Do Geopolitical Risks Raise or Lower Inflation?*

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PRELIMINARY AND INCOMPLETE

Abstract

Do geopolitical risks raise or lower inflation? In this paper, we use historical data for a large panel of countries to quantify the relationship between inflation and geopolitical tensions. Using a structural VAR model estimated on global data from the 1970s, we find that global geopolitical risks increase inflation, with the inflationary effect of higher commodity prices and supply chain disruptions more than offsetting the deflationary effects of lower consumer sentiment and tighter financial conditions. Using country-level panel data since 1900, we confirm that country-specific geopolitical risks are inflationary. The inflationary effects are larger in countries with high military expenditures, public debt, and experiencing exchange rate depreciation.

KEYWORDS: Geopolitical Risk; War; Inflation; Commodity Prices; Fiscal Policy; Exchange Rates; Vector Autoregressions; Panel Data Estimation.

JEL CLASSIFICATION: C30. D80. E31. F44. H56.

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1 Introduction

Global geopolitical risks have soared since Russia's invasion of Ukraine. Investors, market participants, and policymakers expect that the war will lead to elevated inflation and exert a drag on the global economy, with a sharp increase in uncertainty and risks of severe adverse outcomes. As an example of these concerns, the April 2022 edition of the International Monetary Fund's World Economic Outlook contains more than 200 mentions of the word "war."[1] As of this writing, some of the economic effects appear to be materializing. Inflation is high in many countries. The economies of Russia and Ukraine are contracting sharply as a direct result of the war and the sanctions imposed on Russia. Financial and commodity markets have been highly volatile since the start of the conflict.

Historically, periods of elevated geopolitical risks have been associated with negative effects on global economic activity. On the "supply" side, wars destroy human and physical capital, shift resources to less efficient uses, divert international trade and capital flows, and disrupt global supply chains. On the "demand" side, uncertainty about the range of outcomes of adverse geopolitical events may weigh on activity by delaying firms' investment and hiring, eroding consumer confidence, and tightening financial conditions. However, while "demand" and "supply" forces are typically deleterious for economic activity, their combined effect on inflation is more ambiguous, as the inflationary effects on the supply side may be offset by the deflationary effects coming from the reduction in aggregated demand.

Do geopolitical risks raise inflation? Figure 1 provides some suggestive evidence that the answer to this question is likely to be yes, by showing that higher geopolitical risks are historically associated both with higher global inflation and with a higher share of countries experiencing higher-than-average inflation. In this paper, we address this question empirically, and we do so by using historical data on a large panel of countries, organizing the analysis around two datasets. The first dataset collects global economic variables to starting from the 1970s observed at monthly frequency. To quantify geopolitical risks, we rely on the global geopolitical risk (GPR) indexes developed in Caldara and Iacoviello (2022). To quantify their effects, we estimate a structural vector autoregressive (VAR) model of the global economy (Section 3). We illustrate our VAR results through a scenario that quantifies the rise in geopolitical risks observed since the Russian invasion of Ukraine. The ripple effects of the war lead to a rise in global inflation of about 1.3

[1] See, for example, the discussion on the likely effects of the war in Federal Reserve Chair Jerome Powell's press conference after the May 3-4, 2022, meeting of Federal Open Market Committee. Transcript available at https://www.federalreserve.gov/mediacenter/files/FOMCpresconf20220504.pdf. Anayi et al. (2022) show that the Russian invasion of Ukraine has led to an increase in several measures of economic uncertainty.

percentage points while reducing the level of global GDP about 1.5 percent. The adverse effects of geopolitical risks operate through a decline in aggregate demand, captured by lower consumer sentiment and a drop in stock prices, and through a contraction in aggregate supply, captured by higher commodity prices and an appreciation of the dollar. While these channels all tend to reduce global activity, they can have opposite effects on inflation. Our results indicate that the inflationary contribution of higher commodity prices and the dollar appreciation—which implies that many countries experience a currency depreciation—more than offsets the deflationary effects of reduced aggregate demand.

To provide a broader historical perspective and explore additional channels of transmission—most notably fiscal policy— we use a second dataset on a panel of annual data for 42 countries—17 advanced economies and 25 emerging market economies. The panel runs from 1900 through 2019 and includes country-level measures of inflation and GDP, as well as three fiscal and monetary indicators: national military expenditure, public debt to GDP ratio, and the exchange rate.[2]

In Section 4, we estimate panel regression models. In our baseline regression, we find that inflation rises in response to both global and country-specific adverse geopolitical events. A one-standard deviation increase in a country's GPR index is associated with a rise in inflation in the following year of about 1.5 percentage points. Furthermore, using panel quantile regressions, we document that geopolitical events generate large upside risks to inflation.

Wars are often associated with an expansion in military expenditures. Could fiscal policy expansions be a key channel for higher inflation? We approach this question by estimating panel models where we use country-level GPR indexes as instruments for fiscal variables. We find that (i) geopolitical risks predict an increase in military expenditures and public debt; (ii) expansionary fiscal policies fueled by higher geopolitical risk are inflationary. An increase of 1 percentage point in military spending as share of GDP leads to a rise in inflation of about 3 percentage points, while a 1 percentage point increase in a country's debt to GDP ratio leads to a rise in inflation of 1 percentage point. Using the same instrumental variable estimation strategy, we also document that geopolitical risks transmit to inflation through a depreciation of the home currency, in line with the view that these shocks can lead to large international capital outflows and flight-to-safety towards safe haven currencies, as shown by Forbes and Warnock (2012).

Our paper makes two contributions. First, we provide a systematic exploration of the relationship between geopolitical events and inflation for a large panel of countries. Papers in the literature typically focus on the effects of wars on real economic activity (Barro, 2006) and on transmission through fiscal policy (Ohanian, 1997; Ramey, 2011). Only a handful of studies touch upon the

[2] For this purpose, we utilize country-specific measures of geopolitical risks and extend the textual analysis work in CI by relying on newly-constructed country-specific GPR indexes for 16 emerging market economies.

effects of wars on inflation, and often times the analysis is centered on the United States (Hall and Sargent, 2022; Rockoff, 2015). Second, we explore transmission channels that can be active around episodes of major geopolitical tensions. In line with a vast literature on the fiscal determinants of inflation, we show that higher military spending and higher public debt are inflationary (Sims, 1994). We show that exchange rate depreciation is an important transmission channel to inflation, in line with the evidence presented in Gopinath (2015) and consistent with the view that geopolitical events can lead to large flight-to-safety international capital flows (Forbes and Warnock, 2012).

2 The Data

We construct two datasets in order to conduct our empirical analysis.

2.1 Global Monthly Time-Series Data

Our first dataset consists of monthly data on the global economy from 1974 through 2022. We include the following macroeconomic and financial variables: world GDP, world inflation, consumer confidence, oil prices, stock prices, commodity prices, and the dollar exchange rate. Our measure of world GDP is in purchasing power parity and obtained from Cuba-Borda et al. (2018). World inflation is a world aggregate of countries' twelve-month change in the consumer price index from Global Financial Data. The consumer confidence index is from the Organization for Economic Cooperation and Development, and oil prices from the West Texas Intermediate Index. For financial data, we measure global monthly stock prices using the FTSE World Dollar index, commodity prices using the S&P Goldman Sachs Commodity Index, and the dollar exchange rate using the Federal Reserve Board broad dollar index.

We complement this monthly dataset with a measure of adverse geopolitical events, the Caldara-Iacoviello global geopolitical risk index (GPR). Geopolitical risk is defined as the threat, realization, and escalation of adverse events associated with wars, terrorism, and any tensions among states and political actors that affect the peaceful course of international relations. The index is constructed by calculating the frequency of articles mentioning adverse geopolitical events in leading newspapers published in the United States, the United Kingdom, and Canada. The resulting measure captures both the realization of adverse geopolitical events (a terrorist attack or the outbreak of a war), and threats about the future adverse events. Accordingly, CI further break headline GPR into two separate components, the geopolitical threat (GPT) and the geopolitical acts (GPA) indices. The GPT index is based on articles that include phrases related to threats and concerns about scope, duration, and ramifications of geopolitical tensions, while the GPA index concerns phrases referring

to the outbreak and actual unfolding of wars.

2.2 Country-Level Annual Panel Data

For our second dataset, we construct an annual panel of country-level data for 42 countries, 17 of which are advanced economies and 25 of which are emerging market economies.[3] The panel runs from 1900 through 2019 and includes country-level measures of inflation and GDP, as well as three fiscal and monetary indicators: national military expenditure, public debt to GDP ratio, and the exchange rate. In addition, we utilize the country-specific measure of geopolitical risk provided by CI. Our measure of country inflation utilizes annual data from the IMF International Financial Statistics and is extended back to 1900 with historical data from Reinhart and Rogoff (2009). We trim the inflation data at the 2.5 and 97.5 percentiles in order to remove the outsized influence of hyperinflationary outliers. Real GDP per capita data are from Barro and Ursúa (2012), and extended through 2019 using the World Bank World Development Indicators. Data on military expenditure comes from Roser and Nagdy (2013) and is defined as military spending as a share of GDP. Debt to GDP ratio and exchange rate data are from Reinhart and Rogoff (2009), with debt defined as the total of domestic and external public debt for a given country and exchange rate data referring to the bilateral real exchange rate between a given country and the US dollar.[4] Each of these variables are trimmed at the 2.5 and 97.5 percentiles as well.

In order to construct country-specific measures of geopolitical risk, CI count joint occurrences in newspapers of geopolitical terms and a country's name or capital city. The country-specific indices capture the exposure of a given country to geopolitical concerns and conflicts, particularly as perceived by the United States. The original CI dataset contained country-specific indices for 26 countries; in this paper, we extend the panel by constructing country GPR indexes for 16 additional emerging economies. For our analysis, country GPR is standardized by country to have a mean of zero and standard deviation of 1. In our panel regression analysis, we focus on the effects of country-specific geopolitical risks on a country's inflation rate, after controlling for global factors as measured by the global GPR index.

Table 1 provides summary statistics for the 42 countries in our panel. Inflation statistics are additional presented separately for advanced and emerging economies. Note that the average annual

[3] Advanced economies include Australia, Belgium, Canada, Denmark, Finland, France, Germany, Italy, Japan, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom, and the United States. Emerging market economies include Argentina, Brazil, Chile, China, Colombia, Egypt, Hong Kong, Hungary, India, Indonesia, Israel, Malaysia, Mexico, Peru, Philippines, Poland, Russia, Saudi Arabia, South Africa, South Korea, Taiwan, Thailand, Tunisia, Ukraine, and Venezuela.

[4] Exchange rate data for the United States is defined as the bilateral real exchange rate between the US dollar and the British pound.

inflation for a country in this sample is 7.1 percent but that the panel contains sizeable variability and episodes of particularly high inflation. This comes largely - but not exclusively - from emerging countries. In our sample, the average debt to GDP ratio is 34 percent and the average share of military spending in GDP is 3.4 percent, reaching a maximum of nearly 25 percent. Over time, some countries experienced large currency appreciation against the US dollar—corresponding to negative 20 percent in the table—and much larger currency depreciation.

3 VAR Evidence on the Effects of Geopolitical Risk

We design an experiment around the spike of geopolitical tensions caused by the Russia-Ukraine war and estimate a structural vector autoregression (VAR) model to quantify its effects on economic activity over time. The model includes all variables in our monthly time-series database (world GDP, world inflation, global stock prices, real oil prices, the broad real dollar, commodity prices, global consumer confidence) and the geopolitical threats (GPT) and geopolitical acts (GPA) indexes as measures of geopolitical risks. The VAR model uses data from January 1974 through April 2022 and includes three lags. We apply a recursive identification scheme where shocks to geopolitical risks are assumed to affect all other variables contemporaneously. We estimate the model using Bayesian techniques. Specifically, we use an uninformative prior as in Uhlig (2005) and take 10000 draws from the posterior distribution of the model parameters.

3.1 Broader Economic Effects

Figure 2 uses a historical decomposition of the estimated VAR results to simulate the effects of the heightened geopolitical risks during the period of the Russia-Ukraine conflict. Specifically, we construct a simulation using the sequence of geopolitical acts and threats shocks that materialized between January and April 2022.[5] The solid lines show the median response of world GDP and world inflation in the simulation relative to a no-war baseline where there is no shock to geopolitical tensions. The dashed lines depict the 70 percent credible sets. The rise in geopolitical risks observed during this period is estimated to produce a drag on world GDP that builds throughout 2022, culminating to a negative impact of around 1.7 percent. Such contractionary effects of GPR are in line with previous literature documenting drops in economic activity for countries experiencing disasters, including adverse geopolitical events, as documented for instance in Barro (2006) and Glick and Taylor (2010) Meanwhile, the rise in geopolitical risks boosts prices, causing an increase

[5] Between January and April 2022, the average size of the GPT shocks was 2 standard deviations, while the average size of the GPT shock was 0.7 standard deviation. Hence, these impulse responses reflect a combination of GPT and GPA shocks in a three-to-one proportion.

in global inflation of 1.3 percentage points by the second half of 2022, after which the effects begin to subside.

3.2 Global Channels of Transmission

How are geopolitical risks transmitted to the global economy? With various channels controlled for, the structural VAR estimates leave us well-positioned to answer this question. Figure 3 presents a more detailed picture of the way the global economy responds to a geopolitical risk shock. The estimates highlight how effects of elevated geopolitical risks in 2022 are associated with declining consumer confidence and stock prices, factors that weaken aggregate demand. Meanwhile, the exchange value of the dollar appreciates, in line with the evidence that spikes in global uncertainty and adverse risk sentiment can trigger flight-to-safety international capital flows Forbes and Warnock (2012). Lastly, commodity prices and oil prices increase, putting downward pressure on global activity and upward pressure on inflation.

Taken together, our results suggest that the coexistence of deflationary pressures—coming from lower aggregate demand—and inflationary pressures coming from supply-side disruptions, resolves in favor of the latter, with geopolitical events generating a simultaneous decline in economic activity and rise in inflation.

4 Country-Level Evidence: Impact and Transmission

In this section, we quantify the relationship between countries' geopolitical risk and their level of inflation. We first demonstrate that geopolitical risk is associated with higher levels of inflation. We then use quantile regressions to show how elevated levels of geopolitical risk is associated with higher upside risks to inflation. Finally, we explore some of the possible channels through which this this effect may be operating.

4.1 Average Effects on Inflation

We estimate the effect of geopolitical risk on inflation in country i in year t with the following regression:

$$\Pi_{i,t+1} = \alpha_i + \beta GPRC_{i,t} + \gamma GPRC_t + u_{i,t}, \tag{1}$$

where $\Pi_{i,t+1}$ is one-year ahead inflation, α_i are country-fixed effects, GPR is the global GPR index, and GPRC is the country-specific geopolitical risk index. We use lagged country GDP as control variable.

Table 2 shows results from equation 1, estimated on data for all countries in our sample (first column), on data for advanced economies (second column), and on data for emerging economies (last column). The coefficient on the country GPR indexes is economically and statistically significant: a one standard deviation increase in geopolitical risk increases a country's inflation by 1.5 percentage points after a year, with both advanced and emerging economies accounting for this relationship. In addition, after controlling for country factors, a one-standard deviation rise in the global GPR increases inflation by nearly 2 percentage points.

The scatter plot in Figure 4 provides some intuition underlying the relationship between one-year ahead inflation and the country-specific GPR indexes for advanced economies. World War I and World War II are the two episodes dominating our sample. Observations in black indicate the time period 1915 through 1920, and highlight how Canada, United States, and many European countries experienced years with inflation well above 10 percent. Meanwhile, observations in red demonstrate generally low readings of inflation from 1940 through 1945, a time period often associated with price controls imposed by governments and high inflation due to rationing and scarcity. High inflation followed in the years after the war as a result of the high debt accumulated to finance the war effort.

Our regression also exploits idiosyncratic country-level variation in geopolitical risks and inflation. For instance, and drawing on some episodes in emerging economies, country-specific geopolitical risk is extraordinarily high for Indonesia in 1963 during the confrontation on Borneo with Malaysia, for Chile in 1973 with the military coup that deposed the Popular Unity government of President Salvador Allende, and for Argentina in 1982 during the Falkland War. These are all episodes that saw foreign involvements and that contributed to high inflation. For some countries, high readings of the country GPR index capture (geo)political instability caused by dictatorships, as for instance for Peru in the 1980s, which correspond to periods of political and social unrest coupled with inflationary economic policies.

The evidence in this subsection supports the idea that, historically, changes in geopolitical risk are associated with substantial increases in inflation. Many economic disasters of the 20th century took place during the world wars, the two global events in our sample. However, our estimates also demonstrate that regional and country-specific geopolitical events were associated with inflationary pressures.

4.2 Quantile Effects on Inflation

Throughout history, wars have at times destroyed human and physical capital, diverted international trade, and disrupted commodity markets. At other times, wars have enabled larger labor force participation, better technological diffusion, and larger infrastructure spending (see Stein and

Russett, 1980). We use cross-country data and quantile regressions to evaluate how geopolitical risk is associated with the full distribution of future inflation, as geopolitical risks may be associated with different outcomes at the two tails of the inflation distribution.

To test this hypothesis, we run quantile regressions of the following form:

$$\mathcal{Q}_\tau(\Pi_{i,t+1}|x_{i,t}) = \alpha_\tau + \beta_\tau GPRC_{i,t}. \tag{2}$$

Above, we estimate the best linear predictor of the quantile τ of $\Pi_{i,t+1}$, one-year ahead inflation, conditional on values of country-specific geopolitical risk, denoted by $GPRC_{i,t}$. We estimate equation (2) at different quantiles.

Table 3 shows the results. The OLS estimates reported in the first row are a simplified specification of the results in Table 2, showing that a rise in country-specific GPR predicts higher inflation. Focusing on the first column, which uses observations for all countries in the sample, the median effects (row labeled *q50*) have the same sign as the OLS estimates, though they are slightly smaller in magnitude, suggesting that the effects of GPR on inflation are asymmetric. The rows labeled *q10* and *q90* estimate equation (2) at the 10th and 90th quantiles. A rise in the GPR index increases the probability of particularly elevated inflation readings. The right tail of the inflation distribution—measured by the 90th quantile coefficient—shows an increase that is nearly twice as larger than the OLS effect, whereas the left tail of the distribution—measured by the 10th quantile—show an increase that is about three times smaller.

The results from the quantile regression estimates convey two results. First, geopolitical risks can cause large increases in inflation and equivalently, can contribute to upside risks to future inflation. Second, the statistically significant coefficients estimated at the median—the median coefficient in a quantile regression is less influenced by large observations relative to OLS—support the notion that the relationship between geopolitical events and inflation is broad-based, holding also outside episodes of high inflation during major geopolitical events.

4.3 Transmission through Fiscal Policy and the Exchange Rate

Due to the broad range of tensions and adverse events which can cause elevated geopolitical risks, it is likely that there are many potential determinants for the relationship between geopolitical risk and inflation. Here we assess inflation as a byproduct of geopolitical risk, driven by fiscal and monetary factors. To that end, we consider the possible mechanisms of transmission through which geopolitical risk may impact inflation. In particular, we analyze three variables which could be tied to both elevated geopolitical risk and inflation: military expenditure (as a share of GDP), public

debt to GDP ratios, and exchange rates. Each are instrumented with the country-specific GPR index. We estimate

$$\Pi_{t+1} = \alpha_i + \beta X_{i,t} + u_{i,t}, \tag{3}$$

where $X_{i,t}$ refers to each of the possible transmission variables in turn.

Tables 4 and 5 demonstrate the fiscal mechanisms through which GPR contributes to inflation. Table 4 displays the results for military spending. As the second row demonstrates, country-specific GPR has a significant effect on military spending; a one standard deviation increase in the country-specific GPR index is associated with a nearly 1 percent increase in the share of GDP allocated to military spending. In turn, the increase in military spending as explained by the country-specific GPR index is associated with a 3 percent increase in year-ahead inflation. This channel is slightly stronger among advanced economies than emerging ones, but remains significant for both subsets. A similar pattern can be observed when instrumenting GPR with public debt to GDP ratios, as shown in table 5. These results suggest fiscal policy can be a large determinant of how geopolitical risk can contribute to increases in inflation.

Along with fiscal factors, exchange rates appear to be channel through which geopolitical risk may lead to higher inflation. Table 6 displays the results for equation 3 that instruments geopolitical risks with exchange rates. Country-specific geopolitical risk has strong first-stage effects on exchange rates, with a one standard deviation in geopolitical risk associated with a 1 percent increase in the real exchange rate across all the countries in our sample. This ultimately contributes to around a 2.5 percent increase in year-ahead inflation. That is to say, these results imply that periods of elevated geopolitical risk can contribute to depreciating domestic currencies, which itself can have an effect on elevated inflation. As such, exchange rates also present an important transmission channel through which geopolitical risk affects inflation.

4.4 Post World-War II Analysis

We note that the first and second world war are instances of heightened GPR for many countries in our panel and may be driving most of the the effects. To estimate whether the relationship between GPR and inflation persists in the second half of our historical sample, we repeat the estimation on a sample that begins in 1950. Table 7 indicates that higher geopolitical risks are associated with heightened inflation in the post-WWII sample too. Compared to the full sample, the inflationary effects of geopolitical risks are attenuated among advanced economies, with the coefficient dropping from 1.06 in the whole sample to 0.60 in the post-WWII sample, and with global geopolitical risks becoming largely insignificant once country-specific risks are controlled for. However, the effects of

higher geopolitical risks at the country level are stronger for emerging economies.

The distribution of inflation is presented in Table 8

In Figure 5 we plot the relationship between geopolitical risk and inflation for advanced economies since 1950. We plot observations in 1950 in red in order to highlight the Korean War: the trend indicates countries more exposed to geopolitical events experienced higher levels of inflation in the following year.

5 Conclusions

We use historical data for a large panel of countries to quantify the relationship between inflation and geopolitical tensions. We find that global geopolitical risks increase inflation worldwide, with the inflationary effect of higher commodity prices and supply chain disruptions more than offsetting the deflationary effects of lower consumer sentiment and tighter financial conditions. Using country-level panel data since 1900, we confirm that global and country-specific geopolitical shocks are inflationary. The inflationary effects are larger in countries with high military expenditures, public debt, and experiencing exchange rate depreciations.

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Table 1: Summary Statistics

	Mean	SD	Min	Max	Obs.
Inflation	7.1	11.5	-8.9	87.7	4130
Advanced Economies	4.1	5.2	-6.7	25.4	1853
Emerging Economies	8.7	11.6	-7.0	71.1	2159
Military Spending	0.6	3.8	0.5	24.7	3548
Public Debt to GDP	42.2	34.0	0.0	261	3109
Exchange Rate	4.0	14.3	-20.3	99.2	3963
Country GPR	0.0	1.0	-1.8	9.8	4792

The table presents selected summary statistics for key variables on the sample of 42 countries from 1900 to 2019. Inflation is trimmed at the 2.5 and 97.5 percentiles for all countries and advanced economies, and at the 5 and 95 percentiles for emerging market economies. The GPR index is standardized at the country level. Military expenditure is military spending as a share of GDP. Public debt to GDP ratio is the combined domestic and external debt to GDP ratio. Exchange rate is percent change in the bilateral rate between home country and the US dollar, such that positive values indicate depreciation for the home currency. For the United States, we use the bilateral rate between the US dollar and the British pound. Military spending, debt to GDP ratio, and the exchange rate growth are all trimmed at the 2.5 and 97.5 percentiles.

Table 2: Geopolitical Risk and One-Year Ahead Inflation

	Inflation (t+1)		
	All Countries	Advanced Economies	Emerging Economies
	(1)	(2)	(3)
Country GPR	1.48	1.06	0.96
	(0.39)	(0.33)	(0.39)
Global GPR	1.92	1.15	1.48
	(0.52)	(0.40)	(0.45)
GDP Growth (t-1)	-0.08	0.03	-0.03
	(0.05)	(0.04)	(0.08)
Observations	3,331	1,805	1,426
R^2	0.16	0.16	0.09
Number of Countries	42	17	25

Standard errors in parenthesis clustered by country and year.

The table shows the estimated coefficients of a regression of inflation on global and country-specific geopolitical risk in a panel of countries from 1900 to 2019. Inflation is annual and trimmed at the 2.5 and 97.5 percentiles for the full sample and for advanced economies, and at the 5 and 95 percentiles for emerging economies. Country-specific geopolitical risk is standardized to have a mean of 0 and standard deviation of 1 for each country. Global geopolitical risk is standardized. GDP growth is expressed in percent. All specifications include country fixed effects.

Table 3: Quantile Effects of Geopolitical Risk on One-Year Ahead Inflation

	Inflation (t+1)		
	All Countries	Advanced Economies	Emerging Economies
	(1)	(2)	(3)
OLS	2.73	1.93	1.79
	(0.36)	(0.42)	(0.34)
Quantile			
q10	0.75	0.71	0.52
	(0.17)	(0.22)	(0.26)
q50	1.86	2.03	1.32
	(0.20)	(0.38)	(0.27)
q90	5.47	3.85	3.53
	(0.80)	(0.46)	(0.90)
Observations	4,099	1,837	2,145
Countries	42	17	25

Standard errors in parenthesis clustered by country and year.

The table shows quantile regression effects of geopolitical risk on inflation in a panel of countries from 1900 through 2019. Inflation is annual and trimmed at the 2.5 and 97.5 percentiles for the full sample and for advanced economies, and at the 5 and 95 percentiles for emerging economies. Country-specific geopolitical risk is standardized to have a mean of 0 and standard deviation of 1 for each country. Global geopolitical risk is standardized. The OLS coefficients are reported in the top row. The quantile coefficients report the effects at the 10th, 50th, and 90th percentile of the distribution of the inflation. Each specification includes country fixed effects. Standard errors are clustered by country and year for the OLS and boostrapped using 500 observations for the quantile regressions.

Table 4: Geopolitical Risk and Inflation: Military Spending

	Inflation $(t+1)$		
	All Countries	Advanced Economies	Emerging Economies
	(1)	(2)	(3)
Military Spending	3.33	2.53	2.43
	(0.33)	(0.23)	(0.57)
First Stage Results. Regression of Military Spending.			
Country GPR	0.87	0.96	0.67
	(0.06)	(0.07)	(0.10)
Observations	3,289	1,611	1,601
Countries	42	17	25

This table shows the effects of military expenditure on inflation in a panel of countries from 1900 through 2019. The standard errors are in parentheses. Military expenditure is expressed as a share of GDP. Military spending ($mil_{i,t}$) is instrumented with the country-specific GPR index in the following manner: $mil_{i,t} = \alpha_i + \beta GPRC_{i,t} + u_{i,t}$. The GPR index is standardized at the country level. Military spending is trimmed at the 2.5 and 97.5 percentile. Inflation is trimmed at the 2.5 and 97.5 percentiles for all countries and advanced economies, and at the 5 and 95 percentiles for emerging economies. All specifications include country fixed effects.

Table 5: Geopolitical Risk and Inflation: Public Debt

	Inflation $(t+1)$		
	All Countries	Advanced Economies	Emerging Economies
	(1)	(2)	(3)
Debt to GDP	0.93	0.46	1.30
	(0.20)	(0.11)	(0.67)
First Stage Results. Regression of Debt to GDP.			
Country GPR	2.90	4.41	1.38
	(0.58)	(0.97)	(0.66)
Observations	3,103	1,628	1,394
Countries	42	17	25

Note: Standard errors in parentheses. Debt to GDP is the ratio of total public debt to GDP, expressed in percent, for country i. Public debt ($dtogdp_{i,t}$) is instrumented with the country-specific GPR index in the following manner: $dtogdp_{i,t} = \alpha_i + \beta GPRC_{i,t} + u_{i,t}$. The GPR index is standardized at the country level. Inflation is trimmed at the 2.5 and 97.5 percentiles for all countries and advanced economies, and at the 5 and 95 percentiles for emerging economies. All specifications include country fixed effects.

Table 6: Geopolitical Risk and Inflation: Exchange Rate

	Inflation $(t+1)$		
	All Countries	Advanced Economies	Emerging Economies
	(1)	(2)	(3)
Exchange Rate	2.47	2.73	0.51
	(0.59)	(0.95)	(0.11)
First Stage Results. Regression of Exchange Rate.			
Country GPR	1.03	0.69	3.07
	(0.25)	(0.24)	(0.58)
Observations	3,231	1,584	1,580
Countries	42	17	25

Note: Exchange rate is the bilateral rate between country i and the US dollar. US exchange rate is the bilateral rate between the US dollar and the UK pound. The exchange rate ($xr_{i,t}$) is instrumented with the country-specific GPR index in the following manner: $xr_{i,t} = \alpha_i + \beta GPRC_{i,t} + u_{i,t}$. The GPR index is standardized at the country level. Exchange rate is trimmed at the 2.5 and 97.5 percentile. Inflation is trimmed at the 2.5 and 97.5 percentiles for all countries and advanced economnies, and at the 5 and 95 percentiles for emerging economies. All specifications include country fixed effects.

Table 7: Geopolitical Risk and One-Year Ahead Inflation (1950-2019)

	Inflation (t+1)		
	All Countries	Advanced Economies	Emerging Economies
	(1)	(2)	(3)
Country GPR	1.76	0.60	2.73
	(0.59)	(0.34)	(1.15)
Global GPR	-0.90	-0.20	-1.63
	(1.52)	(1.34)	(2.24)
GDP Growth (t-1)	-0.01	0.30	-0.06
	(0.15)	(0.11)	(0.19)
Observations	2,032	1,143	883
R^2	0.27	0.12	0.18
Number of Countries	42	17	25

Standard errors in parenthesis clustered by country and year.

Effects of country-specific geopolitical risk on one year inflation on a panel of countries from 1950 to 2019. Inflation is annual and trimmed at the 2.5 and 97.5 percentiles for the full sample and at the 5 and 95 percentiles for emerging economies. For advanced economies, we remove one outlier, Portugal in 1975. Country GPR is the number of GPR articles mentioning the country divided by total number of newspaper articles, standardized to have a mean of 0 and standard deviation of 1 for each country. GDP growth is expressed in percent. Global GPR is standardized. All specifications include country fixed effects.

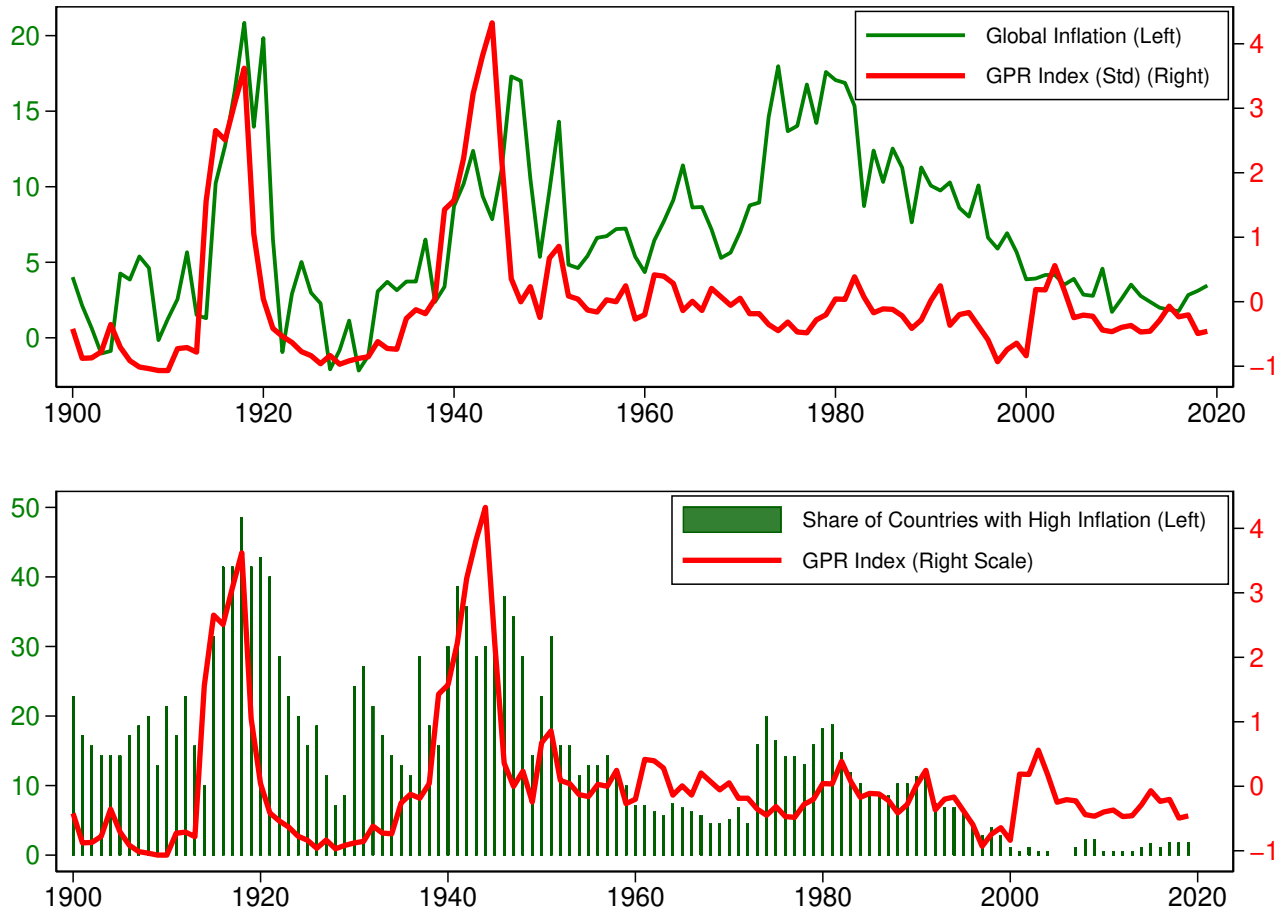
Table 8: Quantile Effects of Geopolitical Risk on One-Year Ahead Inflation (1950-2019)

	Inflation $(t+1)$		
	All Countries	Advanced Economies	Emerging Economies
	(1)	(2)	(3)
OLS	1.86	0.66	2.47
	(0.59)	(0.32)	(0.84)
Quantile			
q10	0.12	0.10	0.06
	(0.07)	(0.09)	(0.11)
q50	0.57	0.43	0.71
	(0.13)	(0.13)	(0.34)
q90	2.55	1.24	4.56
	(0.43)	(0.49)	(0.94)
Observations	2572	1143	1406
Countries	42	17	25
Country Fixed Effects	yes	yes	yes

Standard errors in parenthesis.

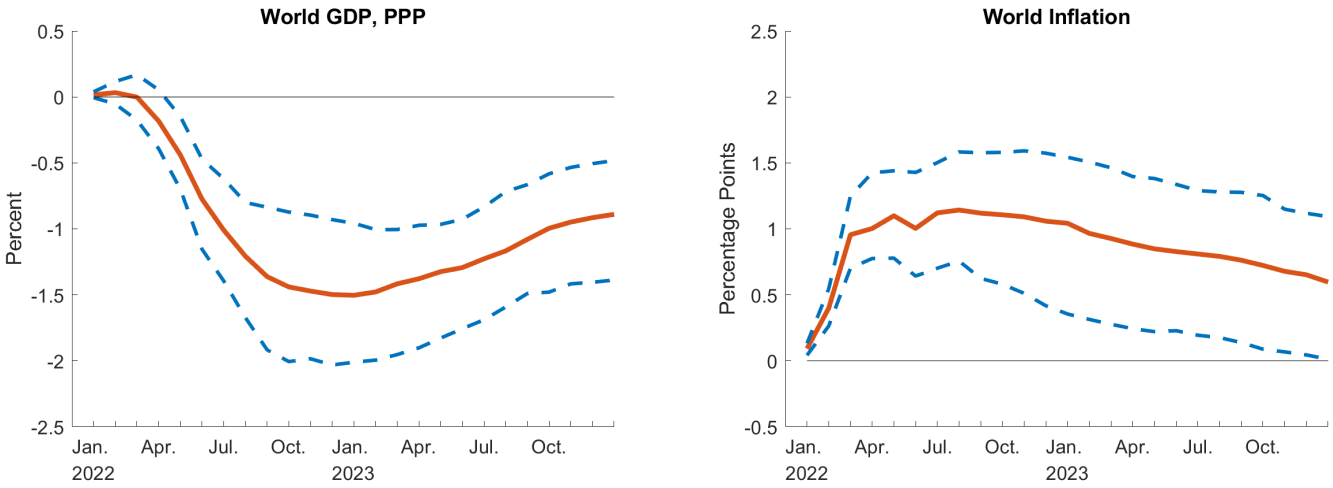
The table shows quantile regression effects of geopolitical risk on inflation in a panel of countries from 1950 through 2019. Inflation is annual and trimmed at the 2.5 and 97.5 percentiles for the full sample and at the 5 and 95 percentiles for emerging economies. For advanced economies, we remove one outlier, Portugal in 1975. Country GPR is the number of GPR articles mentioning the country divided by total number of newspaper articles, standardized to have a mean of 0 and standard deviation of 1 for each country. The OLS coefficients are reported in the top row. The quantile coefficients report the effects at the tenth, fiftieth, and ninetieth percentile of the distribution of the inflation. Each specification includes country fixed effects. Standard errors are clustered by country and year for the OLS and boostrapped using 500 observations for the quantile regressions.

Figure 1: Global Inflation and Global Geopolitical Risk from 1900 through 2019



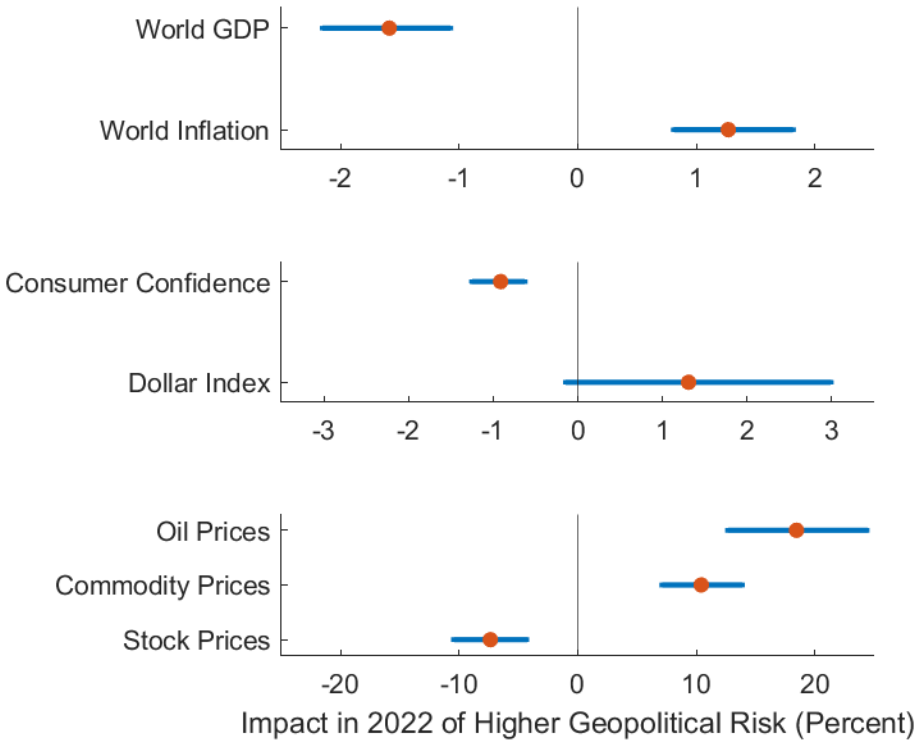
Top panel: Global Inflation and Global Geopolitical Risk from 1900 through 2019. Global inflation is calculated by averaging the inflation levels for countries in our sample, using as weights their share of real GDP. Bottom panel: Share of countries with "high" inflation and Global Geopolitical Risk from 1900 through 2019. We regress inflation on country fixed effects, and dummies for 1900-1945, 1946-1972, 1973-now, each interacted with an advanced economy dummy. A country has "high" inflation when the residual is greater than 5 percent (about 10 percent of the observations).

Figure 2: Global Effects of the Higher Geopolitical Risks between January and April 2022



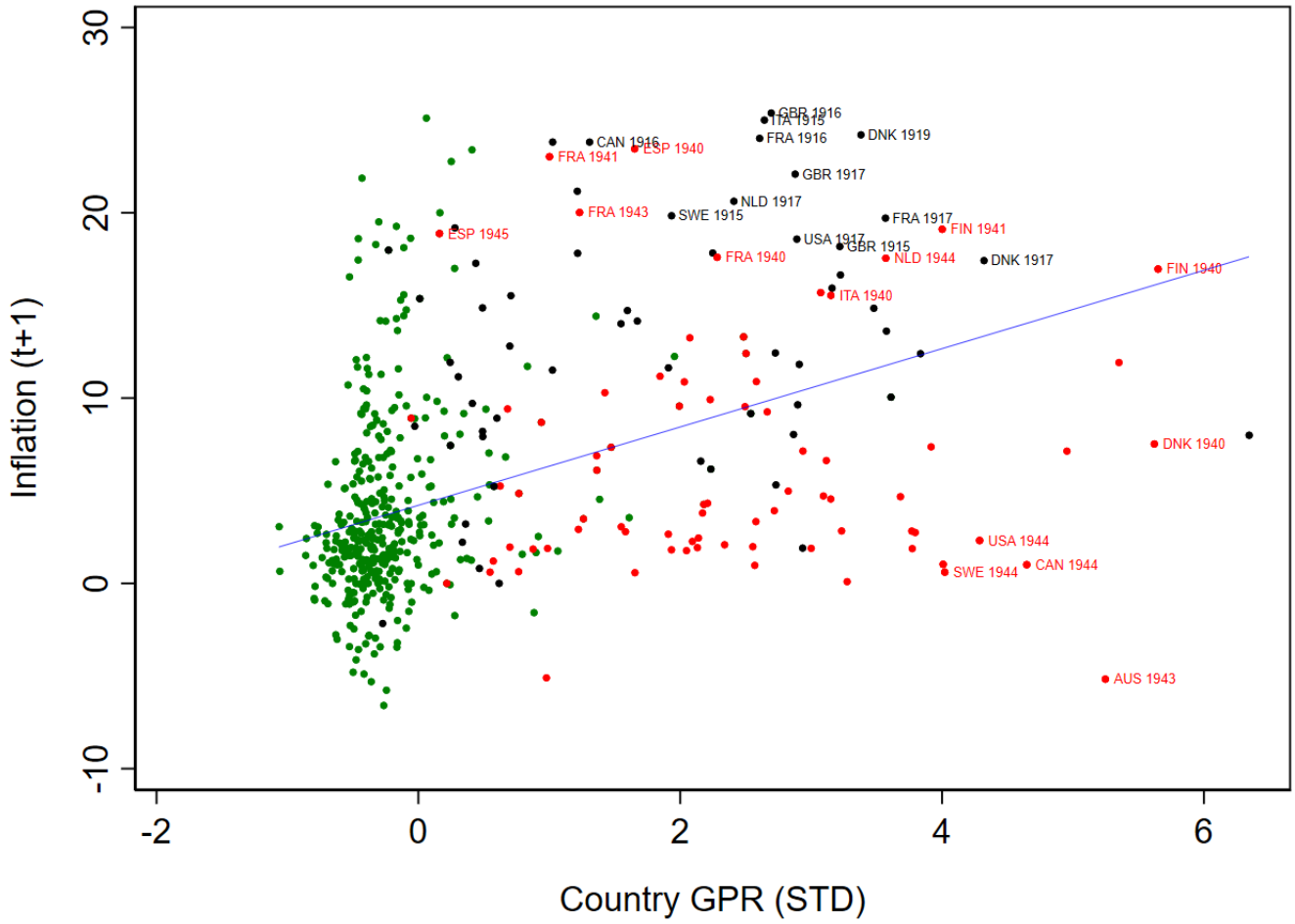
Note: The figure plots the response over time of world GDP and world inflation to a rise in geopolitical risks sized to mimic the increase occurred between January and April 2022, estimated using a structural vector autoregression (VAR) model. The model includes monthly measures of world GDP, world inflation, global stock prices, real oil prices, the broad real dollar, commodity prices, global consumer confidence, and the Geopolitical Threats (GPT) and Geopolitical Act indexes. Data in the model is from January 1974 to April 2022 and uses three lags.
The solid red lines in the figure plot the central estimates. The dashed blue lines denote the 70 percent confidence intervals. The variables are plotted from January 2022 to December 2023 in deviation from a no-war baseline.

Figure 3: Effects of Higher Geopolitical Risk on Selected Variables between January and April 2022



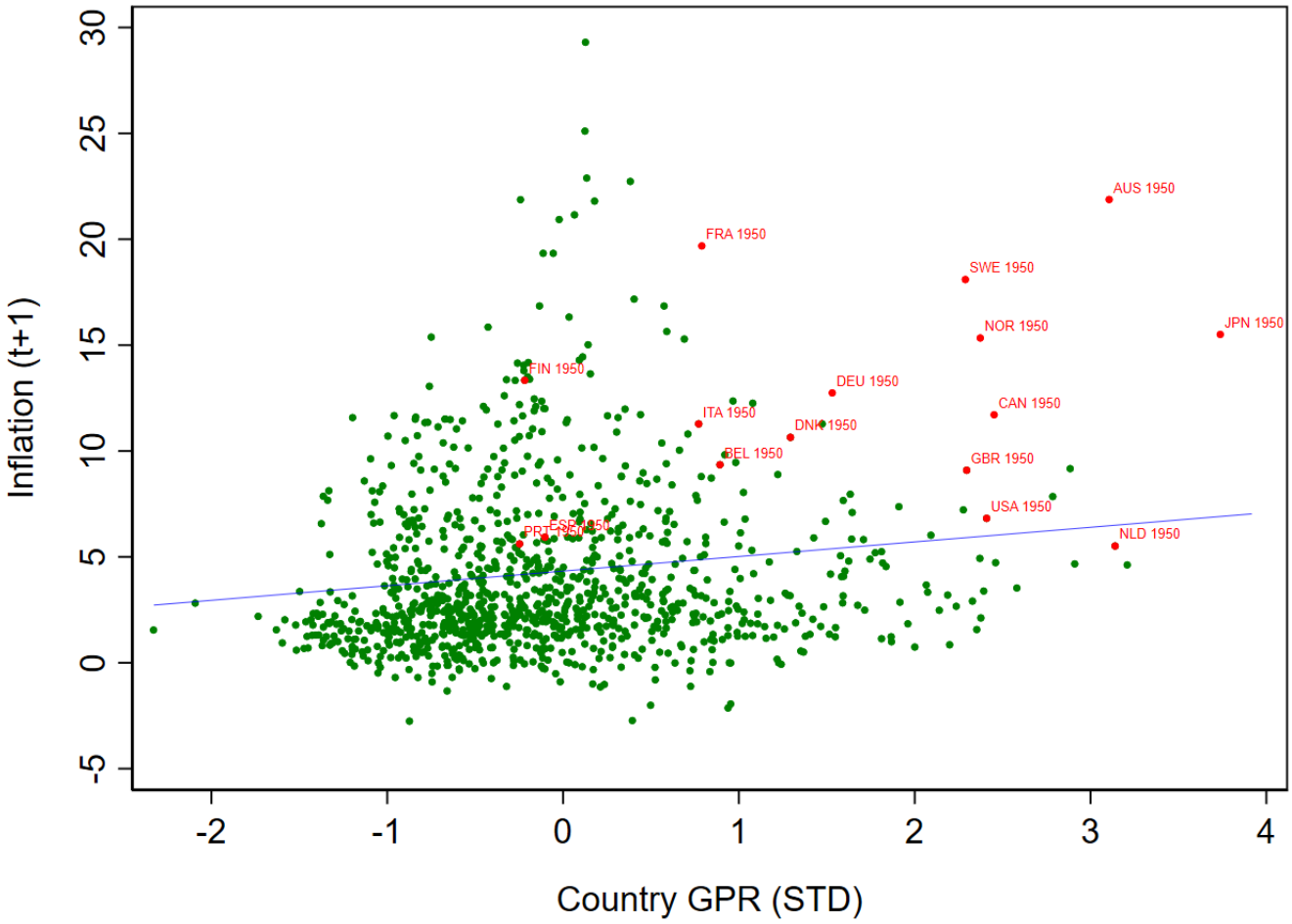
Note: The figure plots the maximum impact in the first year of a rise in geopolitical risks sized to mimic the increase occurred between January and April 2022, estimated using a structural vector autoregression (VAR) model. The model includes monthly measures of world GDP, world inflation, global stock prices, real oil prices, the broad real dollar, commodity prices, global consumer confidence, and the Geopolitical Threats (GPT) and Geopolitical Act indexes. Data in the model is from January 1974 to April 2022 and uses three lags.
For each variable, the red dots plot the central estimates of the maximum impact in the first year. The blue error bars denote 70 percent confidence intervals. The effect is measured in percent deviation from a no-war baseline for all variables except inflation, for which it is measured in percentage points.

Figure 4: Geopolitical Risks and Inflation in Advanced Economies from 1900 through 2019



Note: The figure plots country-specific GPR against one year-ahead inflation for advanced economies. The line of best fit is shown in blue. In green we plot a random 20% of observations throughout our sample (1900-2019). Observations from around WWI (1915-1920) are shown in black, and selectively labeled. Observations from around WWII (1940-1945) are shown in red, and selectively labeled.e
Country-specific GPR is standardized. Inflation is trimmed at the 2.5 and 97.5 percentiles. Advanced economies include Australia, Belgium, Canada, Denmark, Finland, France, Germany, Italy, Japan, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom, and the United States.

Figure 5: Geopolitical Risks and Inflation in Advanced Economies from 1950 through 2019



Note: The figure plots country-specific GPR against year-ahead inflation for advanced economies since 1950. A line of best fit is shown in blue. Observations from the year 1950 are shown in red and labeled, highlighting the onset of the Korean War.
Note: Country-specific GPR is standardized. We remove one outlier in inflation data, Portugal in 1975. Advanced economies include Australia, Belgium, Canada, Denmark, Finland, France, Germany, Italy, Japan, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom, and the United States.