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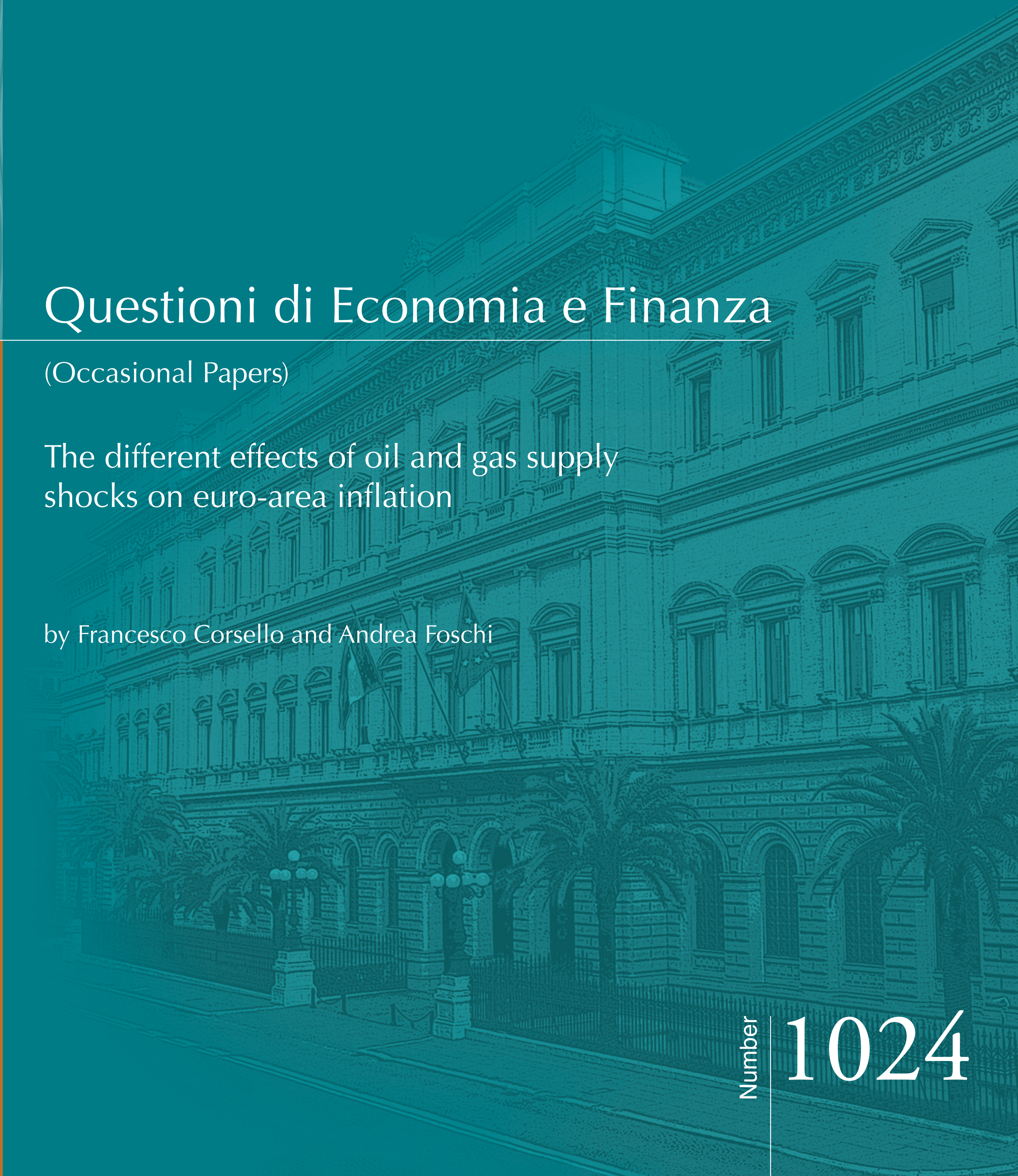

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THE DIFFERENT EFFECTS OF OIL AND GAS SUPPLY SHOCKS ON EURO-AREA INFLATION

by Francesco Corsello* and Andrea Foschi*

Abstract

This paper examines the heterogeneous pass-through of oil and gas supply shocks to consumer inflation, using granular euro-area HICP data and externally identified instruments. We find that the inflationary impact of oil shocks is short-lived, whereas gas shocks generate stronger and substantially more persistent effects. Direct transmission to fuel prices occurs immediately for oil shocks, while gas shocks pass through more gradually to household energy bills. The granular analysis reveals significant heterogeneity in the transmission to non-energy prices: food prices adjust rapidly and sharply, whereas core components respond less and with a considerable delay. We further document that the prevailing inflation regime is a key conditioning factor: the indirect effects are largely muted in low-inflation environments, but become pronounced in high-inflation regimes, particularly for gas shocks. We apply this framework to the 2026 energy shock and we argue that its inflationary consequences are likely to be more contained than those observed during the 2021–22 episode, given the comparatively moderate increase in gas prices. However, since broader indirect and second-round effects crucially depend on how long energy costs remain elevated, uncertainty remains high.

JEL Classification: E31, E52, Q43.

Keywords: energy price shocks, inflation pass-through, oil prices, natural gas prices, monetary policy, inflation regimes.

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* Banca d'Italia.

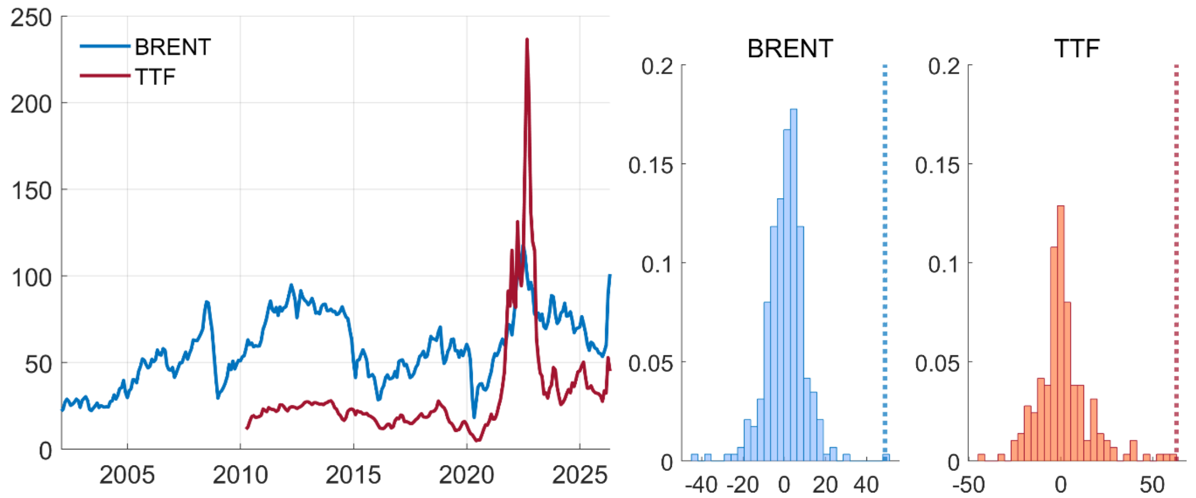
1. The 2026 shock and its direct effects on HICP energy components[1]

Until 2021, any major energy shock affecting the euro area was predominantly an oil shock. Movements in wholesale gas prices were comparatively muted and, when sizeable, often reflected spillovers from oil market developments. This changed abruptly with the 2021-22 energy crisis, when gas shocks emerged as an independent and quantitatively important source of energy fluctuations. A sequence of exceptionally large gas supply disturbances pushed European wholesale gas prices in 2021 and 2022 to unprecedented levels, while oil prices also rose sharply but remained within peaks that had already been observed in earlier episodes.

The renewed geopolitical tensions in the Middle East in March 2026 had notable effects on energy prices, but they differ in important respects from the 2021-22 episode. As shown in Figure 1, the monthly increases in Brent and TTF prices are unusually large by historical standards, placing both observations in the extreme right tail of the distribution of historical m-o-m price changes. At the same time, these sharp increases did not push energy prices back to historical highs. Brent rose markedly but remained below the peak levels observed in earlier episodes. Even more clearly, although TTF recorded a very large monthly increase, wholesale gas prices remained far below the extraordinary levels reached during the 2021-22 energy crisis, when the sequence of increases lasted for many months.

Figure 1. The March 2026 shock in historical perspective

a) Time Series of oil and gas prices (in €) b) Distribution of MoM price changes



Sources: authors' calculations based on LSEG/Datastream data. Notes: Brent and TTF prices are computed as monthly averages of daily data. Latest point: 27 March 2026 for Brent/TTF. Panel a) shows the time series of the price of Brent and TTF in euros; panel b) shows the distribution of historical MoM price changes in Brent and TTF, excluding March 2026, which is highlighted by the vertical dotted line.

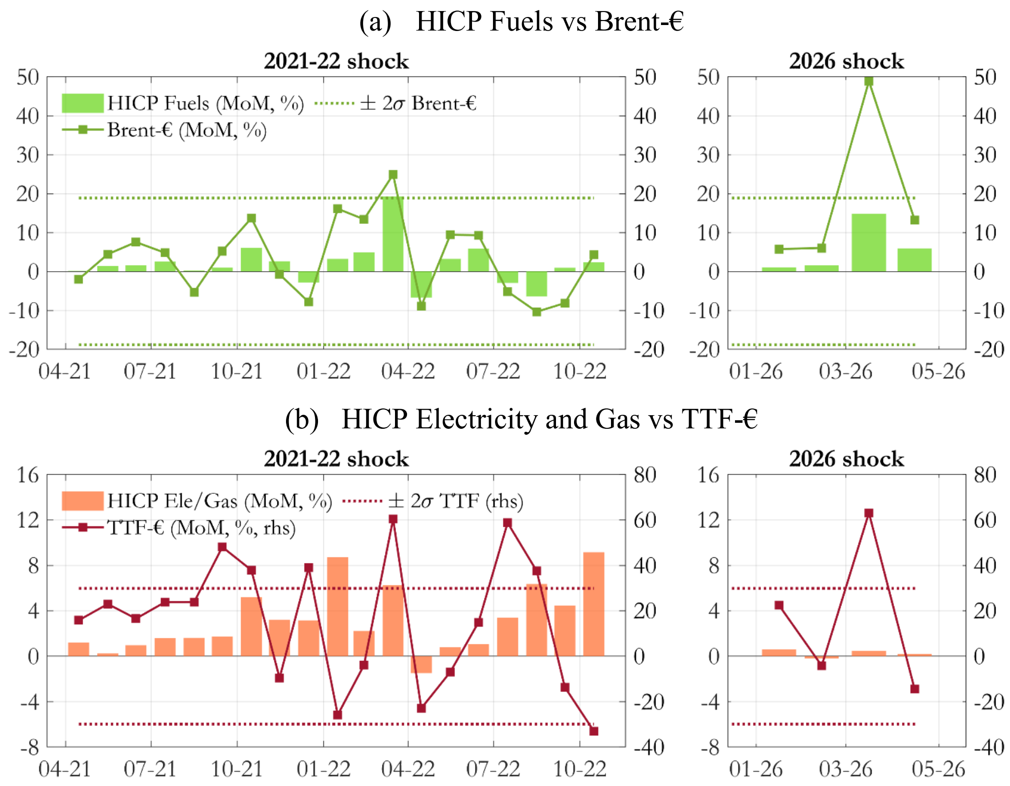
Oil price shocks pass through rapidly to HICP fuels, making motor fuels the most immediate direct channel from wholesale energy to consumer inflation. Retail fuel prices adjust very frequently, so the transmission from oil prices to HICP fuels is typically fast and sizeable. A 1% increase in Brent prices is usually associated with an increase in euro area motor fuels inflation of around 0.3 p.p. within two months. The March 2026 rise in Brent prices was exceptional, at around 45% m-o-m (Figure 2a). Since most of the increase occurred early in the month, it was

[1] We are especially grateful to Fabrizio Colonna for his valuable contribution and inputs. We benefited also from useful suggestions provided by Stefano Neri, Fabrizio Venditti, Alessandro Secchi, Roberta Zizza, Eliana Viviano, Giordano Zevi, Marianna Riggi, Lorenzo Mori and Andrea Gazzani.

largely reflected already in the March HICP for fuels, inducing a price increase of around 15%, which contributed by more than 0.7 p.p. to headline inflation. In April, Brent prices rose by a further almost 15%, while HICP fuels increased by an additional 6%, mainly reflecting a record increase in diesel prices.[2]

Gas shocks pass through to household energy prices to a lesser extent, more gradually, and with greater cross-country heterogeneity than oil shocks. Unlike motor fuels, retail gas and electricity prices adjust only gradually, reflecting regulated tariffs, staggered repricing mechanisms and national differences in retail market design. On average, a 1% increase in the TTF price translates into an increase of about 0.1 p.p. in consumer gas and electricity prices over roughly four months. Applying this elasticity to the March 2026 increase in TTF prices of around 60% m-o-m (Figure 2b) implies an increase of around 6% in household energy bills, with a contribution of roughly 0.3 p.p. to headline inflation spread over 2026-Q2. In March and April 2026, however, the pass-through to electricity and gas bills in the euro area remained very modest, with an increase of less than 1%. This aggregate figure masks divergent movements between gas and electricity prices, as well as considerable cross-country heterogeneity. Tariff-setting practices are also markedly heterogeneous across countries: in some large economies, such as France and Germany, tariffs are typically reset infrequently, whereas in others, including Italy and Spain, prices adjust more often.

Figure 2. Direct effects of oil and gas price shocks



Sources: authors' calculations based on Eurostat and LSEG/Datastream data. Notes: HICP data are monthly indices, while Brent and TTF prices are computed as monthly averages of daily data. Latest points: February 2026 for HICP; 27 March 2026 for Brent/TTF.

[2] The strength of the direct pass-through of oil differs across fuel products and may be partly cushioned by fiscal measures. Figure A-1 shows that the abrupt change in oil price in March 2026 had a stronger pass-through to diesel (+19% m-o-m) than to petrol (+10% m-o-m), consistent with the pattern observed in 2021-22. Similarly to 2022, some governments have partly offset the increase in pump prices through temporary reductions in fuel taxation. Overall, the figure confirms that the direct pass-through of oil shocks to HICP fuels is both immediate and heterogeneous, with diesel showing the larger response.

The direct effects on HICP energy components are only the first stage of the transmission of energy supply shocks to consumer prices. Beyond fuels, gas and electricity, oil and gas shocks also feed into inflation indirectly through production costs and input linkages across the rest of the consumption basket. The next section therefore examines the indirect pass-through to non-energy HICP components, with a focus on heterogeneity across items.

2. Analysing the pass-through: indirect effects via non-energy components

To analyse the indirect effects of oil and gas supply shocks, the note draws on both broad inflation aggregates and a highly granular HICP dataset. The empirical analysis is based on monthly euro area HICP data from January 1996 to December 2025, for a total of 360 observations. At the aggregate level, it considers the main non-energy components of inflation, namely food, services and non-energy industrial goods (NEIGs). At the granular level, it uses disaggregated HICP indices covering 18 food-related components and 73 core components, for a total of 91 non-energy HICP series.[3]

2.1 A historical perspective: changes of non-energy components in 2021-22

A descriptive look at the 2021-22 episode already points to highly uneven, staggered and abnormal price dynamics across HICP items. Relative to their own pre-shock history, some food and non-energy components moved into unusually high inflation territory very quickly since the summer of 2021, while others adjusted only gradually and with varying persistence over the following 18 months (Figure 3).

Food components moved early and broadly into abnormal inflation territory, pointing to a strong sensitivity to the energy shock. Most food components recorded historically high monthly inflation soon after summer 2021 and remained persistently elevated.[4] NEIG inflation was already unusually elevated in summer 2021, reflecting the effects of the supply bottlenecks that followed the post-pandemic recovery. Many NEIGs items displayed abnormal inflation already in mid-2021, consistent with the post-pandemic supply shortages that were already pushing inflation above historical norms in 2021. This is an important difference relative to the situation in early 2026. Services reacted more gradually, with only a few early movers, while many other components adjusted with a lag. The broader response unfolded more slowly over time. This pattern is consistent with less frequent price adjustment and with a more indirect transmission of energy shocks through labour costs and broader second-round effects. It also points to the presence of "late-movers", namely services components whose prices adjusted only with long lags to the inflation surge.[5]

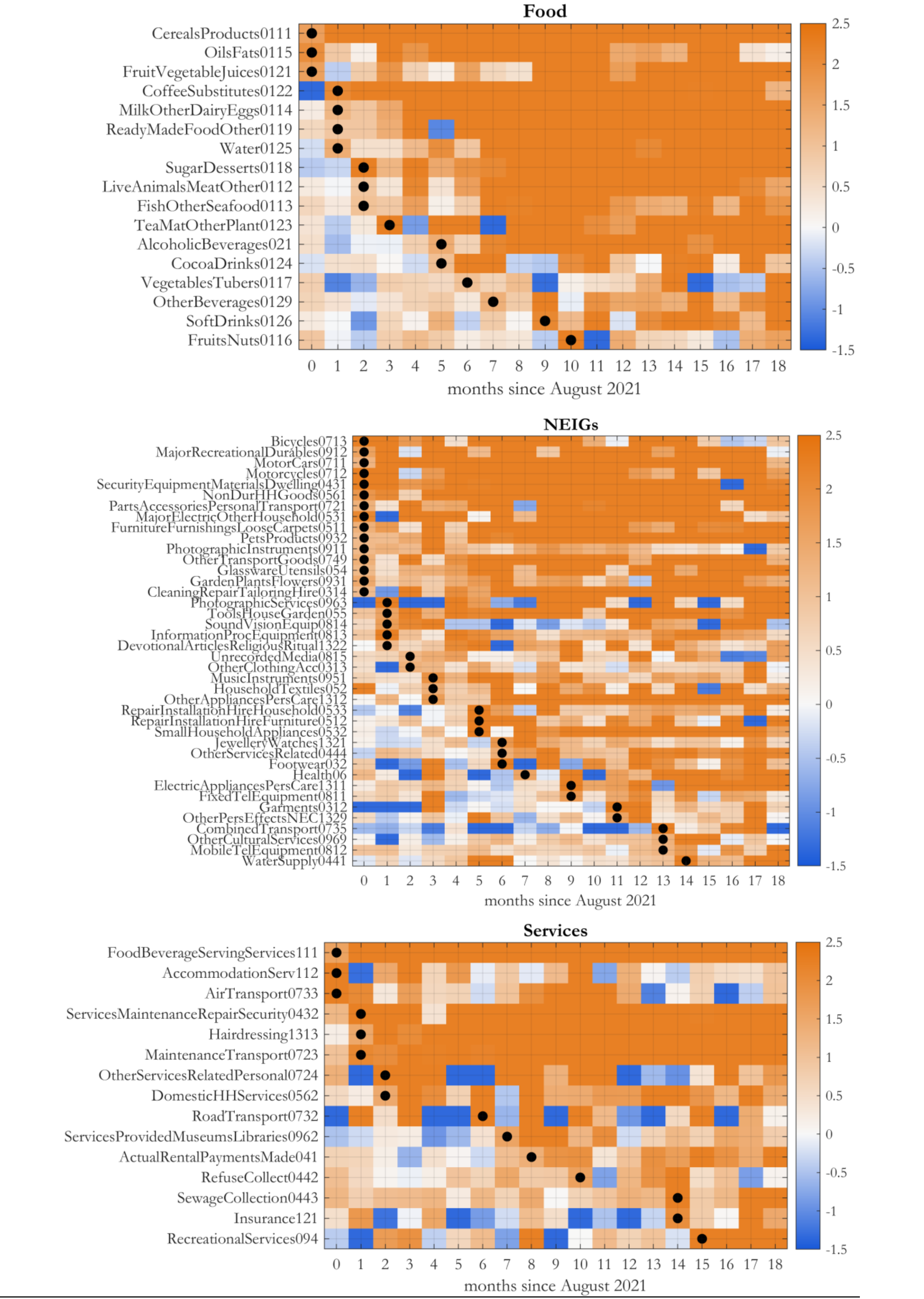
Although purely descriptive, this evidence highlights the sequencing and heterogeneity of the inflation response and motivates a more formal empirical analysis.

[3] The classification follows the new COICOP v2, introduced in January 2026 and used here as the reference taxonomy for the historical sample. To ensure comparability of short-term inflation dynamics across items, all component indices are seasonally adjusted. The granular series are adjusted using X-13, while seasonally adjusted data for the special aggregates are downloaded from the ECB data portal.

[4] Corsello and Tagliabracci (2023) document that the effects of an energy shock to food inflation are significantly larger than that to core inflation in the euro area, signalling a higher sensitivity of food prices to the dynamics of energy.

[5] This distinction between fast-movers and late-comers is consistent with the evidence provided by Corsello and Neri (2025), who document that the delayed and gradual adjustment of some services components was an important feature of euro area inflation after the 2021–22 energy shock.

Figure 3. Inflation dynamics after summer 2021 relative to pre-shock period



Sources: authors' calculations based on Eurostat data. Notes: The heatmaps show monthly z-scores of seasonally adjusted inflation for granular euro area HICP components, measured relative to each component's pre-shock mean and standard deviation over 2018-19. The figure starts in August 2021 and reports only components that display sufficiently persistent abnormal inflation within the subsequent 18 months. The black marker denotes for each component the first month of persistent abnormal inflation.

2.2 Empirical methodology

We investigate the effects of supply shocks through local projections, with the following baseline specification:

$$100 * (\ln p_{t+h}^i - \ln p_{t-1}^i) = \alpha_h^i + \beta_h^i \varepsilon_t + \Gamma_h^i X_t + u_{t+h}^i$$

for $h = 0,1, \dots 24$. Here, p_t^i is the monthly HICP index for a given category or special aggregate i (e.g. Headline, NEIGs, Tobacco, Footwear, etc.); ε_t is the shock of interest (an oil supply shock or a gas supply shock);[6] X_t is a set of controls, which includes 12 lags of the dependent variable, the logarithm of industrial production, the unemployment rate, the interest rate (the yield on the 1-year Bund), plus a COVID dummy for the years 2020-22. When the dependent variable is the special aggregate for NEIGs or any NEIG item, we additionally include PMI delivery times, in order to control for bottlenecks and supply chain pressures. Standard errors are heteroskedasticity and autocorrelation consistent (Newey-West with $12 + h$ lags).

We also explore an extension of our baseline specification that allows for state-dependent effects, by estimating the following regression:

$$100 * (\ln p_{t+h}^i - \ln p_{t-1}^i) = \alpha_h^i + \theta_h^i \varepsilon_t + \gamma_h^i D_t \varepsilon_t + \delta_h^i D_t + \Gamma_h^i X_t + u_{t+h}^i$$

where everything is as in the baseline, with the only addition of D_t, which is a dummy that identifies the state. To distinguish between "low" and "high" inflation states, we define the following object:

$$\bar{\pi}_t^i = \frac{1}{6} \sum_{\tau=t-6}^{t-1} \pi_\tau^{i,MoM}$$

where i is either the energy or the core HICP aggregate. $\bar{\pi}_t^i$ is the average of the month-on-month inflation rates for the "i-th"category (computed using the seasonally adjusted indices) over the last six months. We then compute the 75th percentile for both $\bar{\pi}_t^{core}$and $\bar{\pi}_t^{energy}$, and finally define our state variable as follows:

$$D_t = \begin{cases} 1 & \text{if } \bar{\pi}_t^{energy} > P_{75}(\bar{\pi}_t^{energy}) \text{ or } \bar{\pi}_t^{core} > P_{75}(\bar{\pi}_t^{core}) \\ 0 & \text{otherwise} \end{cases}$$

The resulting high ($D_t = 1$) and low ($D_t = 0$) states are shown in Figure A-3 in the Appendix. This approach allows us to define the "high" regime as a period preceded either by large and persistent increases in energy prices (which feed into the costs of firms, leading to indirect pass-through of energy shocks) or by elevated core inflation (which might alter expectations and price-setting behaviour of firms, thus setting the ground for second-round effects of the energy shock on inflation). In the Appendix we also consider a different definition of the state based only on HICP energy.

3. Results

The results obtained using the baseline specification show that the effects of oil shocks tend to be more short-lived, whereas those of gas shocks are quite persistent (Figure 4a). Both shocks are rescaled in order to generate a 1% increase in HICP energy on impact. The different response

[6] We use the oil shocks by Mori and Peersman (2024), who build on the methodology of Känzig (2021) and additionally control for financial variables to yield a series of shocks that are not predictable and not contaminated by potential demand effects. We use the gas shocks by Alessandri and Gazzani (2025), who follow the logic of Känzig (2021) combined with a narrative approach using daily news on the European gas market to construct an instrument for European gas supply shocks.

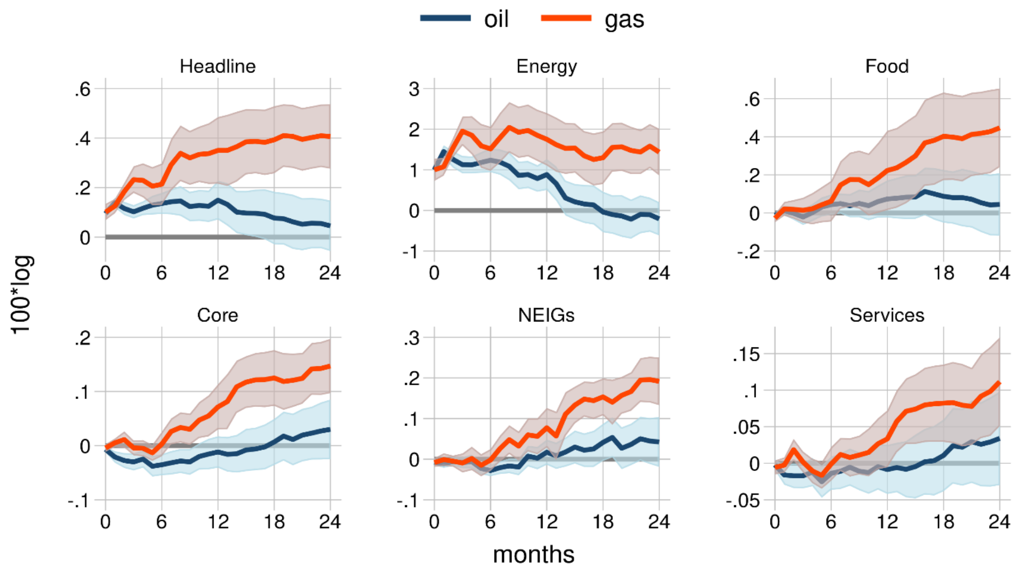
of energy inflation is a result in itself. Direct effects of the oil supply shock tend to be more short-lived due to the nature of oil supply shortages,[7] which can dissolve more rapidly: the oil market is much more global and developed and oil trade is less fragmented than gas and electricity. In addition, oil shocks are immediately transmitted to fuels, whereas gas and electricity contracts are usually long in Europe and updated less frequently.

Moreover, oil supply shocks tend have a smaller pass-through to non-energy components, while gas shocks, conversely, have a stronger, more widespread and more persistent pass-through to non-energy items. The total effect on headline inflation is largely driven by direct effects for oil, whereas gas can generate also sizable indirect inflationary effects through food and core components.

The stark difference between oil and gas shocks is due, in part, to the difference in persistence of the effects on energy prices. However, even netting out for the different persistence, gas shocks display a stronger pass-through to non-energy components (Figure 4b). This reflects the greater importance of gas and electricity in the production costs of food-related sectors, manufacturing and several key service sectors, as opposed to oil, which mostly affects non-energy components only through higher transportation costs. The granular z-score analysis in Figure 3 hints at potential differences in the pervasiveness of oil and gas across different sectors, and to the presence of more responsive individual components. These aspects are potentially masked by the aggregate results: we therefore repeat the baseline analysis at a more granular level, looking at the responses of individual price items.

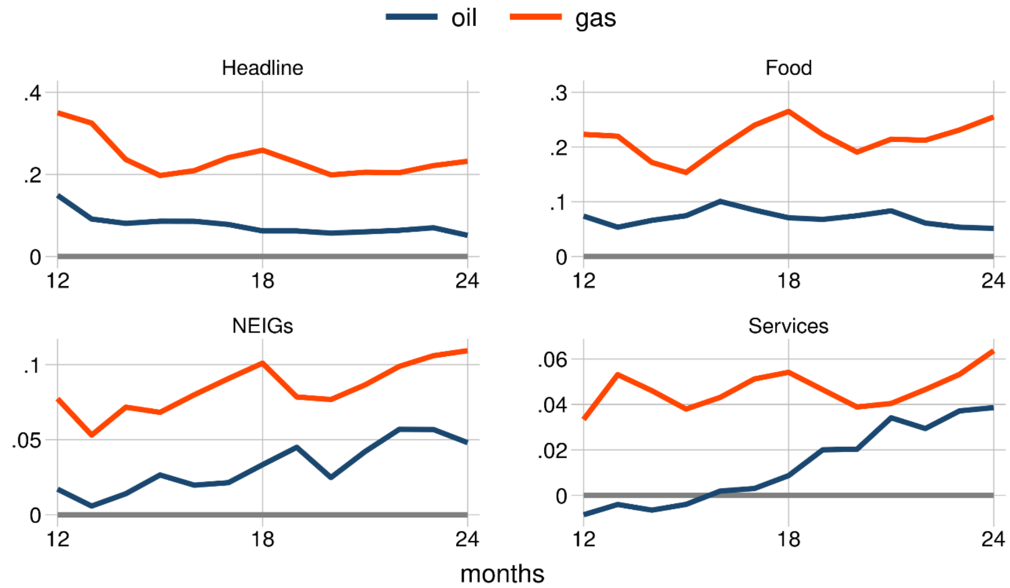
Figure 4. Pass-through of oil and gas shocks to HICP special aggregates

a) Pass-through to HICP special aggregates



[7] The oil shocks, identified by Mori and Peersman (2024), isolate exogenous supply disturbances and filter out oil price movements driven by global demand. Their estimated inflationary effects are therefore likely to be smaller than those associated with hybrid oil price shocks, which also reflect demand pressures.

b) Pass-through at horizons 12-24, normalized by the energy response 12 months before



Sources: authors' calculations based on ECB and Eurostat data. Oil and gas supply shocks are identified using the instruments proposed by Mori and Peersman (2024) and Alessandri and Gazzani (2025). Notes: In panel a), the shocks are normalized so as to have an effect of 1% on energy inflation on impact, and shaded areas denote 68% confidence intervals; in panel b), responses are normalized by the response of energy 12 months before.

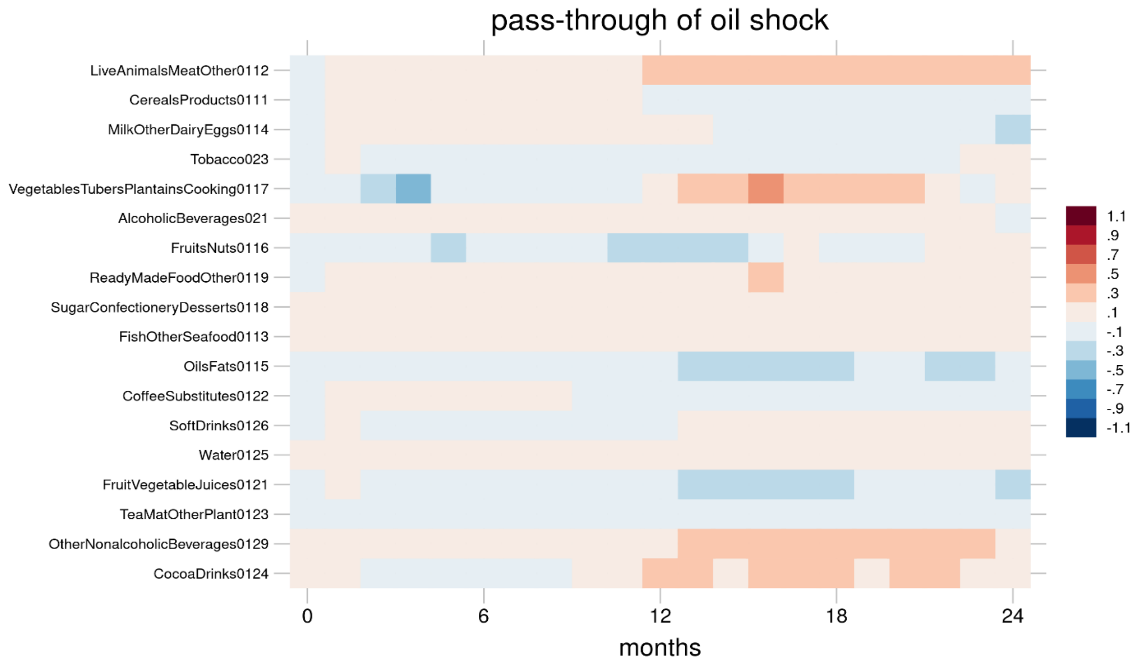
At a granular level, gas shocks have stronger and much more pervasive effects on food items than oil shocks (Figure 5). Some items, such as oils and fats, respond particularly strongly to gas shocks. In general, however, gas (and electricity) is a key input for the production of processed items, as well as for agricultural inputs (e.g. fertilizers) that are crucial for unprocessed items. This is reflected in the stronger effects that gas shocks have throughout food items relative to oil.

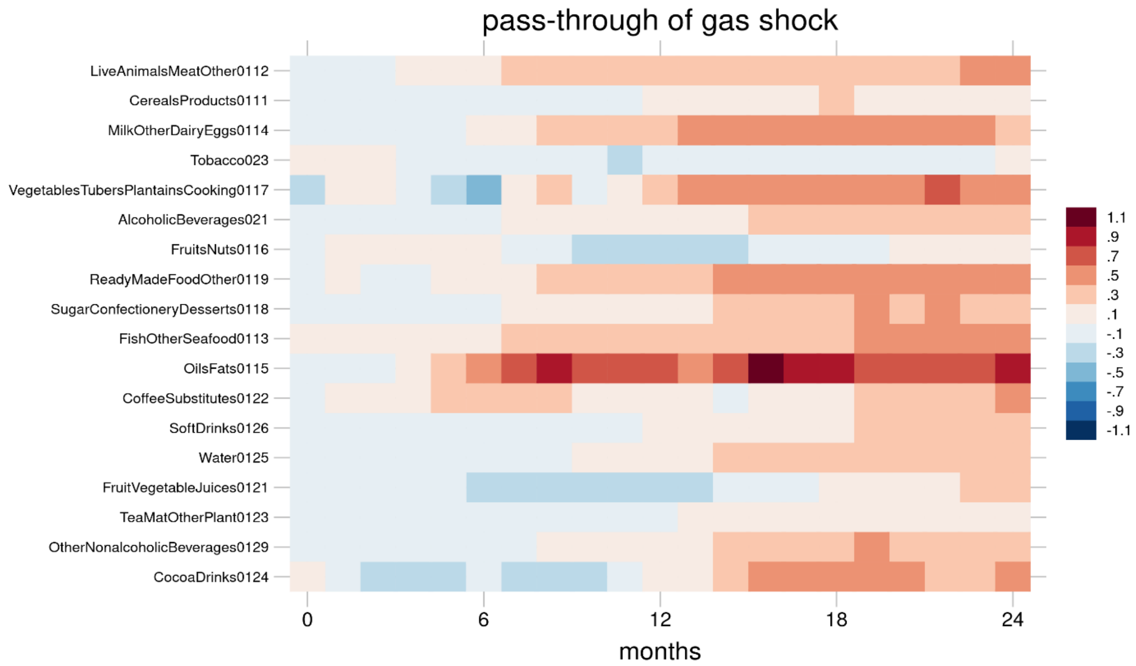
Oil and gas shocks are transmitted relatively homogeneously across NEIGs prices (Figure 6). At longer horizons, gas has stronger and more persistent effects, especially on some categories (e.g. cars and non-durable household goods), but overall, the degree of heterogeneity of the pass-through is limited and similar for the two types of shocks.

In the case of services, the transmission of energy shocks becomes much more heterogeneous, with some categories being heavily affected (especially those related to travel) also by the oil shock, while others are left unscathed (Figure 7). As in the case of food, gas is more pervasive than oil, and even for travel-related categories (including accommodation, package holidays, and air transport), it has much longer-lasting effects than oil. The indirect effects of oil shocks have a key distinctive feature, they fade away more quickly than gas.

These results are consistent with a smaller dispersion of exposures to energy inputs in manufacturing than in services. Moreover, they reflect a smaller incidence of oil relative to gas and electricity as a direct production input in most production structures, with the exception of the transportation sector, as confirmed by 2019 input-output data for the euro area (Figure 8).

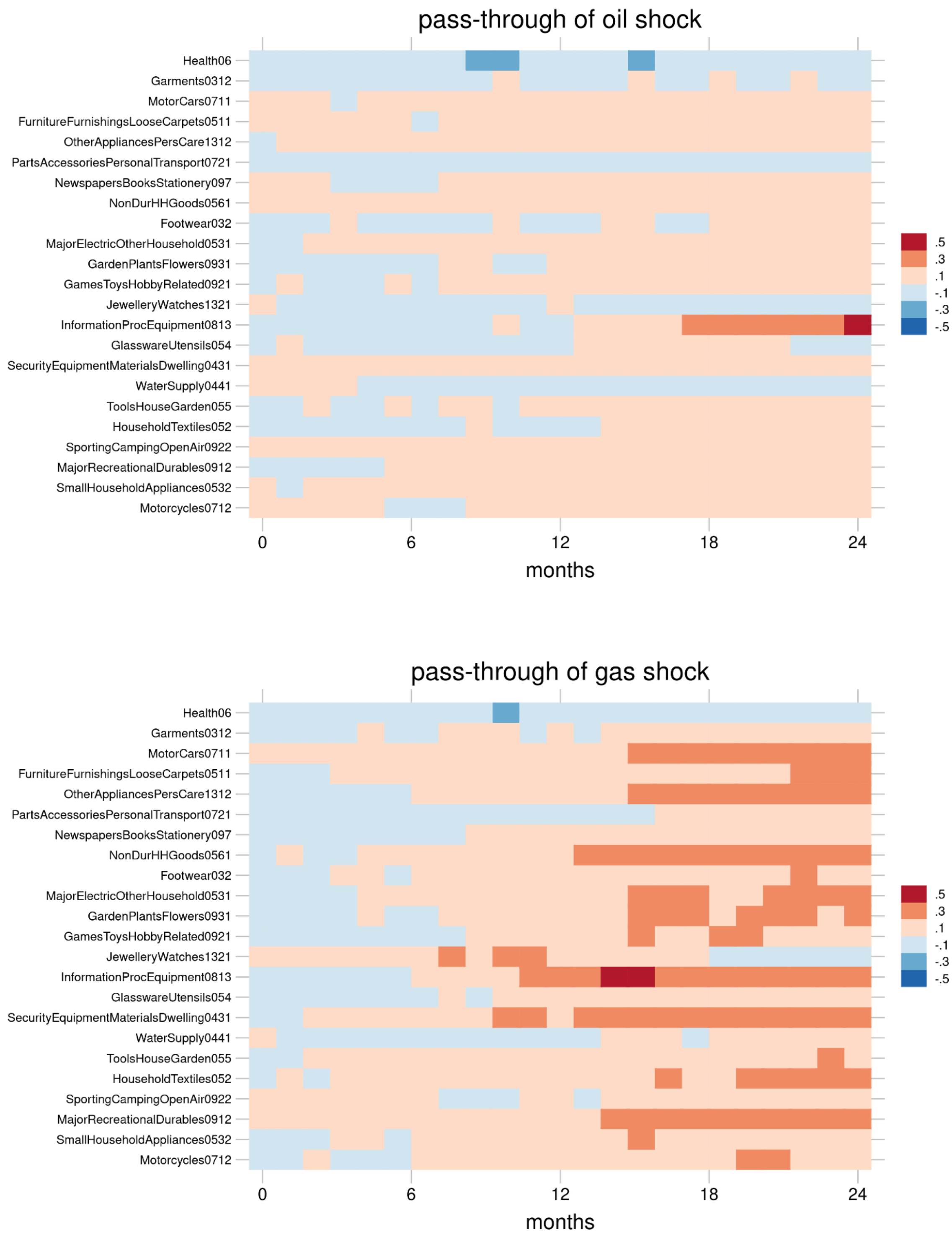
Figure 5. Pass-through of oil and gas shocks to food items





Sources: authors' calculations based on ECB and Eurostat data. Notes: The shocks are normalized so as to have an effect of 1% on energy inflation on impact. The price categories on the y-axis are sorted by their weight in the HICP basket, from highest to lowest.

Figure 6. Pass-through of oil and gas shocks to industrial goods (NEIGs)

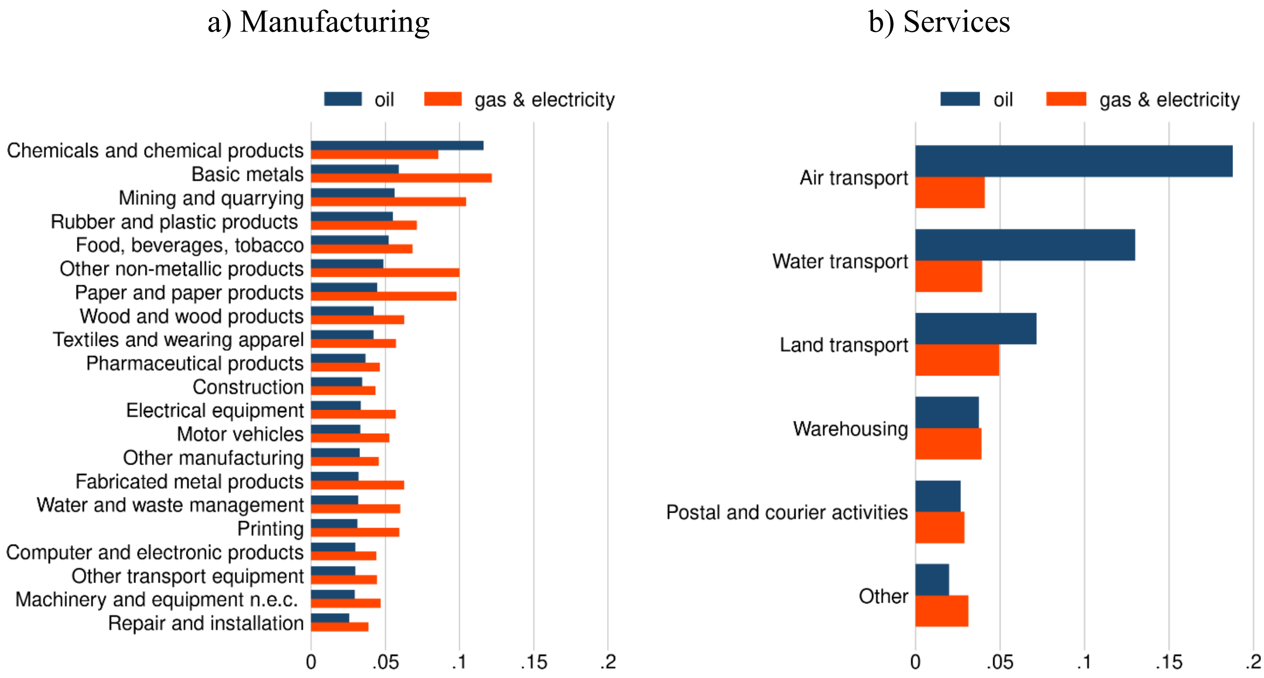


Sources: authors’ calculations based on ECB and Eurostat data. Notes: The shocks are normalized so as to have an effect of 1% on energy inflation on impact. The price categories on the y-axis are sorted by their weight in the HICP basket, from highest to lowest.

Figure 7. Pass-through of oil and gas shocks to services

Sources: authors' calculations based on ECB and Eurostat data. Notes: The shocks are normalized so as to have an effect of 1% on energy inflation on impact. The price categories on the y-axis are sorted by their weight in the HICP basket, from highest to lowest.

Figure 8. Exposure to oil and gas inputs



Sources: authors' calculations based on Eurostat data. Notes: Total exposures include both direct and indirect exposures and are measured as shares of total inputs. Calculations are based on 2019 input-output tables. The classification is based on NACE Rev. 2, and is therefore not directly mappable into the COICOP classification of HICP price items.

3.1 State-dependent analysis

Repeating the analysis for the main aggregates using the state-dependent specification reveals that the pass-through of energy shocks importantly depends on the inflation state (Figure 9).[8]

Oil shocks, which have relatively muted indirect effects in the low state, generate some indirect effects in the high inflation regime via food and NEIGs, but not via services, with an overall moderate effect on headline inflation persistence.

The case of gas shocks is different, with a much more pronounced degree of state-dependence. In a low inflation environment, the impact of gas shocks on headline inflation is driven solely by direct effects, with muted indirect effects, similarly to the case of oil. In a high inflation environment instead, sizable and persistent responses are visible in non-energy components, determining a prolonged period of higher headline inflation. This evidence is consistent with the findings in Neri (2026), who documents a state-dependent pass through of energy shocks driven by gas shocks.

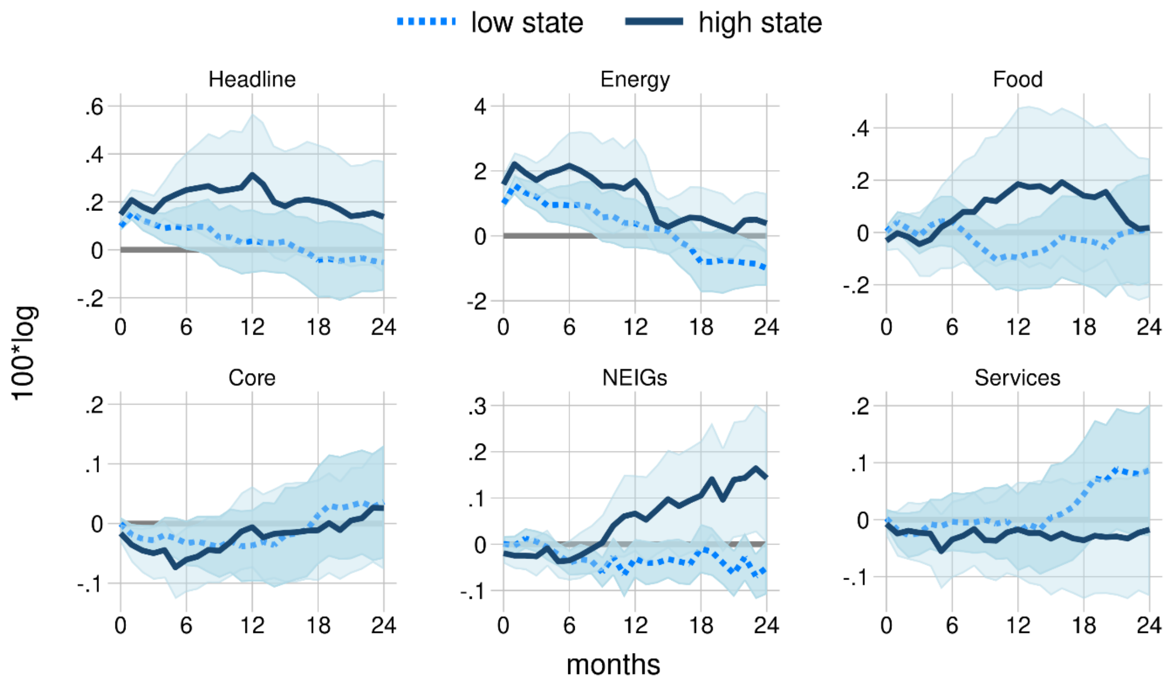
This is likely due to a combination of indirect and second-round effects at play. Indirect effects, generated by repeated supply shocks in an already elevated energy inflation environment, force firms to adjust prices more markedly and more frequently due to persistently higher costs that cannot be absorbed by margins. Second-round effects, especially when shocks occur in a

[8] Figure A-5 in the Appendix shows that the results are robust when the high state is only defined based on energy inflation, without considering the core.

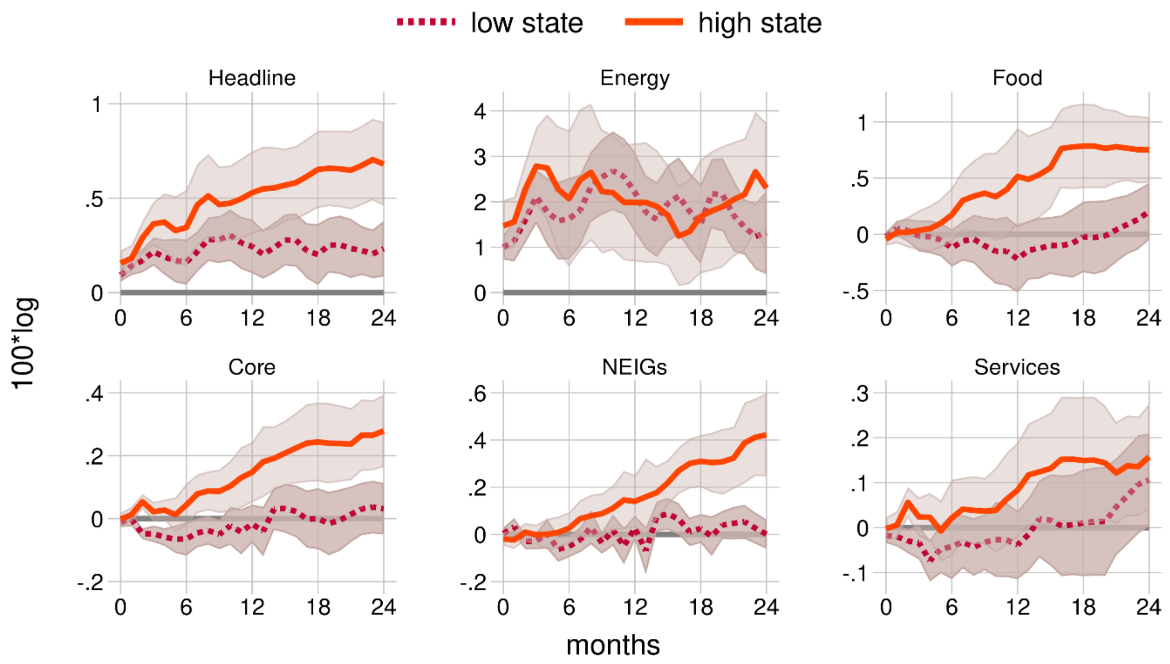
high core inflation environment and thus affect the expectations and behaviour of firms and workers, may induce further price adjustments along with potential rising wage dynamics.[9]

Figure 9. Pass-through of energy shocks and state dependence

a) Oil shock



b) Gas shock



[9] Using micro data for nine euro area countries, Gautier et al. (2026) show that in 2022 the frequency of price changes increased considerably more than was observed over 2010-19, providing empirical motivation for state dependent analysis.

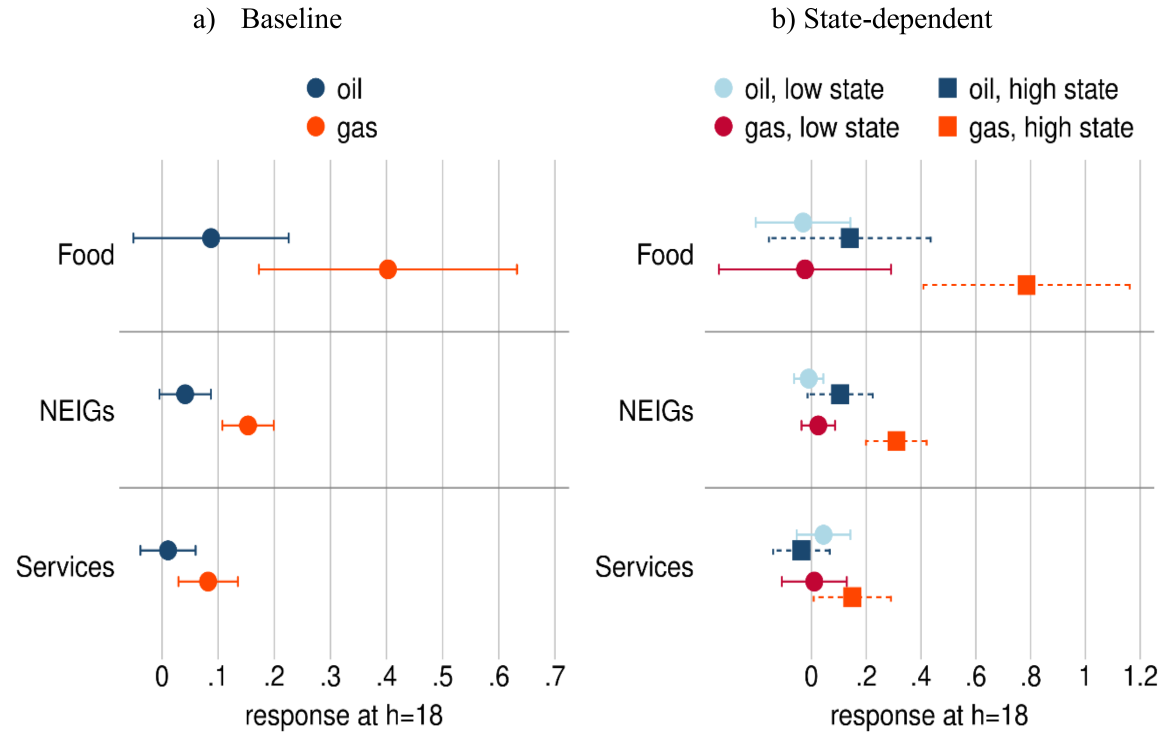
Sources: authors' calculations based on ECB and Eurostat data. Notes: The shocks are normalized so as to have an effect of 1% on energy inflation on impact in the low state. Shaded areas denote 68% confidence intervals.

A potential explanation for the state dependency is that prices adjust more frequently in a high-inflation environment (as in 2021-22), implying a faster transmission of cost-push shocks. This also has broader implications for monetary policy transmission, consistent with Neri, Conflitti and Lin (2026), who show that a higher frequency of price adjustment not only amplifies the pass-through of cost shocks but also steepens the Phillips curve.

The stronger state-dependence associated with gas shocks also emerges when repeating the analysis at the granular level. As in the baseline, there is considerable heterogeneity in the responses across food items and services, and more homogeneity in the responses of NEIGs (Figure A-6). This granular analysis also suggests potential items that should be closely monitored to detect indirect effects, due to their strong and early responses and their larger weight in the HICP basket.[10]

This state-dependent mechanism warrants close monitoring of indirect and second-round effects, especially if commodity prices remain persistently high, core inflation remains elevated, and new shocks emerge after that observed in March 2026.

Figure 10. Summary of indirect effects of energy shocks on inflation



Sources: authors' calculations based on ECB and Eurostat data. Notes: Bars denote 68% confidence intervals.

4. Concluding remarks and policy takeaways

This note uncovers several layers of heterogeneity that are essential to deciphering how tensions in energy markets travel through to consumer inflation in the euro area.

[10] Figure A-7 provides evidence about timing and size of the response to gas shocks. In particular, early responders are the following: for food, 0112, 0113, 0115, 0114, 0119; for NEIGs, 0532, 0432, 0511, 0561, 0531, 0912; for services, 098, 0724, 0732, 0734, 0733, 111.

The pass-through of energy shocks to consumer inflation is first of all heterogeneous across the nature of the shock itself. Oil shocks tend to have a shorter-lived effect, reflecting more immediate direct effects on energy prices and more limited indirect spillovers to non-energy ones. Gas shocks, by contrast, generate more persistent inflationary effects, owing to both more gradual direct effects and larger spillovers to non-energy components (Figure 10a).

The transmission of energy shocks is also highly uneven across sectors and across individual items within sectors. Consumer energy prices react very quickly, while food components follow relatively early in the transmission process. By contrast, core components respond with longer delays, and the pass-through tends to be complete only after at least one year. Granular estimates further show substantial heterogeneity within broad aggregates, with services being the most diverse and staggered aggregate.

The inflationary consequences of energy shocks depend crucially on the broader inflation environment in which they unfold. When an energy crisis is large, persistent and broad-based across energy commodities, it can push the economy into a high-inflation state in which indirect effects are amplified and second-round effects become more material, as in 2021-22. By contrast, when energy shocks are smaller, less widespread across commodities, or shorter-lived, indirect effects are likely to remain weaker, with inflation responding mainly through direct channels (Figure 10b).

This evidence suggests that the 2026 energy shock, as it has unfolded so far, may have a more limited inflationary impact than in 2021-22, although uncertainty remains high. Oil and fuels prices have risen sharply, but not to unprecedented levels, while gas prices are far below those of 2022 and effects on energy bills have yet to materialize. As for indirect effects, while some pass-through to food prices is likely due to their direct exposure to energy-related inputs, a broader pass-through to core components appears unlikely to materialize quickly. The evidence suggests that firms in manufacturing and services typically adjust prices only if higher energy costs persist for long enough. For central banks, this implies that close monitoring of energy price developments during the first half of 2026 will be essential to assess the extent and timing of possible non-immediate inflationary effects extending into 2027.

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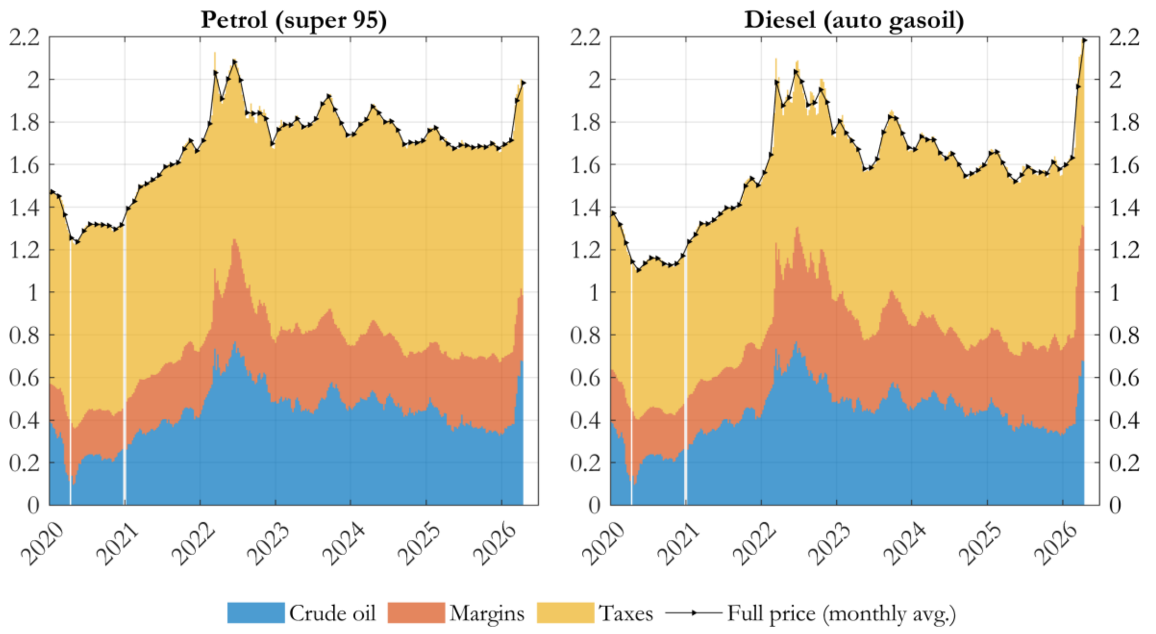
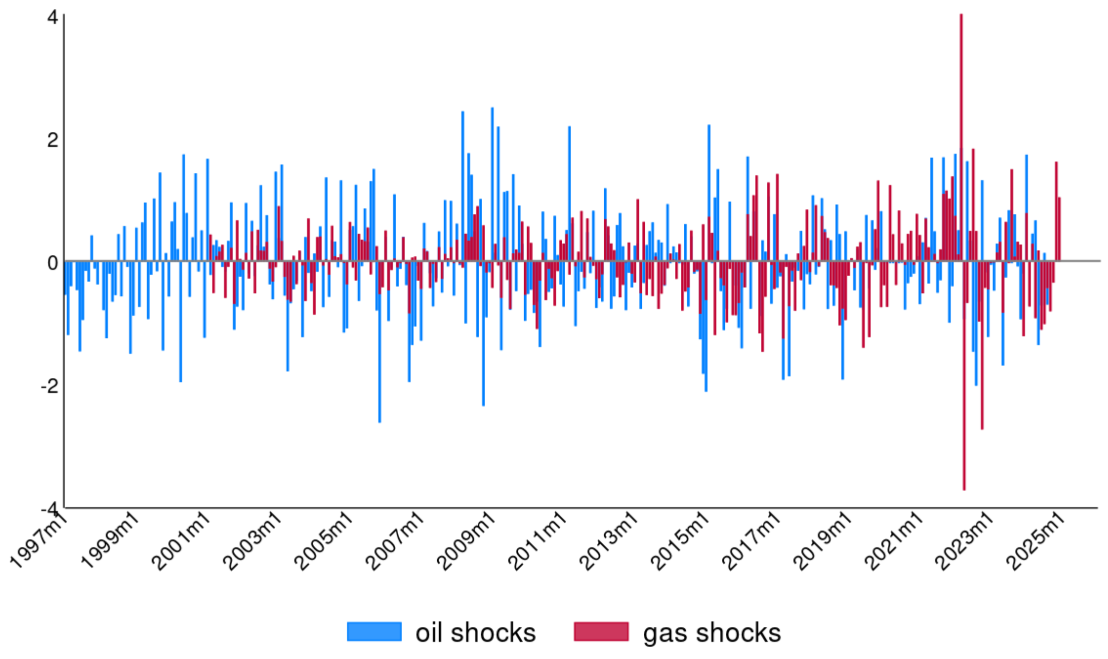
Appendix

Figure A-1. A decomposition of euro area fuels prices



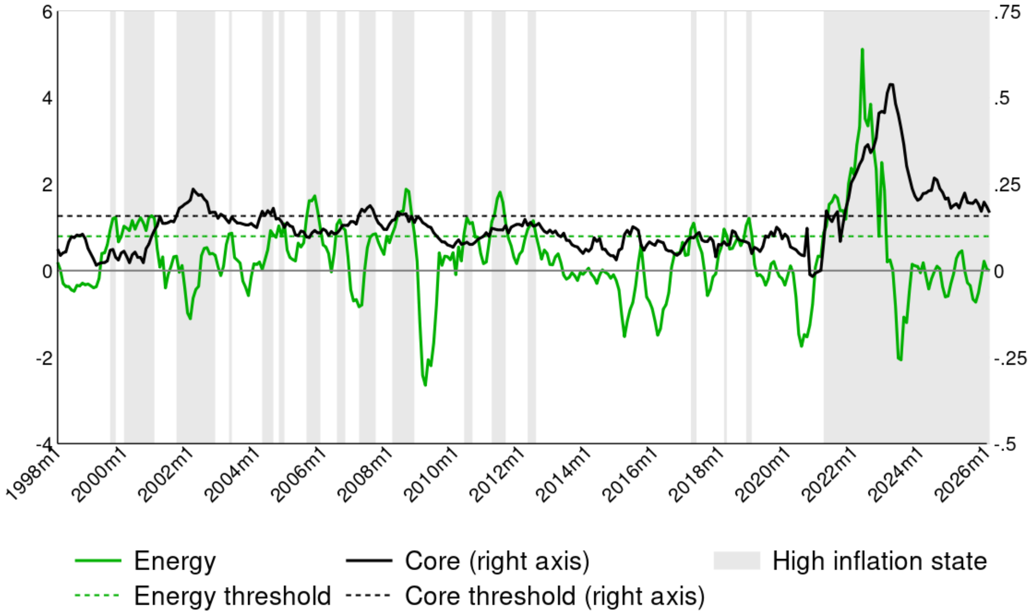
Sources: authors' calculations based on LSEG/Refinitiv, ECB and EC data. Notes: fuels prices are expressed in € per liter, and decomposed into three components: raw oil, refining and distribution margins, and taxes (including excise duties).

Figure A-2. Oil and gas supply shocks



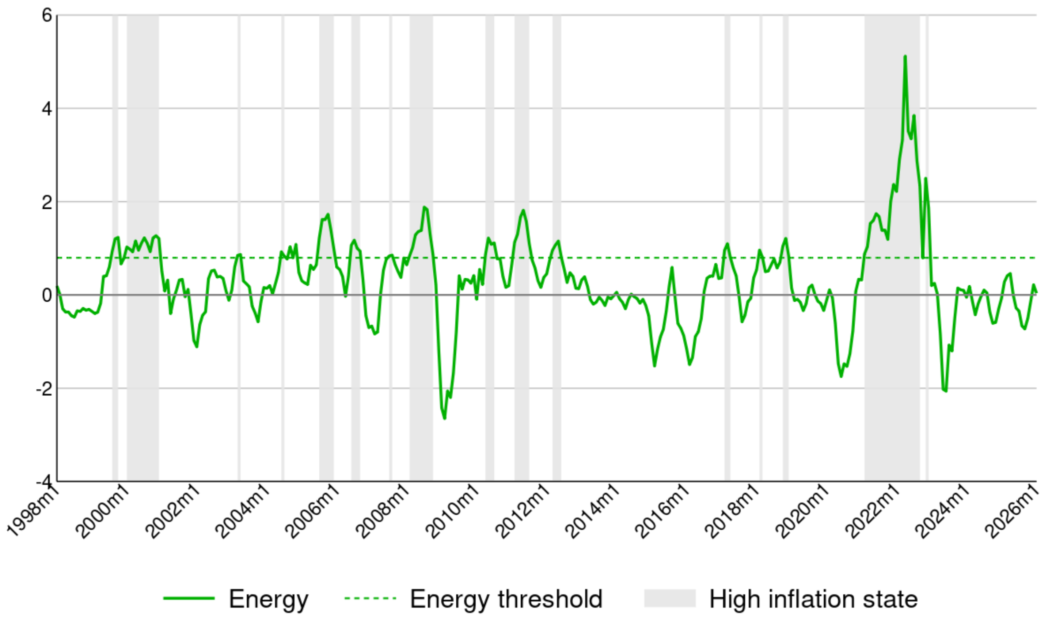
Sources: authors' calculations. Notes: The figure plots the oil shocks (Mori and Peersman 2024) and the gas shocks (Alessandri and Gazzani 2025) after they have been normalized so as to have an effect of 1% on energy inflation on impact.

Figure A-3. Definition of low and high inflation regimes



Sources: authors' calculations based on ECB and Eurostat data. Notes: The figure plots $\bar{\pi}_t^{energy}$ ("Energy") and $\bar{\pi}_t^{core}$ ("Core") as defined in the main text, along with their corresponding 75th percentiles ("Energy threshold" and "Core threshold"). The grey areas correspond to the periods in which $D_t = 1$.

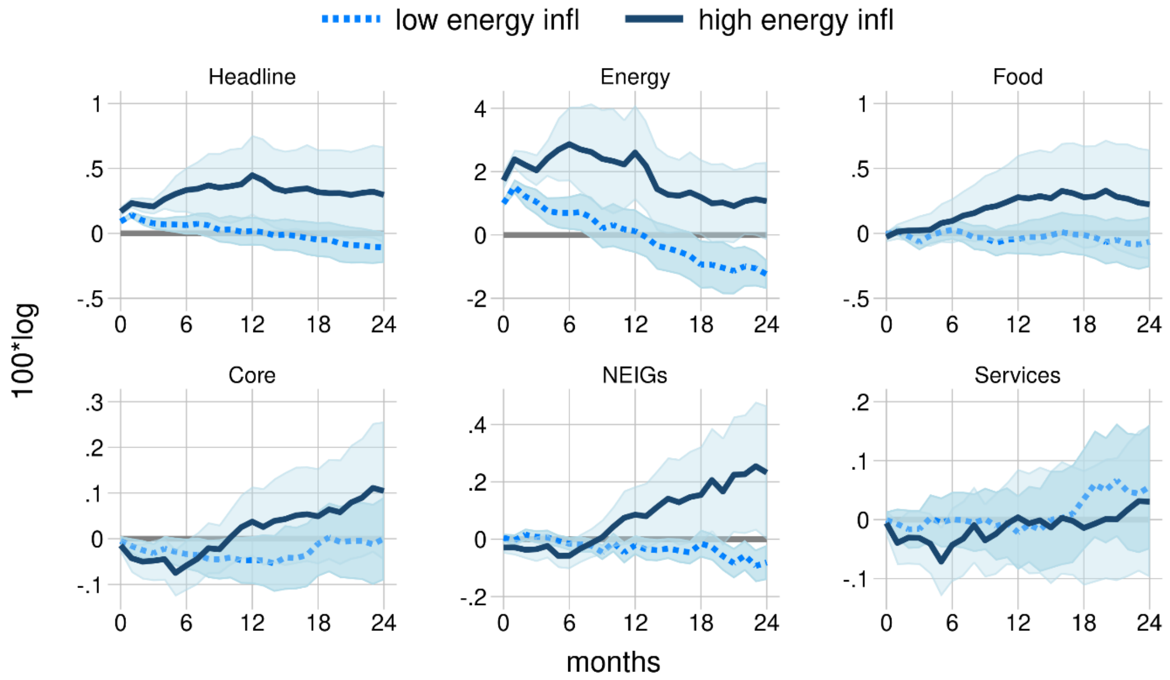
Figure A-4. Alternative definition of low and high inflation regimes



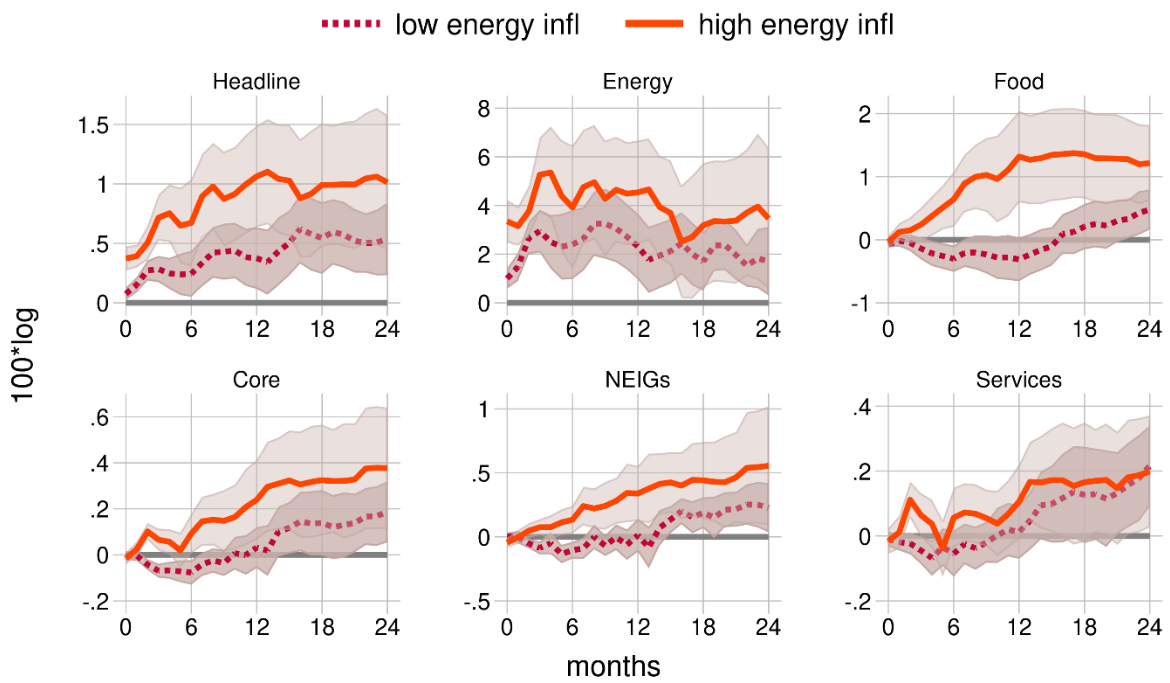
Sources: authors' calculations based on ECB and Eurostat data. Notes: The figure plots $\bar{\pi}_t^{energy}$ ("Energy") as defined in the main text, along with its corresponding 75th percentiles ("Energy threshold"). The grey areas correspond to the periods in which $D_t = 1$.

Figure A-5. Pass-through of energy shocks and state dependence, alternative states

a) Oil shock



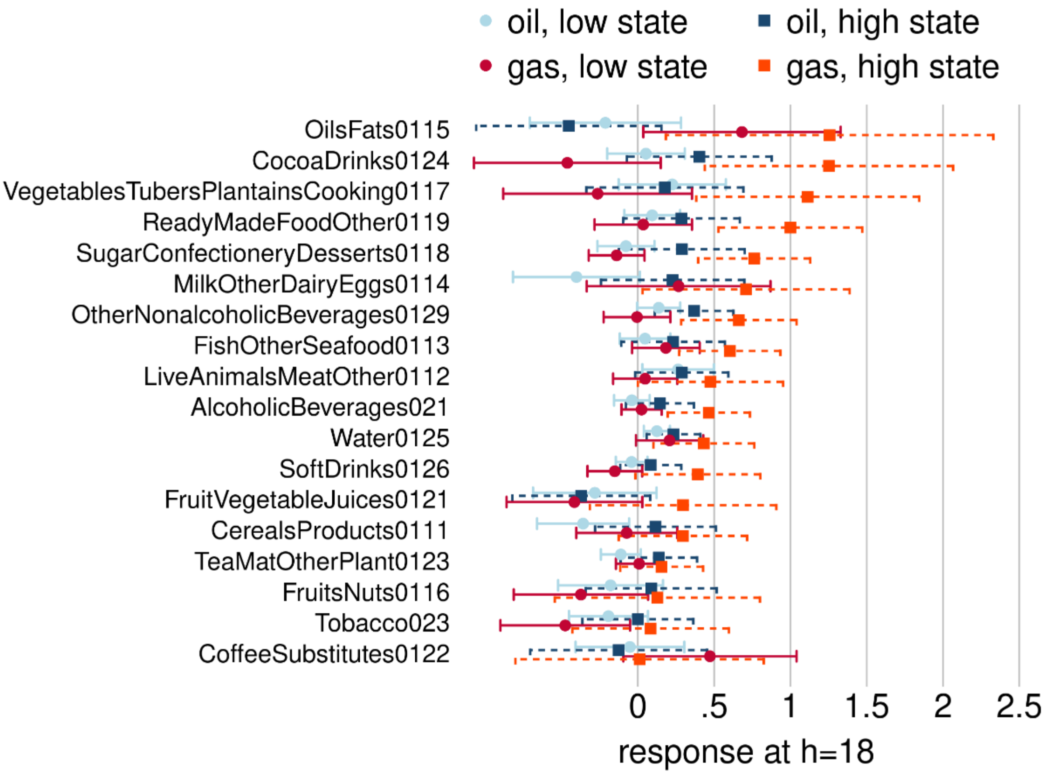
b) Gas shock



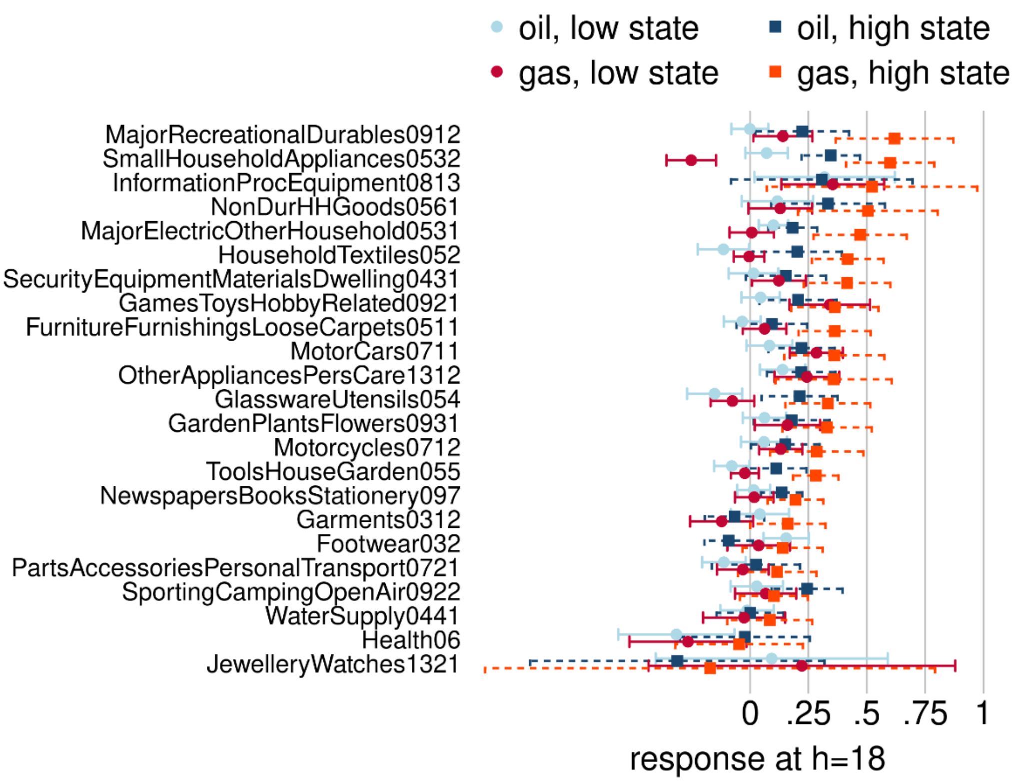
Sources: authors' calculations based on ECB and Eurostat data. Notes: The shocks are normalized so as to have an effect of 1% on energy inflation on impact in the low state. Shaded areas denote 68% confidence intervals.

Figure A-6. Summary of state-dependent indirect effects, granular analysis inflation

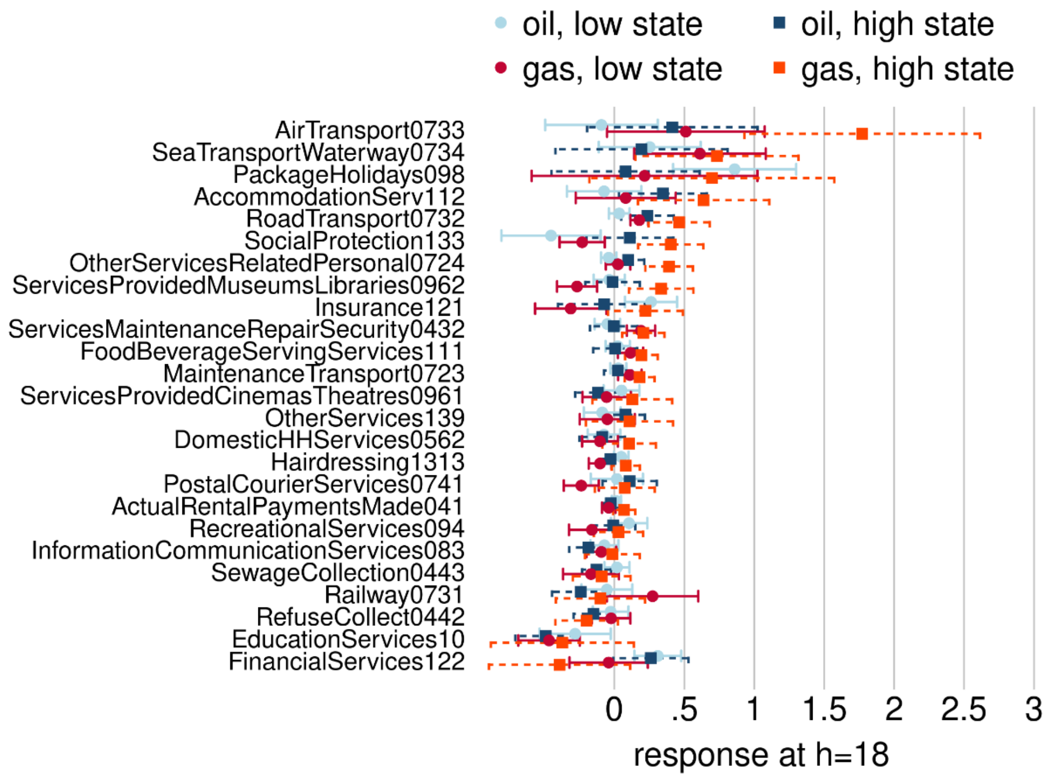
a) Food



b) NEIGs



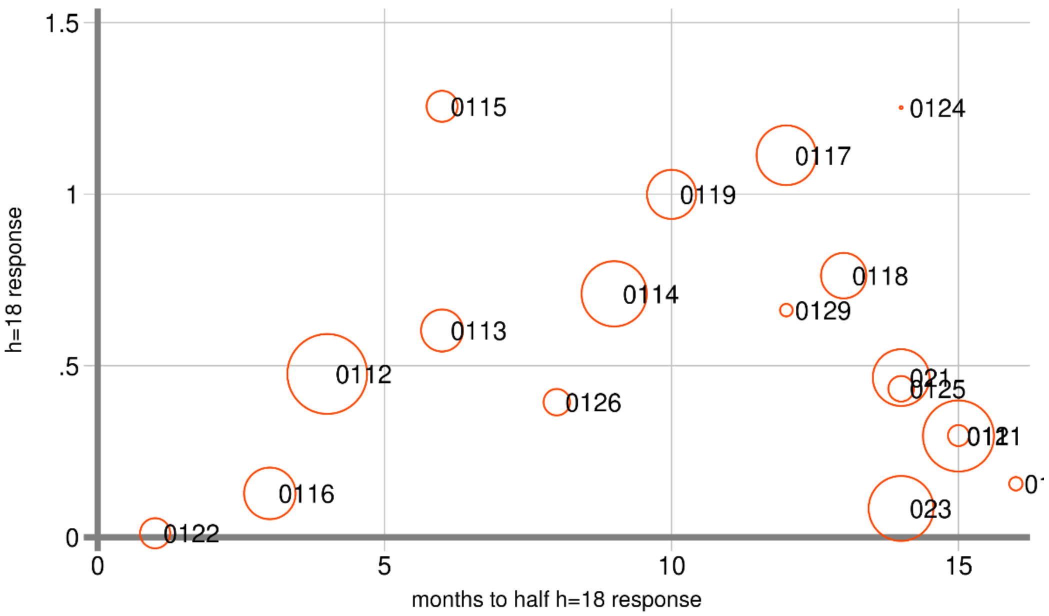
c) Services



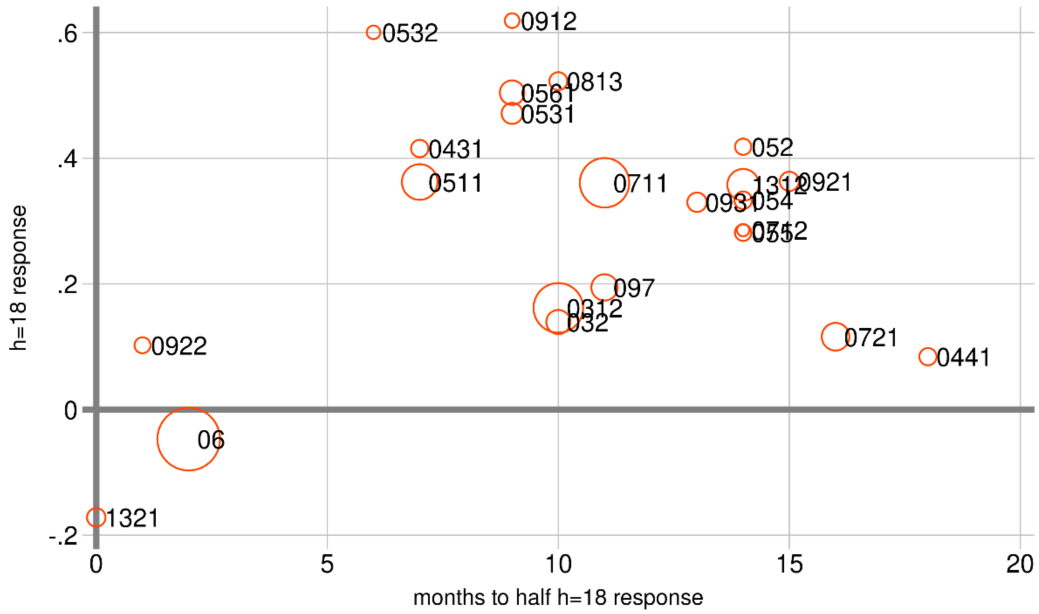
Sources: authors' calculations based on ECB and Eurostat data. Notes: Bars denote 68% confidence intervals.

Figure A-7. Early indicators of indirect and second-round effects following gas shocks

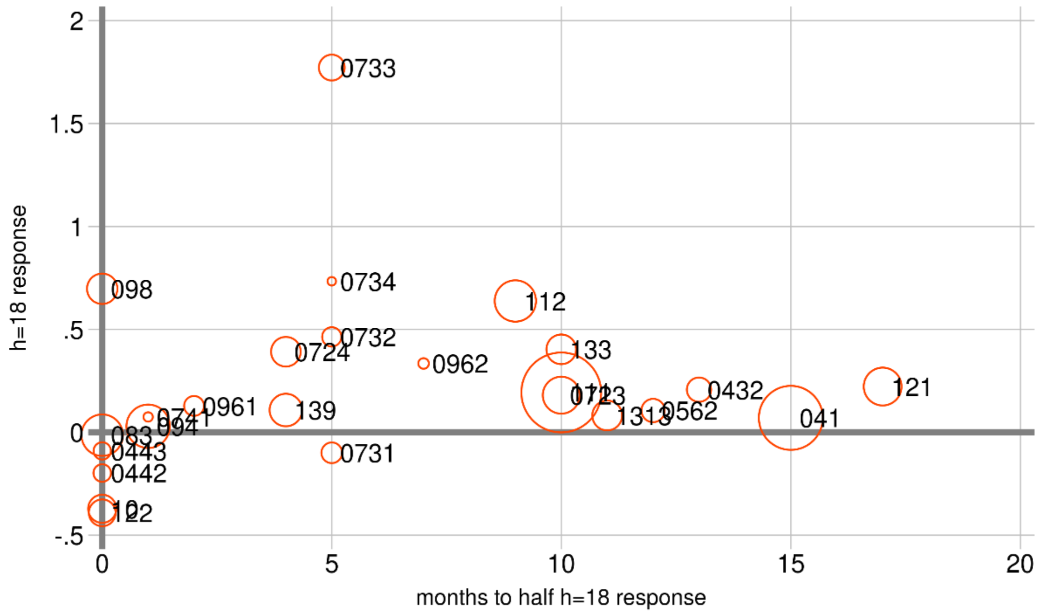
a) Food



b) NEIGs



c) Services



Sources: authors' calculations based on ECB and Eurostat data. Notes: Each bubble corresponds to an item. The y-axis shows the price response to a gas shock in the high inflation state after 18 months; the x-axis shows how many months it takes for the response to reach half of its level at h=18; the size of the bubble corresponds to the weight in the HICP basket.