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How does the perception of geopolitical risks affect inflation in Austria?

Analysis shows pronounced and persistent effects

We analyse the impact of shocks in perceived geopolitical risk on Austrian inflation. To do this, we construct a geopolitical risk perception index based on newspaper coverage in Austria. The Austrian index shows strong co-movement with similar indices for Germany, the euro area and the USA, but maintains distinct characteristics. We find that geopolitical risk perception shocks increase inflation by amplifying the cost-push channel of energy and food inflation. Our results are generally robust, but sensitive to omitting the period after the Russian invasion of Ukraine.

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Significant short-run inflation impact

A geopolitical risk perception shock significantly raises Austrian HICP inflation. After two years, the impact dissipates, but the price level remains permanently higher.

Strongest impact after Russian invasion

Our model suggests that geopolitical risk perception shocks contributed 0.4 percentage points to the HICP inflation of 8.6% in 2022 and 0.2 percentage points in 2023 (7.8%).

Shock amplifies cost-push channel of energy prices

The biggest immediate, but also temporary, effects of geopolitical risk shocks are on energy prices, which feed through, albeit weaker, to food, non-energy industrial goods and services prices.

The views expressed are those of the authors and do not necessarily reflect those of the Oesterreichische Nationalbank or the Eurosystem.

Abstract

This article studies the effects of domestic geopolitical risk perceptions on Austrian inflation. We construct a geopolitical risk perception index for Austria based on domestic newspaper coverage. Our index co-moves strongly with corresponding indices for Germany, the euro area and the USA, while sizeable differences remain. Using Bayesian vector autoregressive models, we analyse the dynamic responses of headline inflation and its components to geopolitical risk shocks. The results indicate that these shocks lead to pronounced and persistent inflationary pressures, even after we take into account contemporaneous energy price and global supply chain shocks. Our results are in general robust, but sensitive to omitting the period after the Russian invasion of Ukraine. A closer look at the main components reveals that geopolitical risk amplifies inflation through a cost-push channel: the strongest and most immediate effect is on energy inflation, with weaker downstream effects on food, non-energy industrial goods and services inflation. Evidence from Austrian diesel and petrol prices at the refinery and retail stage further suggests that these inflationary pressures propagate along the fuel price chain. Overall, our findings highlight the importance of domestic geopolitical risk perceptions and the expectation- and uncertainty-based channels in affecting inflation in medium-sized open economies.

1 Introduction

Geopolitical tensions are a key factor in the assessment of macroeconomic risk. Over the past 25 years, major geopolitical events, such as the September 11 attacks, the Iraq War, Russia's annexation of Crimea and the start of its full-scale invasion of Ukraine, have shaped the global economic environment. These events have been associated with heightened uncertainty, disruptions to trade and energy markets and distortions in market allocation. Against this background, understanding how geopolitical risk (GPR)[1] affects macroeconomic dynamics has become a central topic in both academic research and policy debates in recent years.[2]

A growing number of research papers examine the macroeconomic consequences of heightened geopolitical risk. Using news-based measures, Caldara and Iacoviello (2022) show that GPR shocks tend to resemble adverse supply side disturbances, depressing investment and output while raising inflation. Subsequent research emphasises that these effects operate primarily through uncertainty, energy prices and expectations, with inflationary responses often dominating real activity effects in advanced and energy-importing economies (see, e.g., Yang et al., 2023; Bondarenko et al., 2024). Importantly, recent contributions suggest that the inflationary effects of geopolitical risk are not confined to direct cost channels such as energy prices or realised supply chain disruptions. Heightened geopolitical risk can also affect inflation through changes in expectations, uncertainty and pricing behaviour, as firms and households revise beliefs about future economic conditions and adjust prices preemptively in response to elevated tail risks and perceived economic fragmentation (Minesso et al., 2024; Caldara et al., 2026). Andriantomanga (2026) finds that uncertainty is deflationary in weak demand regimes and inflationary

[1] As in Caldara and Iacoviello (2022, page 1197), we define geopolitical risk "as the threat, realisation, 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."

[2] This publication was prepared with linguistic support and coding assistance of AI tools; all content has been reviewed and approved by the authors, who assume full responsibility.

in tight supply regimes, further confirming the role of uncertainty as an amplifier of other shock channels. At the same time, firm-level evidence suggests that geopolitical risk reduces investment by increasing the value of delaying irreversible decisions, while recent research identifies an additional bank lending channel that constrains both firm investment and employment (Wang et al., 2024; Avril et al., 2025).

Recent work further highlights that macroeconomic responses depend on the size, source and perceived global relevance of geopolitical risk: large shocks generate disproportionately stronger effects, conflicts of systemic importance drive most of the observed economic consequences, and energy-related tensions operate more strongly through inflationary channels than trade-related tensions (Alonso Álvarez et al., 2025; Brignone et al., 2026; Ioannou et al., 2026). Policy-related articles also emphasise that macroeconomic implications of geopolitical risk are shaped by domestic perceptions and narratives, implying that country-specific news-based indicators can provide additional information beyond multinational aggregate measures when assessing domestic economic effects (see, e.g., Ambrocio et al. 2025; Bijsterbosch et al., 2025; Bondarenko et al., 2025).

This article contributes to the literature by examining the macroeconomic effects of geopolitical risk on Austrian inflation. Austria provides a relevant case study for a medium-sized, highly integrated, energy-importing economy without direct exposure to recent military conflicts. We do so by constructing a monthly geopolitical risk perception index for Austria, derived from Austrian newspaper articles and conceptually aligned with the Factiva search methodology of Bondarenko et al. (2024). By focusing on domestic media coverage, the index approximates geopolitical risk concerns as perceived within Austria.[3] In the empirical analysis, the index is used in a Bayesian vector autoregressive (BVAR) model to study the dynamic responses of HICP inflation to geopolitical risk perception shocks. Using the results of the model, we analyse how geopolitical risk perception shocks have contributed to inflation fluctuations in the past 20 years.

We find that geopolitical risk perceptions in Austria co-move strongly with geopolitical risk perceptions in Germany and the euro area. However, sizeable differences remain. The empirical analysis shows that a one-standard-deviation geopolitical risk shock increases year-on-year inflation in Austria by 0.2 percentage points (pp) in the first year after the shock. This shock size corresponds to approximately 20% of the observed increase in the index at the onset of Russia's invasion of Ukraine in 2022. The inflationary response remains positive after distinguishing geopolitical risk perception shocks from contemporaneous energy price and global supply chain shocks. Our model further suggests that geopolitical risk perception shocks amplified Austrian HICP inflation by around 0.3 pp on average in both 2022 and 2023. In addition, the model attributes a sizeable share of excess inflation during that period to supply chain and energy price shocks.

A closer look at HICP inflation components suggests that geopolitical risk is not a direct driver of inflation but rather an amplifier of existing pressures through a cost-push channel, particularly via energy and commodity markets. Its impact is strongest, most immediate and temporary in energy inflation before gradually passing through to food, non-energy industrial goods (NEIG) and services, with diminishing intensity along the transmission chain. An analysis of the pricing pipeline from crude oil to refineries and, ultimately, to diesel and petrol prices shows a pattern of responses consistent with a geopolitical risk shock that generates upward pressure along the price chain. More broadly, our findings support existing

[3] Since we do not measure the geopolitical risk perception of Austrian firms and households directly, we assume that the media coverage we use to construct the indicator influences the perceptions of the Austrian economic agents and reflects them reasonably well.

evidence that uncertainty and expectations play an important role in the transmission of geopolitical risk to consumer prices.

The remainder of this article is structured as follows. In section 2 we describe the geopolitical risk perception index for Austria and compare it to similar indices for other economies. Subsection 3.1 introduces the BVAR model, subsection 3.2 presents the data used for estimation, and subsection 3.3 discusses the empirical results for HICP inflation. Subsection 3.4 examines the heterogeneous effects of geopolitical risk on the inflation components energy, food, NEIG and services. For these we employ individual models based on the forecasting models of the Oesterreichische Nationalbank (OeNB) Inflation Projection Exercise for the medium term. In subsection 3.5 we examine the indirect channels of geopolitical risk on diesel and petrol prices through crude oil and refinery prices. Section 4 concludes.

2 Geopolitical risk perceptions in Austria

We construct a monthly indicator of geopolitical risk perceptions for Austria by building on the influential work of Caldara and Iacoviello (2022) and the adopted methodology put forward in Bondarenko et al. (2024). Specifically, we search the Factiva newspaper archive[4] for articles containing terms related to geopolitical risk (GPR) in two Austrian quality newspapers, namely "Der Standard" and "Die Presse".[5] The query is based on Bondarenko et al. (2024), who constructed an index for Germany as well as other major European economies.[6] We construct the monthly index by dividing the total number of GPR-related articles published across both newspapers by the total number of articles published across both newspapers in that month. Each matching article therefore contributes once, irrespective of how prominently it features geopolitical risk. Iacoviello and Tong (2026) offer an AI-based measure that also captures the intensive margin.

The resulting Austrian news-based GPR perception index covering January 1998 to May 2026 is presented in chart 1. For comparison we also included GPR indices for the euro area, Germany and the USA. The Austrian index displays pronounced spikes around major adverse geopolitical events, indicated by the text labels, including the NATO intervention in the Kosovo war in spring 1999, the September 11 attacks in 2001, the Iraq War in 2003, the Russian annexation of Crimea in 2014, the onset of the full Russian invasion of Ukraine in 2022 and recent conflicts in the Middle East in 2025 and 2026.

The most pronounced spike in the Austrian index occurs at the onset of the Russian invasion of Ukraine in 2022, which is consistent with Austria's geographical proximity and economic exposure to this conflict. While the role of Russia as an Austrian export market had been diminishing even prior to Russia's invasion of Ukraine, Austria's dependence on Russian energy imports had remained high.[7] Austria, where natural gas accounts for 15% to 18% of total final energy consumption,[8] imports roughly 90% of its yearly natural

[4] Dow Jones Factiva is an international newspaper archive maintained by Dow Jones that covers over 33,000 sources from 200 countries in 33 languages. See https://proquest.libguides.com/factiva.

[5] We follow existing literature by excluding tabloid newspapers and focusing on national media. Due to further data limitations of the Factiva news archive, we end up with two newspapers for which news articles are available starting in 1993.

[6] The query includes words (in German) such as war, conflict, bomb or rocket. The whole query is included in Appendix A.4. in Bondarenko et al. (2024). We only exclude the term "nuclear" from the query to avoid conflating geopolitical risk with Austria-specific debates on nuclear energy, particularly around the time of the Fukushima accident.

[7] Between 2013 and 2021 the share of Austrian goods exported to Russia declined from 3.3% to 1.2% and the share of services exports from 2.3% to 1.6%.

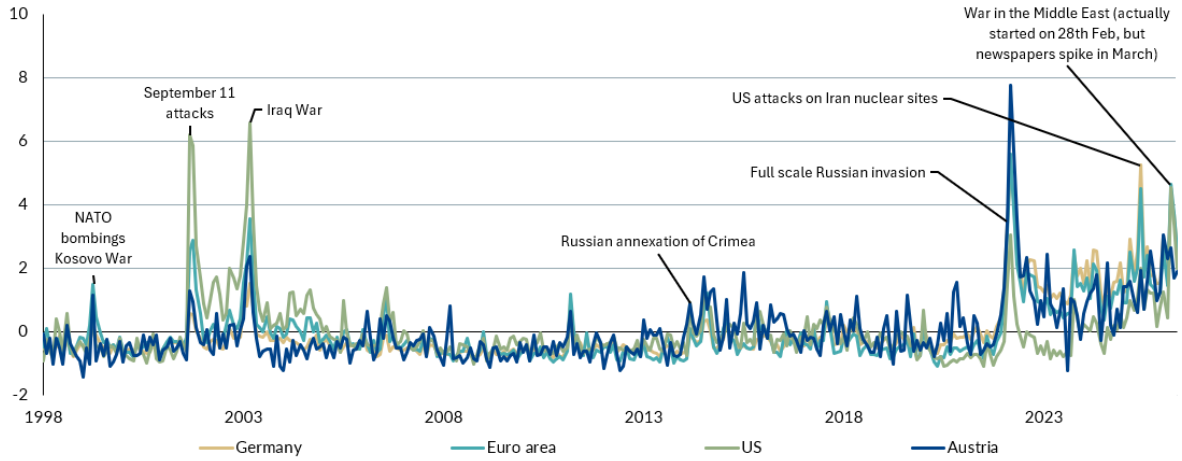
[8] Calculated from the energy balances of Statistics Austria. The share of natural gas in final energy consumption was 18.4% in 2021 and 15.1% in 2024.

gas consumption, and in 2021, around 80% of those imports originated from Russia (see Pichler et al., 2024).

Chart 1

Geopolitical risk indices

Standardised indicators



Note: This chart presents the monthly geopolitical risk indices for Austria and other major economies from January 1998 to May 2026. Indices are standardised to have zero mean and unit variance. The index for the euro area is a GDP-weighted average of the five largest euro area economies. The indices for Germany, the US and the euro area are available at: https://github.com/YvesSchueler/EuroAreaGPR.
Source: OeNB based on Factiva.

The differences in the relevance of geopolitical events across countries underscores the importance of assessing exposure to geopolitical risk through a country-specific index, as domestic media coverage may reflect concerns that are specific to a country's economic and geopolitical exposure. While all indices respond to major global geopolitical events, the most prominent spikes within each index tend to coincide with events that are particularly relevant for the respective region, suggesting that geopolitical risk perceptions are shaped by region-specific exposure. For example, the US index exhibits its highest peaks following the September 11 attacks and the Iraq War, whereas the German and euro area indices, similar to the Austrian index, also peak strongly at the onset of the Russian invasion. Moreover, all indices display a noticeable upward level shift and increased volatility after 2022, indicating a period of persistently heightened geopolitical risk. The cross-correlations between the indicators are shown and discussed in the annex (table A.2).

3 VAR analysis

3.1 The BVAR model

We first discuss the BVAR model which is used in our empirical analysis. Let y_t be an M-dimensional vector of economic variables, then

$$y_t = c + A_1 y_{t-1} + \cdots + A_p y_{t-p} + B x_t + \varepsilon_t, \quad \varepsilon_t \sim \mathcal{N}(0, \Sigma),$$

Where c is a constant term, the matrices $A_1, \ldots, A_p$ store the VAR coefficients, p denotes the lag order, x_t contains exogenous controls and ε_t is a normally distributed error term with variance covariance matrix Σ.

Since we estimate the model using Bayesian techniques, we rely on shrinkage priors to tackle the curse of dimensionality that commonly arises in highly parameterised models. Thus, we specify a standard

Minnesota prior (see Doan et al., 1984) on the VAR coefficients. This prior assumes that a variable's own lags are more important predictors compared to lags of other variables in the system. In addition, more distant lags are assumed to carry less information. We follow conventional hyperparameter settings and set $\lambda_1 = 0.2$, $\lambda_2 = 0.5$ and $\lambda_3 = 1.5$. These settings imply moderate overall shrinkage towards persistent univariate dynamics, stronger shrinkage on cross-variable coefficients and quadratic lag decay, respectively.

3.2 Data and identification

The BVAR is estimated on quarterly data from Q1 2001 to Q1 2026. Thus, we aggregate our GPR perception index to quarterly frequency by averaging over monthly observations.[9] We include the following variables in the model: the GPR perception index for Austria (GPR AT), year-on-year growth of Brent crude oil price (Oil), year-on-year growth of wholesale gas prices for Europe (Gas), the global supply chain pressure index (GSCPI), the three-month euro interbank offered rate (EURIBOR), the year-on-year growth of Austria's real GDP (GDP) and year-on-year HICP inflation (HICP). The endogenous variable selection broadly follows the existing literature, such as Bondarenko et al. (2024). Besides GPR, GDP, inflation and the policy rate, Bondarenko et al. (2024) also included credit volume, equity prices and house prices. As we are mainly interested in the impact of GPR on HICP inflation, we omitted these variables to keep the model parsimonious. However, we added the gas price and supply chain pressure index to capture confounding supply-side impacts especially from 2022 onwards. A more detailed description of the variables included in the model is given in table A.1 in the annex.

In accordance with Caldara and Iacoviello (2022) and Bondarenko et al. (2024), we identify a GPR shock using a Cholesky decomposition with the variable ordering as listed above. The results presented in the next subsection are robust to a model specification with an alternative ordering that considers a global and a domestic VAR block. Our model is estimated using $p = 4$ lags and we save 10,000 draws of the posterior distribution after discarding the first 10,000 draws as burn-in.

3.3 Response of headline inflation to GPR shocks in Austria

In theory the impact of a GPR shock on inflation is ambiguous (see Caldara et al., 2026). On the supply side, wars and conflicts disrupt international supply chains and may lead to increases in commodity and energy prices, which all drive up inflation. On the demand side, elevated GPR may dampen confidence and sentiment, depress activity and thus dampen inflation. Finally, fiscal and monetary policy may respond to heightened GPR, potentially dampening or amplifying its impact.

Chart 2 presents impulse response functions (IRF) of HICP inflation and real GDP growth to a one-standard-deviation shock to geopolitical risk over a four-year horizon. This shock size corresponds to approximately 20% of the observed increase in the index between Q4 2021 and Q1 2022, coinciding with the onset of Russia's full invasion of Ukraine. The solid blue line shows the posterior median response, while the shaded areas denote the 68% credible intervals. Responses are expressed as percentage point deviations from the respective year-on-year growth rates. The results are broadly consistent with the existing literature, indicating that geopolitical risk perception shocks exhibit supply shock characteristics by dampening real activity and increasing inflationary pressures (Caldara et al., 2026).

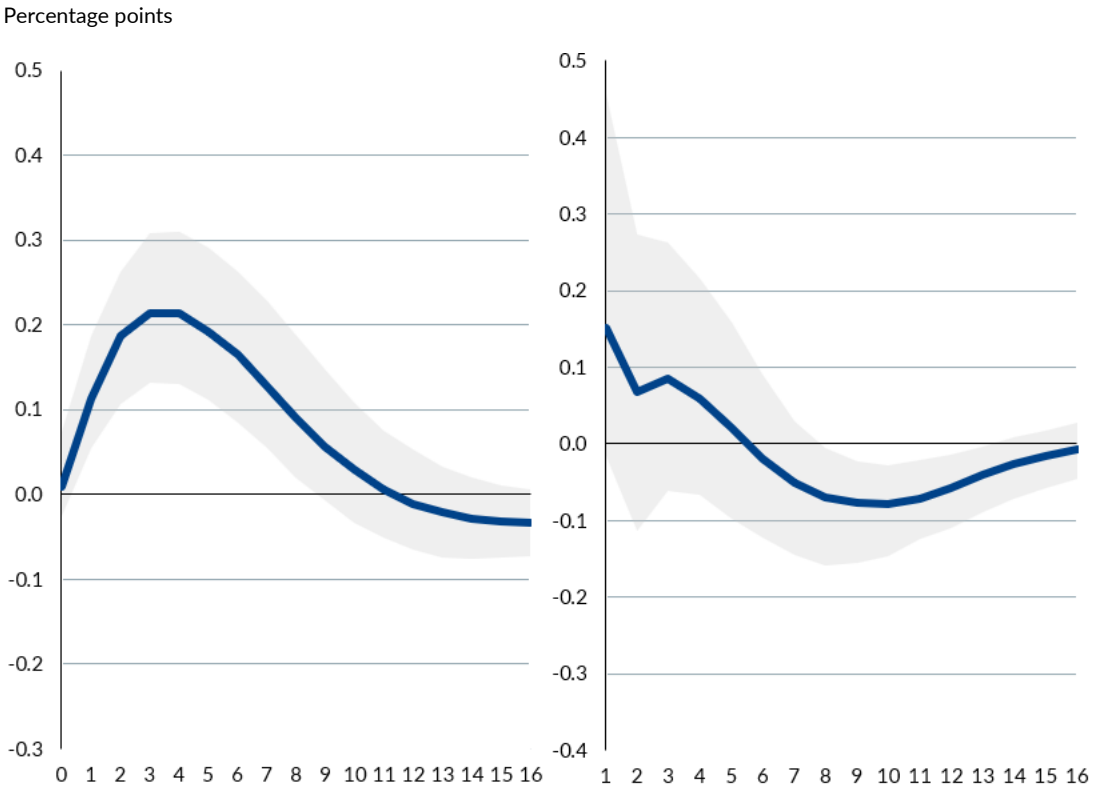
[9] The quarterly geopolitical risk perception index for Austria is presented in chart A.1 in the annex.

Following a geopolitical risk shock, HICP inflation rises already in the short run, peaking at around +0.2 pp after three quarters, with significant effects for up to two years. Notably, these inflationary responses remain sizeable even though we adjust for contemporaneous energy price and global supply chain pressure shocks. This finding suggests that geopolitical risk perception shocks may affect inflation dynamics through expectation- and uncertainty-based channels, leading to strong and persistent price pressures. Note also that the geopolitical risk shock implies a permanent shift in the price level, as the initial increase in the year-on-year growth rate is not reversed.

In contrast, real GDP growth declines moderately over the medium term, after insignificant effects in the short run. The peak response of around -0.1 pp is reached two years after the shock. Since we are mainly interested in the impact on HICP inflation, we will not discuss activity growth impacts any further in the remainder of this paper.

Chart 2

Impulse response functions of HICP inflation (left) and GDP growth (right) to a geopolitical risk shock

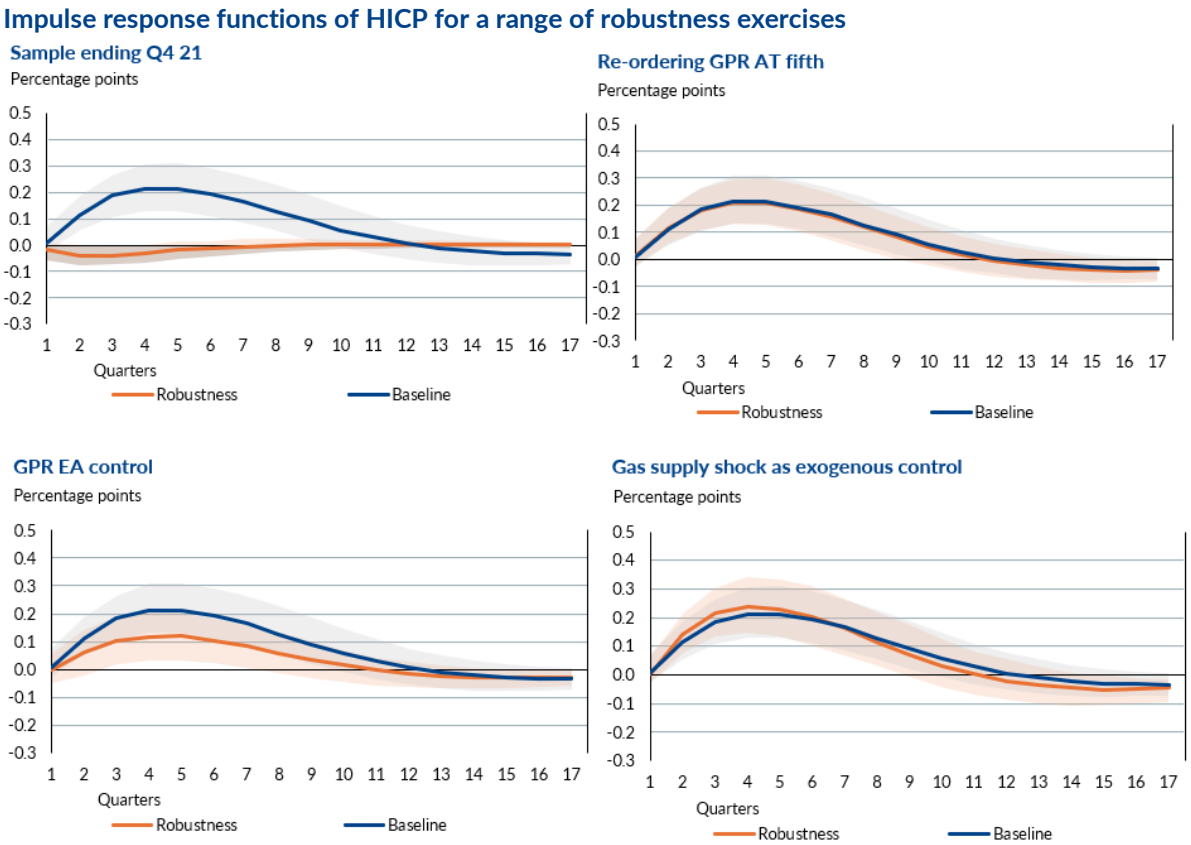


Note: This chart presents impulse response functions of the respective variables in the BVAR to a one-standard-deviation shock to the geopolitical risk perception index in the initial quarter, for up to 16 quarters after the shock. The solid blue line corresponds to the posterior median estimate; the blue shaded area corresponds to the 68% credible set. Responses show percentage point deviations from the year-on-year growth rate.
Source: OeNB.

We re-estimate the model using a range of alternative specifications to check the robustness of our baseline results. First, we provide further insight into the role of the post-2021 period in shaping the average IRF estimates. Given the severe repercussions of Russia's invasion of Ukraine for the Austrian economy, we restrict the estimation sample to end in Q4 2021, thereby capturing only the pre-war relationship. In addition, we also estimate the model over the full sample while including an exogenous

post-2021 dummy, which is equal to 1 from Q1 2022 onwards. This specification retains the post-2021 information, but controls for an average shift in the conditional mean during that period. Both specifications are compared with the baseline VAR results. Second, we assess the sensitivity of the results to the recursive ordering by estimating the model with GPR AT ordered fifth. Given that Austria is a small, open economy, we assume that domestic variables have no contemporaneous impact on global variables. Hence, our alternative ordering implicitly defines a global VAR block (Oil, Gas, GSCPI, EURIBOR) and a domestic VAR block (GPR AT, GDP, HICP). Third, to examine whether the estimated effects reflect domestic risk perceptions or a common euro area component, we augment the model with the euro area GPR index as an additional variable and order it first in the VAR. We continue to identify a GPR AT shock and compare the resulting IRFs with the baseline estimates. Lastly, we consider the possibility that the results may be driven by exogenous energy shocks. Given the euro area's reliance on natural gas and its importance in the inflation surge of 2022 and 2023, we obtain the gas supply shock series developed by Adolfsen et al. (2024)[10]. We augment the BVAR with the gas supply shock as an exogenous series to possibly purge the results from confounding energy effects.

Chart 3



Note: This chart presents impulse response functions of HICP inflation in the BVAR to a one-standard-deviation shock to the geopolitical risk perception index. The solid blue line corresponds to the posterior median response, the grey shaded area corresponds to the 68% credible set. Responses show percentage point deviations from the year-on-year growth rate.
Source: OeNB.

[10] The monthly gas supply shock series is available from https://sites.google.com/view/massimo-minesso-ferrari/codes-data. For estimation, we aggregate the series by average of the sum of monthly observations in each equation. Due to data limitation of the shock series, the estimation sample of this robustness exercise starts in Q1 2007.

The results of these robustness checks for inflation are presented in chart 3. In each panel, the HICP response from the respective robust specification is shown relative to the baseline HICP response. The top-left panel compares the baseline IRF with the IRF obtained from the restricted sample ending in Q4 2021.[11] The inflation response weakens markedly relative to the baseline specification. This suggests that the estimated inflationary effect of GPR shocks is closely linked to the post-2021 period and should therefore not be interpreted as a stable average relationship over the full sample. Instead, the baseline response appears to be strongly shaped by the Russian invasion of Ukraine and the subsequent high-inflation episode.

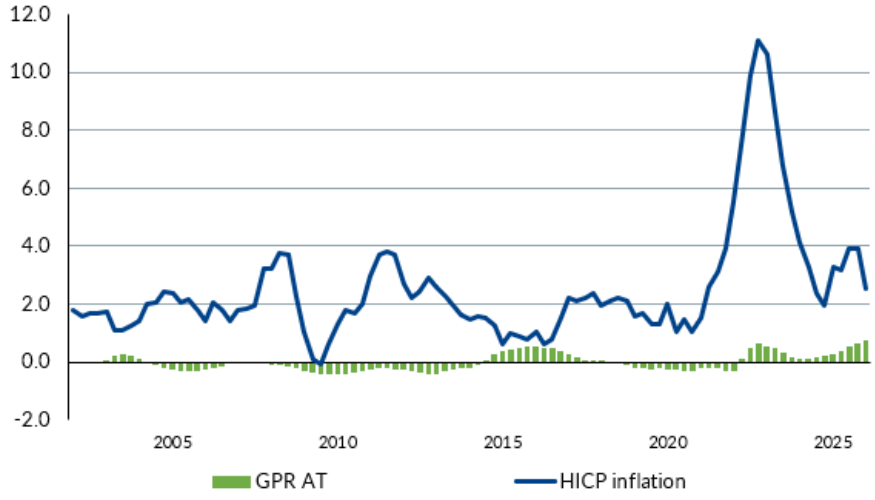
The top-right panel suggests that the results are robust to reordering GPR AT, as the impulse responses remain almost identical to the baseline. The bottom-left panel assesses whether the inflation response is driven by domestic or euro area risk perceptions. While the HICP response is somewhat weaker in the augmented model, it remains broadly in line with the baseline, supporting the view that Austria-specific risk perceptions contain information beyond that captured by common euro area geopolitical risk perceptions. This further underscores the importance of measuring geopolitical risk perceptions at the domestic level. The bottom-right panel includes the IRF of a model including a gas supply shock as an exogenous variable. The resulting IRF is almost identical to the baseline IRF, strengthening the argument that the geopolitical risk shock captures price responses distinct from those of energy price shocks.

Next, we will analyse the historical role of geopolitical risk perception shocks in shaping inflation dynamics in Austria. Given that the inflation rate in Austria was among the highest in the euro area during 2022 and 2023 and remained elevated relative to the euro area aggregate in 2025 and 2026, this exercise is particularly informative for the later part of the sample.

Chart 4

Historical contribution of geopolitical risk shocks to HICP inflation

Percentage points; change on previous year in %



Note: Historical decomposition of HICP inflation from Q1 2002 to Q1 2026. Contribution of geopolitical risk shocks (GPR AT) to HICP inflation in percentage points indicated by green bars.
Source: OeNB.

[11] To conserve space the IRF from the model augmented with the post-2021 dummy is not shown here, since the results are qualitatively similar to restricting the sample end to Q4 2021. Results are available upon request.

Chart 4 presents the historical decomposition of HICP inflation. The solid line depicts the actual inflation series, the green bars represent the contributions of structural GPR shocks. The contributions of the remaining innovations as well as the constant and initial condition are not interpreted as exogenous shocks and therefore left out.

The historical decomposition reveals substantial variation over time in the contribution of geopolitical risk perception shocks to Austrian HICP inflation. Following moderate inflationary pressures in the early 2000s, comparatively benign geopolitical conditions generally exerted a disinflationary influence until the mid-2010s. Geopolitical risk perception shocks subsequently contributed positively to inflation around the annexation of Crimea and during the following years, before becoming predominantly disinflationary again between 2018 and 2021. However, as explained above, we are potentially overestimating the role of geopolitical risk prior to 2022. With the onset of Russia's full-scale invasion of Ukraine, the contribution of geopolitical risk perception shocks was positive from the second quarter of 2022 onwards. On average, GPR shocks contributed around 1/4 pp to inflation in 2022, 0.4 pp in 2023 and 0.15 pp in 2024.[12] Their contribution then increased to 0.46 pp in 2025 and 0.8 pp in Q1 2026, suggesting that geopolitical risk has become a more prominent source of recent inflationary pressures.

3.4 Heterogeneous impact on headline inflation components

Our results suggest a positive link between geopolitical risk perception and headline inflation. To analyse the transmission channels in more detail, we repeat the analysis for the main components of headline inflation, i.e. energy, food, NEIG and services. We do this by extending the BVAR models the OeNB employs for forecasting these components for Austria within the Eurosystem Projection Exercise. All BVAR specifications[13] for the HICP components contain, in addition to their own HICP indicator, the GSCPI, an index of global real activity (IGREA) and at least one energy commodity price (oil price in euro - Oil) as well as our proposed geopolitical risk index (GPR AT). A second energy price (wholesale price of gas - gas) is added in the components NEIG, food and energy. Component-specific variables are wages (Wages) and real consumption (PCR) for NEIG and services and agricultural commodity prices (P AGRI) for services and food. Variables are in annual percentage changes except the geopolitical risk indicator and the global activity variable, which enter the specifications in levels. The ordering of the variables in the BVAR specifications is as follows. For energy: GPR AT, GSCPI, IGREA, Oil, Gas, energy; for food: GPR AT, GSCPI, IGREA, Oil, Gas, P AGRI, Wages, food; for NEIG: GPR AT GSCPI, IGREA, Oil, Gas, Wages, PCR, NEIG; for services: GPR AT, IGREA, Oil, P AGRI, Wages, services. With respect to the prior, we use the Minnesota prior with relatively tight overall shrinkage: $\lambda_1 = 0.05$, $\lambda_2 = 0.5$ and $\lambda_3 = 1.5$.

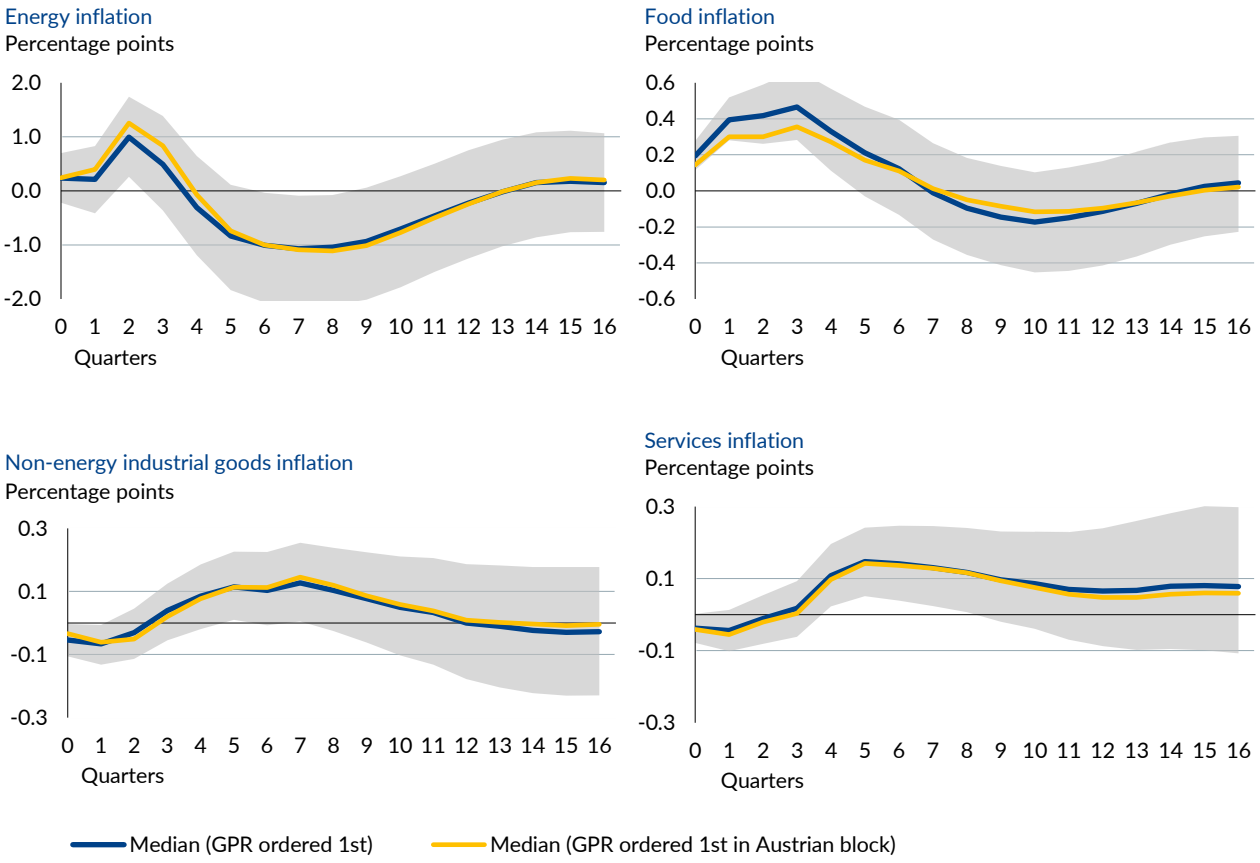
Chart 5 presents the impulse response functions of a one-standard-deviation positive GPR shock on energy inflation, food inflation, NEIG inflation and services inflation. A positive shock to the Austrian geopolitical risk index leads to heterogeneous inflation responses across the main HICP components, suggesting that geopolitical risk affects prices primarily through commodity and production cost channels rather than through broad-based demand pressures.

[12] The impact of the geopolitical risk shock in 2022 seems small at first glance. With a peak shock at the onset of the Russian invasion of Ukraine in Q1 2022 of around 5 standard deviation (chart A.3 in the annex shows the structural GPR shock series), we might expect a larger impact. However, a series of negative GPR shocks prior to the invasion dampen the impact in 2022. Additionally, the IRF shows that the shock transmission is not immediate but the peak impact is reached 3 quarters after the initial shock.

[13] See also table A1 in the annex.

Chart 5

Impulse response functions of main components of inflation to a one-standard-deviation geopolitical risk shock



Note: This chart presents impulse response functions of the respective variables in the BVAR to a one-standard-deviation shock to the geopolitical risk perception index. The solid blue line corresponds to the posterior median response when GPR AT is ordered first in the BVAR specifications and the yellow lines when ordered as first variable in the Austrian block of the variables (5th or 6th variable depending on component). The grey shaded area corresponds to the 68% credible set. Responses show percentage point deviations from the year-on-year growth rate.
Source: OeNB.

In comparison to NEIG inflation, services inflation displays a quantitatively similar response to the geopolitical risk shock. Since services rely less directly on internationally traded commodities and imported intermediate goods, geopolitical disturbances are transmitted only indirectly through higher energy costs, wage developments and second-round effects. The muted response therefore suggests that domestic factors continue to dominate the inflation dynamics of the services sector.

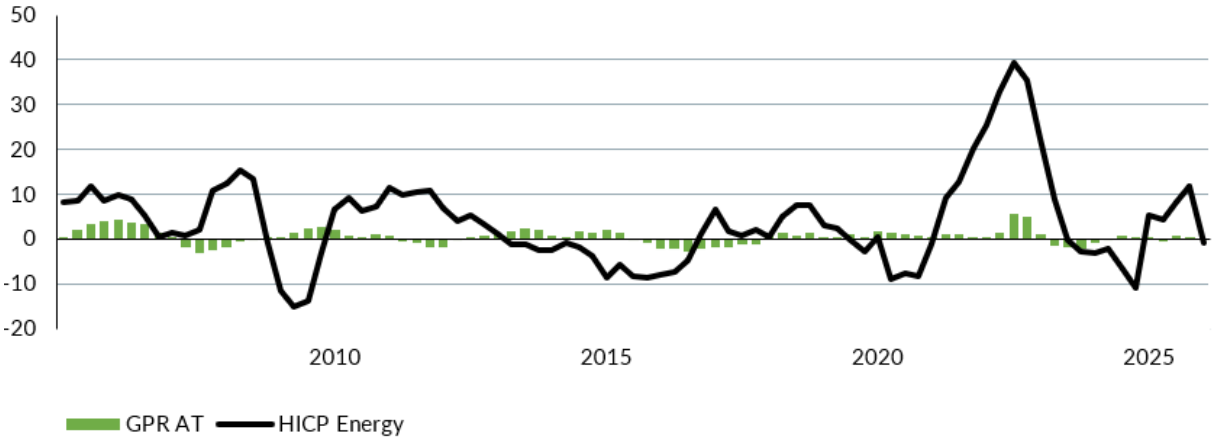
Overall, the impulse responses indicate that geopolitical risk perception shocks predominantly affect inflation through cost-push channels, with the strongest and most immediate effects concentrated in energy prices, followed by food prices, while the pass-through to NEIG and especially services is substantially weaker. This ordering closely mirrors the transmission mechanism documented by Bondarenko et al. (2024) for the euro area and by Caldara et al. (2026), who likewise find that geopolitical shocks initially raise commodity and energy prices before gradually propagating to broader measures of consumer price inflation.

Geopolitical risk perception shocks exert additional inflationary pressures during periods of heightened international tensions.

As regards energy inflation, geopolitical risk perception shocks made their largest positive contributions during Russia's annexation of Crimea and, in particular, following Russia's full invasion of Ukraine (see chart 6; for the other main components – food, NEIG and services – see chart A.4 in the annex). This finding is consistent with the interpretation that geopolitical tensions primarily affect energy prices indirectly, by heightening concerns about future supply disruptions and increasing risk premiums in commodity markets.

Chart 6

Historical contribution of geopolitical risk shocks to energy components of inflation



Note: Historical decomposition from Q3 2005 to Q1 2026. Contribution of geopolitical risk shocks (GPR AT) to HICP energy inflation in percentage points indicated by green bars.
Source: OeNB.

For the other main inflation components, the contribution of geopolitical risk shocks was considerably smaller, even during 2022 and 2023. Overall, these results are broadly consistent with the evidence reported by Bondarenko et al. (2024) and Caldara et al. (2026), who find that geopolitical shocks are transmitted to consumer prices primarily through energy and commodity markets, with effects on other inflation components emerging only more gradually.

3.5 Transmission along the pricing chain of diesel and petrol

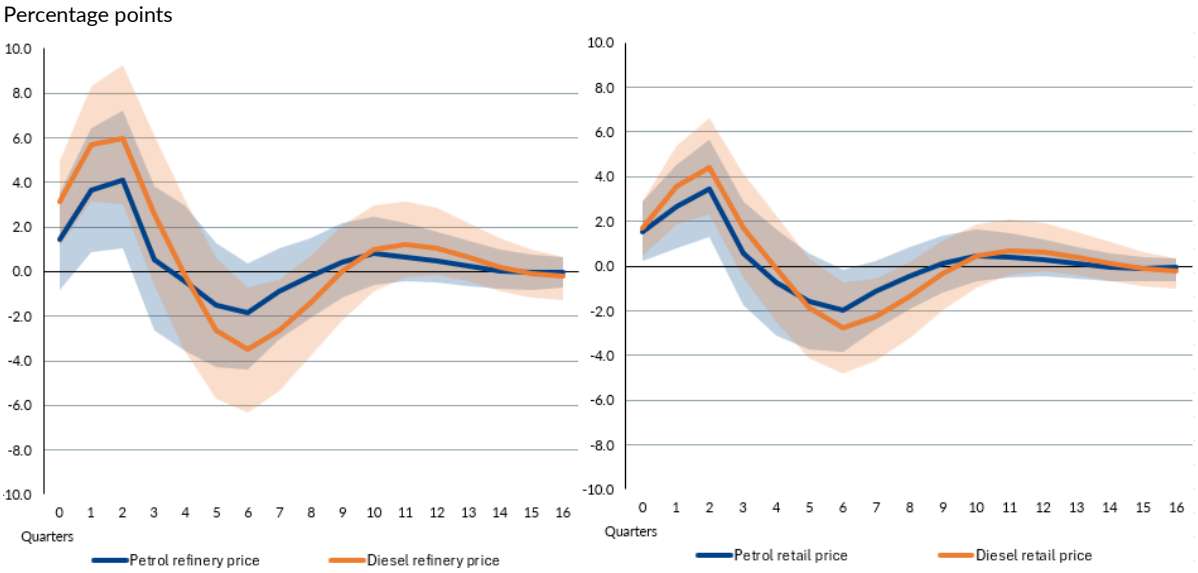
As a next step, we will use even more narrowly focused models to analyse the impact of geopolitical risks on diesel and petrol prices at refineries and Austrian petrol stations (retail price). To this end, we estimate separate BVAR models for diesel and premium petrol. In addition to the Austrian geopolitical risk index, these models consider the crude oil price, the wholesale price and the net retail price at the consumer level for the respective fuel. All price variables are expressed in year-on-year log changes.

In addition to the channel via crude oil prices, GPR may also have a direct impact on downstream market segments as an independent pricing factor. The resulting impulse response functions (chart 7) suggest a sizeable increase in both refinery and retail inflation for both diesel and petrol following a one-standard-deviation GPR shock. The inflationary pressures last around a year and at their peak in the second quarter after the shock, diesel refinery (retail) inflation is elevated by 6 pp (4.4 pp) and petrol refinery (retail) inflation by 4.1 pp (3.5 pp). Roughly a year after the shock, the inflationary pressures subside and a partial price correction sets in. This deflationary correction lasts around a year and reaches its trough at -3.5 pp

(-2.7 pp) for diesel refinery (retail) inflation and -1.9 pp (-2 pp) for petrol refinery (retail) inflation, respectively. However, the support from our model and data for a deflationary correction of the petrol refinery price is only weak as shown by the less precise credible band around the median response.

Chart 7

Impulse response functions of refinery (left) and net prices (right) for diesel and petrol to a geopolitical risk shock



Note: This chart presents impulse response functions of the respective variables in the BVAR to a one-standard-deviation shock to the geopolitical risk perception index, for up to 16 quarters after the shock. The solid blue (orange) line corresponds to the posterior median estimate; the blue (orange) shaded area corresponds to the 68% credible set. Responses show percentage point deviations from the year-on-year growth rate.
Source: OeNB.

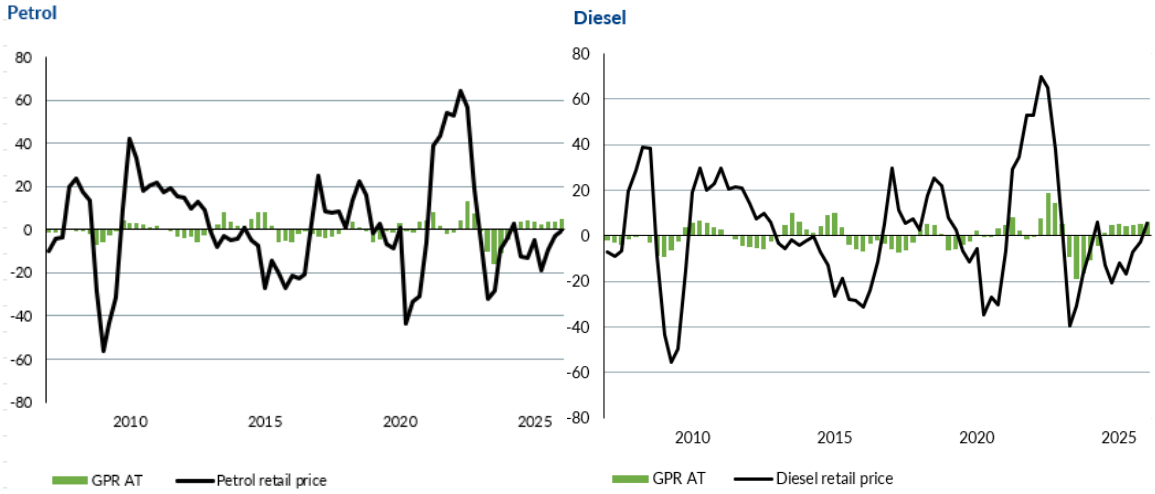
The results suggest that the diesel market is a bit more sensitive to geopolitical risk shocks. A plausible mechanism is the comparatively low price elasticity of commercial diesel demand, which implies that supply-side disturbances translate into prices rather than quantities, combined with the closer link of diesel consumption to freight transportation and industrial activity (see, e.g., Wadud, 2016; Liddle and Huntington, 2020). The positive impulse responses of refinery and retail prices for diesel and petrol are consistent with a transmission mechanism in which geopolitical risk affects retail fuel prices partly through upstream crude oil and refinery-market channels. However, a recursive identification scheme does not separately identify direct and mediated effects. The estimates should therefore be interpreted as the total pass-through along the pricing chain under the maintained ordering assumption rather than as a formal causal decomposition into direct and indirect channels.

The historical contribution of geopolitical risk shocks to diesel and petrol prices is shown in chart 8. Between 2007 and 2026, geopolitical risk shocks accounted for around 6.5% (petrol) and 9% (diesel), respectively, of the fluctuations in the retail price. The role of geopolitical risk shocks was most pronounced during the energy crisis. In Q3 2022, the contribution reached almost +19 pp (of the 65% increase) for diesel and +13 pp (of the 57% increase) for petrol. As conditions normalised in 2023, geopolitical risk shocks dampened fuel prices by up to 19 pp (diesel) and 16 pp (petrol) in Q3 2023. Overall, diesel reacts more strongly to risk shocks in both directions. Risk amplifies price dynamics, particularly during periods of crisis, but can also counteract them during downturns.

Chart 8

Historical contribution of geopolitical risk shocks to petrol and diesel inflation

Percentage points; change on previous year in %



Note: Historical decomposition from Q3 2007 to Q1 2026. Contribution of geopolitical risk shocks (GPR AT) to petrol and diesel inflation in percentage points indicated by green bars.
Source: OeNB.

4 Concluding remarks

We constructed a geopolitical risk perceptions (GRP) index for Austria using domestic newspaper articles, following the methodology of Bondarenko et al. (2024). We use this index in structural BVAR (recursive identification) models for Austria to estimate the impact of geopolitical risk perception shocks on Austrian headline inflation and its main components. To distinguish these shocks from contemporaneous energy price and global supply disturbances, we include energy commodity prices and global supply chain conditions and order them before the Austrian GPR index.

The impulse response functions of our model show a pronounced and persistent impact of GPR shocks on Austrian HICP inflation. A one-standard-deviation GPR shock – corresponding to one fifth of the increase observed at the onset of Russia's invasion of Ukraine – increases inflation by up to 0.2 pp one year after the shock. Thereafter, the effects decline, but inflation remains elevated, returning to its average growth rate roughly two years after the shock. Since there were no counteracting deflationary movements thereafter, the price level remains persistently higher following a GPR shock. The historical decomposition suggests that geopolitical risk perception shocks amplified Austrian HICP inflation in 2022 and 2023 by 0.3 pp on average. A closer inspection of the main components of headline inflation reveals that geopolitical risk perception shocks amplify the cost-push channel, primarily via the energy and commodity markets. The strongest, most immediate but also only temporary impact of a GPR shock is on energy inflation. We see smaller effects on food, non-energy industrial goods and finally services inflation (in order of size). While getting weaker at each consecutive stage, these effects contribute to persistently higher headline inflation after the shock fades. Additionally, we find that GPR shocks generate sizeable increases in diesel and petrol price inflation at both the refinery and retail stage, providing further evidence that inflationary pressures propagate along the fuel pricing chain.

Our analysis is subject to some caveats. Following the argument in Caldara and Iacoviello (2022), we implicitly assume that the coverage of our two included newspapers represents an accurate measure of the perceptions of Austrian economic and political agents. Our access to news archive data restricts us

to just two Austrian daily newspapers, which might misrepresent the public perception of risk in Austria. Future work could extend this analysis by broadening the covered news sources.

Besides data issues our analysis also faces constraints in the identification of the GPR shock. While the results are robust to the ordering, inclusion or omission of certain variables, the identification of the geopolitical risk perception shock is driven by the period following the Russian invasion of Ukraine in February 2022. Ending the sample in Q4 2021 yields negligible estimated effects of geopolitical risk shocks on Austrian inflation. An extended coverage of the GPR index, including the 1990s with, for instance, the war in Yugoslavia, could provide additional episodes of heightened geopolitical risk and allow us to assess whether the estimated relationship is specific to the post-2022 period or reflects a more general feature of Austrian inflation dynamics.

We find that our measure of perceived geopolitical risk in Austria accounts for variation that is not fully reflected in geographically broader indicators (i.e. for the euro area), highlighting the value of a country-specific perspective when assessing common geopolitical events. Moreover, domestic perceptions of geopolitical risk shocks can amplify inflationary cost-push channels. Monitoring how geopolitical risk affects different inflation components in Austria can help assess whether price pressures remain concentrated, spread to other components or persist over time. Together with evidence from other euro area member states, our results can add to the understanding of euro area inflationary pressures and risks and thus inform monetary policy decisions.

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Annex

Table A.1

Data description

Variable	Mnemonic	Description	Transformation	Source
Geopolitical risk index	GPR AT	Number of articles related to geopolitical risk relative to total number of articles in two selected Austrian newspapers (Der Standard and Die Presse).	0	Authors' calculations.
Natural gas price Europe	GAS	Global price of natural gas - EU. Natural Gas, Netherlands TTF Natural Gas Forward Day Ahead, USD per Million Metric British Thermal Unit.	1	International Monetary Fund, Primary Commodity Prices.
Brent crude oil price	OIL	Global price of Brent Crude. USD per Barrel.	1	International Monetary Fund, Primary Commodity Prices.
Global supply chain pressure index	GSCPI	The GSCPI integrates transportation cost data and manufacturing indicators to provide a gauge of global supply chain conditions.	0	Retrieved from the Federal Reserve Bank of New York. For further information, see Beningo et al. (2022).
Real gross domestic product	GDP	Real gross domestic product for Austria, seasonally adjusted	1	Eurostat.
HICP	HICP	Harmonised Index of Consumer Prices for Austria, seasonally adjusted.	1	Eurostat.
HICP Energy	HICP Energy	Harmonised Index of Energy Consumer Prices for Austria	1	Eurostat.
HICP Food	HICP Food	Harmonised Index of Food Consumer Prices for Austria	1	Eurostat.
HICP Non-Energy Industrial Goods	HICP NEIG	Harmonised Index of NEIG Consumer Prices for Austria	1	Eurostat.
HICP Services	HICP Services	Harmonised Index of Services Consumer Prices for Austria	1	Eurostat.
EC Food Prices	P AGRI	European farm gate prices for food	1	ECB.
Wages	WUN	Compensation per employee, seasonally adjusted.	1	Statistics Austria.
Real Private Consumption	PCR	Real private consumption, seasonally adjusted.	1	Statistics Austria.
Interbank rate	EURIBOR	3-month Euro interbank offered rate (IBOR)	0	Eurostat.

Note: Transformation: '0' = no transformation, '1' = % year-on-year changes.
Source: OeNB.

Table A.2 reports pairwise correlations across the geopolitical risk indices, revealing substantial co-movement across economies. At the same time, correlations remain well below unity, indicating that country-specific indices contain information beyond common global or euro area components. Consistent with Austria's economic and cultural proximity, the Austrian index is more strongly correlated with the euro area and in particular the German measure than with the US index. We view this as further support for the relevance of a country-specific measure when assessing the exposure to geopolitical risk.

Table A.2

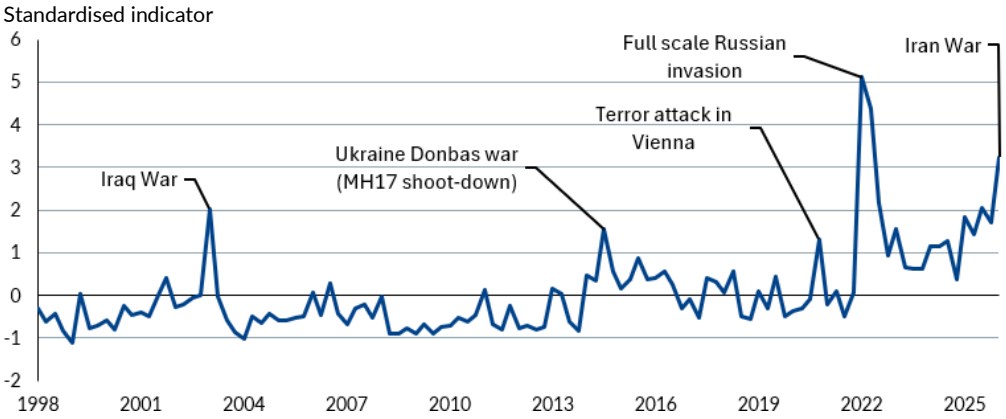
Correlations of monthly geopolitical risk indices

	Austria	EA	Germany	US
Austria	1			
EA	0.75	1		
Germany	0.77	0.92	1	
US	0.45	0.71	0.46	1

Source: OeNB based on Factiva.

Chart A.1

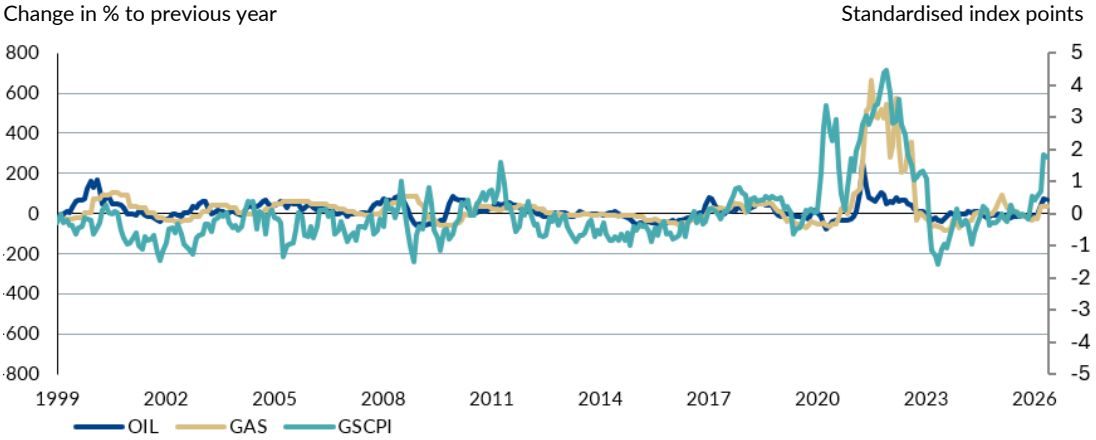
Quarterly geopolitical risk indicator for Austria



Source: OeNB based on Factiva.

Chart A.2

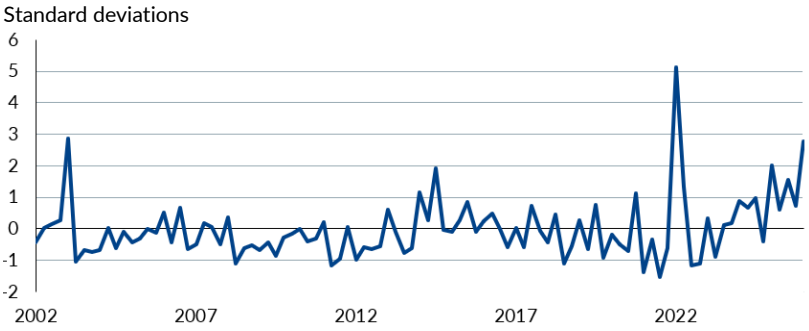
Energy price developments and global supply chain pressures



Source: OeNB based on IMF primary commodity prices and Federal Reserve Bank of New York.

Chart A.3

Structural GPR AT shock

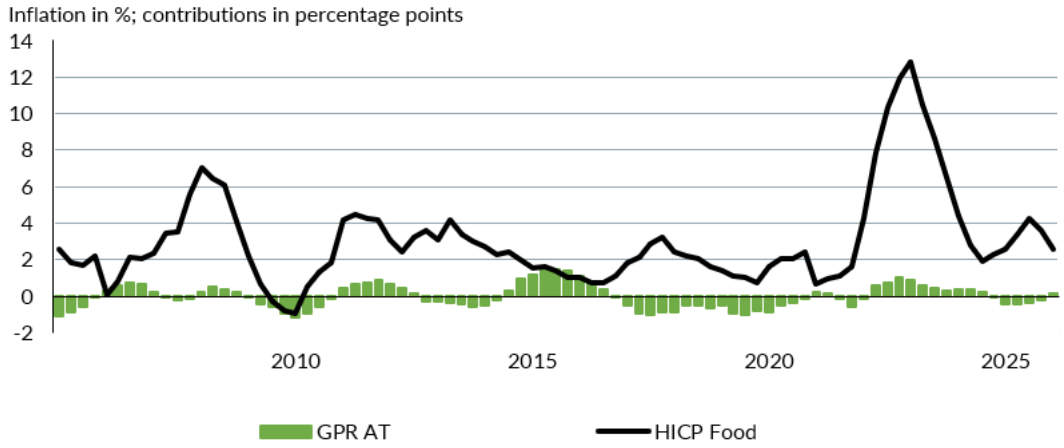


Source: OeNB.

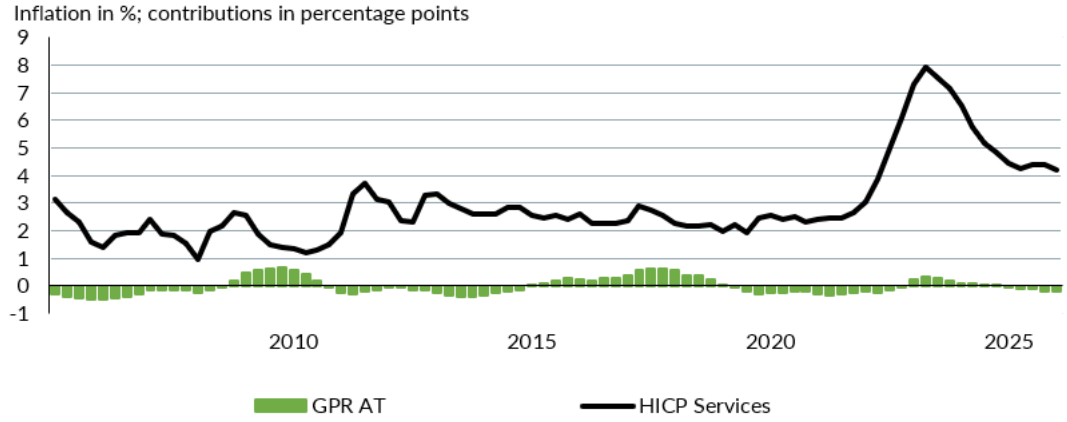
Chart A.4

Historical contributions of geopolitical risk to food, services and NEIG inflation

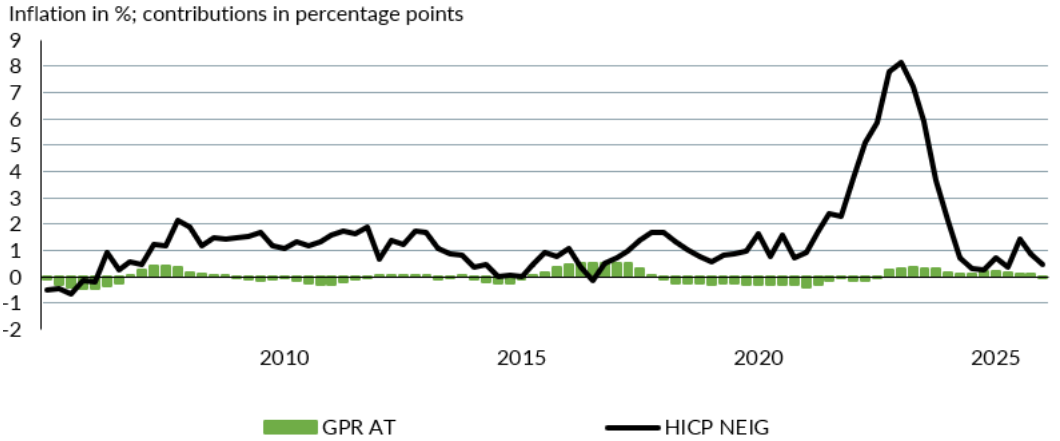
Food inflation: contribution of risk shock



Services inflation: contribution of risk shock



NEIG inflation: contribution of risk shock



Note: Contribution of geopolitical risk shocks (GPR AT) to HICP inflation components in percentage points indicated by green bars.
Source: OeNB.

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