European Stability Mechanism

ECONOMIC NARRATIVES AND REALITIES OF GEOPOLITICAL RISK

S. ARNDT, Y. BONDARENKO, V. LEWIS, M. ROTTNER, AND Y. SCHULER

Discussion by Yasin Mimir (ESM)

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Views are my own and do not necessarily reflect those of the ESM.

THIS PAPER IN A NUTSHELL

- **Motivation:** It is critical for policymakers to assess whether a geopolitical risk shock has a demand or supply-side narrative to accurately evaluate its impact on the macroeconomy.
- **Goal:** Analyse the economic narrative transmitted by a news article covering a geopolitical event, with the help of references to different transmission channels.
  - **Main research question:** When the media portrays the impact of a geopolitical event as driven by demand or supply factors, does the actual economic response align with this framing?
- **Approach:** Employ machine learning techniques to examine each article and obtain a detailed assessment of its underlying narrative.
  - Identify structural shocks from the geopolitical events
  - Evaluate whether narratives are in line with the inherent economic mechanisms
- **Result:** The actual effects of a geopolitical risk event indeed depend on the very nature of the underlying narrative.

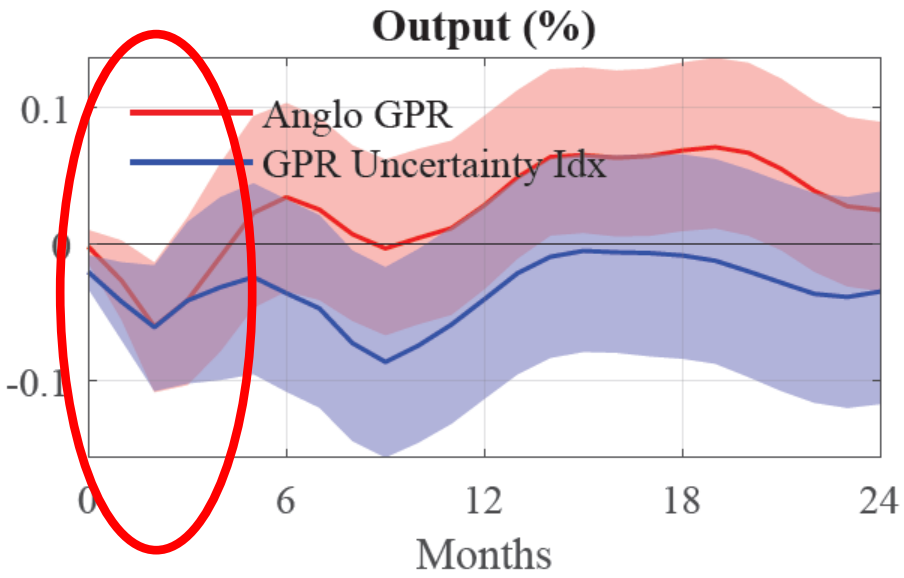
KEY TAKEAWAYS AND MY ASSESSMENT

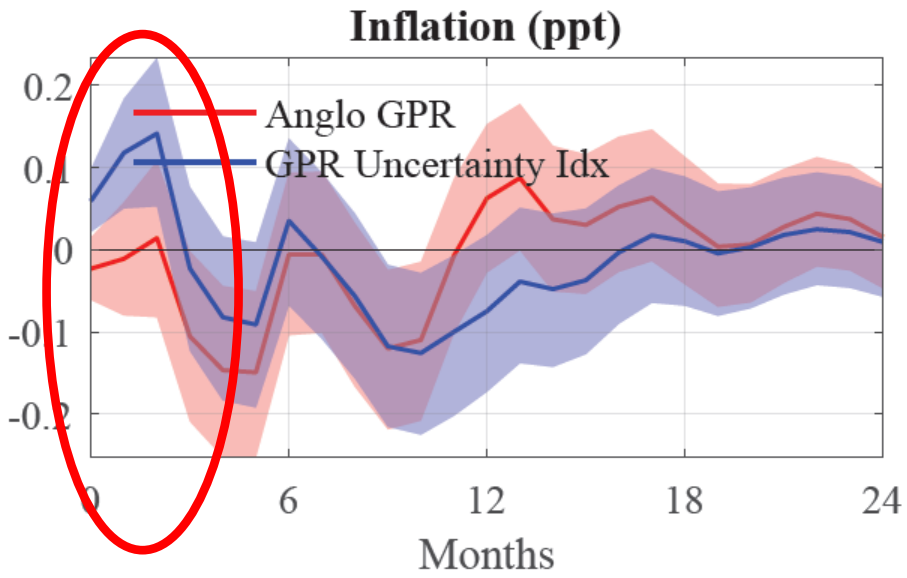
- Highlights:
  - The adverse impact of geopolitical events on the real economy tends to be more long-lasting when these events are perceived to increase uncertainty.
  - The negative supply risk narratives correlate fairly well with the Shortages and Sanctions indices while the correlations with policy uncertainty indices are quite low.
  - Adverse GDP and oil price responses are the most severe in the case of negative supply GPR shocks.
- My assessment in a nutshell
  - A timely and highly insightful contribution to the important policy debate about the impact of geopolitical risk on the economy.
  - A clear, simple and innovative methodology to analyse the geopolitical risk narratives to be tested.
  - A careful and very well-executed empirical analysis to assess the key results from the LLM (with a few caveats and potential improvements).

MY COMMENTS

- The nature of geopolitical “uncertainty” shocks
- The source country of geopolitical risk (Alvarez et al., 2025)
  - Geopolitical risk for the US arising from tensions in the Middle East may have distinct economic consequences compared to those originating from Russia or China.
- LLM prompt-related issues
  - Mixing of anticipated and unanticipated shocks, positive demand GPR narrative
- Nonlinearities (Hudecz, Lauwers, and Mimir, 2024)
  - The response behaviour of many economic variables to a rise in geopolitical risk could change depending the prevailing regime of geopolitical tensions (high vs. low geopolitical risk regime)

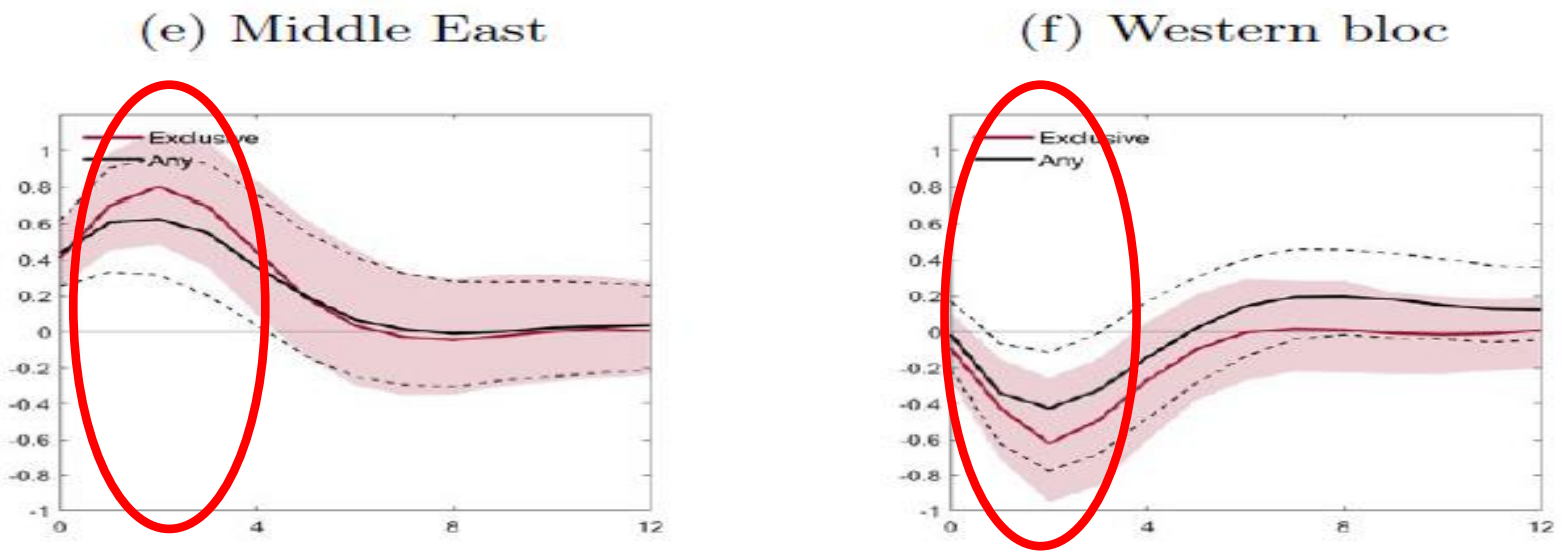
ARE GEOPOLITICAL UNCERTAINTY SHOCKS REALLY NEGATIVE AGGREGATE DEMAND SHOCKS?





- Leduc and Liu (2016): An increase in uncertainty resembles effects of a negative aggregate demand shock. However, based on this, the impact on inflation for the first three-four months appears puzzling.
- It could be related to how the prompt has been constructed as it only takes the articles that contain the words “uncertain” or “uncertainty” or “uncertainties”. This prompt could still be contaminated by the articles that mention negative supply side factors. It would be better to design a prompt that clearly distinguishes the uncertainty narrative from the negative supply narrative.

THE SOURCE COUNTRY OF GEOPOLITICAL RISK MATTERS FOR THE NARRATIVE (ALVAREZ ET AL., 2025)



- An increase in GPR shocks from the Middle East is linked to higher oil prices, benefiting the US economy through increased investment in the shale oil industry while those shocks from Western bloc weigh on US economic activity.
- Could the prompt be designed to improve the granularity of the risk narrative by considering the source country of geopolitical risk? Or does the information about the source country already provide the risk narrative (demand or supply)? A negative supply GPR shock could increase US output, potentially contaminating positive demand shocks.

LLM: PROMPT-RELATED QUESTIONS

- The prompt has been designed to classify both anticipated and unanticipated shocks in the same category for both demand and supply narratives.
  - Ex: “Does the article explicitly or clearly imply that prices of goods and services in the US have **risen** or **will rise** because of the event?
  - Although the direction of the responses might be similar, anticipated shocks allow for gradual adjustments while unanticipated shocks could lead to more abrupt changes in behaviour and larger initial impacts.
  - Is there any reason to mix these two types of shocks? Could not they be separated to ascertain the effects?
- Positive demand narrative leads to a fall in output as opposed to a rise in the VAR.
  - Could this imperfect identification be due to non-separation of anticipated and unanticipated shocks?
  - Anticipated positive government spending shocks might lead households to reduce their consumption today in anticipation of higher future taxes to pay for the spending, having contractionary effects today, as opposed to unanticipated positive government spending shocks, raising output on impact.
- One article can be classified in many narratives with one “yes”. Doesn’t it blur the results a bit?

COULD THE LLM PROMPT BE DESIGNED TO BE MORE SPECIFIC ABOUT NARRATIVES?

Negative supply:

1. Does the article explicitly or clearly imply that prices of goods and services in the US have risen or will rise and U.S. output has fallen because of the event?

Negative demand:

4. Does the article explicitly say U.S. consumer, business, or investor confidence has fallen (or will fall) and prices of goods and services in the US have decreased?

5. Does the article explicitly say U.S. consumer, business, or investor demand has fallen (or will fall) and prices of goods and services in the US have decreased?

Positive demand:

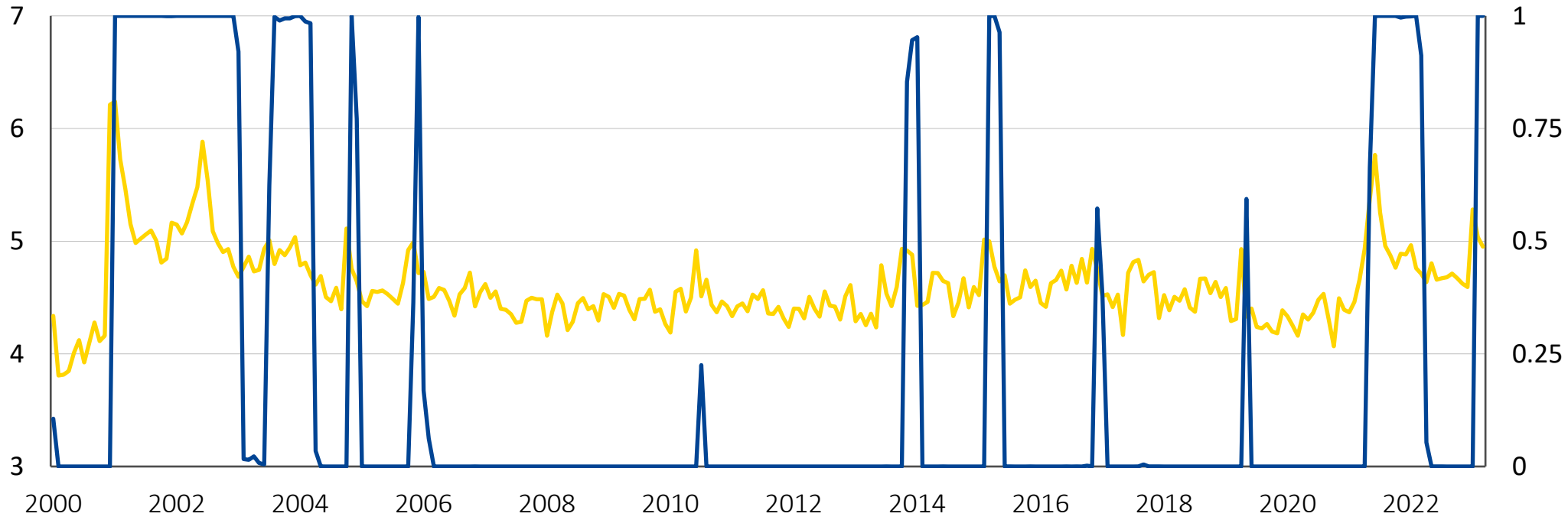
6. Does the article explicitly or clearly imply U.S. military spending or defence production is increasing or planned to increase and prices of goods and services in the US are rising?

NONLINEARITIES: INVESTORS' APPETITE MAY CHANGE IN A LOW VS. HIGH GEOPOLITICAL RISK (HUDECZ, LAUWERS AND MIMIR, 2024)

Regime-switching BVAR models

Long periods of low geopolitical tensions, interspersed with short periods of heightened risks

Geopolitical risk index (yellow, left-axis) and probability of high geopolitical risk regime (blue, right-axis)

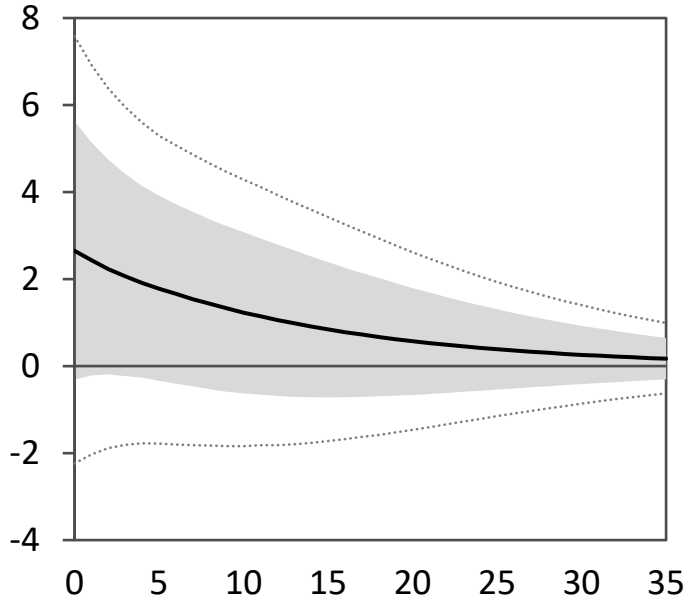


Sources: ESM 's calculations based on Eurostat and Haver Analytics. Geopolitical risk (GPR) index from Caldara and Iacoviello (2022). The probabilities of low and high geopolitical risk regimes are computed based on an endogenous Markov regime-switching BVAR model that detects different regimes based on the level of the GPR index.

A GEOPOLITICAL SHOCK CAN TRIGGER OUTFLOWS FROM EURO AREA DEBT, AND THEREBY INCREASE RISKS TO EXTERNAL FINANCING

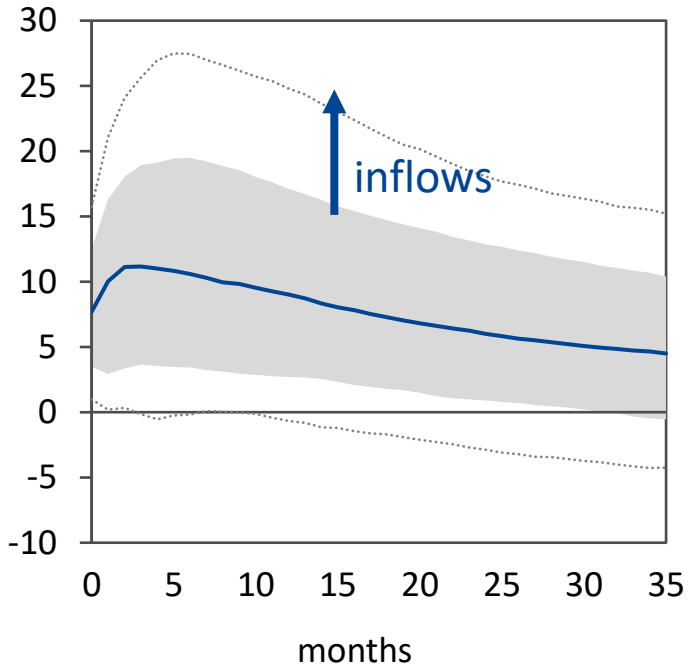
Although foreign investors usually tend to purchase EA debt

Portfolio debt liability flows (% of EA GDP)



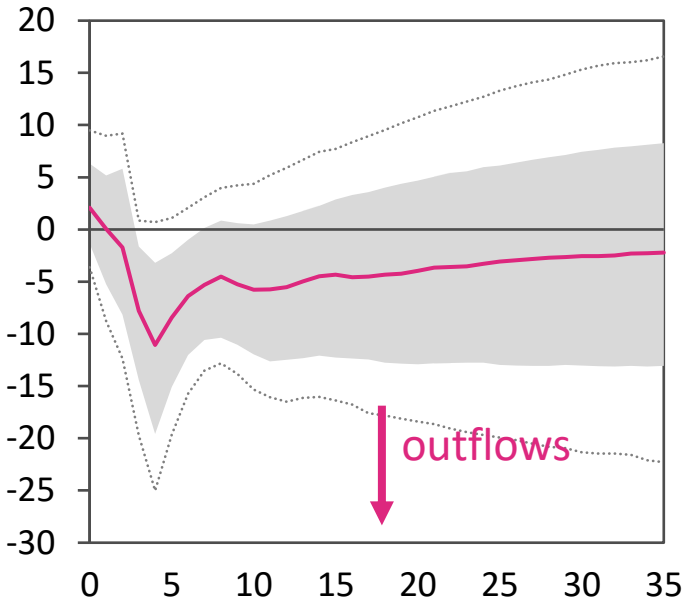
as in a low geopolitical risk regime,

Portfolio debt liability flows (% of EA GDP)
in a low geopolitical risk regime



in a high-risk regime, they can liquidate their debt holdings

Portfolio debt liability flows (% of EA GDP)
in a high geopolitical risk regime



Sources: ESM 's calculations based on Eurostat and Haver Analytics. Geopolitical risk (GPR) index from Caldara and Iacoviello (2022).

CONCLUSION

- Innovative approach to decipher risk narratives behind geopolitical events
- Thorough and transparent methodological approach
- Highly relevant for policymakers interested in underlying risk narratives related to geopolitical events
- A useful and easily deployable tool for policy institutions

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CONTACT

Yasin Mimir, Senior Economist

y.mimir@esm.europa.eu

European Stability Mechanism
6a Circuit de la Foire Internationale
L-1347
Luxembourg

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