No 453 – March 2025

La Lettre du CEPII

Beyond Energy Costs: Demand, the Forgotten Driver of Competitiveness

Carl Grekou, Thomas Grjebine & Florian Morvillier*

The recent energy crisis has brought energy prices back to the forefront of industrial concerns. While much of the debate has focused on this issue, another key determinant – too often overlooked – plays a critical role in shaping industrial competitiveness: fiscal policy and its impact on demand. Expansionary fiscal policies can erode competitiveness by pushing up prices, which in turn weighs on exports. On average, over the past three decades, a 1% increase in demand in advanced economies has resulted, within three years, in a 1.8% decline in exports of manufactured goods. However, the impact on value added depends on the degree of trade openness. In sectors with low exposure to international trade, domestic sales can offset declining exports, meaning that stronger demand boosts manufacturing value added. By contrast, in highly open sectors, the fall in exports outweighs gains in domestic sales, ultimately reducing value added.

The 2022 energy crisis, triggered by the conflict between Russia and Ukraine, has renewed focus on the importance of energy prices for industrial competitiveness. The Draghi Report 2024 highlights that, despite a decline in energy prices since their 2022 peak, European firms still face much higher energy costs than their American counterparts. In 2024, electricity prices in Europe remain two to three times higher, and natural gas prices four to five times higher, than in the United States. This situation puts European industries – particularly energy-intensive sectors – at a clear disadvantage, undermining their competitiveness on the world market. According to the report, this gap is expected to persist over time.

Demand-Side Policies: Between Cushioning and Amplifying the Effects of Energy Shocks

This divergence in energy prices between the United States and Europe is nothing new. In the wake of the "shale gas revolution" in the second half of the 2000s, US gas prices dropped by 70% between 2008 and 2012, contributing significantly to the 64% reduction in final energy prices observed for industrial users (Figure 1.a).

However, the United States made only limited use of this competitiveness lever. This is because another factor – the divergence in domestic demand dynamics – may have undermined US competitiveness. Between 2008 and 2019, domestic demand in the euro area grew by only around 10%, compared to 23% in the United States (Figure 1.b). Over the same period, cumulative (cyclically adjusted) primary budget deficits amounted to nearly 35% of GDP in the United States, versus a surplus of 2.2% of GDP in the euro area.

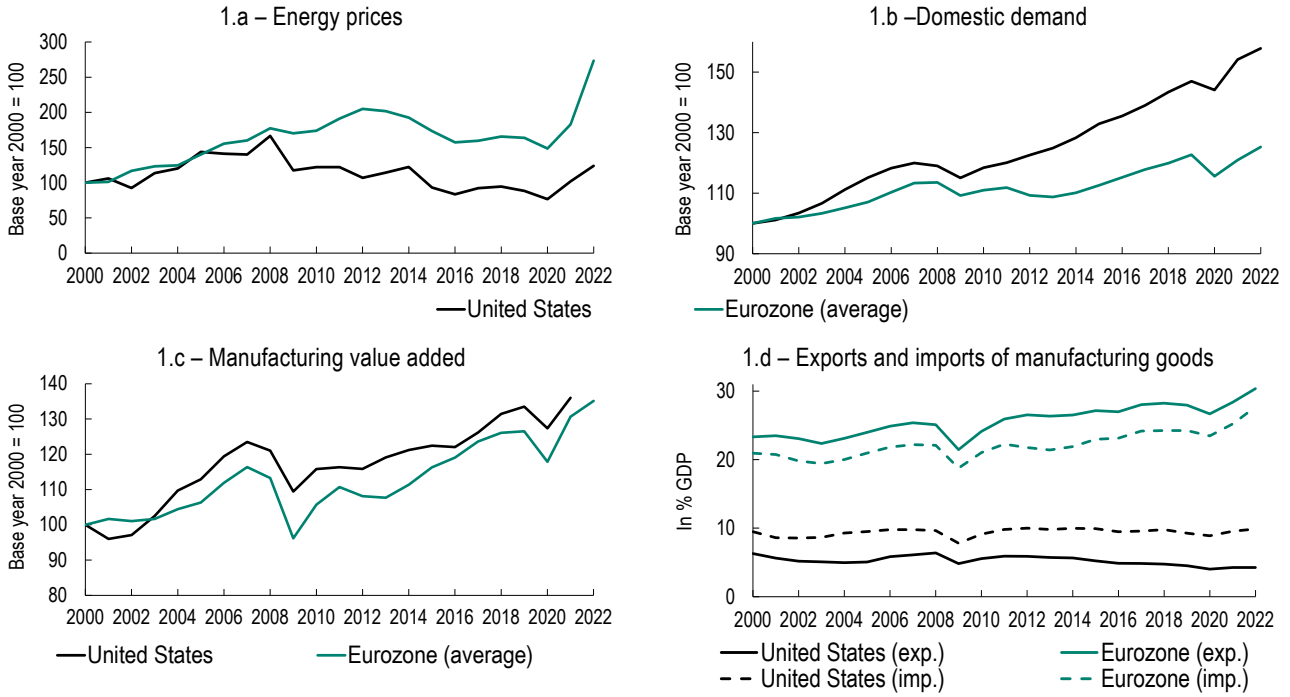
An expansionary fiscal stance in the US likely contributed to strong wage growth, stimulating domestic demand – the primary driver of manufacturing value added in the US. This could account for the faster growth in US manufacturing value added compared to the euro area, particularly during the subprime crisis (Figure 1.c).[1] Yet, by fueling wage and price increases, demand-side stimulus in the US has driven up relative prices, gradually undermining competitiveness.[2] This is reflected in a drop of over 2 points of GDP in US manufacturing exports since 2008 (Figure 1.d). In the euro area, however, wage moderation helped rebuild competitiveness – a cornerstone for its export-driven manufacturing

* Carl Grekou and Florian Morvillier are economists at CEPII. Thomas Grjebine is Head of the International Macroeconomics and Finance research program.

1. The more moderate increase in US manufacturing value added following the 2007-09 crisis may be explained by a saturation in demand for manufactured goods, which limited the growth of domestic sales. The decline in external demand resulting from European austerity may also have weighed on US exports, thereby dampening the increase in value added.

2. Ferrara *et al.* (2021) showed that, in the United States, a fiscal stimulus leads to an appreciation of the real exchange rate and a deterioration of the trade balance.

Figure 1 – Shale gas discovery: the beneficial effects on the competitiveness of American industry are limited by the strong simultaneous rise in demand



Sources: Authors' calculations based on data from International Energy Agency (IEA), World Bank and United Nations (UNIDO).

Reading note: Between 2000 and 2012, energy prices increased by 100% in the eurozone.

Note: The indices of domestic demand and value added are calculated based on data expressed in constant 2015 dollars.

sector, which since 2008 has seen exports rise by 5 points of GDP and become an increasingly important driver of its value added.

This structural difference in the external exposure of the manufacturing sector between the United States and the euro area highlights the potentially ambivalent nature of demand-stimulus policies. While the negative impact of rising energy prices on the industrial base may seem obvious, the effects of demand-side policies can be expected to vary depending on the degree of openness of the economies – or sectors – concerned. What does the evidence show?

Energy Shocks, Demand Shocks: What Impact(s) on Manufacturing Industries?

The effects of energy and demand shocks on key indicators in the manufacturing sector – exports, wages, value added, and domestic sales – are estimated using sector-level data covering 34 industrialized countries over a 45-year period (1978-2022).[3] Unlike in studies based on the price of a single energy source (such as gas or oil), an aggregated energy price index is used. This indicator stands out for its exhaustive nature – incorporating the prices of coal, electricity, gas and oil simultaneously – and for its tailored approach, as it reflects a weighted average of energy prices, where each energy source is weighted by its share in the energy mix specific to the industrial sector of each country. In addition, energy prices correspond to the final prices paid by industrial users, including taxes and subsidies.

Figure 2.a, which presents the dynamic responses to an increase in energy prices, highlights the detrimental effects on manufacturing activity.[4] The impact on manufacturing value added stems from both supply-side and demand-side channels. In addition to rising production costs that weaken both domestic and external competitiveness – an effect particularly pronounced in energy-intensive sectors – higher energy prices also represent a negative demand shock for consumers of manufactured goods, whether final consumers or intermediate users (such as industrial firms). Domestically, the sharp decline in sales clearly reflects these recessionary effects, which are further amplified by second-round effects such as falling wages – further depressing demand for manufacturing output. At the international level, the drop in exports underscores the lasting blow to competitiveness triggered by the energy shock.[5]

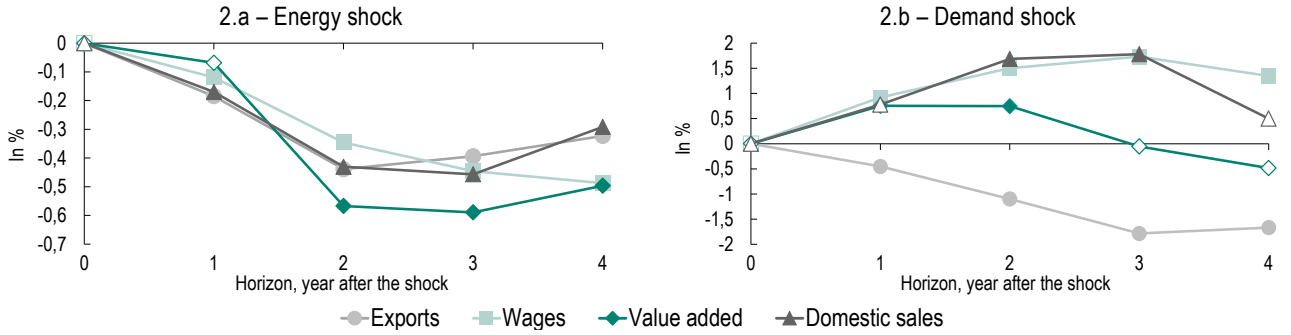
3. The sectors considered are: "chemicals and petrochemicals," "food and tobacco," "machinery," "minerals and metals," "extractive industries," "textiles and leather," "transport equipment," and "wood and paper."

4. The dynamic responses of the variables are obtained using local projection regressions (Jordà & Taylor, 2024). To mitigate potential endogeneity biases, the energy price index is based on fixed energy-mix weights corresponding to those of the year 2010. Moreover, in addition to lagging the general price index by one period, domestic sectoral variations in energy prices are instrumented using regional energy price variations, which affect baseline energy prices. Regional prices make it possible to purge national and sector-specific components such as activity levels, taxation, and transport and distribution cost differentials.

5. The effects estimated here can be compared to those found by Arezki *et al.* (2017), who showed that the drop in energy prices following the discovery of shale gas in the United States led to an average increase of 10% in US output and exports, and a 3.7% rise in employment. Using a shock of similar magnitude and our regression coefficients, we obtain more modest effects on output and exports (4% and 6% respectively), and a very similar effect on employment (4%). Economists at the European Central Bank (De Santis *et al.*, 2023), for their part, show that a 10% increase in energy prices in euro area countries leads to a 4.5% decline in industrial production (under low-inflation regimes), compared to 4% in our estimates.

Figure 2 – Competitiveness undermined by demand stimulus and rising energy prices

Cumulative responses to a 1% increase in energy prices and a 1% increase in domestic demand



Source: Grekou *et al.* (2025). Energy and Fiscal Shocks: Reassessing Industrial Competitiveness. *CEPII Working Paper,* forthcoming.

Reading note: Following a 1% energy price shock, manufacturing value added decreases by 0.58% over a two-year horizon (Figure 2.a). Three years after a 1% demand shock, exports decline by 1.8% (Figure 2.b).

Notes: Only solid markers indicate a statistically significant effect at the 10% level. Exports, wages, value added and domestic sales are adjusted for inflation.The regressions include country-sector fixed effects and control for the evolution of external demand (trade partners), the real effective exchange rate, and, depending on the shock studied, either domestic demand or energy prices.

While a rise in energy prices clearly harms manufacturing activity, what about demand-stimulus policies?

Unsurprisingly, an increase in domestic demand boosts manufacturing activity:[6] domestic sales rise, wages increase, and manufacturing value added grows on average by 0.75% over the first two years following a 1% increase in demand (Figure 2.b).[7] However, after three years, exports decline by 1.8%, as wage growth leads to higher relative prices, thereby weakening export competitiveness. The fall in exports may also reflect a reallocation of manufactured goods originally intended for foreign markets toward the now more profitable domestic market.[8]

These opposing responses of domestic sales and exports highlight the ambivalent effects of stimulus policies on manufacturing value added and shed light on the role played by trade openness – whether at the sectoral level or more broadly across the economy. Indeed, the overall impact on value added depends on the relative weight of external demand. In "closed" sectors (or economies), fiscal demand-support policies stimulate manufacturing value added and output, as the increase in domestic sales outweighs the decline in exports. Conversely, in "open" sectors (or economies), demand stimulus has a negative impact on manufacturing value added and output, since the rise in domestic sales is insufficient to offset the loss in exports. This dichotomy is illustrated in Figure 3: in closed sectors, wage growth is sustained, with a multiplier effect on domestic sales (1.6% on average over two years) and especially on value added (1.9% after one year), thereby mitigating the export decline.[9] In open sectors, by contrast, although there are temporary gains in domestic sales and wages, a sharp and almost immediate fall in exports leads to a decline in value added in the short to medium term.

What Options for Europe in the Years Ahead?

Energy prices are likely to remain structurally divergent on both sides of the Atlantic. In this context, what options are available to Europe to limit the consequences – particularly on its industrial competitiveness?

Undoubtedly, a first component of Europe's response would be to reduce the energy bill paid by industrial firms, as proposed by the European Commission's Clean Industrial Deal and Affordable Energy Action Plan. This includes a €500 million scheme to guarantee long-term renewable energy purchase contracts for small and medium-sized enterprises (SMEs). However, the expected impact of these measures on narrowing the energy price gap across the Atlantic is likely to remain limited (Wolf, 2025).

The orientation of macroeconomic policies represents another possible lever. European countries, taken individually, rank among the most open to international trade, making them highly sensitive to external constraints. In a context of sluggish growth, these economies may be tempted to stimulate demand to revive activity. However, such a stimulus would risk having a negative impact on manufacturing value added, as the positive effect on domestic sales may not be sufficient to offset the negative effect on exports – especially given the likely increase in imports.[10] This stands in sharp contrast with economies

6. Aggregate demand variations are instrumented using changes in property taxation, a tax generally considered non-distortionary – that is, with no impact on supply (excluding construction) – and whose effects can therefore be interpreted as demand-driven. For further details, see Geerolf and Grjebine (2018).

7. Defined here as the share of manufacturing output that is not exported.

8. Conversely, an austerity policy may lead to an increase in exports through a "vent for surplus" mechanism, whereby firms compensate for declining domestic sales by actively seeking external markets (see Almunia *et al.*, 2021).

9. Following a demand stimulus, imports increase during the first year in "closed sectors," whereas they decrease from the second year onward in "open sectors," likely due to the decline in exports and the reduced need for manufacturinginputs.

10. Note that this refers to the general orientation of macroeconomic policy (compression or stimulation of aggregate demand), which is not incompatible with "targeted measures" – for example, to reduce energy costs for industrial firms or to support certain sectors. In the case of a policy aimed at compressing demand, such targeted measures should be offset by others, particularly affecting consumption, such as an increase in VAT.

Figure 3 – Sectoral trade openness determines the effect of a stimulus policy on value added

Cumulative responses to a 1% increase in domestic demand

Source: Grekou *et al.* (2025). Energy and Fiscal Shocks: Reassessing Industrial Competitiveness. *CEPII Working Paper,* forthcoming.

Reading note: One year after a 1% demand stimulus, value added in closed sectors increases by 1.9%. In open sectors, at a four-year horizon, the demand stimulus leads to a 2.3% decrease in value added..

Notes: The "closed sectors" ("open sectors") correspond to the third (first) tercile of the ratio of domestic sales to manufacturing production. Only solid markers represent a statistically significant effect at the 10% level.

such as the United States or Japan, where manufacturing sectors are relatively shielded from international competition. In these cases, demand-stimulus policies are more likely to have a positive impact on manufacturing value added.

Does this mean that European countries are condemned to austerity? Not necessarily, as two strategies could help mitigate the negative effects of demand stimulation on industrial competitiveness.

The first would involve introducing protective measures that act as import taxes and subsidize domestic production. While individual EU member states cannot impose tariffs at the national level, several instruments can serve as partial substitutes. One example is the use of environmental content requirements, which favor lower-carbon production located within Europe – such as the French bonus scheme for the purchase of electric vehicles.

The alternative strategy would be to deepen the European single market, with the aim of transforming the euro area's small open economies into a large, more closed economy – similar to the United States as suggested by Mario Draghi (2025): "The European economy is highly open to trade – more than twice as much as the U.S. economy – which reflects the high level of internal barriers. Since expansion within our domestic market is effectively capped, EU firms have sought growth opportunities abroad."

Expanding the internal market, without further coordination of fiscal policies, would not prevent the continuation of divergent macroeconomic strategies, raising the risk of intensifying social and tax competition between European countries. This situation echoes the early 2000s, a period marked by intra-European imbalances and an accelerated deindustrialization of the French economy (Grekou and Grjebine, 2022). That said, current threats to European security could help reduce these imbalances. A large-scale stimulus in Germany, with the announcement of hundreds of billions of euros in defense and infrastructure investments, could initiate a rebalancing of demand within the euro area. Such a shift would help ease the pressure on France, after almost 25 years of external deficits, and provide fresh momentum for its export-oriented industries, which would benefit from this additional demand.

La Lettre du CEPII

Centre d'études prospectives
et d'informations internationales
20, avenue de Ségur
TSA 10726
75334 Paris Cedex 07

contact@cepii.fr
www.cepii.fr – @CEPII_Paris
Press contact: presse@cepii.fr

CEPII (Centre d'Études Prospectives et d'Informations Internationales) is a French institute dedicated to producing independent, policy-oriented economic research helpful to understand the international economic environment and challenges in the areas of trade policy, competitiveness, macroeconomics, international finance and growth.

Editors in Chief:
Isabelle Bensidoun
Antoine Vatan

Editorial Director:
Antoine Bouët

Head of publications:
Isabelle Bensidoun

Visual design and production:
Laure Boivin

ISSN 2493-3813

September 2025

To subscribe to
The CEPII Newsletter
www.cepii.fr/KeepInformed

This *Lettre* is published under the responsibility of the cepii management. The opinions expressed in it are those of the of the authors.

RESEARCH AND EXPERTISE ON THE WORLD ECONOMY