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US partisan conflict, Sino-US political relation news, and oil market dynamics☆,☆☆

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ABSTRACT

This study analyzes the effects of US partisan conflict and US-China political relation news shocks on the oil market. A shock to partisan conflict leads to a drop in the political relations news index, a decrease in oil demand, and an increase in oil prices. When the political relations news index rises, it significantly reduces oil demand and prices, with only minor effects on oil supply. The study also finds that negative political news shocks have a more significant impact on the oil market compared to positive news shocks, leading to lower oil prices and demand. These findings suggest important policy considerations for managing the impacts of political news on the oil market.

1. Introduction

Recent geopolitical risks are documented and recognized as factors susceptible to affecting the economic and financial spheres of the world economy, as explained by Caldara and Iacoviello (2022). A growing body of literature explores the impact of geopolitical tensions on financial asset classes.[1] Several studies have tried to estimate the effect of geopolitical risks on energy markets (Lee et al., 2017; Miao et al., 2017; Perifanis and Dagoumas, 2019; Qin et al., 2020; Cai et al., 2022; Mignon and Saadaoui, 2024).

To capture the political relationships between the US and China, we adopt a novel indicator pioneered by Yan and Qi (2009) and Yan et al. (2010). Unlike studies (e.g., Du et al., 2017; Cai et al., 2022; Cai et al., 2024a, 2024b) focusing on the overall political relation news index, our interests are the news components of the political relation between the US and China. These components encompass not only the aggregate political relation news index but also separate indices for positive and negative political relation news, as we suspect an asymmetric influence on oil market variables.

This study presents a novel perspective in the growing literature on the impact of geopolitical tensions on commodity prices. We uniquely focus on the news shock of US-China political relations in the global oil market, considering both positive and negative news and evaluating their asymmetric effects on oil variables. Furthermore, we investigate the interaction between the effects of political tensions between the US and China, and the effects of political polarization within the US, a dynamic that has been a focal point of political discourses (e.g., during the 2016 presidential campaign of Donald Trump).

One important question is to determine the causality between the degree of partisan disagreement and the level of tensions between China and the US. Existing studies in political science offer two alternative theories. The ***first*** is the threat-unity theory, described in Schwartz and Tierney (2025). In the threat-unity theory, the emergence of an external threat will reduce the degree of domestic polarization. In particular, the external threat could be the emergence of China as an economic superpower, that contests the current international economic order led by the US. In reaction, this external threat may act as a unifying force that reduces the degree of partisan disagreement. In this case, the causality

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[1] Nilavongse et al. (2020) illustrate the influence of other types of uncertainty on financial markets.

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runs through the political tensions between China and the US to the partisan disagreement within the US. Consequently, an increase in the tension with China will act as a unifying force that reduce partisan disagreement in the US. This reduction in partisan disagreement will have, in turn, positive consequences on firms' investment decisions. Besides, a reduction in the tension with China will produce the opposite effect. Political disagreement will increase when the threat is perceived as less vivid. In turn, this will imply a reduction in the private investment of firms, as shown by Azzimonti (2018).

Threat-unity theory: Rise in US-China tensions → Reduction in Political disagreement in the US due to a rally around the flag effect.

The ***second*** theory describes a causality from political disagreement to political tensions between the US and China. This second theory, described in Borg (2024), explains how the tensions with China can increase the polarization between US politicians. We call this theory the scapegoat theory. This view is well illustrated by the rhetoric of Donald Trump about the rise of China. During the 2016 presidential campaign, Trump has used the relation with China as one of the main topics to mobilize voters. For example, the candidate Trump has accused China of maintaining its currency at an artificially low level. Thereby, China has been accused of conducting unfair trade policies. This view was not shared between Democrats and Republicans. This episode has had long-lasting consequences on the US foreign policy. In fact, the Trump's trade war has not been fully reversed by the Biden administration. During the 2016 presidential campaign, the increase in the political disagreement between US politicians has had for consequences of radically changing the political relations between the US and China. Thus, we can assume that an increase in the political disagreement in the US induces a deterioration in the political relationships between the US and China. On the contrary, a reduction in the political disagreement may have the reversed effect of reducing the level of tensions between the US and China.

Scapegoat theory: Rise in Political disagreement in the US → Rise in US-China tensions to win the election in the US.

Both the threat-unity theory and the scapegoat theory explain how partisan conflict and political tension between the US and China influence each other. Nevertheless, we do not exclude the possibility of asymmetric effects in these causal relationships. Indeed, the influence of geopolitical events on the oil market may differ according to their nature (negative or positive events). When we observe negative news related to the US-China relation, we can expect a reduction in the political disagreement, according to the threat-unity theory. It is not excluded that the expected effect of positive news related to the US-China relation on the political disagreement is not symmetric, with a lower effect for positive news.

After clarifying the bidirectional causality between the US partisan conflict and the political relations between the US and China, we are now explicitly describing the potential effect on the oil market. Firstly, we first start with the political relationship between the US and China. The previous literature, Cai et al. (2022) and Mignon and Saadaoui (2024) being prime examples, explicit how an unexpected deterioration of political relations between the US and China may threaten the outlook for the world economic growth and, in turn, pulling down oil demand (Cai et al., 2022). Global production may also be affected by this relationship. Indeed, political conflicts between the US and China (or their allies) may give birth to sanctions on the global trade of oil or even worse to military strikes, suggesting that oil production and trade may be affected.[2] In addition to these indirect effects, the oil prices may be directly impacted by the political relationship between the US and China, as the markets price the related uncertainty. In particular, Mignon and Saadaoui (2024) show that the relationship between the US and China influences the expectations of consumers and aggregate markets, especially of the Global Financial Crisis. Secondly, we now turn to the influence of US partisan conflicts on the oil market. As shown by Azzimonti (2018), higher level of partisan conflict in the US negatively impacts the investment of private firms, due to the fiscal and legal uncertainty created by the political gridlock. This uncertainty, in turn, may affect the oil market in the following ways. The oil demand may be negatively influenced by less bright growth prospect for the US economy. The US oil production may also be negatively impacted by the partisan conflict uncertainty. The price may directly be impacted by negative expectations on US oil production. Considering the central place of the US economy in the world economy, these expectations on oil consumption and production can produce spillovers effects around the world, as noted by Cai and Wu (2019). The rest of this section reviews selected studies linking partisan conflict, geopolitical risks, political tensions and oil markets.

Yang et al. (2024) employ a time-varying parameter vector autoregressive model with stochastic volatility to analyze how partisan conflict and trade policy uncertainty influence the energy market from January 2000 to July 2021. Their study illuminates how the effects of Partisan conflict (PC) and Trade policy uncertainty (TPU) on energy returns and volatility vary over time, providing valuable insights into considering political factors when analyzing energy market behavior. Zhou (2023) contributes to understanding the offshore RMB exchange rate by examining the market impact of Donald Trump's tweets on Sino-US trade. They find that negative tweets increase volatility in offshore RMB exchange rates, which has significant implications for political communication influencing the market. Cai et al. (2024a) investigate the effect of changes in Europe-China political relations on the oil market, demonstrating that political shifts between China and Europe play a key role in driving oil market uncertainty. This research underscores the critical role of political dynamics in understanding market behavior, thereby highlighting the importance of their work in the field of market analysis. Using structural vector autoregression and local projection methods, Cai et al. (2024b) also explore how deteriorating US-China political relations influence trade between China and Australia. Their findings indicate that the economic context in the United States is more influential in transmitting these effects than conditions in China or Australia. Song et al. (2024) use a time-varying parameter/stochastic volatility vector autoregression (TVP-SV-VAR) model to assess how the relationship between Sino-US political ties and bilateral trade evolves. The authors find asymmetric effects, with a greater impact on Chinese imports than exports. The authors suggest that fostering shared interests is crucial for stable political relations, and that managing risks linked to political conflicts remains important despite the growing trade volume. Guo and Shi (2024) observe an asymmetric and evolving dependency between China's geopolitical risks (GPR) and the United States' international stability (IS), as well as stock market volatility, highlighting how these dependencies shift over time.

To our best knowledge, our study is the first to provide an articulation between political news related to the relation between the US and China, the US partisan conflicts, and the oil market dynamics. In previous studies, the effect of the US and China and US partisan conflict on the oil market has been studied in isolation. We provide an empirical structural analysis considering these dimensions altogether.

The empirical results are summarized as follows. First, a one-standard-deviation shock to the partisan conflict index leads to an immediate 0.09 % decline in the political relation news index (aggregate), with significant effects lasting for 15 periods, supporting the scapegoat theory. While partisan conflict shocks have no significant impact on oil supply, they result in a clear decrease in oil demand and a rise in oil prices. Second, one-standard-deviation increase in the aggregate political relations news index, which reflects improved relations between the US and China, has little effect on the US partisan conflicts index, suggesting that changes in political relations impact partisan conflicts rather than the reverse. In the oil market, while there is a small short-

[2] A recent illustration of this point can be found here: Insight: Russia braces for oil output cuts as sanctions and drones hit, https://www.reuters.com/world/europe/russia-braces-oil-output-cuts-sanctions-drones-hit-2025-02-12/, Reuters, February 13, 2025.

term increase in oil supply, this effect fades over time. On the other hand, oil demand decreases slightly, with a maximum drop of 0.032 %, possibly due to shifts in consumer and business behavior in response to changing political conditions. Oil prices also decrease, reaching a 0.020 % decline five months on the impact. Finally, the identified Political Relations Positive News Index shock does not significantly affect US partisan conflicts, oil supply, or oil prices. While oil demand increases temporarily in response to the immediate shock, this effect disappears over time. In contrast, a shock to the political relations negative news index leads to a decrease in US partisan conflicts and a significant reduction in oil demand and prices. These results indicate that positive political news has limited and short-lived effects on oil markets and partisan conflicts, while negative political news has more lasting impacts, particularly on oil demand and prices.

This study is structured as follows. We begin by presenting the data and the methodology used in our research. We then proceed to discuss the results of our study. Finally, we conclude with a summary of our findings and their implications.

2. Data

2.1. Political variables

This study uses two political indicators: the US Partisan Conflict Index and the US-China Political Relation News Index. Although both are political measures, they serve different purposes. The US Partisan Conflict Index captures domestic disputes over government policies, reflecting internal political disagreements. In contrast, the US-China Political Relation News Index focuses on the state of bilateral relations between the United States and China.

2.2. US partisan conflict index

The partisan conflict index (PCI) (Azzimonti, 2018) describes political disagreements among political factions regarding government policies. The lexicon employed in their semantic search differs from that used in constructing the economic policy uncertainty index. The Partisan Conflict Index measures political disagreement and policy-related conflicts by analyzing the frequency of relevant newspaper articles. Using a search-based methodology inspired by Baker et al. (2016), the index identifies articles containing keywords related to political disagreement and government, such as “divided Congress,” “gridlock,” and “partisan divisions.” These terms capture both the debates and outcomes of partisan disputes, covering topics like economic policy, private-sector regulation, national defense, and social issues. The index assumes that increased media coverage of issues like legislative gridlock or filibuster threats reflects higher levels of partisan conflict. By counting these articles over time, the index provides a systematic measure of political divisions. The US partisan conflict index peaks at Panic 1893 Tariffs, Panic 1911 Antitrust, Ford’s assassination attempts in the mid-1970s, the 1995 Shutdown, Debt Ceiling and Obamacare, and the 2013 Shutdown.

2.3. US-China political relation news index

The US-China Political Relation News Index was developed by Yan Xuetong and his team at Tsinghua University (Yan and Qi, 2009; Yan et al., 2010). It is constructed by manually recording monthly political events related to US-China relations and classifying them as good or bad based on the Goldstein scale, ranging from −10 to +10 (Goldstein, 1992). Data is sourced from the People’s Daily and the official website of the Chinese Ministry of Foreign Affairs. As shown in Fig. 1, the index effectively tracks key moments in US-China relations, such as significant improvements in the late 1970s (Kissinger’s trip to China), late 1990s (positive diplomatic developments), and pre-2005 (post-WTO accession of China). Major declines are also evident, including the late 1980s, late 1990s (US bombing of the Chinese embassy in Belgrade), and the Trump administration. Unlike the US Partisan Conflict Index by Azzimonti (2018), which focuses on domestic disputes, this index highlights US-China bilateral relations. Moreover, compared to the index used in Cai et al. (2022, 2024a, 2024b), it captures both positive and negative events, enabling an analysis of the asymmetric impacts of political relation shocks.

2.3.1. Oil variables

To represent oil market dynamics, we draw on the framework Kilian (2009) established, which considers oil supply, demand, and price. The oil supply (OS_t) is represented by the global oil production growth rate, denoted as $OS_t = log(OP_t) - log(OP_{t-1})$, where OP_t represents oil production at time t. The oil demand (OD_t) is proxied by the global economic activity index as measured by Kilian (2009). Finally, oil price (OP_t) is proxied by real WTI crude oil price adjusted using the US consumer price index. Our VAR model is estimated to use the sample period from January 1981 to March 2022 with 494 observations. In the Appendix, we provide the source of the data and plots of all variables. We test the unit root of the variables and check the stationarity of the VAR model.

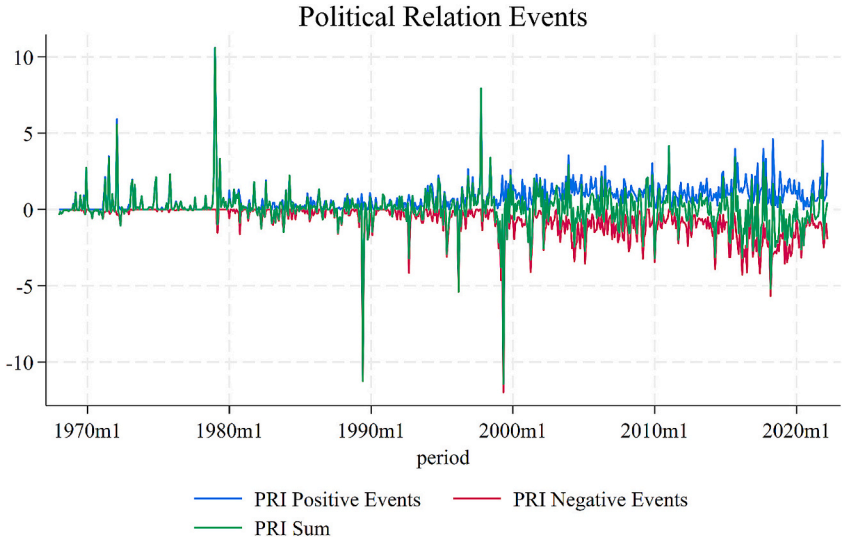

Fig. 1. Political Relation Event index. Source: authors’ calculations.

3. Methodology

Let $z_t = [PCI_t, PRNI_t, OS_t, OD_t, OP_t]'$, where PCI_t denotes the US partisan conflict index taken in logarithm. $PRNI_t$ is the Sino-US political relation events index which is transformed using the formula $log\left(PRNI_t + \sqrt{1 + PRNI_t^2}\right)$. OS_t, OD_t and OP_t are oil supply growth, real economic activity index and real price of oil, respectively. The structural $VAR(p)$ can be written as follows,

$$\Gamma_0 z_t = c + \sum_{i=1}^{p} \Gamma_i z_{t-i} + \varepsilon_t \quad (1)$$

where p is the lag length, which is decided as 2 using Schwarz Information Criteria (SIC). ε_t is a 5×1 vector of structural shocks which are uncorrelated with each other. Γ_0 is the impact matrix which needs to be imposed on restrictions to recover the structural form.

The identification strategy plays a pivotal role in this study, facilitating the clear distinction between political shocks and their subsequent effects on both the oil market and political relations. By employing a recursive identification approach, as outlined in the works of Cai et al. (2022, 2024a, 2024b), the study isolates structural political shocks. This identification scheme reveals that shocks to the US partisan conflict index exert an immediate impact on other variables. In contrast, shocks to the US-China political relation news index yield immediate effects on oil market variables, but their influence on the US partisan conflict index takes time, illustrating a delayed response of domestic political dynamics to shifts in foreign relations.

The ordering of the variables, with the US partisan conflict index preceding the US-China political relation news index, is substantiated both by the historical context of US global political influence and statistical evidence. For instance, significant events such as Henry Kissinger's "Secret Trip" in 1971 and the Joint Communiqué between the US and China in 1978 laid the groundwork for improved US-China relations, highlighting the role of US domestic politics in shaping international relations. Furthermore, statistical testing reveals a unidirectional causality from the US partisan conflict index to the US-China political relation news index, confirming that domestic political tensions are exogenous in relation to the political dynamics between the US and China. This suggests that the US domestic political conflicts are a key driver of foreign policy, rather than being shaped by changes in international relations.

To examine the dynamic effects of the political shocks discussed above, we utilize impulse response functions and generate 90 % confidence intervals using the moving block bootstrapping method proposed by Brüggemann et al. (2016), with 5000 replications. It is important to note that we test the stationarity of the VAR model to ensure the robustness of the estimated VAR in each draw. To assess the asymmetric effects of positive/negative political relation news shocks, we substitute the aggregate political relation news index with the respective positive and negative indices.

4. Empirical results

In this section, we first test the stationarity of the variables used for estimating the SVAR model. Then, we utilize the Granger causality test to examine the causality between the US partisan conflict index and the US-China political relation news index. Due to the availability of the dataset (and, especially, the partisan conflict index), we estimate the SVAR model from January 1981 to March 2022.

4.1. Pretests

To ensure the stationarity of the variables, we apply unit root tests, specifically the augmented Dickey-Fuller (ADF) test and the Phillips-Perron (PP) test. The results are presented in Table A1 in the appendix. The unit root hypothesis is rejected for all variables, except for oil prices at the 10 % significance level. In addition to checking the stationarity of the variables, we also compute the inverse roots of the VAR model, confirming the model's stationarity. As mentioned earlier, we use a recursive identification scheme to isolate structural shocks, and the ordering of US partisan conflicts and the US-China political news index remains important for the evolution of impulse response functions. Therefore, we examine the causality between these two variables by constructing a bivariate VAR model. The null hypothesis that the US partisan conflict index does not Granger-cause the US-China political relations news index is rejected at the 10 % significance level ($\chi^2_{GC} = 3.544$), supporting the scapegoat theory. However, there is no evidence supporting a causal impact in the opposite direction. Therefore, we place the PCI before the PRNI in the model, given the unidirectional causality from PCI to PRNI.

4.2. Impulse response functions

As noted earlier, we use a recursive identification approach to capture both causal and simultaneous relationships between the variables. However, this method requires us to assume a specific ordering of the variables. It is common practice to arrange oil-related variables (e.g., oil supply, oil demand, and oil prices) according to the strategy proposed by Kilian (2009). For political variables, careful consideration is needed when determining their order. Following Cai et al. (2022), we place political variables before oil variables, assuming that political shocks have an immediate effect on oil variables, while oil variables influence political factors with a lag. Additionally, we position PCI first, followed by PRNI, due to the block exogeneity between them. For robustness, we also use Generalized Impulse Response Functions (IRFs) from Pesaran and Shin (1998), which do not require specifying the immediate relationships between variables. Moreover, we consider three indices describing US-China political relations: the aggregate political relations news index, the positive political relations news index, and the negative political relations news index.

4.2.1. The IRFs of US partisan conflict shock

To investigate the impacts of US partisan conflicts shocks, we specify the VAR model as follows,

$$z_t = [PCI_t, PRNI_t, OS_t, OD_t, OP_t]'$$

Fig. 2 illustrates the impulse responses following a one-standard-deviation shock in the Political Conflict Index (PCI). We observe a decrease in the aggregate Political Relations News Index (PRNI), with the most significant negative impact occurring immediately after the shock, measured at 0.09 %. The impulse response functions remain significant for 15 periods following the PCI shock. This suggests that rising levels of PCI can lead to a reduction in PRNI, as predicted by the scapegoat theory.

In terms of oil market dynamics, the response of oil supply is positive but not statistically significant, indicating that PCI does not primarily drive changes in oil supply. This finding is consistent with previous studies, such as Kilian (2009), which propose a vertical oil supply curve. On the other hand, increasing partisan conflicts result in decreased oil demand, as reflected in the global real economic activity index. These effects are statistically significant and negative across all selected sample periods. Moreover, higher levels of partisan conflicts tend to raise oil prices.[3] Our findings provide new insights compared to Cai et al. (2022), who focused on shocks in US-China political relations. Specifically, participants in the oil market should also pay attention to US partisan conflicts.

[3] As mentioned in the introduction, the price may directly be impacted by negative expectations on US oil production.

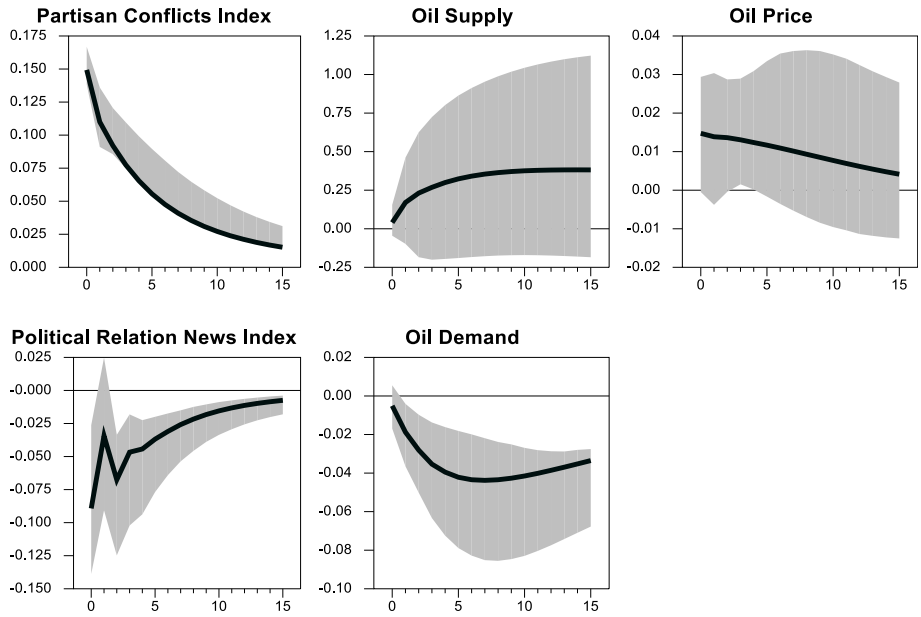

Fig. 2. Positive shock to US partisan conflict index (PCI). **Note:** The moving block bootstrapping method with 5000 repetitions is used to generate confidence intervals at the 90 % significance level. Higher levels of the Partisan Conflict Index (PCI) mean a higher degree of political disagreement among US politicians at the federal level. Higher levels of the Political Relation Index (PRI) mean better diplomatic relationships between the US and China.

4.2.2. The IRFs of US-China political relation news shock (aggregate)

We further investigate the effects of shocks in aggregate PRNI on PCI and oil market variables using the following VAR specifications,

$$z_t = [PCI_t, PRNI_t, OS_t, OD_t, OP_t]'$$

Fig. 3 presents the impulse responses of the variables following a one-standard-deviation shock in the aggregate PRNI. Unlike the positive shock to the PCI, an increase in aggregate PRNI signifies improved political relations between the US and China. The unexpected rise in aggregate PRNI has an insignificant impact on the US partisan conflicts index. These findings support the notion of causality flowing from aggregate PRNI to PCI.

In terms of oil market dynamics, the response of oil supply to a shock in the aggregate Political Relations News Index (PRNI) is only positive in the short term. This means that, immediately following an improvement in political relations between the US and China, there may be a slight increase in oil supply. However, this positive effect does not hold in the medium and long term, indicating that any initial response fades over time and is not statistically significant. On the other hand, oil demand reacts negatively to improvements in PRNI. This suggests that as political relations warm, there is a slight decrease in oil demand, with the maximum impact reflecting a decrease of 0.032 %. This negative response could indicate that businesses or consumers might be adjusting their oil consumption based on changing expectations around political stability or economic activity.

Additionally, oil prices show a negative reaction to the PRNI shock, reaching their lowest point of −0.020 % five months after the initial shock. This implies that improvements in US-China political relations may lead to a decline in oil prices over time, possibly due to decreased demand or shifts in market expectations about future oil consumption linked to political stability. Overall, these responses highlight the complex interactions between political relations and oil market dynamics, illustrating how changes in political news can influence both supply and demand in the oil market.

4.2.3. The IRFs of US-China positive political relation news shock

As discussed earlier, the aggregate PRNI is constructed by using political relation related to good and bad news indicators, see Soroka (2006, 2012), Beber and Brandt (2010), and Forni et al. (2024). Therefore, we suspect the asymmetries in the IRFs when we are considering good and bad political relation news indicators. In this section, we first consider a situation where an unexpected increase in good political relation news index, the VAR model is specified as follows,

$$z_t = \left[PCI_t, PRNI_t^{+}, OS_t, OD_t, OP_t\right]'$$

Fig. 4 presents the impulse response functions following a positive shock to the Positive Political Relations News Index (PRNI+). In this scenario, the IRFs for the US partisan conflicts index show positive values, but they are not statistically significant. This suggests that an unexpected increase in positive PRNI does not have a meaningful impact on the US partisan conflicts index. Similarly, the IRFs for both oil supply and oil price are also found to be insignificant following this positive shock. This lack of significant response indicates that changes in positive political news do not substantially affect oil supply or price dynamics in the market.

Conversely, the IRFs for oil demand exhibit a significant increase in the short run, indicating a positive reaction to the improvement in political relations. However, this positive response does not persist, and it becomes insignificant in the medium and long-run. This pattern suggests that while there may be an initial boost in oil demand due to improved political relations, the effect diminishes over time. Overall, these findings highlight the limited immediate influence of positive political relations on US partisan conflicts and oil market variables. These results underscore the complexity of the relationship between political news and market responses, suggesting that while positive political developments may temporarily enhance oil demand, their effects on partisan conflicts and other oil market variables are not lasting.

4.2.4. The IRFs of US-China negative political relation news shock

We are also interested in the IRFs of PCI and oil variables given US-China negative political relation news shock. Thus, the VAR model is specified as follows,

$$z_t = \left[PCI_t, PRNI_t^{-}, OS_t, OD_t, OP_t\right]'$$

The results are reported in Fig. 5. Previously, the IRFs results suggest that an increase in the Positive Political Relations News Index between

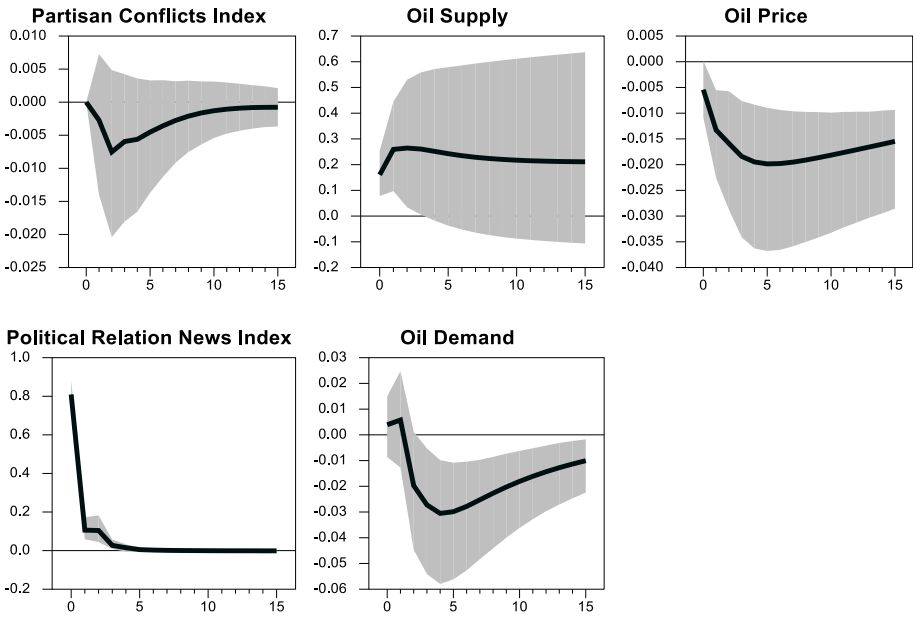

Fig. 3. Positive shock to aggregate US-China political relation news index. **Note:** see footnote under Fig. 1.

the US and China leads to a reduction in the US partisan conflicts index. This finding is particularly intriguing as it contradicts our earlier analyses, which indicated no significant impact. Conversely, an increase in the Negative Political Relations News Index (that is, a reduction in bad news) is associated with a significant decrease in the US partisan conflicts index, with a maximum impact of 0.011 %.

In terms of the responses of oil market variables, oil supply does not show a significant reaction to a sudden increase in the negative PRNI. However, both oil demand and oil prices respond negatively to the identified shock in negative PRNI. Specifically, oil demand is projected to decrease by a maximum of −0.035 % at the five-month horizon, while oil prices will also experience a decline, with a maximum impact of −0.022 % observed at the seven-month horizon.

To summarize, we find asymmetric reactions of the US partisan conflict index and oil variables given an unexpected increase in positive and negative political relation news indices between US and China. The different responses in the US Political Conflict Index given positive and negative PRNI shocks can be attributed to the contrasting nature of political relation news, where positive news fosters temporary optimism and reduced tensions, while negative news exacerbates fears, uncertainty, and existing divisions, leading to a more pronounced and sustained increase in the PCI.

We find empirical support for the scapegoat theory, meaning that the causality runs through the partisan conflict index to the US-China relation news index. However, the impulse response function indicates that the dynamic causal effects also run US-China relation news index to the partisan conflict index. Thus, it also provides partial empirical support to the threat-unity theory, underlying the complex interaction between domestic politics and foreign policy. An improvement in the bad news index (that is, less bad news) will have more impact in reducing the political disagreement in the US than an improvement in the good news index (that is, more good news). Thus, a reduction of the bad news concerning the US-China relation implies a reduction in the partisan conflict index that reduces the demand for precautionary

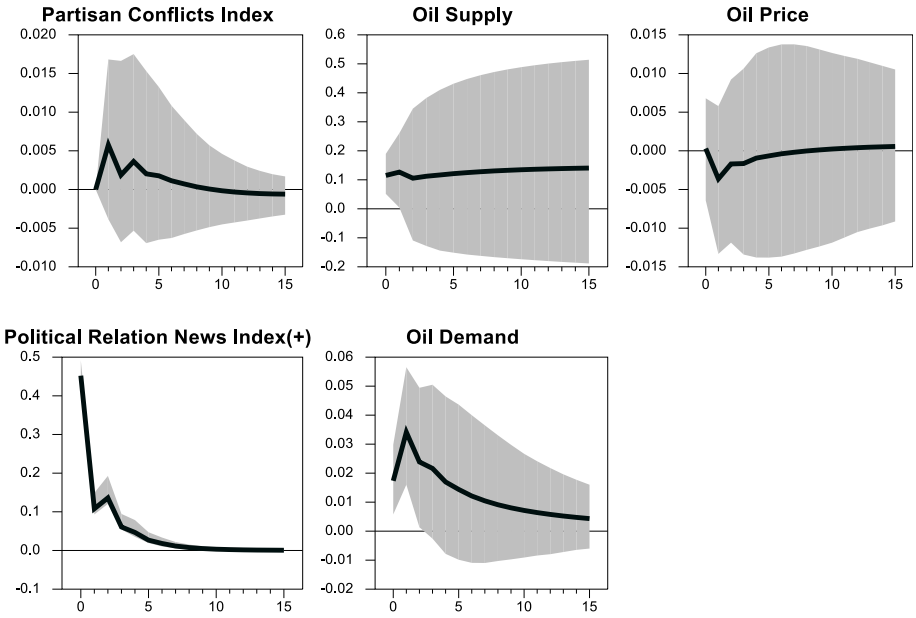

Fig. 4. Positive shock to US-China political relation good news index ($PRNI^{+}$). **Note:** See footnote under Fig. 1. Here, we focus on positive events, with $PRNI^{+}$ is the political event index restricted to positive events.

motives. These asymmetric effects between good news and bad news extend previous literature on the effects of political news.

5. Robustness checks

This section outlines the findings from robustness checks. We consider potential factors that will significantly change the outcomes of the baseline results including optimal lags, forecast horizons, log transformation, variable orderings, generalized impulse response functions, and the US-China tensions index. To be noted, we just report the robustness check of the results of the shock to the US-China political relation news index, other results are available upon request. The results for robust checks are reported in the appendix.

Lags. The baseline model is estimated by using 2 lags, which are decided by the SIC. For the robustness check, we use AIC to decide the optimal lags used for the estimation. The AIC results indicate 3 lags, which are used in robustness checks. The results are shown in Fig. A3 in the appendix. The results indicate the robustness against lag selection.

Forecast horizons. Subsequently, we prolong the forecast horizons to 25, as depicted in Fig. A4 in the appendix. The IRFs using 25-month forecast horizons are reported in Fig. A4 in the appendix. Noticeably, there are no significant differences in the IRFs compared to the results of the baseline model.

Log transformation. The log-modulus transform (John and Draper, 1980) allows using a logarithmic transformation with variables that include zero. It consists of the following transformation: $\mathbf{L}(x) = \mathbf{sign}(x) * \mathbf{log}(|x| + 1)$, where $|x|$ is the absolute value of x. The results are shown in Fig. A.5. The results are consistent with the baseline IRFs.

Variable orderings. As shown earlier, the oil supply remains largely unaffected by shocks stemming from US-China relations news or US partisan conflicts. Consequently, in the VAR model, oil supply is placed in the first position, followed by political variables, with oil demand and oil price occupying the last two positions. Fig. A.6 illustrates the IRFs under varying variable orderings, revealing results that are broadly consistent with the baseline findings, thereby affirming the robustness of the analysis.

Generalize impulse response functions. Pesaran and Shin (1998) propose generalized impulse response functions (GIRFs) to address the issue of variable ordering, offering a flexible approach when theoretical justification for variable order is unavailable. The empirical findings, presented in Fig. A.7, demonstrate that the results obtained through GIRFs are consistent with those derived from structural IRFs, reinforcing the robustness of the analysis.

US-China tensions index. Rogers et al. (2024) introduce a novel index termed the US-China Tensions Index (UCT), which serves as an alternative measure for capturing the political relationship between the United States and China. This index employs a methodology like the geopolitical risks index proposed by Caldara and Iacoviello (2022), but specifically focuses on the dynamics between the two nations. To ensure the robustness of the analysis, the UCT is compared with the US-China Political Relation News Index. The IRFs derived using the UCT, as depicted in Fig. A.8, reveal notable differences in responses when contrasted with other political indices. This discrepancy arises because the political relation indices developed by Yan and Qi (2009) and Yan et al. (2010) encompass both positive and negative events involving the US and China. In contrast, the US-China Tensions Index predominantly emphasizes adverse events that exacerbate tensions in their political relationship.

Oil inventory. To comply with Cai et al. (2024a, 2024b), we include oil inventory into the oil model. The oil inventory dataset is calculated using the method proposed by Baumeister and Hamilton (2024). The time series of oil inventory is ordered at the last position of the VAR model. Other model settings are the same as the ones used in the baseline model. The results given US-China political relation shocks are reported in Fig. A.9. Although oil inventory is included in the model, the political relation shocks do not have significant effects.

Other variables in the system. We find that as oil supply increases, oil price goes down but make insignificant impact on oil demand. The oil demand shock will drive up oil price but make insignificant impacts on oil supply in Fig. A.10. Very different from Kilian (2009), the oil supply shock is defined as one standard deviation increase in oil production growth. Besides, the estimating period is also different from Kilian's study due to the unavailability of US partisan conflicts before 1981.

6. Conclusions

This research contributes to the growing literature on the consequences of geopolitical tensions on commodity markets. By exploring the interactions between partisan conflict within the US and Sino-U.S. political relations news, our VAR analysis demonstrates that increased political conflicts in the US deteriorate the relationship between the US and China. A positive shock to the Sino-US political relations news index

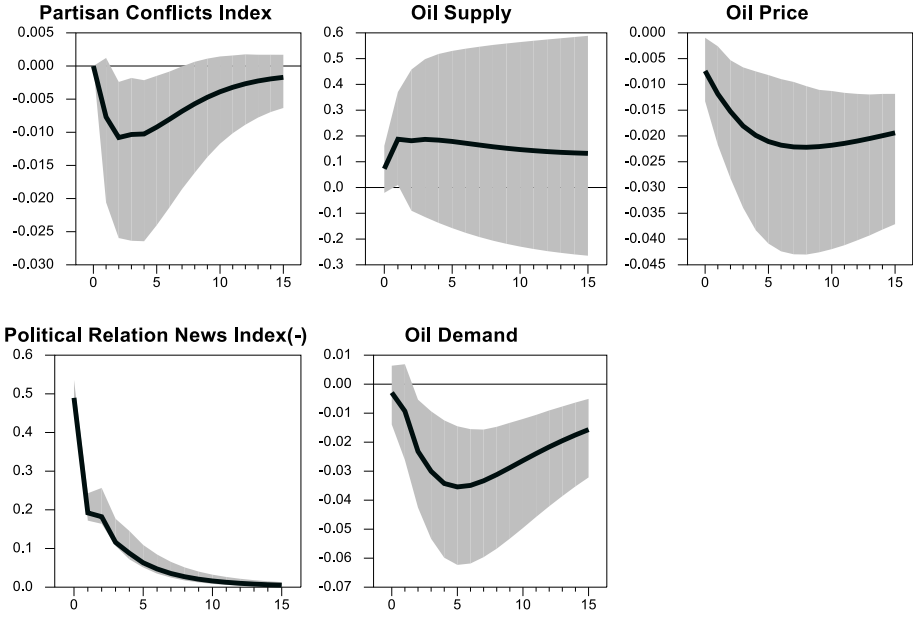

Fig. 5. Positive shock to US-China political relation bad news index ($PRNI^{-}$). **Note:** See footnote under Fig. 1. Here, we focus on negative events, with $PRNI^{-}$ is the political event index restricted to negative events.

reduces political conflicts in the US. The shock also reduces global oil demand and the oil price. Finally, we discovered asymmetries between good and bad political relations news. In a nutshell, future studies should control this interaction to assess the impact of partisan conflict and international political tensions on the oil market dynamics. We further clarify a channel through which the geopolitical risk can affect the commodity markets.

With the recent results of the 2024 US Presidential election, the relationship between China and the US will once again be at the center of international relations. According to The Economist's Trump Risk Index, China (along with Mexico, Germany, and Japan) is expected to be one of the countries that will be the most impacted by the policy changes by the new Trump administration. Trump's re-election signals more uncertainties for China's electrical vehicle (EV) and possibly impacts the development of the global EV and battery industry. Since the EV and battery industries are the main contributors to decarbonization, it is foreseeable to find an increase in oil demand. Besides, the rising political tensions between the US and China will further stress the global supply chains.

Oil is crucial in driving economic growth, and its influence on economic activity is widely acknowledged. Given the empirical findings, oil market participants should pay significant attention to changes in the political relations between the United States and China and domestic political conflicts within the US. It is important for those involved in the oil markets and policymakers overseeing monetary policy to be cautious regarding political developments related to trade restrictions, energy supply chains, and geopolitical risks between the US and China. These political events are likely to have asymmetric effects on oil market behavior, which, in turn, will influence the transmission of oil price fluctuations to domestic inflation rates.

CRediT authorship contribution statement

Yifei Cai: Writing – review & editing, Visualization, Supervision, Resources, Methodology, Funding acquisition, Data curation, Writing – original draft, Validation, Software, Project administration, Investigation, Formal analysis, Conceptualization. **Jamel Saadaoui:** Writing – review & editing, Visualization, Supervision, Resources, Methodology, Funding acquisition, Data curation, Writing – original draft, Validation, Software, Project administration, Investigation, Formal analysis, Conceptualization. **Gazi Salah Uddin:** Writing – review & editing, Visualization, Supervision, Resources, Methodology, Funding acquisition, Data curation, Writing – original draft, Validation, Software, Project administration, Investigation, Formal analysis, Conceptualization.

Appendix A. Unit root test

Table 1
Unit Root Tests.

	Partisan Conflicts Index		Political Relation News Index	
	(c)	(c, t)	(c)	(c, t)
ADF	−3.331 (3) **	−3.870 (3) **	−21.190 (1) **	−21.676 (1) **
PP	−5.818 (7) **	−7.577 (9) **	−22.001 (5) **	−22.051 (6) **
	Oil Supply		Oil Demand	
	(c)	(c, t)	(c)	(c, t)
ADF	−27.633 (1) **	−27.693 (1) **	−4.755 (1) **	−4.753 (1) **
PP	−28.168 (21) **	−28.635 (24) **	−3.993 (10) **	−3.991 (10) **
	Oil Price			
	(c)	(c, t)		
ADF	−2.998 (1) **	−3.215 (1) **		
PP	−2.804 (3) *	−3.135 (3) *		

Note: ** and * denote significance at 5 % and 1 % levels. The numbers in the bracket of ADF unit root tests represent lags order decided by SIC. The numbers in bracket of PP unit root test represents the Bartlett kernel bandwidth using Newey-west automatic method. (c) and (c, t) denote the inclusion of constant and constant and time trend, respectively. ADF and PP denote the Augmented Dickey-Fuller unit root test and Phillips and Perron unit root test.

Appendix B. Datasets

The sources of the monthly data are the following:

- Partisan Conflict Index:
https://www.philadelphiafed.org/surveys-and-data/macroeconomic-data/partisan-conflict-index
- Political tensions indexes: http://www.tuiir.tsinghua.edu.cn/imiren/Publications/Foreign_RelationsData.htm; https://www.johnrogersecono mist.net/
- Oil prices and oil supply are retrieved from Christiane Baumeister's website: https://sites.google.com/site/cjsbaumeister/research
- Oil demand:
https://www.dallasfed.org/research/igrea

We first present the plots of data sets used in the baseline model, with the results shown in Fig. A1. We utilize various unit root tests such as ADF and P to ensure the variables are stationary before estimating the VAR model. The results indicate the stationarity of the variables in the VAR model. The results of the unit root tests are reported in Table A1. Besides, we calculate the unit root circle of the VAR, indicating the model's stationarity. The results are presented in Fig. A2.

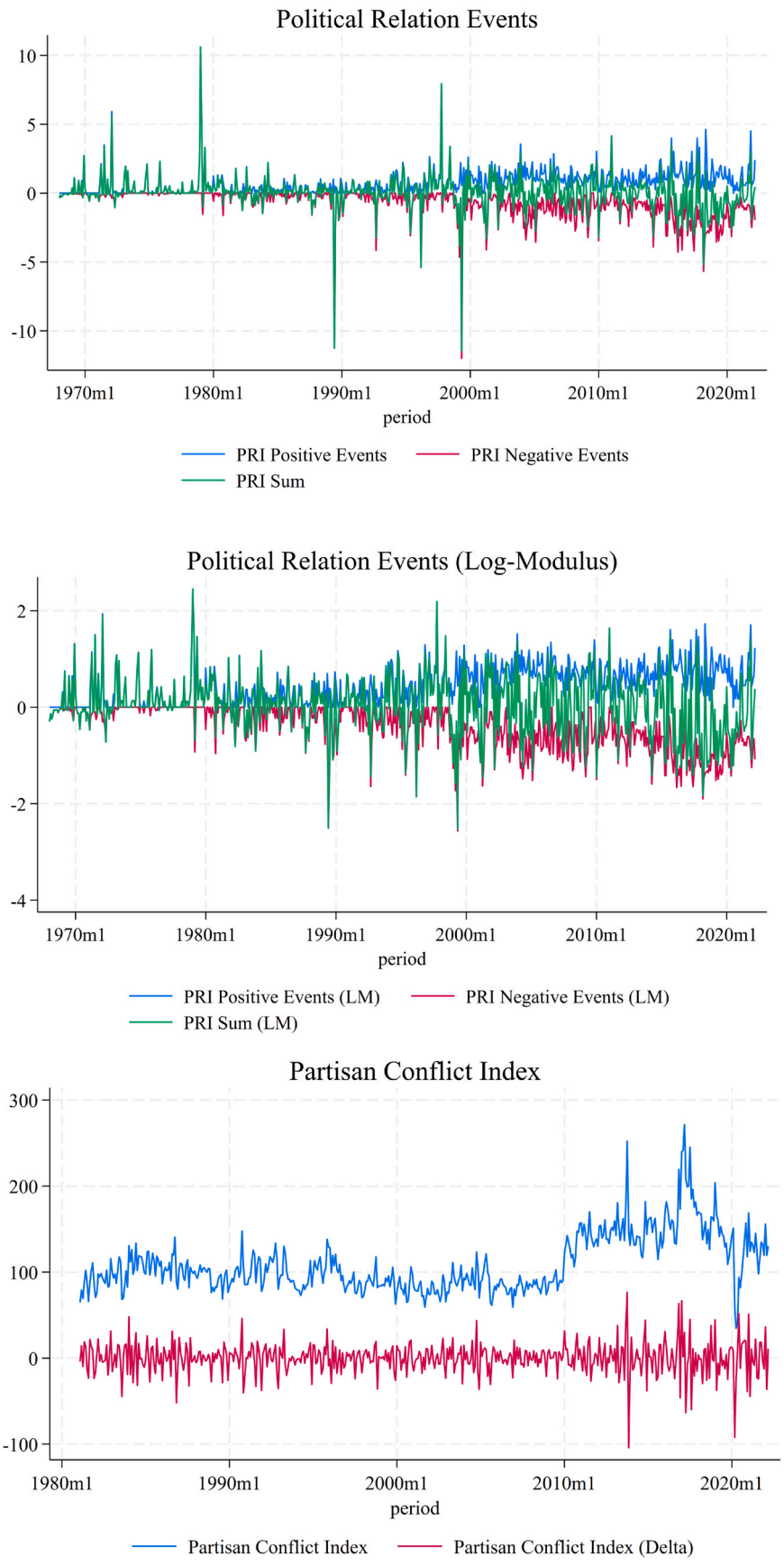

Fig. A1. Data Plots. **Note**: the datasets cover the period from January 1981 to March 2022.

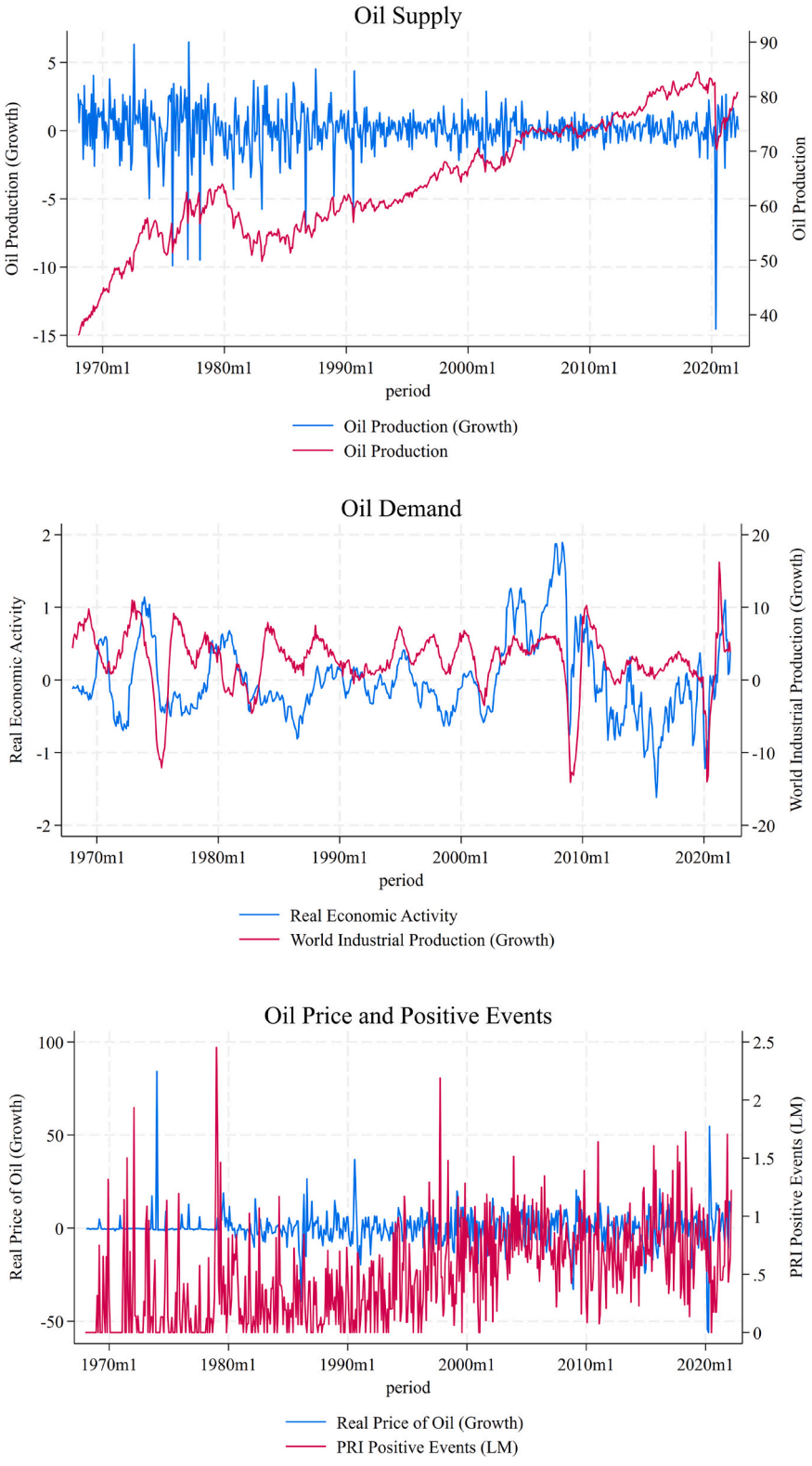

Fig. A1. (*continued*).

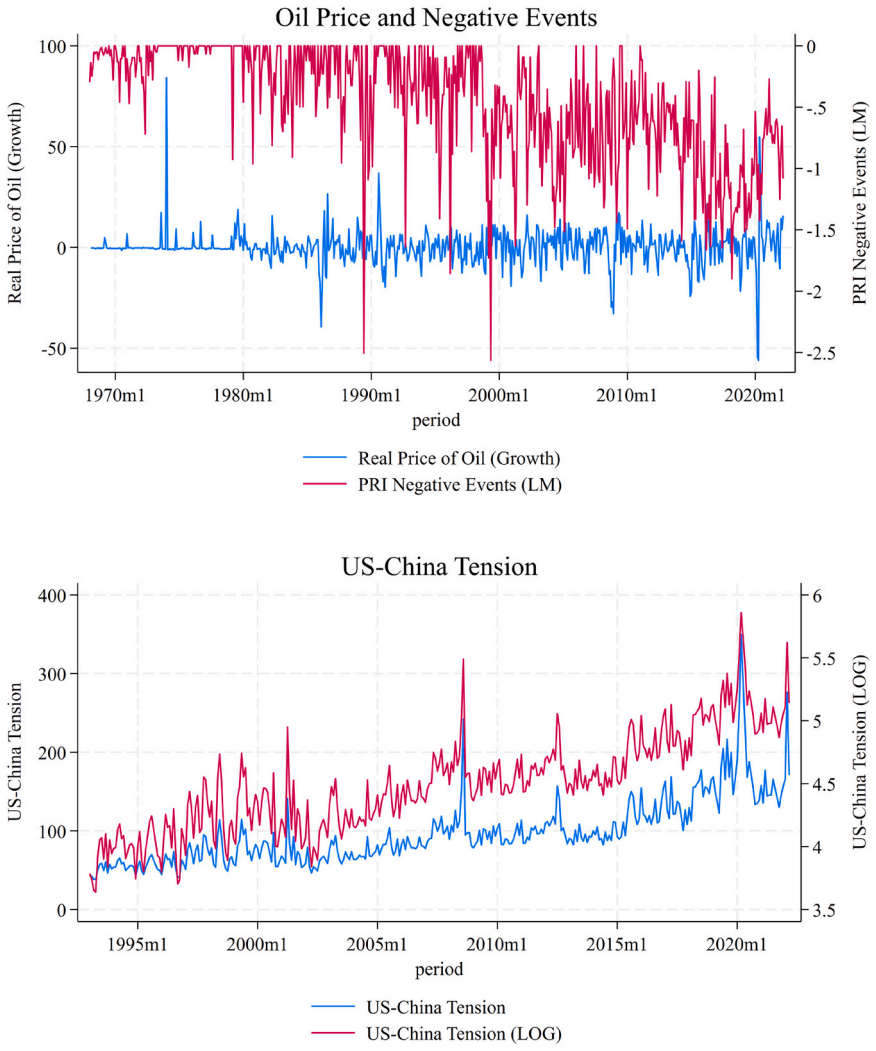

Fig. A1. (*continued*).

B.1. Robustness checks

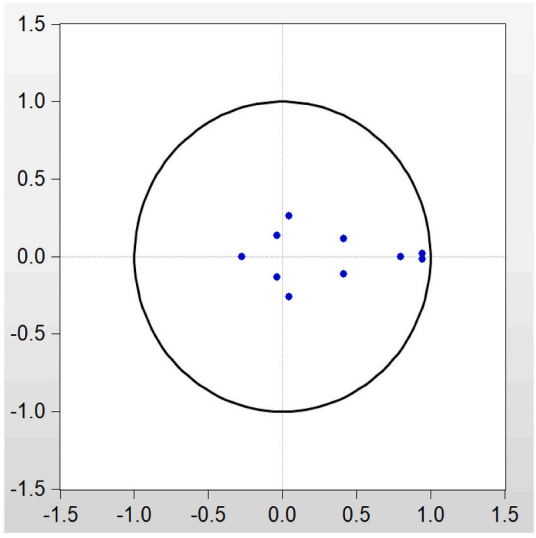

Fig. A2. Inverse Roots of the VAR Model. **Note**: the lag number is decided as 2 based on SIC. The model is specified as follows, $z_t = [PCI_t, PRNI_t, OS_t, OD_t, OP_t]'$.

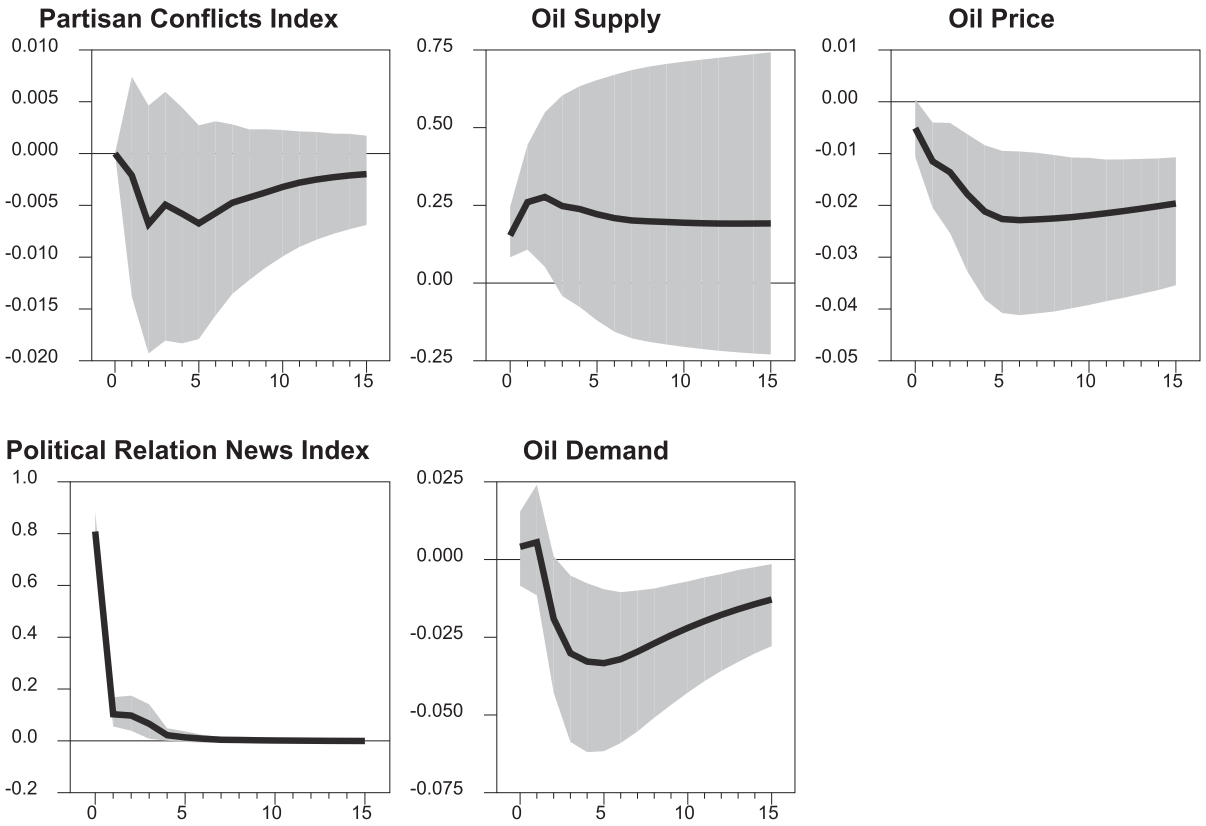

Fig. A3. Robustness check against lags number. **Note:** see footnote under Fig. 1. We introduce a positive shock on the US partisan conflicts index.

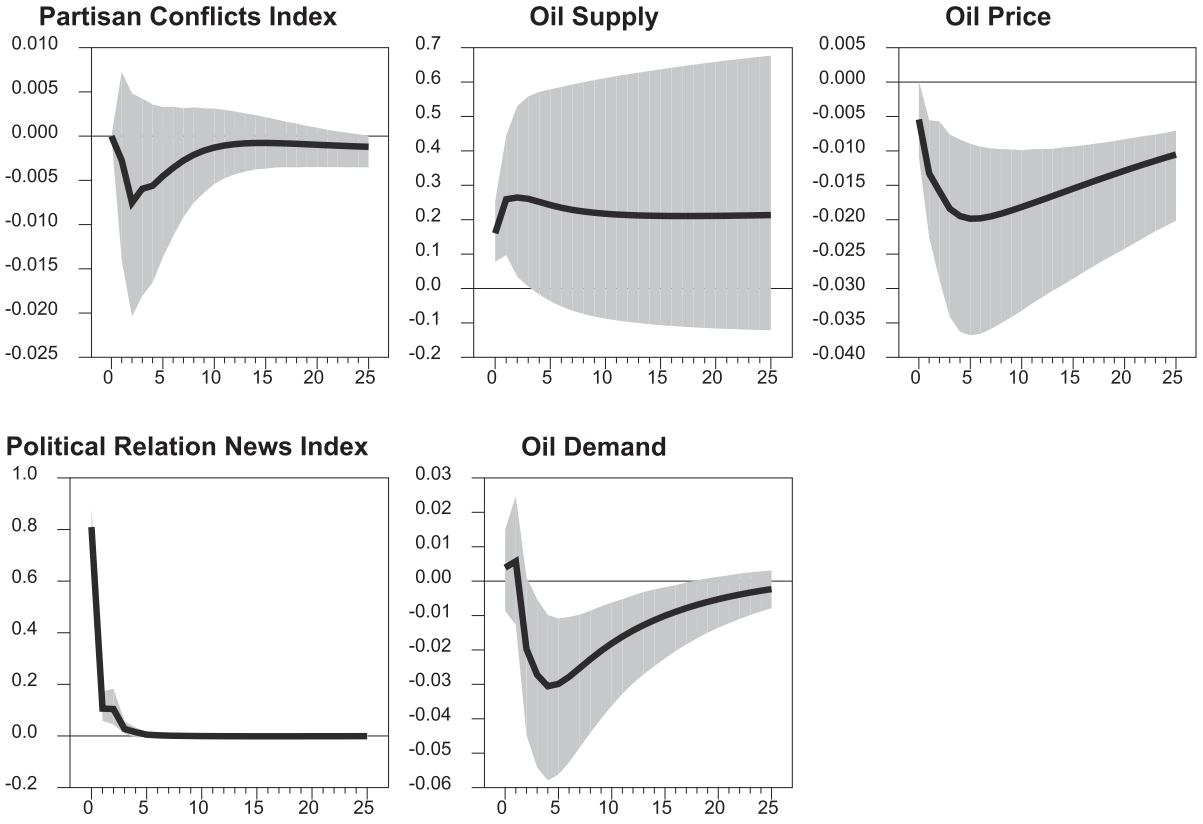

Fig. A4. Robustness check against forecast horizons. **Note:** see footnote under Fig. 1. We introduce a positive shock on the aggregate PRNI.

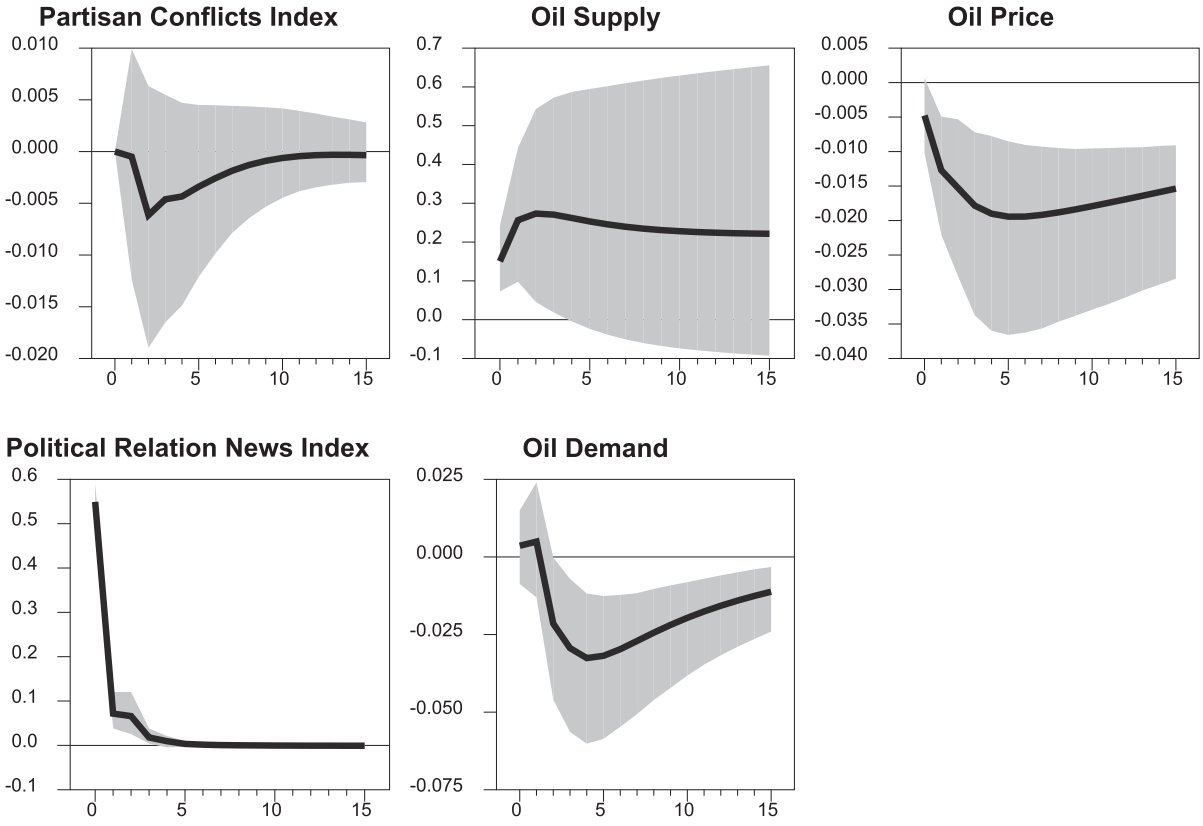

Fig. A5. Robustness check against log transformation. **Note:** see footnote under Fig. 1. We introduce a positive shock on the aggregate PRNI.

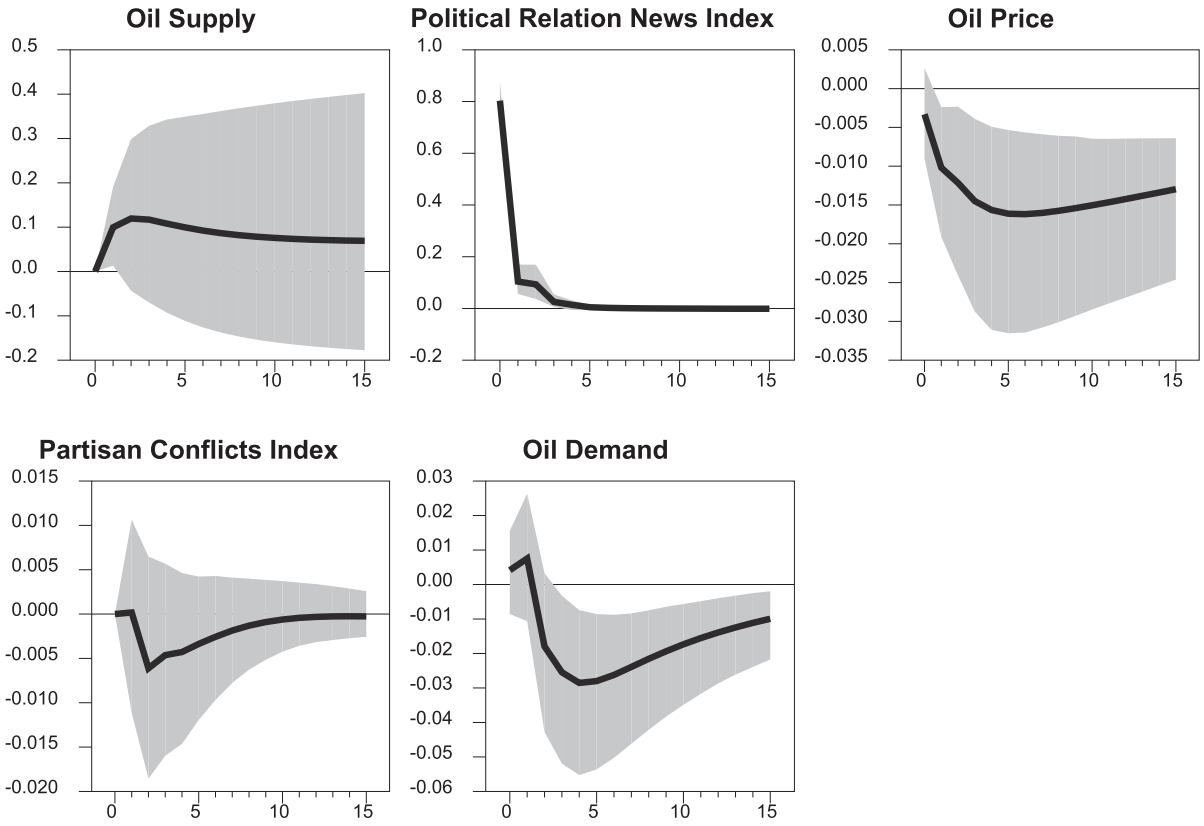

Fig. A6. Robustness check against variable orderings. **Note:** see footnote under Fig. 1. We introduce a positive shock on the PRNI.

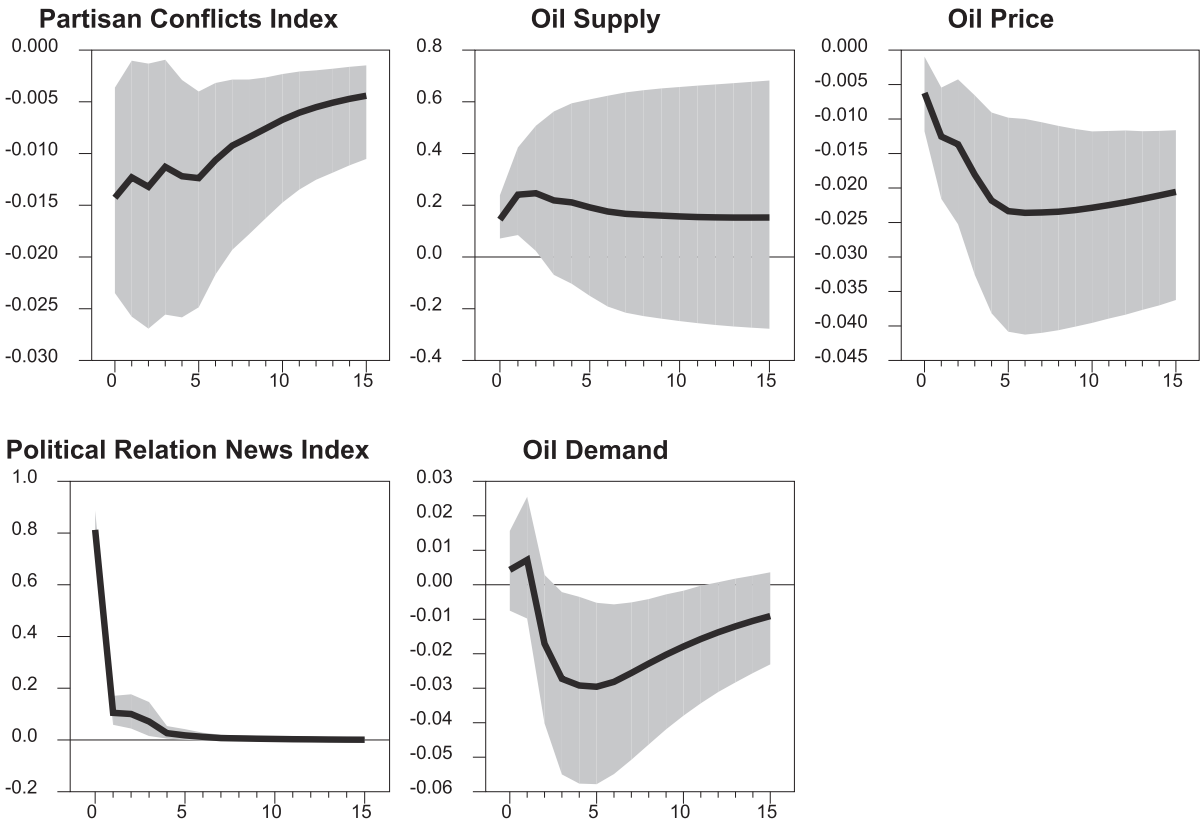

Fig. A7. Robustness check against generalized impulse response functions. **Note:** see footnote under Fig. 1. We introduce a positive shock on the PRNI.

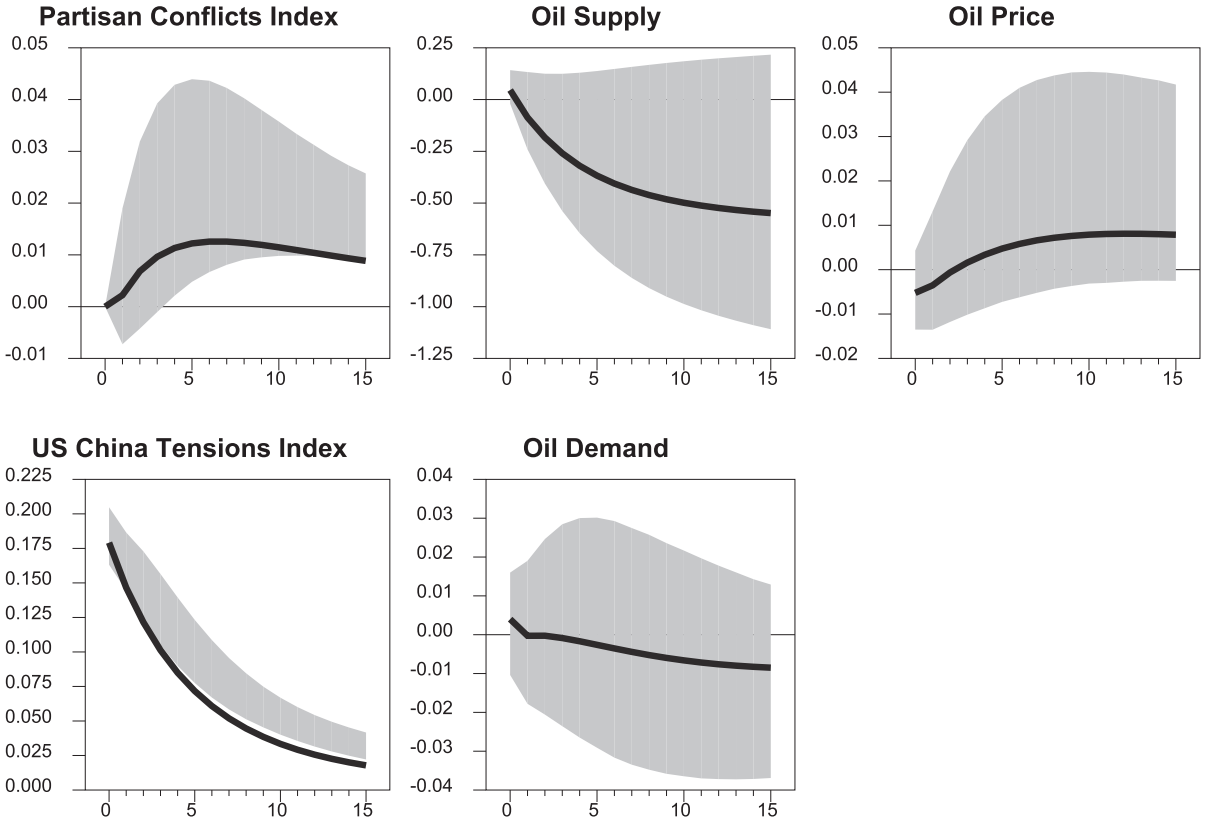

Fig. A8. Robustness check against US-China tensions index. **Note:** see footnote under Fig. 1. We introduce a positive shock on the PRNI.

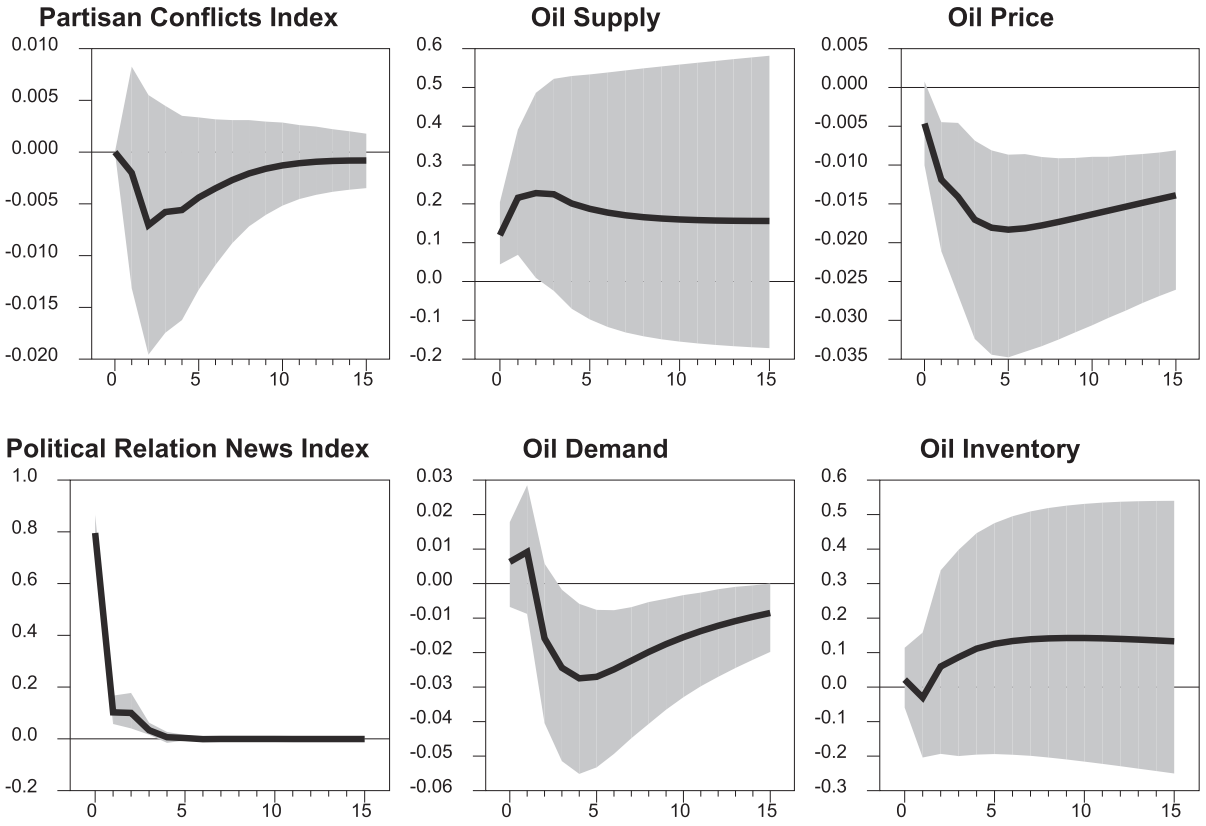

Fig. A9. Robustness check including oil inventory. **Note:** see footnote under Fig. 1. We introduce a positive shock on the PRNI. The IRFs of oil inventory are accumulated.

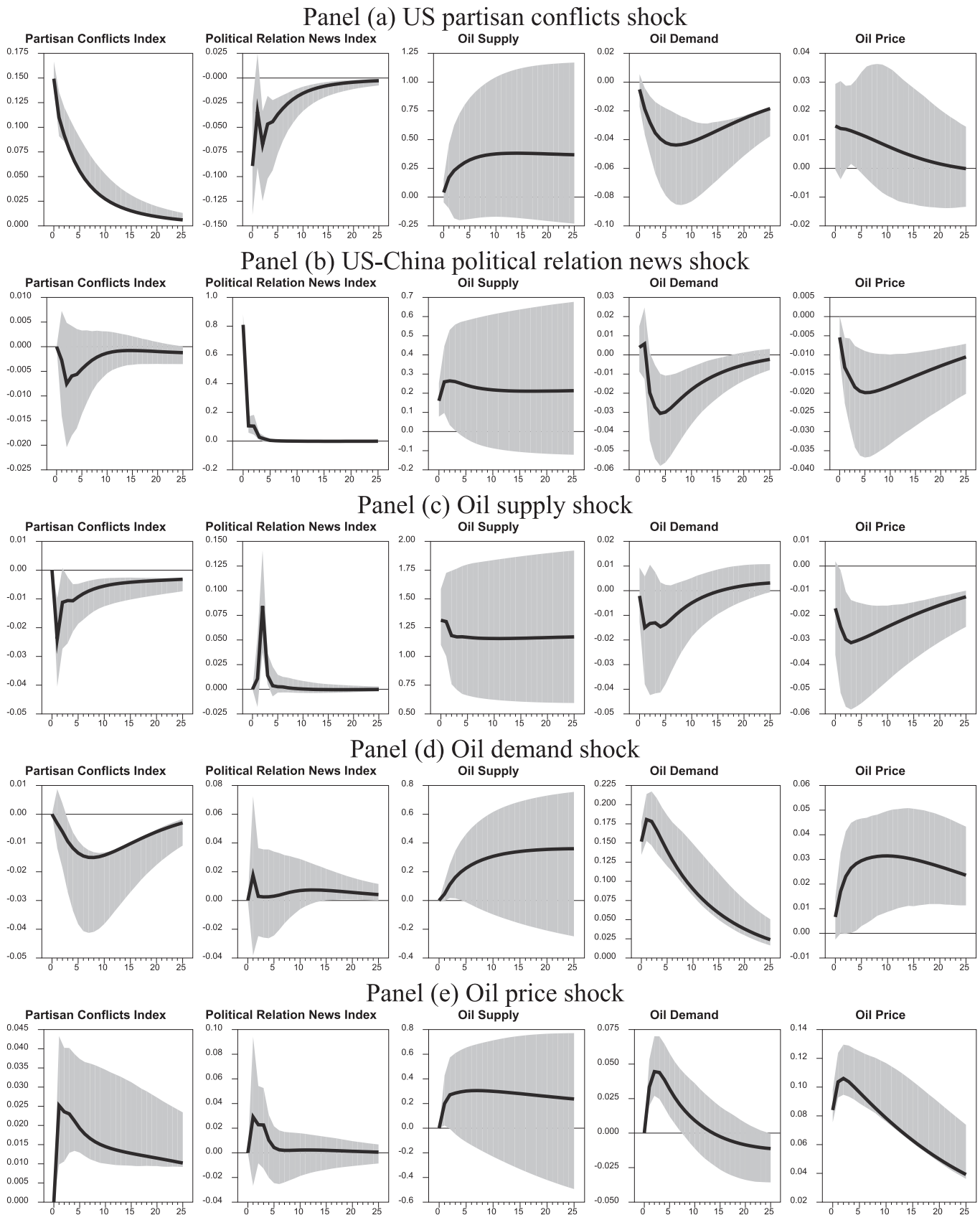

Fig. A10. Structural Impulse Responses in the Politics-Oil model. Note: the shaded area denotes 90 % confidence intervals generated from moving-block bootstrapping method with 5000 repetitions.

Appendix C. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.eneco.2025.108820.

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