	-0.0128***
$\Delta SENT_t$	-0.3691***	-0.1562***	-0.2796***	-0.3095***
ΔEX_t	-0.3143**	-0.0770	0.7165***	0.4677**
ΔINT_t	-0.0610	0.3329***	0.0320	0.2303**
		Bear Market Regime		
α	0.0070*	-0.0010	0.0114***	0.0095**
R_{t-1}	0.2825**	-0.2350***	-0.1038	0.3021***
ΔGPR_ZAF_t	0.0154***	0.0035	0.0055	0.0035
ΔGPR_ZAF_{t-1}	-0.0020	0.0059	0.0019	0.0050
ΔLQ_t	0.0033	-0.0002	-0.0005	0.0073*
$\Delta SENT_t$	-0.1666***	-0.3303***	-0.1182***	-0.0328
ΔEX_t	0.1213	-0.1569*	0.0711	0.0823
ΔINT_t	0.2017*	-0.1084*	0.0910	-0.1599

****, **, and * represent statistical significance at a 1%, 5%, and 10% level of significance, respectively.*

3.3. The Influence of Global GPR on Equity Returns

Table 6 presents the regime-specific standard deviations used to identify the market state, along with the transition probabilities and durations. The transition probabilities and durations coincide with the domestic GPR models and indicate that JSE equity returns tend to follow bearish market conditions, characterised by high volatility, including different companies of different sizes.

Table 7 presents the results of the regime-switching models estimated with global GPR changes. The results suggest that global GPR shocks exhibit a negative impact on the overall market and large companies in bull markets but a positive impact on medium-sized companies. Interestingly, medium-sized companies display a consistently delayed response to GPR since only the lagged one-month variable (ΔGPR_Global_{t-1}) is significant, as is the case with domestic GPR. Further, global GPR does not significantly impact small companies in bull markets. Remarkably, changes in global GPR do not significantly influence JSE equity returns in bear markets, suggesting that the South African equity market is immune to global GPR shocks in bear market conditions, regardless of the size of the company. These key findings are discussed further in Section 3.4. The results of the control variables suggest that changes in liquidity, sentiment, exchange rates, and interest rates are significant determinants of equity returns, as discussed previously.

Table 6. Classification of Regimes in Global GPR Model

	Regime 1				Regime 2			
	Std. Dev.	Market	$p_{1,1}$	$D_{1,1}$	Std. Dev.	Market	$p_{2,2}$	$D_{2,2}$

R_ALSI	0.0231	Bear	0.8025	5.0638	0.0075	Bull	0.3087	1.4465
R_TOP40	0.0080	Bull	0.2171	1.2772	0.0243	Bear	0.7829	4.6070
R_MID	0.0052	Bull	0.0472	1.0495	0.0383	Bear	0.7145	3.5026
R_SMALL	0.0320	Bear	0.7104	3.4533	0.0173	Bull	0.7050	3.3898

Table 7. Markov Regime-Switching Results with Global GPR

	R_ALSI	R_TOP40	R_MID	R_SMALL
	Bull Market Regime			
α	0.0123***	0.0211***	-0.0060	-0.0043
R_{t-1}	0.7942***	0.7857***	0.0186	0.5154***
ΔGPR_Global_t	-0.0443***	-0.0644***	-0.0027	0.0220
ΔGPR_Global_{t-1}	-0.0030	-0.0483***	0.0746***	0.0394
ΔLQ_t	0.0148***	0.0134***	-0.0008	-0.0041
$\Delta SENT_t$	-0.0700***	-0.0689***	-0.2391***	0.0133
ΔEX_t	0.0021	0.1756**	0.3814***	-0.0642
ΔINT_t	0.2683***	0.2676***	0.3159***	-0.0941
	Bear Market Regime			
α	0.0027	0.0022	0.0073	0.0078
R_{t-1}	-0.1786**	-0.1889***	-0.1139	-0.1292
ΔGPR_Global_t	-0.0139	-0.0144	0.0073	0.0223
ΔGPR_Global_{t-1}	-0.0108	-0.0052	-0.0368	-0.0322
ΔLQ_t	0.0005	-0.0009	-0.0038	-0.0037
$\Delta SENT_t$	-0.3222***	-0.3233***	-0.1420***	-0.3447***
ΔEX_t	-0.0588	-0.1243	0.1040	0.5063***
ΔINT_t	-0.0888	-0.1031	-0.0453	0.0604

****, **, and * represent statistical significance at a 1%, 5%, and 10% level of significance, respectively.*

3.4. Discussion of Results Relating to GPR

The results of this study highlight three key findings with respect to geopolitical risk. Firstly, the effects of domestic and global GPR are not uniform. For instance, domestic GPR has a significant effect on small companies in bull markets, however, global GPR do not impact these companies regardless of the regime. Furthermore, when significant, domestic GPR exhibits a positive effect on equity returns while global GPR has a negative effect (with the exception of medium-sized companies in Table 7). This implies that an increase in domestic GPR tends to increase returns, but an increase in global GPR tends to decrease returns. Similarly, Bouras et al. (2019) report that the effects of country-specific and global GPR on emerging stock markets differ, however, the authors find that global GPR is more dominant relative to domestic shocks. The first key finding of the study implies that investors need to tailor portfolio diversification strategies to account for different types of geopolitical risk (domestic versus international) to enhance risk management and resilience because geopolitical risks are not homogeneous. In addition, the absence of a significant response to global GPR shocks across all indices in bear markets suggests that the JSE's resilience to global geopolitical shocks during market downturns may position it as a relatively stable investment destination in times of global uncertainty. For policymakers, understanding these asymmetric effects can assist them in designing more effective regulatory frameworks to boost investor confidence and market stability during geopolitical crises.

Secondly, the sensitivity of equity returns to GPR shocks is regime-dependent. As an example, domestic GPR shocks exhibit significant positive effects on the size-based indices during bull markets with no significant effect in bear markets. On the contrary, domestic GPR has a positive effect on the overall market (ALSI) during bear markets, with no significant effect in bull markets. Given the broader diversification and relative safety of the overall market, this result suggests a flight to stability during bear markets, whereby heightened domestic geopolitical risk positively influences overall market returns. The second key finding of this study is in line with Hoque et al. (2021) who report that the impact of GPR shocks depends on different volatility conditions or regimes. This finding implies that investors need to adapt risk management strategies to account for prevailing market regimes because static approaches may be insufficient since the effects of GPR are regime-specific. By doing so, investors may be able to improve returns and limit losses by better anticipating and responding to changes in sensitivity to geopolitical uncertainties. Like investors, policymakers need to consider the prevailing market regime when crafting interventions to maintain financial stability, particularly during periods of heightened sensitivity to GPR shocks.

Thirdly, the effects of GPR are not uniform across companies of different sizes. For instance, current domestic GPR shocks significantly impact large and small companies in bull markets, whereas there is a delayed response by medium-sized companies. Another illustration of this finding is in terms of global GPR, where global GPR shocks have a negative effect on large companies but a positive effect on medium-sized companies in bull markets. Furthermore, based on the magnitude of the GPR coefficient, small companies (0.0173) exhibit the strongest positive reaction to domestic GPR shocks, highlighting their vulnerability to external shocks. Similarly, Muzindutsi et al. (2023) report that the effects of political and economic risk shocks vary across JSE-listed companies of different sizes. This key finding of the study suggests that investors need to acknowledge that small, medium, and large companies respond differently to GPR shocks, thus necessitating size-aware risk mitigation strategies. Together, the findings of this study imply that investors should adopt a multidimensional approach to risk management, considering both firm size and market regime when evaluating exposure to GPR.

4. Conclusion

In recent years, geopolitical risks and uncertainties have increasingly disrupted financial markets by introducing vulnerabilities that affect equity investment decisions, with firm size playing a critical role in determining resilience to such shocks. This study investigates the size-specific effects of GPR on equity returns across different market conditions. To achieve the objectives of this study, size-based JSE indices are employed as proxies for firms of varying capitalisations, in conjunction with the global and country-specific GPR indices developed by Caldara and Iacoviello (2022), covering the period from 1 May 2015 to 30 April 2025. A Markov Regime-Switching model is used to distinguish between bull and bear market regimes. The analysis yields three key findings: (I) the effects of domestic and global GPR are not uniform, (II) equity return sensitivity to GPR shocks is regime-dependent, and (III) the impact of GPR varies across firm sizes. These findings underscore the importance of a multidimensional approach to risk management, whereby investors and policymakers should consider both firm size and prevailing market regimes when assessing exposure to geopolitical risk. Future research could investigate the industry-specific impacts of GPR to enhance understanding of how responses to GPR differ across sectors. Additionally, conducting cross-country comparisons may help elucidate the variations in national responses to GPR.

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