The Scientific Journal of Business and Finance

https://caf.journals.ekb.eg

The Impact of Global Geopolitical Risks on Countries' Economic Growth: Evidence from Emerging Economies.

Eman Mohamed Mohamed Selim

Professor of Economics at the Economics and Public Finance Department, Tanta University.

Published online: June 2025.

To cite this article: Selim, Eman Mohamed Mohamed. The Impact of Global Geopolitical Risks on Countries' Economic Growth: Evidence from Emerging Economies., **The Scientific Journal of Business and Finance**, 45, (2),269-296.

DOI: 10.21608/caf.2025.443541

***Corresponding author:** Eman.saleem@commerce.tanta.edu.eg

The Impact of Global Geopolitical Risks on Countries' Economic Growth: Evidence from Emerging Economies

Eman Mohamed Mohamed Selim
the Economics and Public Finance Department, Tanta University.

Article History
Available online June 2025.

Abstract:

Political instability and uncertainty caused by geopolitical events can stifle economic growth by influencing trade, financing, technology transfer, foreign direct investment, borrowing rates for firms and governments, and future expectations. Understanding the influence and size of geopolitical events on economic growth is critical for policymakers. The goal of this article is to investigate the impact of global geopolitical risks, as measured by Dario Caldara and Matteo Iacoviello's geopolitical risk (GPR) index, on the economic growth of eighteen emerging economies. The study uses panel regression estimates to evaluate the association between geopolitical risks and economic growth in the selected emerging economies. The study uses annual data from 1995 to 2023 for a basic sample of eighteen cross-section emerging economies and a subsample of the top ten emerging economies. The results show that one standard deviation of the global geopolitical risk index increases economic growth by 25 percent. The robustness check shows that a one percent increase in the country's specific geopolitical risk index increases economic growth of the top ten emerging economies by 3.6 percent on average. The ARDL results of the basic model show that GPRI has a positive and significant impact on economic growth. In the short run, changes in GPI in the current period have a negative and significant impact on economic growth. The coefficient of the error correction term of -0.649493 means that about 65 percent of the departure from long-run equilibrium is corrected each period.

Keywords: Economic growth, Geopolitical Risk Index, panel data regression. Fixed Effect Model

JEL Classification Codes: D81; F14; O24.

1. Introduction

Geopolitical risk has received increasing attention in recent years. According to Caldara & Iacoviello, (2022) Geopolitical risk is "the threat, realization, and escalation of adverse events associated with wars, terrorism, and any tensions between states and political factors that affect the peaceful course of international relations.

There are economic and financial channels through which geopolitical risk can affect economic performance. Geopolitical risk events can push up oil/energy prices and thereby increase inflation and interest rates and reduce economic activity. Moreover, major disruptions to international trade due to wars or increasing regional political fragmentation can reduce potential gross domestic product (GDP) and drag down stock market prices. Caldara and Iacoviello (2022) demonstrate that an increase in the GPR index is associated with reduced economic activity, and these impacts are associated with a range of macro channels ranging from human and physical destruction to increased military spending and precautionary behavior. Aiyar *et al*., (2023), investigate various transmission mechanisms of geoeconomic fragmentation, including commerce, money flows, and technological diffusion. If global geopolitical risks are high, there are concerns about the potential impact on macroeconomic stability. A surge in geopolitical risks that stifles cross-border trade and investment activity or raises uncertainty may lead capital flows to reallocate, supply chains to disrupt, or an economy to suffer severe demand shocks. This can lower asset prices, limiting financial institutions' intermediation capacities and raising the possibility of a negative macro-financial feedback loop.

Global geopolitical uncertainty has varying effects on advanced and emerging countries. When it comes to geopolitical instability, emerging countries fare far worse than advanced economies. Specifically, at the height of the geopolitical shock (three quarters later), developing economies experience a greater reduction in GDP growth than established economies. The impact on emerging countries is also longer lasting than in advanced countries. The apparent disparity between advanced and emerging blocks may be due to advanced countries' more mature and well-established institutional systems, which provide them with a stronger buffer against geopolitical uncertainty. On the other hand, many emerging countries are still in the process of solidifying their institutional environment, leaving them more exposed to geopolitical difficulties.

Jha *et al*., (2022), also argued that the direction of geopolitical risk's impact on a country's economic activity is decided by its economic conditions. When global tensions rise, advanced countries benefit, while emerging countries suffer. They also demonstrate how institutions such as democracy and economic freedom can boost economic growth in the face of geopolitical uncertainty.

The purpose of the paper is to examine the impact of geopolitical risk on the economic growth of selected emerging economies. Geopolitical risk is measured by the GPR index to capture all aspects of geopolitical risk. The study investigated the relationship between economic growth and

the GPR index with annual data for eighteen emerging economies over the period 1995-2023. For a robustness check, we undertake two procedures. First, we apply panel data regression using data from the top ten emerging economies. Second, we use a panel ARDL model to investigate the long-run and short-run impact of the GPRR index on the economic growth of the original sample of eighteen emerging economies. We control economic variables such as initial GDP, investment, government expenditure, trade openness, and inflation.

The paper is organized as follows: Section 2 briefly reviews the economic literature. Section 3 introduces the geopolitical risk index. Section 4 presents the economic model, the data, and the econometric methodology. Section 5 provides the results of the panel regression of the basic model with the country specific geopolitical risk index. GPRIC Section 6 provides estimation results of the basic model. Section 7 shows the robustness check. Section 8 provides the discussion, and section 9 provides the conclusion.

2. Literature Review

2.1. The literature review of the relationship between the geopolitical risk index and economic growth in emerging countries:

Soybigen *et al*., (2019), examine the relationship between geopolitical threats and growth using annual panel data from eighteen emerging nations spanning 1986 to 2016. They also use panel data with 5-year intervals to verify the robustness of the original estimates. Their findings show that a 10-point increase in GPR causes a0.2-0.4 percent decline in real GDP per capita growth rate.

Caldara and Iacoviello (2022), employed news-based indices to represent geopolitical concerns. According to their findings, geopolitical risks have a major negative impact on growth rates, The study suggests that an increase in the GPR index leads to lower economic activity through various macro channels, including capital destruction, increased military spending, and precautionary behavior.

Jha *et al*., (2022), investigate the effects of increased geopolitical risk on the economic growth of forty-one nations from 2000 to 2020. Their panel estimations, utilizing the feasible generalized least squares (FGLS) technique, reveal that geopolitical risk has a positive and significant impact on economic growth. Their results remain strong even after addressing endogeneity concerns using system GMM and auto-correlated explanatory growth factors with PCSE technique. Furthermore, they discover that, unlike emerging economies, advanced economies are more able to absorb and recover from geopolitical shocks. Furthermore, they concluded that institutional issues such as democracy and economic freedom promote economic growth. Their findings show that a percentage increase in geopolitical risk boosts economic growth by 3.3%. Their findings demonstrate that advanced economies can better manage geopolitical shocks and have higher growth rates than emerging economies. On the other hand, for the emerging economies they believe that geopolitical risk has a negative impact on their economic growth, demonstrating an asymmetric effect between the two sets of economies. Furthermore, they argued that

macroeconomic conditions and institutional considerations have an important influence in determining how geopolitical risk affects economic growth in forty-one nations. In the presence of institutional characteristics such as democracy and economic freedom, they find that the relationship between geopolitical risk and economic growth remains unchanged.

Ugurlu and Akkaya, (2022), study whether the negative impact of geopolitical risk on economic growth decreases with emerging economies' financial structures. Although past research has found that market-based structures do not increase economic growth, they provide light on why governments continue to adopt them. They primarily use panel autoregressive distributed lag (ARDL) data from 1985 to 2021, as well as country-based geopolitical risk (GPR) indices for fifteen emerging economies. The findings show that a market-based structure minimizes the negative impact of geopolitical risk on economic growth, which could be linked to increased transparency, making investors feel less hesitant to participate in market-based economies. They also demonstrate that a market-based system mitigates the negative effects of GPR on consumption, whereas a bank-based system has the same effect on long-term investment growth. As a result, they concluded that financial system is important in terms of growth if geopolitical risk is a significant element for a growing country.

Aydin *et al*., (2025) examine the impact of geopolitical risk on growth in selected Turkic republics and bordering governments facing geopolitical uncertainty, particularly their position in the global economy. This study investigates how geopolitical risk indices for the global economy (GE), the United States (US), and the Russian Federation (RS) affect the economic growth of Turkic republics and adjacent governments that follow open macroeconomic policies. This analysis uses panel data to analyze interdependence among cross-sectional countries. The study includes the following countries: Azerbaijan, Kazakhstan, Kyrgyzstan, Tajikistan, Türkiye, Turkmenistan, Mongolia, and Uzbekistan. The findings indicate that there are limiting effects of geopolitical risk on selected countries' economic growth performance.

SAVAS 2021, uses a complete analytical framework that includes the Kao and Westerlund co-integration test, the panel autoregressive distributed lag (ARDL) model, and the Dumitrescu Hurlin (2012) panel causality tests to examine the impact of geopolitical threats and economic growth on tourism receipts in advanced nations from 1996 to 2018. The Kao and Westerlund co-integration tests show that the tested variables are co-integrated. The ARDL model results show that geopolitical threats and economic growth are important long-term drivers of tourism receipts: a 1% rise in geopolitical risk increases revenues by around 0.13%, whereas a 1% increase in GDP increases receipts by 3.23%. These data illustrate the sustained nature of their influence on tourism receipts over a prolonged time.

(Soltani *et al*., 2021), investigate the effects of financial development, foreign direct investment (FDI), and geopolitical risk on economic growth in MENA countries. They investigate geopolitical tensions using the geopolitical risk index created by Caldara and Iacoviello in 2016. They use the Panel Vector Auto-regression (PVAR) model to analyze a panel of MENA nations; the results

demonstrate that the financial development variable has no effect on economic growth of a number of the MENA countries but influences others. This small influence of financial development on economic growth is primarily due to the quality of MENA nations' financial systems, which have remained underdeveloped despite efforts to enhance them. On the other hand, higher GPR results in greater economic vulnerability in the MENA countries, therefore the military policies of countries and the influence of wars in the region hinders the development of specific economies and fails to attract foreign investors and promote economic progress.

2.2.Literature review of the relationship between subsets of geopolitical risk and economic growth

Several studies as Park and Bali (2017) & (Cebotari *et al.,* 2024), in literature have examined the effects of wars, terrorism incidents, revolutions, coups, and political transitions on national growth rates.

Gaibulloev & Sandler 2008, report panel data for 18 Western European countries to determine the distinct effects of domestic and international terrorism on income per capita growth from 1971 to 2004. The paper combines domestic and transnational terrorist incidents to assess the growth implications of the two primary kinds of terrorism. Each new transnational terrorist incidence per million people affects economic growth by around 0.4 percentage point. Domestic terrorism has a far lesser influence on growth, which is half this amount. They suggest that the negative impact of terrorism on growth is proportional to the extent of terrorism in the sample nations, providing a better estimate of the average outcome in most sample countries. Domestic and transnational terrorism have been found to have a detrimental impact on investment shares. Counterterrorism operations also increase government spending, which drives down growth-promoting investment. We demonstrate that the mechanisms by which domestic and international terrorism affect growth differ. They believe that global terrorism works by crowding out investment, but domestic terrorism works by increasing government spending. To support our empirical model, they run numerous sensitivity tests.

Alesina *et al.,* (1996), examine the effect of government changes as a proxy for political instability on economic growth in 113 countries between 1950 and 1982, concluding that political stability reduces growth, particularly when the government changed because of a coup. In another study.

Murdoch & Sandler (2002), examine the influence of civil wars on economic growth using a sample of African, Asian, and Latin American countries from 1960 to 1995, and their findings clearly show that civil wars had a negative impact on per capita income growth both at home and in neighboring countries.

In a cross-sectional study that analyzes the effect of sixty-two variables on economic growth, Sala-I-Martin (1997), shows that wars, revolutions, and coups negatively affect countries' growth rates.

2.3. Literature Review of determinants of Economic Growth

Solow 1956, proposed in his article that economists begin their analysis of economic growth by assuming a normal neoclassical production function with decreasing returns to capital. He demonstrated that the steady-state level of income per capita is determined by two external variables: savings rates and population growth. Because saving and population growth rates range between countries, different countries achieve distinct steady states. Solow's model makes simple, testable predictions regarding how these variables influence steady-state income. The higher the rate of savings, the wealthier the country. The country becomes poorer as its population grows faster.

According to MRW 1992, an augmented Solow model that includes both human and physical capital accumulation accurately describes cross-country data. They also look at the Solow model's implications for standard of living convergence, or whether poor countries grow faster than rich countries. Their evidence suggests that, holding population growth and capital accumulation constant, countries converge at the rate predicted by the augmented Solow model.

According to Levine and Renelt (1992), a large body of research employs cross-country regressions to look for empirical links between long-run growth rates and a variety of economic policy, political, and institutional variables. They investigate whether previous studies' conclusions are robust or sensitive to slight changes in the conditioning information set. They discover that all outcomes are fragile. They do, however, find a strong positive association between growth and the percentage of investment in GDP, as well as between the investment share and the foreign trade-to-GDP ratio. They explain the circumstances in which there is evidence of per capita output convergence.

Barro & Lee (1994), in an outstanding empirical investigation of the causes of economic growth, discover that growth is positively connected to male schooling but adversely related to female schooling. According to Stokey (1994), this is primarily due to the influence of four Asian countries (Hong Kong, Singapore, Taiwan, and Korea) with very high levels of growth but very low levels of female schooling, and removing the female education variable would call into question the statistical significance of the male education variable. They used deletion diagnostics and partial scatter plots to identify influential observations. They then investigate the sensitivity of their results to removing specific nations from the sample and female education from their growth equations. The obtained results indicate the weak nature of the significant negative effect of female education and the significant positive effect of male education in the Barro-Lee model.

Barro's 1996 empirical findings for a panel of around one hundred nations from 1960 to 1990 clearly support the broad concept of conditional convergence. Higher initial schooling and life expectancy, lower fertility, reduced government consumption, better maintenance of the rule of law, lower inflation, and improvements in the terms of trade all contribute to an increase in the growth rate for a given starting real per capita GDP. For the given values of these and other variables, growth is negatively correlated with the beginning level of real per capita GDP. Political

freedom has a minimal effect on growth, but there is some evidence of a nonlinear relationship. At low levels of political rights, expanding these rights promotes economic growth. However, after a reasonable quantity of democracy has been attained, a further expansion reduces growth. In contrast to the small effect of democracy on growth, there is a strong positive influence of the standard of living on a country's propensity to experience democracy.

Alesina *et al*., (1996), explore the association between political instability and per capita GDP growth in 113 countries from 1950 to 1982. They define political instability as the likelihood of a government collapse, and they build a model in which this measure of political instability and economic development are linked. They conclude that in countries and time periods with a high tendency for government collapse, growth is much lower than elsewhere.

Barro's 2003, cross-country panel regression results reveal that disparities in per capita growth rates are systematically related to a set of quantifiable explanatory variables. One effect is a conditional convergence term, which states that the growth rate increases when the initial level of real per capita GDP is low in comparison to the starting amount of human capital in the form of educational attainment and health, and for given values of other variables reflecting policies, institutions, and national characteristics. Growth is positively correlated with the rule of law and the investment ratio, and adversely correlated with the fertility rate, the ratio of government consumption to GDP, and the inflation rate. Growth grows with positive changes in terms of trade and with increased international openness, but the latter effect is surprisingly weak.

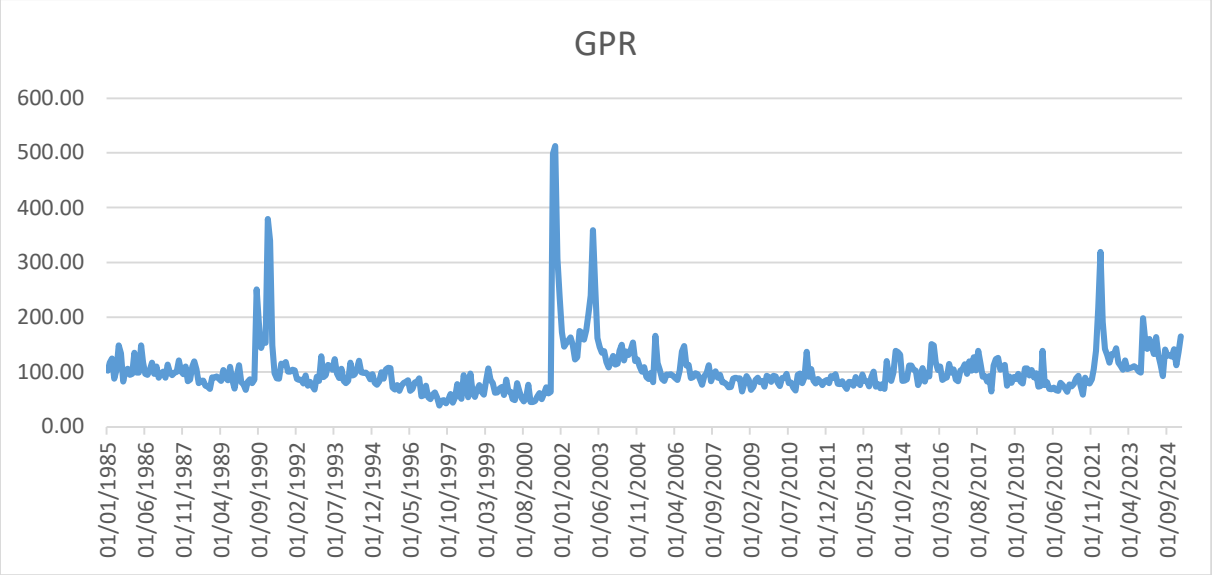
Teixeira and Queiros (2016) employ a growth model that includes variables from both the supply side and demand side to examine the direct and indirect effects of human capital on economic growth, including the interaction of human capital with countries' industrial specialization. They discovered that human capital and the dynamics of productive specialization in countries are critical variables for economic growth, based on dynamic panel data estimates. Furthermore, they found that the combination of human capital and structural change in highly knowledge-intensive businesses has a major impact on economic growth. However, the magnitude of this influence varies depending on the country and the period under consideration.

3. Geopolitical Risk Index

Caldara and Iacoviello (2022), propose a news-based assessment of negative global developments and accompanying hazards. Thet defined geopolitical risk as the danger, realization, and amplification of negative events linked with wars, terrorism, and other tensions between states and political factors that disrupt the peaceful development of international relations. The geopolitical risk (GPR) index rises around the two world wars, the start of the Korean War, the Cuban Missile Crisis, and after 9/11. Higher geopolitical risk predicts decreased investment and employment, as well as an increased likelihood of disasters and larger downside risks. The GPR index's negative repercussions are caused by both the threat and the occurrence of adverse geopolitical events. They supplement their aggregate measurements with geopolitical risk indicators at the industry and firm

levels. Investment declines more in industries exposed to aggregate geopolitical risk. Higher firm-level geopolitical risk correlates with lower firm-level investment.

Caldara, D., & Iacoviello, M. (2022), Create the GPR index by calculating the number of articles published each month that discuss negative geopolitical developments and associated risks. The current GPR index began in 1985 and is based on automated text searches of the electronic archives of ten newspapers: the Chicago Tribune, the Daily Telegraph, the 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 selection of six newspapers from the United States, three from the United Kingdom, and one from Canada indicates their desire to chronicle events with worldwide significance and implications. Every month, the index calculates the number of articles highlighting escalating geopolitical dangers divided by the total number of published articles.



Recent GPR (Index: 1985:2019=100)

4. Economic Model, Data, and Econometric Methodology

4.1. The Economic Model

Methods explaining differences in income levels and in growth rates can be broadly grouped into three classes: growth accounting, growth regressions, and calibration.

We apply the growth regressions method to economic growth, which entails estimating regressions with growth rates as the dependent variables. The original contribution was a highly influential study by Robert Barro (1991), that created a standard specification. The equation to be estimated resembles this:

$$y_{i,t} = X'_{i.t}\beta + \alpha \log(y_{i,t-1}) + \varepsilon_{i,t}$$

Where $y_{i,t}$ is the growth rate of country from period t-1 to period t $X'_{i.t}$ is a vector of variables that can affect a country's growth rates at steady state and along the transition path to the steady state. β is a vector of coefficients, $y_{i,t-1}$ is a country's i output in the previous period t-1. α is the coefficient to measure convergence. $\varepsilon_{i,t}$ is the random term that represents all other variables not included among the explanatory variables in the equation.

4.2. Data

We collected annual data on economic, geopolitical risk, and stability economic variables from 1995 to 2023 for eighteen emerging countries. The economic data sources were the World Bank's World Development Indicators (WDI). Geopolitical risk index is from. https://www.matteoiacoviello.com/gpr.htm

Table 1: Data Definition

Variable / Appreciation	Definition /Source
GDP per capita (constant 2015 US$) GDP	"GDP per capita is gross domestic product divided by midyear population. GDP is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources. Data are in constant 2015 U.S. dollars. WDI"
GDP per capita growth (annual %) GDPPERG	"Annual percentage growth rate of GDP per capita based on constant local currency. GDP per capita is gross domestic product divided by midyear population. GDP at purchaser prices is the sum of gross value added by all WDI."
Global Geopolitical Index GPRI	Data downloaded from https://www.matteoiacoviello.com/gpr.htm on February DD, 2025").
Country Specific Geopolitical Index GPRC	Data downloaded from https://www.matteoiacoviello.com/gpr.htm on February DD, 2025").
Gross Capital Formation (%GDP) GCFGDP	"Gross capital formation (formerly gross domestic investment) consists of outlays in addition to the fixed assets of the economy plus net changes in the level of inventories. Fixed assets include land improvements (fences, …..) WDI"
Government Final Consumption (%GDP) GGFCGDP	"Government final consumption expenditure (GFCE) is an aggregate transaction amount on a country's national income accounts representing government expenditure on goods and services that are used for the direct satisfaction of individual needs (*individual consumption*) or collective needs of members of the community (*collective consumption* It consists of the value of the goods and services produced by the government itself other than own-account capital formation and sales and of purchases

	by the government of goods and services" produced by market producers that are supplied to households—without any transformation – as social transfers"
Inflation Rate INF	"Inflation, as measured by the annual growth rate of the GDP implicit deflator, shows the rate of price change in the economy. The GDP implicit deflator is the ratio of GDP in current local currency to GDP in constant local currency"
Population	"The annual population growth rate for year t is the exponential rate of growth of the midyear population from year t-1 to t, expressed as a percentage. Population is based on the de facto definition of population, which counts all residents regardless of legal status or citizenship."
Openness	"Exports of goods and services (% of GDP plus Imports of goods and services (% of GDP. WDI"
Life Expectancy at Birth	"Life expectancy at birth used here is the average number of years a newborn is expected to live if mortality patterns at the time of its birth remain constant in the future. It reflects the overall mortality level of a population and summarizes the mortality pattern that prevails across all age groups each year. "

Because global and country-based GPR data is available monthly, we convert the data to annual via the average method.

Table 2: Descriptive Statistics

	GDPPERG	LOG(GDPP(-1))	GPRI	GCFGDP	POPG	GGCE	INF
Mean	2.680882	8.760015	99.96000	24.66992	1.172801	14.56310	8.659430
Median	3.010064	8.832798	92.34500	23.10393	1.109637	14.07295	5.520690
Maximum	13.63582	10.42497	176.3000	46.66012	5.411491	29.32164	135.3689
Minimum	-14.48915	6.430848	50.91000	10.85391	-2.553768	5.693508	-16.55885
Std. Dev.	3.858754	0.796019	31.41339	7.080608	0.994945	4.065167	13.42225
Skewness	-0.879450	-0.430802	1.005328	0.903385	1.015669	0.544085	4.378238
Kurtosis	4.826101	2.985598	3.318179	3.542788	7.130965	3.304738	29.33896
Jarque-Bera	134.9958	15.59392	87.02354	74.73974	445.0154	26.81658	16178.75
Probability	0.000000	0.000411	0.000000	0.000000	0.000000	0.000002	0.000000
Sum	1351.165	4415.048	50379.84	12433.64	591.0915	7339.805	4364.353
Sum Sq. Dev.	7489.660	318.7242	496360.8	25217.91	497.9279	8312.367	90+618.89
Observations	504	504	504	504	504	504	504

4.3.Econometric Methodology: Panel Data Regression

$$Y_{it} = \beta_0 + \beta_1 X_{it} + \mu_t + \omega_i + \varepsilon_{it}$$

Estimated methods for panel data regression are

1. Pooled OLS
2. Fixed effect model (Least square dummy variable LSDV), within group (WG), First difference (FD)
3. Random effects model.

Fixed effects models explicitly account for the effect of country heterogeneity.

$$Y_{it} = \beta_{0i} + \beta_1 X_{it} + \mu_t + \omega_i + \varepsilon_{it}$$

$\omega_i = unobserved$ Heterogeneity (country dependent error term)

ω_i is fixed over time but varies cross sectionally.

μ_t= unobserved time - dependent error - term (factors affecting the dependent variable that vary with time but not across countries.

The LSDV model accounts for heterogeneity by allowing different intercept in the pooled data. It does this with the use of dummy variables.

Differences in the interceptions capture the unique characteristics of the countries. The term fixed effects are because although the interceptions vary across countries, they are fixed over time. It is time invariant and as a result has no subscript t.

The Random Effect Model:

$$Y_{it} - \bar{Y}_i = \beta_0(1 -) + \beta_1(X_{1,it} - \overline{X_{1\imath}) + \beta_2(X_{2,\imath t} - \overline{)} + V_{\imath t} - \bar{\bar{V}}_{\imath}}$$

Fixed Effects Model FEM Versus Random Effects Model REM: the Hausman Test.

Statement of the hypothesis

$$H_0 = REM\ is\ the\ appropriate\ estimator.$$

$or\ H_0$: $COV(\omega_i, X_{it}) = 0 (i.e. REM\ is\ correct\ estimator)$

$$H_A = FEM\ is\ the\ appropriate\ estimator$$

$$or\ COV(\omega_i, X_{it}) \neq 0$$

5. two Methods For the robustness check

We applied two methods of robustness checks. We first estimate the equation (1) using the same dependent and independent variables for a sample of the top ten emerging economies with country-based GPR instead of the global GPR.

We second apply Panel ARDL on the original economic model of the eighteen emerging economies to investigate and compare the impact of GPR on real per capita GDP growth rate in the long run and the short run. We estimate the panel ARDL by Pooled Mean Group (PMG).

Long run Model

$$GDPPERG_{it} = \alpha_{i0} + \alpha_{1i}GPRI_{it} + \alpha_{2i}GDSGDP_{it} + \alpha_{3i}GGCE_{it} + \alpha_{4i}POPG \quad + \alpha_{5i}INF_{it} + \alpha_{6i}Trade_{it} + \alpha_{7i}Lifeexpectency_{it} + u_{it}$$

Error Correction

$$\Delta y_{it} = \sum_{k=1}^{p-1} \lambda^{*}\Delta y_{i,t-k} + \sum_{k=0}^{q-1} \delta'_{ik}\Delta x_{i,t-k} + \varphi(y_{i,t-1} + \beta' x_{i,t-1} + \xi_{it}$$

Short Run Causality

$$\Delta y_{it} = \sum_{k=1}^{p-1} \lambda^{*}\Delta y_{i,t-k} + \sum_{\boldsymbol{k=0}}^{\boldsymbol{q-1}} \boldsymbol{\delta'_{ik}\Delta x_{i,t-k}} + \varphi(y_{i,t-1} + \beta' x_{i,t-1} + \xi_{it}$$

6.Estimation Results of the Basic Model

Table 3: Panel Data Fixed Effect Regression

Dependent Variable: GDPPERG
Method: Panel Least Squares
Sample (adjusted): 1996 2023
Periods included: 28
Cross sections included: 18
Total panel (balanced) observations: 504

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	29.90463	5.272	5.671960	0.0000
LOG (GDPPER (-1))	-1.915601	0.831	-2.304179	0.0216
GPRI	**0.008167**	0.004586	1.780735	0.0756
GCFGDP	0.216187	0.044	4.894642	0.0000
GGCE	-0.571448	0.094396	-6.053702	0.0000
INF	-0.027346	0.013249	-2.064036	0.0396
POPG	-1.376130	0.238970	-5.758591	0.0000
EXGDP+IMGDP	0.017595	0.011074	1.588848	0.1128
EXPECTANCY	-0.104052	0.097149	-1.071055	0.2847

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.368068	Mean dependent var	2.680882
Adjusted R-squared	0.335017	S.D. dependent var	3.858754
S.E. of regression	3.146678	Akaike info criterion	5.180781
Sum squared resid	4732.956	Schwarz criterion	5.398612
Log likelihood	-1279.557	Hannan-Quinn criter.	5.266228
F-statistic	11.13642	Durbin-Watson stat	1.885044
Prob(F-statistic)	0.000000		

GDPPERG, GDPP, GPRI, GCFGDP, GGCE. INF, EXGDP+IMGDP and life expectancy are GDP per capita growth rate, GDP per capita, global geopolitical Risk index, gross capital formation, general government final consumption, Trade Openness, and life expectancy at birth.

Regression as a whole is significant. The F-statistics are significant with a value of 11.136, along with a zero p-value, suggesting that the regression model is a good fit for the data and that the independent variables contribute significantly to explaining the variance of the dependent variable. We can reject the null hypothesis for an F-test in regression that all the regression coefficients are equal to zero, meaning the independent variables have no effect on the dependent variable.

The coefficient of determination (R-squared) measures that almost 37 percent of the variations in the dependent variable is explained by the regression model. The estimated coefficient on the log of per capita GDP lagged one period is negative and significant. The growth rate is inversely related to the absolute level of initial per capita GDP, holding other explanatory variables constant. The magnitude of the estimated coefficient implies that convergence occurs at the rate of about 190 percent per year. According to this coefficient, a one-unit decline in the log of per capita GDP would raise the growth rate by 1.9 percent.

The estimated coefficient on the global geopolitical risk index GPRI is positive and significant; a one percent increase in geopolitical risk increases economic growth by 0.8 percent.

The estimated coefficient on the global GPRI is economically small.

The estimated coefficient on the ratio of domestic investment to GDP is positive and statistically significant, 0.22 with P value = 0.0000. A one percent increase in the ratio of domestic investment to GDP would increase economic growth by 22 percent.

The estimated coefficient in inflation is negative and statistically significant. This coefficient implies that a one percent increase in the inflation rate lowers the growth rate on impact by 0.027 percent with p value = 0.04.

The estimated coefficient on the population growth rate is negative and highly significant: -1.38 (P value = 0.0000). A one percent decline in the population growth rate raises economic growth by 1.38 percent.

The estimated coefficient of the government consumption ratio is negative and significant: -0.57 (p value = 0.000). This estimate implies that a reduction in the ratio by one percent would raise the growth rate by 0.57.

The estimated coefficient on the openness variable is positive but insignificant, 0.017595 Hence, there is no statistical evidence that greater international openness induces economic growth.

The estimated coefficient of life expectancy at birth is 0.104052, negative and insignificant, and indicates that better health does not explain economic growth.

Table 4: Panel Data Regression Fixed Effect with Standardized GPRI

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	30.71695	5.278836	5.818888	0.0000
LOG(GDPP(-1))	-1.915601	0.831359	-2.304179	0.0216
SGPRI	**0.253001**	**0.142077**	**1.780735**	**0.0756**
GCFGDP	0.216187	0.044168	4.894642	0.0000
GGCE	-0.571448	0.094396	-6.053702	0.0000
POPG	-1.376130	0.238970	-5.758591	0.0000
INF	-0.027346	0.013249	-2.064036	0.0396
EXGDP+IMGDP	0.017595	0.011074	1.588848	0.1128
LIFEEXPECTENCY	-0.104052	0.097149	-1.071055	0.2847
Effects Specification				
Cross-section fixed (dummy variables)				
R-squared	0.368068	Mean dependent var		2.680882
Adjusted R-squared	0.335017	S.D. dependent var		3.858754
S.E. of regression	3.146678	Akaike info criterion		5.180781
Sum squared resid	4732.956	Schwarz criterion		5.398612
Log likelihood	-1279.557	Hannan-Quinn criter.		5.266228
F-statistic	11.13642	Durbin-Watson stat		1.885044
Prob(F-statistic)	0.000000			

GDPPERG, GDPP, SGPRI, GCFGDP, GGCE. INF, EXGDP+IMGDP and Life-expectancy are GDP per capita growth rate, GDP per capita, Standardized global geopolitical Risk index, gross capital formation, general government final consumption, Trade Openness, and life expectancy at birth

Table 4 includes all the above-mentioned variables except that global geopolitical risk index is standardized SGPRI. The regression is significant with F-statistics 11.13642 and *p* value= 0.0000. Replacing global geopolitical risk index in its average for its standardized dorm did not change the significance and the signs of the explanatory variables.. The estimated coefficient on SPRI remains positive and significant with *p* value = 0.07. A one standard deviation of global geopolitical risk index increases economic growth by 25 percent.

Table 5: Panel Regression Fixed Effect with GPRIC

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	28.14598	5.445447	5.168719	0.0000
LOG(GDPP(-1))	-1.723145	0.839459	-2.052685	0.0406
GPRIC	**-1.255765**	**0.835271**	**-1.503423**	**0.1334**
GCFGDP	0.201477	0.043414	4.640812	0.0000
POPG	-1.384558	0.239072	-5.791371	0.0000
GGCE	-0.587329	0.094449	-6.218490	0.0000
INF	-0.028631	0.013248	-2.161138	0.0312
EXGDP+IMGDP	0.019137	0.011027	1.735524	0.0833
LIFEEXPECTENCY	-0.081778	0.097427	-0.839372	0.4017
Effects Specification				
Cross-section fixed (dummy variables)				
R-squared	0.366870	Mean dependent var		2.680882
Adjusted R-squared	0.333756	S.D. dependent var		3.858754
S.E. of regression	3.149660	Akaike info criterion		5.182675
Sum squared resid	4741.932	Schwarz criterion		5.400507
Log likelihood	-1280.034	Hannan-Quinn criter.		5.268123
F-statistic	11.07915	Durbin-Watson stat		1.846500
Prob(F-statistic)	0.000000			

GDPPERG, GDPP, GPRIC, GCFGDP, GGCE. INF, EXGDP+IMGDP and Life-expectancy are GDP per capita growth rate, GDP per capita, Standardized global geopolitical Risk index, gross capital formation, general government final consumption, Trade Openness, and life expectancy at birth.

In table 5 we replace the global geopolitical risk index GPRI with the country specific geopolitical risk index GPRIC. The coefficient of GPRIC -1.2tt765 is negative but insignificant with p value = 0.1334.

7. The Robustness Check

For robustness check, we first estimate the economic growth equation for a subsample including the top ten emerging economies (Argentina, Brazil, China, Mexico, Poland, South Africa, South Korea, and Türkiye) with Pooled OLS panel regression. Then we estimate the economic growth equation for the basic model of the eighteen emerging economies by an alternative methodology: the Panel ARD Model

7.1. Panel regression for the Top Ten Emerging Economies Using Country Specific GPR Index

Table 6: Empirical Results of the Top 10 Emerging Economies with country specific geopolitical risk index GPRIC

	Model 1 GDPERG	Model 2 GDPPERG	Model3 GDPPERG	Model4 GDPPERG	Model 5 GDPPERG	Model6 GDPPERG	Model 7 GDPPERG	Model 8 GDPPERG
C	11.40063	8.278123	16.97760	18.36780	18.19443	17.47552	17.84615	22.61247
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
LOG (GDPPER (-1))	-1.073916	-0.989190	-	-	-	-	-1.46201	-
	0.0000	0.0001	1.704181	1.611620	1.654267	1.507519	0.0003	0.825922
			0.0000	0.0000	0.0000	0.0000		0.0023
GPRC	**7.027247**	**4.810703**	**3.557414**	**3.694801**	**3.706893**	**2.906107**	**2.942161**	**3.322266**
	0.0000	**0,0005**	**0.0082**	**0.0061**	**0.0062**	**0.0324**	**0.0328**	**0.0328**
GCFGDP		0.098060	0.091641	0.076964	0.079983	0.094820	0.096795	0.068467
		0.0007	0.00000	0.0079	0.0099	0.0023	0.0036	0.0036
POPGROWTH			-	-	-	-	-	-
			2.222220	2.495287	2.479218	2.453212	2.482842	2.554681
			0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
GGFCGDP				-	-	-	-	-
				0.109609	0.094456	0.101629	0.104421	0.180738
				0.1128	0.2213	0.1821	0.1813	0.1813
TRADE					0.003836	-	-0.00302	0.006690
					0.7744	0.002871	0.8219	0.8219
						0.8301		
INF						-	-	-
						0.044199	0.044357	0.057709
						o.0028	0.0028	0.0028
LIFEEXPECTANCY							-	-
							0.010464	0.041518
							0.8671	0.8671
ADJUSTED R Squared	0.136478	0.168074	0.235977	0.253265	0.261832	0.285489	0.285562	0.302322
F-Statistics	23.75898	20.39482	23.23797	19.19659	16.31643	15.69691	13.68976	13.09609
	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Total Penel Observations	289	289	289	289	289	289	283	282

Note: GDPPERG, GDPPER, GPRC, GCFGDP, POPGROWTH, GGFCGDP. TRADE, INF, Life Expectancy sre real GDP per capita, real GDP per capita growth rate, the Country specific geopolitical risk index, Country GPR is the number of GPR articles mentioning adverse events of the country divided by total number of newspaper articles the investment to GDP ratio, inflation rate, sum of exports and imports as a percentage of GDP, and the final government expenditure as a percentage of GDP.

Table 6 provides the Pooled OLS estimation results of eight models of the top ten emerging economies in which real per capita gross domestic product is the dependent variable. The second column of Table 5 reports the estimation results of Model 1. In model 1 and in all the eight models the estimated coefficient of log (GDPP (-1) is negative and significant, which shows the conditional convergence in accordance with the neoclassical growth theory.

A one-unit decline in the log of real per capita GDP lagged one year would raise economic growth by 1.35 percent on average. The results show that the coefficient of the GPRC index is positive and significant at the 1 percent level. The results indicate that a one unit increase in the GPRC index increases the real per capita GDP growth rate by 7.03 percentage points. When we include gross capital formation as an independent variable in Model 2, we find that GPRIC coefficient remains positive and significant. On the other hand, the GPRC index remains positive and significant at the 5% level with a coefficient of 4.8.

The results of Model 3 show that population growth is highly significant and has a negative effect on the growth rate. A one percent increase in population reduces the real GDP per capita growth rate by 2.2 percentage points.

The estimated coefficient on GPRC (3.5) remains positive and significant after adding population growth in model three. Adding trade openness and government expenditure in Models 4 and 5 does not change the results. However, Trade openness and government general final consumption are insignificant in all models. Inflation

rate has a negative and significant coefficient in model 6, 7, and 8 where an increase in inflation rate by one percent reduces real per capita GDP between 4- 5 percent. Adding economic freedom in model 8 did not change the results.

In all models, the GPRC index has a positive and significant coefficient at 1% level. On average, a one percent increase in the GPRC index causes a 0.84 percentage points increase in the growth rate. As a result, we find that the estimation results of the top ten emerging economies models are in line with the estimation results of the original model of the eighteen emerging economies.

All the results conclude that geopolitical risk is an important determinant of the growth rate of countries and a rise in geopolitical risk significantly reduces the growth rate.

7.2. Results of the Original Model Using the Panel ARDL Model

The empirical Process

1.We run panel unit root test – to confirm no variable is ≥ I(2) 2. Then we specify Panel ARDL cointegration model 3. We estimate models with PMG, MG, or DFE 4. We use Hausman Test to determine appropriate estimator 5. Interpret result: • Cointegration – joint causality • ECT – speed of adjustment • Long-run causality • Short-run causality.

Table 6: Unit Root Test Level

	Levin, Lin & Chu t*	Im, Pesaran and Shin W-stat	ADF - Fisher Chi-square	PP - Fisher Chi-square
GDPPERG	-9.51182 (0.0000)	-10.1377 (0.0000)	173.832 (0.00000)	269.915 (0.00000)
GDPP	4.60692 (1.0000)	6.97686 (1.0000)	14.3806 (0.9995)	17.1387 (0.9967)
GCFGDP	-3.87613 (0.0001)	-4.93511 (0.0000)	93.7367 (0.0000)	95.4372 (0.0000)
GOV	-1.07077 (0.1421)	-1.48311 (0.0690)	52.8067 (0.0350)	47.6531 (0.0926)
POPG	1.80644 0.0354	-1.4724 0.0704	56.3989 0.0164	44.3435 0.1602
Trade	-1.68457 (0.0460)	-0.77249 (0.2199)	35.7826 (0.4788)	35.4779 (0.4932)
INF	-0.39485 (0.3465)	-6.51553 (0.0000)	127.732 (0.0000)	228.805 (0.0000)
Life expectancy	-4.97881 (0.0000)	0.03098 (0.5124)	36.4461 (0.4479)	63.8687 (0.0029)

Table 7 : Unit Root Tests First Difference

	Levin, Lin & Chu t*	Im, Pesaran and Shin W-stat	ADF - Fisher Chi-square	PP - Fisher Chi-square
D(GDPPERG)	-18.9669 0.0000	-20.3466 0.0000	359.479 0.0000	436.909 0.0000
D(GDPP)	-9.63962 0.0000	-9.86129 0.0000	167.599 0.0000	257.800 0.0000
D(GCFGDP)	-9.60100 0.0000	-11.4518 0.0000	193.590 0.0000	302.718 0.0000
D(GGCE)	-9.46724 0.0000	-11.0828 0.0000	186.113 0.0000	295.884 0.0000
D(POPG)	-8.7019 0.0000	-12.5061 0.0000	214.808 0.0000	177.987 0.0000
D(EXGDP+IMGDP)	-11.9289 0.0000	-13.5433 0.0000	232.409 0.0000	303.906 0.0000
D(INF)	-8.02901 0.0000	-16.1570 0.0000	288.056 0.0000	400.441 0.0000
D(Life expectancy)	-16.8176 0.0000	-16.5692 0.0000	242.524 0.0000	288.097 0.0000

The real per capita GDP growth rate, the ratio of gross capital formation to GDP and the life expectancy are stationary at level I(0). Real GDP per capita, general government consumption to GDP ratio, inflation rate m trade openness and population growth are stationary at first difference. I (1).

ARDL cointegration method is required when modeling with mix of I(1) and I(0) regressors.

Table 9: Panel ARDL MODEL ESTIMATION: Pooled Mean Group (PMG)

Dependent Variable: D(GDPPERG)
Method: ARDL
Sample: 1997 2023
Included observations: 486
Maximum dependent lags: 2 (Automatic selection)
Model selection method: Akaike info criterion (AIC)
Dynamic regressors (2 lags, automatic): GPRI GDSGDP GGCE POPG INF EXGDP+IMGDP LIFEEXPECTENCY
Fixed regressors: C
Number of models evaluated: 4
Selected Model: ARDL (2, 2, 2, 2, 2, 2, 2, 2)

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
Long Run Equation				
GPRI	**0.025538**	**0.003943**	**6.476735**	**0.0000**
GDSGDP	0.134434	0.037769	3.559358	0.0005
GGCE	-0.375267	0.103170	-3.637381	0.0003
POPG	-1.298616	0.211208	-6.148530	0.0000
INF	-0.260328	0.039998	-6.508610	0.0000
EXGDP+IMGDP	0.023394	0.010683	2.189767	0.0296
LIFEEXPECTENCY	-0.194617	0.056066	-3.471190	0.0006
Short Run Equation				
COINTEQ01	-0.649493	0.089653	-7.244559	0.0000
D(GDPPERG (-1))	-0.160601	0.079253	-2.026430	0.0440
D(GPRI)	**-0.018241**	**0.005946**	**-3.067786**	**0.0024**
D(GPRI(-1))	-0.007754	0.010290	-0.753517	0.4520
D(GDSGDP)	-0.135438	0.305789	-0.442913	0.6583
D(GDSGDP (-1))	0.187060	0.173603	1.077513	0.2825
D(GGCE)	-3.238740	0.660912	-4.900413	0.0000
D(GGCE(-1))	0.867680	0.593735	1.461393	0.1454
D(POPG)	1.236739	3.162673	0.391042	0.6962
D(POPG(-1))	4.757517	5.589988	0.851078	0.3957
D(INF)	-0.034267	0.131604	-0.260379	0.7948

D(INF(-1))	0.050458	0.060128	0.839170	0.4023
D(EXGDP+IMGDP)	0.010410	0.119132	0.087382	0.9305
D(EXGDP(-1)+IMGDP(-1))	-0.110321	0.106973	-1.031298	0.3036
D(LIFEEXPECTENCY)	0.673011	0.506586	1.328521	0.1855
D(LIFEEXPECTENCY(-1))	-0.845314	0.507666	-1.665100	0.0974
C	11.56703	1.615619	7.159506	0.0000
Mean dependent var	-0.071150	S.D. dependent var		4.710620
S.E. of regression	2.139373	Akaike info criterion		4.165663
Sum squared resid	956.5753	Schwarz criterion		6.718632
Log likelihood	-774.2380	Hannan-Quinn criter.		5.165593

*Note: p-values and any subsequent tests do not account for model selection.

SUMMARY OF PMG RESULTS LONG RUN

• PMG estimator assumes long -run slope homogeneity. • It therefore estimates one long -run coefficient for each regressor. SHORT RUN: • PMG estimator allows short - run coefficients to vary across groups.

Long run Model

$$GDPPERG_{it} = \alpha_{i0} + \alpha_{1i}GPRI_{it} + \alpha_{2i}GDSGDP_{it} + \alpha_{3i}GGCE_{it} + \alpha_{4i}POPG \quad + \alpha_{5i}INF_{it} + \alpha_{6i}Trade_{it} + \alpha_{7i}Lifeexpectency_{it} + u_{it}$$

- Selected model is ARDL (2 2 2 2 2 2 2 2) , meaning that 2 lags are included for each variable.
- GPRI, saving to GDP, and Trade to GDP have positive and significant long run effects on GDP per capita growth rate.
- If GPRI rises (falls) by 1 percent, GDP per capita rises(falls) by 0.025 percent.
- If Saving (investment) to GDP rises (falls) by 1 percent, GDP per capita rises (falls) 0.134 percent.
- If trade rises (falls) by 1 percent, GDP per capita rises (falls) by 0.0233 percent.
- Government expenditure, population growth, and inflation rate have a negative and significant impact on GDP per capita growth rate.
- If government expenditure rises (falls) by 1 percent, GDP per capita falls (rises) by 0.375 percent.
- If population growth rises (falls) by 1 percent, GDP per capita falls (rises) by 1.298 percent.
- If the inflation rate rises (falls) by 1 percent, GDP per capita falls (rises) by 0.260 percent.

Error Correction Model

$$\Delta y_{it} = \sum_{k=1}^{p-1} \lambda^* \Delta y_{i,t-k} + \sum_{k=0}^{q-1} \delta'_{ik} \Delta x_{i,t-k} + \varphi(y_{i,t-1} + \beta' x_{i,t-1} + \xi_{it}$$

- Speed of adjustment is the coefficient of the cointegration equation: $\hat{\varphi}$
- Cointegration equation is the error-correction term (ECT): $y_{i,t-1} + \beta'_i x_{it}$
- Estimated coefficient: $\hat{\varphi}$=-0.649493
- This coefficient has the correct sign (negative) and is significant at 0.05 level.
- The coefficient value of -0.649493 means that about 0.65 percent of departure from long-run equilibrium is corrected each period.
- Because $\hat{\varphi}$ is negative and significant, we can also conclude that variables are cointegrated and all the regressors jointly Granger cause GDP per capita growth rate in the long - run.

Short Run Causality

$$\Delta y_{it} = \sum_{k=1}^{p-1} \lambda^* \Delta y_{i,t-k} + \sum_{k=0}^{q-1} \delta'_{ik} \Delta x_{i,t-k} + \varphi(y_{i,t-1} + \beta' x_{i,t-1} + \xi_{it}$$

- Changes in GPRI in the current period has a negative and significant effect on GDP per capita growth rate (coefficient = -0.018241) at 0.05 level.
- However, previous changes in GDPI do not have significant impact on GDP per capita growth rate.
- Changes in government expenditure in the current period have a negative and significant impact on GDP per capita coefficient = -3.238740 at 0.05 level.
- However, previous changes in government expenditure do not have significant impact on GDP per capita growth rate.
- Past changes in life expectancy at birth up to the first lag have a negative and significant effect on GDP per capita growth rate. Coefficient = -0.845314

8. Discussion

Industrialization, urbanization, and policy reforms all contribute to emerging economies' faster GDP growth than developed markets do. Emerging economies' governments prioritize manufacturing and trade to create jobs and boost consumer spending.

The significant and positive effect of geopolitical risk on GDP per capita in the long run presented in this study could simply be due to the different data sets used or because these developing countries have emerged economically throughout time with market-based financial systems, yielding differing outcomes from previous and current data samples.

Ugurlu-Yildirim, E.; Ordu-A. A 2022, study explores how different financial systems affect economic growth, and they claim that market-based financial structures have a binding effect by mitigating the detrimental impact of GPR on economic growth. They use panel ARDL methodology, and their dataset covers 15 emerging markets: Argentina, Brazil, China, Colombia, India, Indonesia, Korea, Malaysia, Mexico, Philippines, Russia, Saudi Arabia, South Africa, Thailand, and Turkey from 1986 to 2021. Their findings show that market-based systems reduce the negative impact of geopolitical risk on economic growth in the long run, while the opposite is true in the short run.

Sevastianova (2009), demonstrates that there is no clear relationship between conflict and economic growth, as war does not necessarily reduce GDP and may even increase it. Civil conflict has been shown to diminish income in most cases (as in Angola, Chad, and Congo), but in India, it has increased. The impact of international war on the economy is more ambiguous: GDP per capita fell in Egypt, Iran, and Uganda during wartime, while it increased in Israel, Syria, and China. (Sevastianova 2009) believes that wars can increase productivity by mobilizing resources.

9. Conclusion

In this paper, the relationship between the global GPR index and economic growth is examined using annual data for eighteen emerging economies (Argentina, Brazil, Chile, China, Colombia, Malaysia, Mexico, Philippines, Poland, Saudi Arabia, South Africa, South Korea, Thailand, and Turkey) over the period 1995-2023 is examined. As control variables, we used the LOG of GDP per capita lagged one period, the ratio of domestic investment to GDP, the ratio of general government final consumption expenditure to GDP, the inflation rate, trade openness, and life expectancy at birth. We used two methods to check for the model robustness and stability. We first run the basic model for a sample of the top ten emerging economies and replace the global geopolitical risk index with the country specific risk index. We estimate the Panel ARDL examine the long run and the short run impact of global geopolitical risk index using data of the eighteen emerging economies using data of the eighteen emerging economies.

For the robustness check of the basic model, we used panel data for the top emerging economies (Argentina, Brazil, China, Mexico, Poland, South Africa, South Korea, and Turkey) with a country-specific geopolitical risk index (GPR) over the period 1994-2023 and a panel ARDL model for the original sample of the eighteen emerging economies.

The results of the basic model show that the effect of the global GPR index on economic growth is positive and significant for the eighteen emerging economies in the long-run. The country-specific geopolitical index has a negative and insignificant impact on economic growth.

As for the subsample model with the top ten economies, the panel regression shows that the country-specific geopolitical risk index (GPRIC) has a positive and significant coefficient and that a one percent increase in GPRIC increases the real per capita growth rate by 3.6 percent on average.

In the panel ARDL, the global geopolitical risk index, GPRI, has positive and significant long-run effects on economic growth. If GPRI rises (falls) by 1 percent, GDP per capita rises (falls) by 25 percent. In the short run, changes in GPRI in the current period have a negative and significant effect on GDP per capita growth rate (coefficient = -0.018241) at the 0.05 level of significance. However, previous changes in GDPI do not have a significant impact on GDP per capita growth rate.

References

Aiyar, M. S., Chen, M. J., Ebeke, C., Ebeke, M. C. H., Garcia-Saltos, M. R., Gudmundsson, T., ... & Trevino, M. J. P. (2023). *Geo-economic fragmentation and the future of multilateralism*. International Monetary Fund.

Alesina, A., Özler, S., Roubini, N., & Swagel, P. (1996). Political instability and economic growth. Journal of Economic Growth, 1(2), 189-211.

Acemoglu, D. & Johnson, S. (2007). Disease and development: The effect of life expectancy on economic growth. Journal of Political Economy, 115(6), 925–985.

Aydin, H. İ., Bălăcescu, A., & Căruntu, G. A. (2025). The Effects of Geopolitical Uncertainties on Growth: Econometric Analysis on Selected Turkic Republican Countries and Neighboring States. Économies, 13(3), 83. https://doi.org/10.3390/ economies13030083

Barro, R. J., 1991, Economic growth in a cross section of countries. Quarterly Journal of Economics May, 407-443.

Barro, R.J.(1996.) "Determinants of Economic Growth: A Cross-Country Empirical Study," NBER Working Papers 5698, National Bureau of Economic Research, Inc.

Barro, R. J. (2003). Determinants of economic growth in a panel of countries. Annals of Economics and Finance, 4, 231-274.

Batten, J. A., & Vo, X. V. (2009). An analysis of the relationship between foreign direct investment and economic growth. Applied Economics, 41(13), 1621-1641.

Caldara, D. and Iacoviello, M. (2022), "Measuring geopolitical risk", *American Economic Review*, Vol. 112, No 4, 1194-1225.

Caldara, Dario, and Matteo Iacoviello. 2022. "Measuring Geopolitical Risk." *American Economic Review* 112 (4): 1194–1225.DOI: 10.1257/aer.20191823

Campante, F., Sturzenegger, F. and Velasco, A. 2021. Advanced Macroeconomics: An Easy Guide. Ch. 7. 'Proximate and fundamental causes of growth', pp. 87–112. London: LSE Press. DOI: https://doi.org/10.31389/lsepress.ame.g License: CC-BY-NC 4.0.

De Gregorio, J. (1991). The Effects of Inflation on Economic Growth: Lessons from Latin America, IMF Working Paper WP/91.

Ecenur Ugurlu-Yildirim & Beyza Mina Ordu-Akkaya, (2022.) "Does the impact of geopolitical risk reduce with the financial structure of an economy? A perspective from market vs. bank-

based emerging economies," Eurasian Economic Review, Springer; Eurasia Business and Economics Society, vol. 12(4), pages 681-703, December.

Fischer, S. (1993). The Role of Macroeconomic Factors in Growth, NBER Working Paper No. 4565.

Gaibulloev, K., & Sandler, T. (2008). Growth consequences of terrorism in Western Europe. Kyklos, 61(3), 411-424

Jha, Saakshi, and Bhushan, Sunny and Nirola, Nupur, (2022)" Does Geopolitical Risk Matter for Economic Growth? Cross-Country Evidence Available at SSRN: https://ssrn.com/abstract=4383520 or http://dx.doi.org/10.2139/ssrn.4383520

Levine, Ross & Renelt, David, 1992. "A Sensitivity Analysis of Cross-Country Growth Regressions," American Economic Review, American Economic Association, vol. 82(4), pages 942-963, September.

Mankiw, N.G., Romer, D. and Weil, D.N., 1990. A contribution to the empirics of economic growth (No. w3541). National Bureau of Economic Research.

Murdoch, J. and Sandler, T., (2002). Civil wars and economic growth: A regional comparison. *Defense and Peace Economics*, *13*(6), pp.451-464.

Polachek, S. W., & Sevastianova, D. (2011). Does conflict disrupt growth? Evidence of the relationship between political instability and national economic performance. The Journal of International Trade & Economic Development, 21(3), 361–388. https://doi.org/10.1080/09638191003749783

Sala-I-Martin, X. (1997). I just ran two million regressions. American Economic Review, 87(2), 178-83.

Savas, Younus 2024 : Assessing the Impact of Geopolitical Risk and Economics growth on Toursim in Addvanced Countries" Nazilli İktisadi ve İdari Bilimler Fakültesi Dergisi, 2024, Cilt 5, Sayı 2, 185-199

Solow, Robert M. 1956. "A Contribution to the Theory of Economic Growth," The Quarterly Journal of Economics, President and Fellows of Harvard College, vol. 70(1), pages 65-94

Soltani, H., Triki, M. B., Ghandri, M., & Abderzag, F. T. (2021). Does geopolitical risk and financial development matter for economic growth in MENA countries? Journal of International Studies, 14(1), 103-116. doi:10.14254/2071-8330.2021/14-1/7

Ugurlu-Yildirim, E., Ordu-Akkaya, B.M. 2022Does the impact of geopolitical risk reduce with the financial structure of an economy? A perspective from market vs. bank-based emerging economies. *Eurasian Econ Rev* 12, 681–703 (2022). https://doi.org/10.1007/s40822-022-00219-3

تأثير المخاطر الجيوسياسية العالمية على النمو الاقتصادي للبلدان: أدلة من الاقتصادات الناشئة.

إيمان سليم: أستاذة الاقتصاد بقسم الاقتصاد والمالية العامة بجامعة طنطا.

Eman.saleem@commerce.tanta.edu.eg

emansaleem@aucegypt.edu

الملخص: يمكن أن يؤدي عدم الاستقرار السياسي وعدم اليقين المرتبطين بالأحداث الجيوسياسية إلى الحد من النمو الاقتصادي من خلال ممارسة تأثير كبير على التجارة والتمويل ونقل التكنولوجيا والاستثمار الأجنبي المباشر وتكاليف الاقتراض للشركات والحكومات والتوقعات المستقبلية. يعد فهم تأثير وحجم الأحداث الجيوسياسية على النمو الاقتصادي أمرا بالغ الأهمية لصنع السياسات. الغرض من الورقة هو التحقيق في تأثير المخاطر الجيوسياسية العالمية التي يقاس بمؤشر المخاطر الجيوسياسية (GPR) الذي وضعه داريو كالدارا وماتيو ياكوفيلو على النمو الاقتصادي لثمانية عشر اقتصادًا ناشئًا مختارًا. تستخدم الدراسة تقدير الانحدار لتقييم العلاقة بين المخاطر الجيوسياسية والنمو الاقتصادي للاقتصادات الناشئة المختارة. تستخدم الدراسة بيانات سنوية من عام 1995 إلى عام 2023 لعينة أساسية من ثمانية عشر اقتصادًا ناشئًا وعينة فرعية من الاقتصادات الناشئة العشرة الأولى. تظهر النتائج أن الانحراف المعياري الوحيد لمؤشر المخاطر الجيوسياسية العالمي يزيد من النمو الاقتصادي بنسبة 25 في المئة. ويظهر فحص المتانة أن زيادة بنسبة 1 في المئة في مؤشر المخاطر الجيوسياسية المحددة في البلاد تزيد من النمو الاقتصادي للاقتصادات الناشئة العشرة الأولى بنسبة 3.6 في المئة في المتوسط. تظهر نتائج ARDL للنموذج الأساسي أن GPRI له تأثير إيجابي وكبير على النمو الاقتصادي. على المدى القصير، يكون للتغيرات في GPI في فترة العضو التناسلي تأثير سلبي وكبير على النمو الاقتصادي. يعني معامل مصطلح تصحيح الخطأ −0.649493 أنه يتم تصحيح حوالي 65 في المئة من الخروج عن التوازن طويل المدى في كل فترة.

الكلمات المفتاحية: النمو الاقتصادي، مؤشر المخاطر الجيوسياسية، انحدار بيانات اللوحة. نموذج التأثير الثابت رموز تصنيف JEL: D81 ؛ F14; [أو24]