Why has industrial production held up in France and Spain for the past two years, while declining in Italy and Germany?

Since the beginning of 2023, the manufacturing industry production index has declined sharply in Germany and Italy, with its average in 2024 standing at 5.4 and 4.7 points respectively below its 2021 average. Conversely, production increased by 2.4% in France and 1.8% in Spain over the same period. There are several factors to account for this sharp divergence. First, longer-term dynamics show that the decline in German industry began before the health crisis and appears to be more structural than in Italy. Over the recent period, however, the sectoral composition of French and Spanish production has differed significantly from that of Germany and Italy, which are heavily positioned in products linked to the investment cycle, especially the manufacture of machinery and equipment. Finally, within certain sectors (pharmaceuticals, textiles, etc.), France and Spain have outperformed their neighbours, Spain more often than France.

Germany and Italy have been penalised both by weaker performances in their respective sectors, but also by the sectoral composition of their industries. In addition to the cyclical effects linked to rising energy prices, the German economy is suffering from weak demand for its goods, particularly in the automotive industry, due to growing competition from Chinese industry. The pessimism shown in the business survey results suggests that this decline could continue in the coming quarters. Thus the deindustrialisation process affecting Germany twenty years behind its neighbours is expected to continue in the short term: industrialists here remain much more pessimistic than in other European countries.

Enzo Iasoni et Alexandre Simcic

For two years, manufacturing production has been declining in Germany and Italy, but is holding up in Spain and France

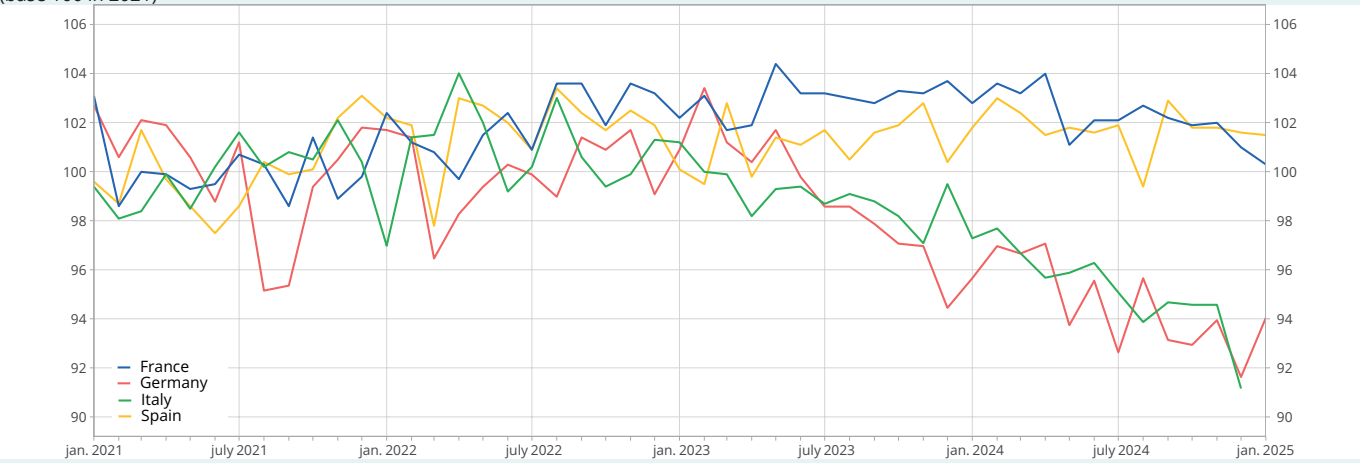
From 2021 to early 2023, manufacturing production evolved at a relatively similar pace in all four of the main Eurozone countries, in a context of continuing post-health crisis recovery. However, for the past two years it has stalled in Italy and Germany, while remaining more or less stable in Spain and France, despite the sharp rise in energy costs: ultimately, on average in 2024 compared to 2021, it fell by 5.4% in Germany and 4.7% in Italy, while over the same period it increased by 2.4% in France and 1.8% in Spain (►**Figure 1**).

Several explanations can be put forward to account for this difference: first of all, over the recent period, the sectoral composition of French and Spanish production differs considerably from that of Germany and Italy, which are very much positioned in the manufacture of machinery and equipment. Within some sectors, France and Spain have outperformed their neighbours. Finally, longer-term dynamics show that the decline in German industry began before the health crisis and it appears to be more structural than in Italy.

The decline in German industry began in 2018 while France largely deindustrialised from the 2000s

During the 2000s, the contribution of industry fell sharply in the main European countries, except in Germany: between 2000 and 2010, the share of industrial value added in total value added dropped from 20% to 16% in

►1. Industrial production index in the manufacturing industry
(base 100 in 2021)



Last point: January 2025 for France, Germany and Spain, December 2024 for Italy.
How to read it: in France, in January 2025, the industrial production index in the manufacturing industry was 0.3 points above its 2021 average.
Source: INSEE, Destatis, Istat, INE, INSEE calculations.

Italy, from 18% to 12% in Spain and from 16% to 11% in France (►Figure 2). Conversely, Germany managed to preserve a significant share of industry in its economy over the same period: apart from a short-lived drop during the financial crisis, the share of manufacturing in GDP remained between 22% and 23% over the period, with no marked decline.[1] The share of industry in the GDP of these different countries then remained relatively stable between 2010 and 2018, except in Italy, where the industrial machine regained some ground, although without returning to its pre-financial crisis level: the share of industry in the Italian GDP stood at almost 17% at the end of 2018.

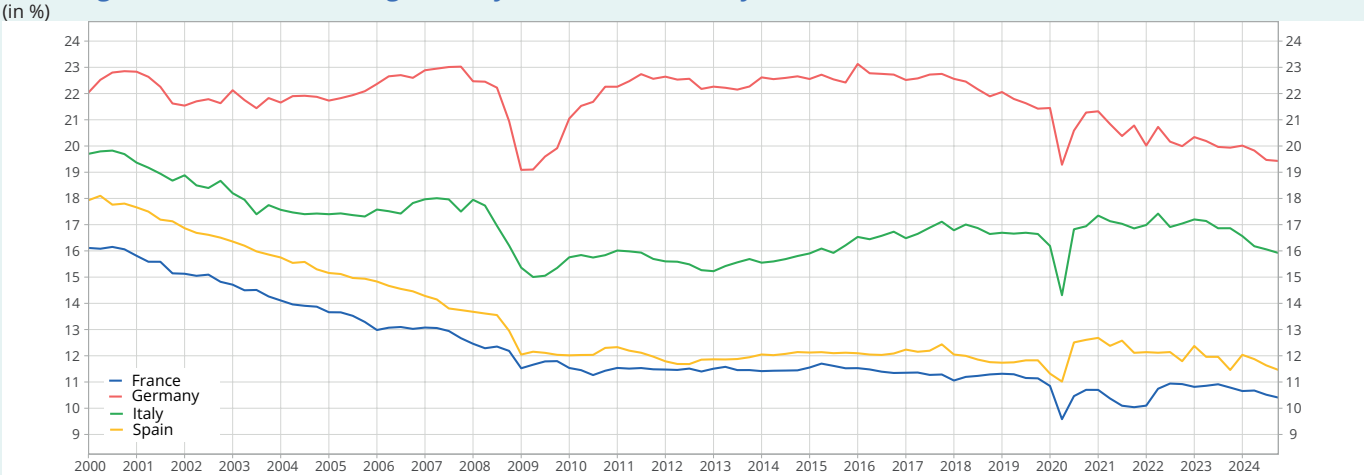
Since 2018, however, the share of industry in economic activity has fallen back in Germany: it was below 20% in Q4 2024, down about 2.7 points compared to its average over the period 2000-2018. In the other three main European economies, at the beginning of 2024 this share was at a similar level to that of 2018.

Finally, by rebasing the industrial production indices by volume in 2018 (►Figure 3), the German decline since 2018 is clear-cut and specific: industrial production fell by 13.3% on average in 2024 compared to its 2018 average, while the decline was less in Italy (-6.4%) and limited in France (-4%). In Spain, industrial production remained at the same level as six years earlier. The decline in Italian production is therefore very recent and in all probability linked to high exposure to European cyclical jolts, whereas in Germany there is in addition a more structural trend.

1 However, these differences between countries must be put into perspective against the national legal and statistical contexts on which the construction of these measurements is based, and which notably could account for up to half of the France-Germany gap (►INSEE 2024 [1]).

►2. Weight of the manufacturing industry in economic activity

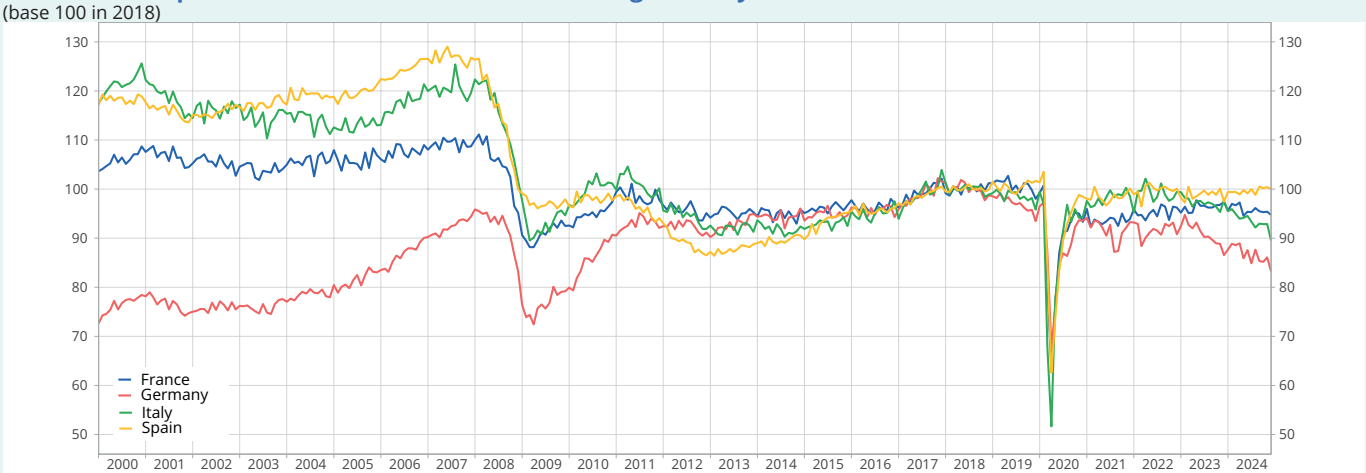
(in %)



Last point: Q4 2024.
How to read it: in France, in Q4 2024, gross value added in the manufacturing industry represented 10.4% of total gross value added.
Source: INSEE, Destatis, Istat, INE, INSEE calculations.

►3. Industrial production index in the manufacturing industry

(base 100 in 2018)



Last point: January 2025 for France, Germany and Spain, Q4 2024 for Italy.
How to read it: in France, in January 2025, the industrial production index in the manufacturing industry was 6 points below its 2018 average.
Source: INSEE, Destatis, Istat, INE, INSEE calculations.

Germany and Italy are strongly positioned in machinery and equipment, and are very sensitive to the investment cycle

The European economies do not all have the same industrial specialisations. Compared to its neighbours, Germany specialises more in the automotive sector, the manufacture of machinery and equipment, and electrical equipment. Italy specialises in textiles and the manufacture of machinery and equipment, a sector traditionally very sensitive to the investment cycle, whereas France specialises in "other transport equipment" (mainly aeronautics) and agrifood, and Spain in agrifood and to a lesser extent automobiles (►**Figure 4**). Energy-intensive industries represent about a third of industry in France, Germany and Italy, and slightly more in Spain.

The decline in production in the energy-intensive industries was greater in Germany and Italy, mainly due to exposure to Russian hydrocarbons

The shock of rising energy costs has hit all European countries. In the case of energy-intensive industries, which are of similar weight in industry in the four main countries, the deterioration in cost-competitiveness in the Eurozone as a whole, which resulted from the inflationary shock, partly accounts for the loss of export performances by European industries (►**INSEE 2024 [2]**). Thus, the industrial production index in the energy-intensive industries was on average in 2024 almost 15 points below its 2021 average in Germany, almost 12 points below in Italy and almost 7 points below in France, but only 5 points below in Spain (►**Figure 5a**). This particularly pronounced decline in Germany has to be set against the stronger rise in production prices in this industrial sector (►**Figure 6**). With the upswing in industrial activity coming out of the health crisis combined with supply chain problems, production prices in industries requiring a great deal of energy increased in approximately the same way in all four Eurozone countries until the beginning of 2022. However, although these prices began to decline from the end of 2022, their decline was less marked in Germany. This more pronounced increase could result from the country's greater exposure to hydrocarbons coming from Russia, and more dynamic wages. Thus, energy-intensive industries alone can explain a significant share of the decline in overall manufacturing production between 2021 and 2024 in Germany and Italy, amounting to almost 5 points in total, compared to 2.4 points in France and 2.1 in Spain (►**Figure 7**).

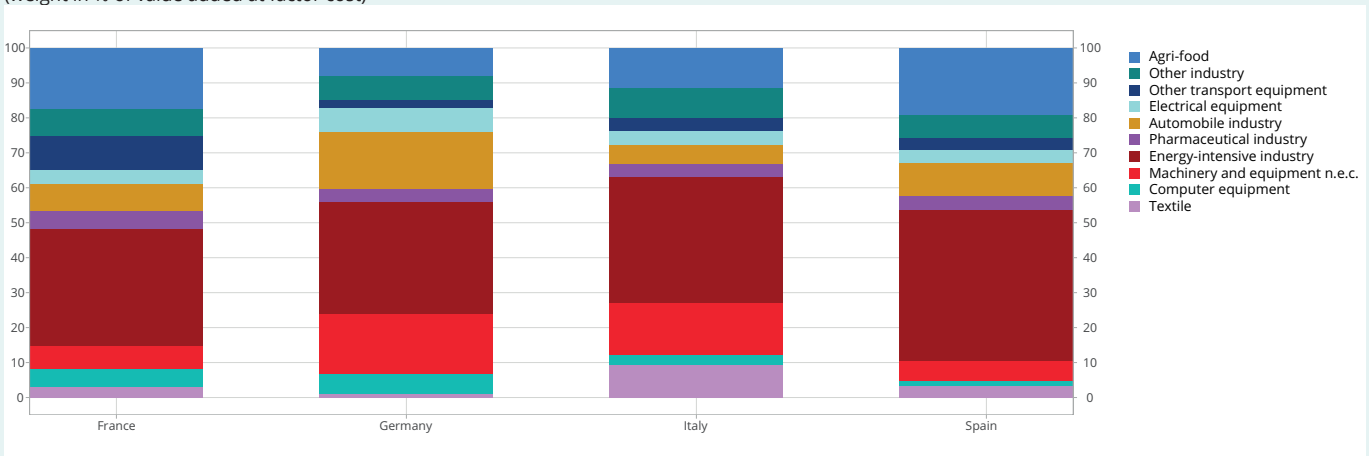
The downturn in the manufacture of machinery and equipment was fairly similar in Germany and France and weaker in Italy and Spain

The significant rise in interest rates caused a reversal in corporate investment from 2023 in the Eurozone, with market shares eroding, particularly in favour of China. The manufacture of machinery and equipment was thus in sharp decline in 2024 compared to 2021 in Germany (-8%) and France (-7%). Conversely, production in this sector remained more or less the same in Spain and Italy, even though the apparent stability in Italy masked a strong increase in 2022 followed by a decline approximately equivalent to that seen in France and Germany over the previous two years. (►**Figure 5b**).

Strong momentum in electrical and computer industries in Spain

As countries came out of the health crisis, the manufacture of computer, electronic and optical products in all four countries resumed its previous trend until the end of 2023

►4. Weight of industrial sectors in the manufacturing industry in 2019
(weight in % of value added at factor cost)



Note: energy-intensive industry includes industrial sectors that produce goods whose manufacturing is particularly intensive in energy consumption relative to their value added (mainly the wood and paper industry, chemicals, metallurgy and non-metallic materials, with refining conventionally added).
How to read it: in France, in 2019, the automotive industry represented 8% of industrial production measured in value added at factor cost.
Source: INSEE, Destatis, Istat, INE, INSEE calculations.

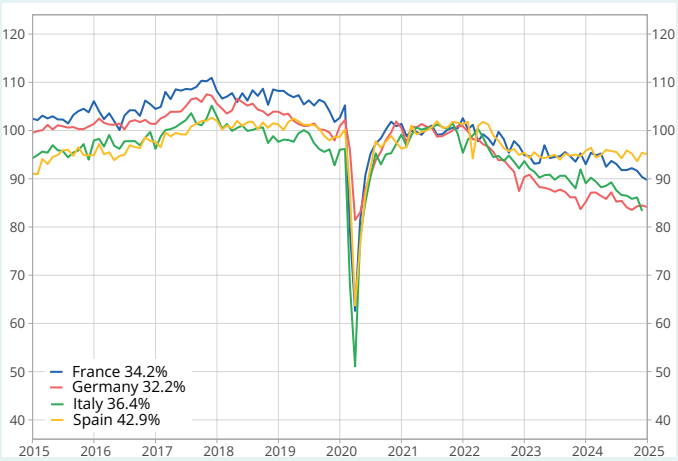
(►Figure 5c). Since then, the buoyancy of this sector has been different from one country to another: production remained relatively stable in France, edged down slightly in Italy and Germany, but surged in Spain. On average in 2024, the production of computer, electronic and optical products was 29 points above its 2021 average in Spain, compared to 14 points in France, 6 in Italy and 3 in Germany.

The production of electrical equipment is also particularly favourable to Spanish industry, and is relatively stable in France and Italy (►Figure 5d). However, it has been falling sharply in Germany since mid-2023, and in 2024 was on average 13 points below its 2021 average, compared to 2 points below in Italy, 2 points above in France and 6 points above in Spain.

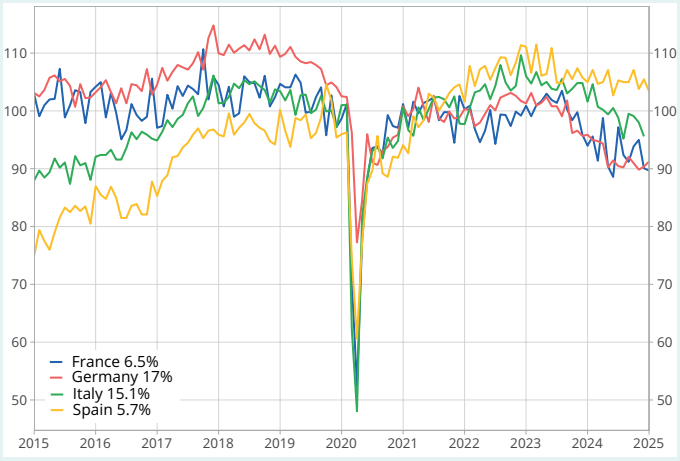
►5.Industrial production index...

(index base 100 in 2021 and average weight in 2018 of the sector in manufacturing production in % of value added at factor cost)

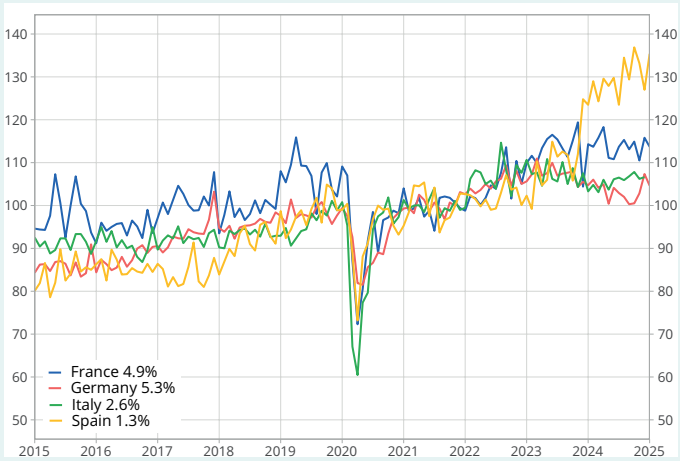
5a. ...in energy-intensive industries



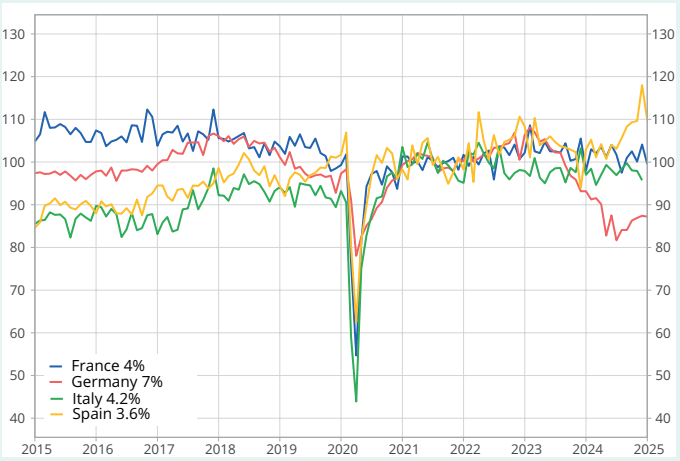
5b. ...in the manufacture of other machinery and equipment



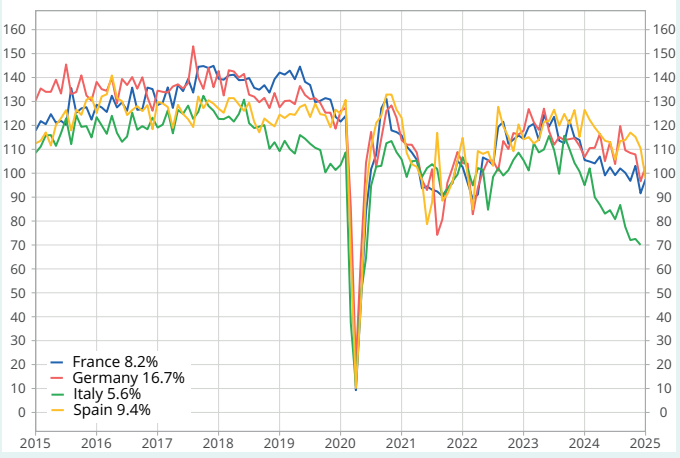
5c. ...in the manufacture of computer, electronic and optical products



5d. ...in the manufacture of electrical equipment



5e. ...in the automotive industry



Last point: January 2025 for France, Germany and Spain, December 2024 for Italy.
How to read it: in France, in Januarty 2025, the industrial production index in the automotive industry was 2.5 points below its 2021 average.
Source: INSEE, Destatis, Istat, INE, INSEE calculations.

Automobile manufacture is declining in Italy

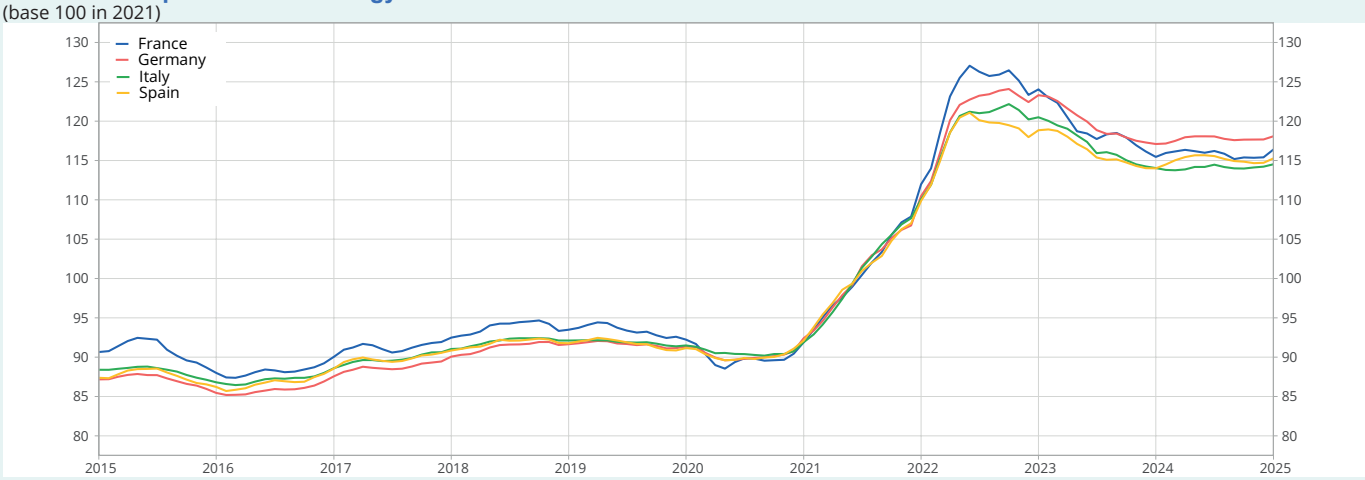
In the automotive sector, Europe has also lost market share since the health crisis due to the surge in the electric car market and increased competition, especially from China (►Insee 2024 [2], ►Focus on imports of electric vehicles). In addition, the sluggishness of the European market against the backdrop of the sector's ecological transition is hampering consumption and hence production: thus the production index in the automobile industry in 2024 was on average 9 points above its 2021 average in Germany, only 1 point above in France, and almost 17 points below in Italy (►Figure 5e). In Spain, however, the index rose by 16 points over the period, mainly due to a particularly pronounced decline between the pre-health crisis period and 2021 (-20 points on average in 2021 compared to the average in 2018); thus the automotive sector has boosted Spanish manufacturing production since 2021.

Compared to France, Germany and Italy were penalised both by the sectoral composition of their industry and by lower performance in most sectors

Thus, compared to France, Italy and Germany suffered on the one hand from their sectoral specialisation, with the sectors that are particularly sensitive to the investment cycle occupying a more important place in the industry of these two countries than in France. On the other hand, these two countries suffered from performances that

►6. Producer price index in energy-intensive industries

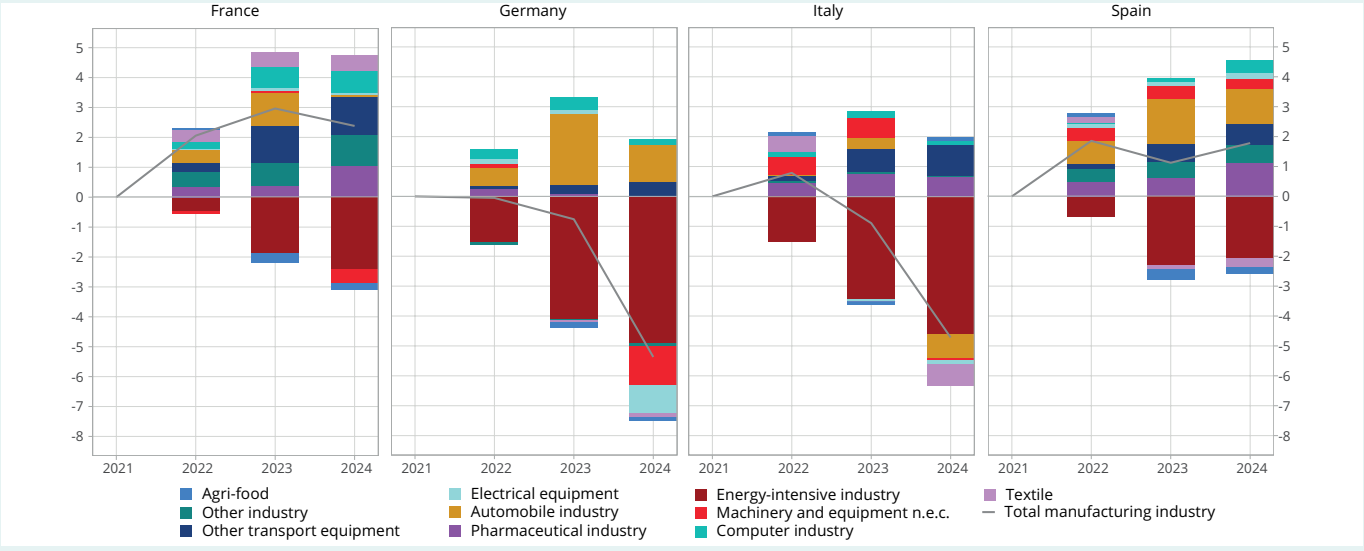
(base 100 in 2021)



Last point: January 2025.
How to read it: in January, the industrial producer price index in energy-intensive industries was 18.1% above its 2021 average in Germany.
Source: INSEE, Destatis, Istat, INE, INSEE calculations.

►7. Sectoral breakdown of change in the industrial production index in the four main European economies

(difference in industrial production index compared to 2021 in %, and cumulated contributions by the sectors to change in the index in points)



Last point: 2024.
Note: in this study, sectoral contributions were obtained with constant sector weights in the countries' total manufacturing industry (share of value added at factor cost, average in 2019), whereas the industrial production index is a chained index, whose weightings change every year. As a result, the sum of the sectoral contributions represented in the figure is slightly different from the overall change in industrial production: this difference is small, however, and does not compromise the analysis presented here.
How to read it: on average in 2024, the industrial production index in the manufacturing industry was 5.4 points lower than its 2021 average in Germany. Energy-intensive industries contributed -4.9 points.
Source: INSEE, Destatis, Istat, INE, INSEE calculations.

were worse in all sectors, on average, compared to those of industry in France. An analytical breakdown of the difference in the dynamism of industrial production in our neighbours compared to that of France highlights these different factors.

Firstly, the contribution of the dynamics of an industrial sector to the difference in the evolution of total production between 2021 and 2024 (►**Figure 8**) is estimated by representing, at a given weight in the industry, the effect of a differential in the sector's growth on industry as a whole. We thus compare the contribution of sectors in the different countries to that observed in France at fixed weights. By convention, this performance effect of the sectors is measured by taking the weights they had in French industry in 2019 as a common reference for all countries. Secondly, the contribution of the structural effect between France and the other countries is deduced from the balance, once the dynamism effect has been deducted from the difference in total industrial performance.

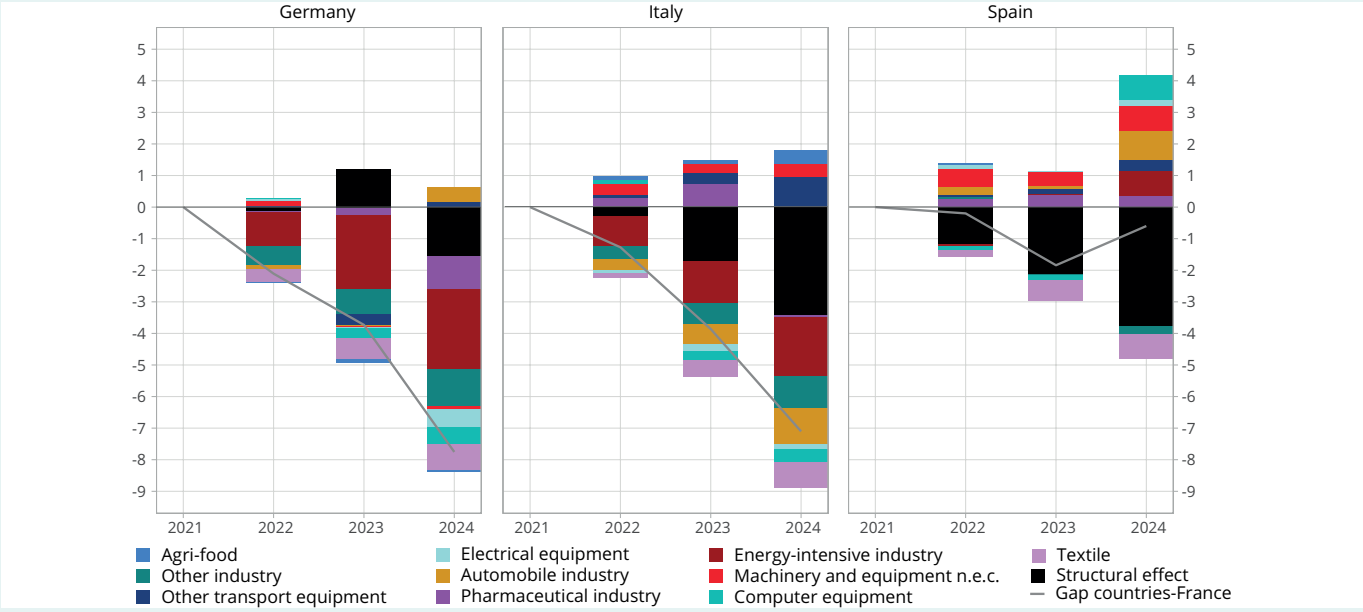
In Germany, industrial production fell by 5.4% between 2021 and 2024 compared to an increase of +2.4% in France over the same period. In this gap of approximately 8 points, the structural effect accounts for about 1.5 points: although the decline in the manufacture of machinery and equipment is broadly equivalent in France and Germany, the weight of this sector is nearly three times greater in German production. Excluding the structural effect, a few sectors account for the resilience of French industry compared to German industry: energy-intensive industries account for 2.7 points of difference, and pharmaceuticals, textiles and the manufacture of electrical and computer products about one point each. The other sectors contribute to the difference in dynamism to a much lesser extent.

In Italy, industrial production fell back by 4.7% between 2021 and 2024, a gap of about 7 points compared to the dynamics of French industry over the same period. The structural effect accounts for about half of the gap, notably because the "other transport equipment" sector, which was fairly dynamic over the period, has half the weight in Italy. As with Germany, the difference in growth is largely linked to that of the energy-intensive sectors, counting for around 2 points, and to the dynamism of French textiles, for 1 point. However, the automotive industry in Italy fell back sharply over the period, contributing more than one point to the gap with France. Conversely, the manufacturing of "other transport equipment", which was more dynamic in Italy, helps moderate the divergence between Italian and French industrial production, by 1 point.

Meanwhile in Spain, the situation is unique. Sector by sector, since 2021 Spanish industrialists have generally performed better than their French competitors. Nevertheless, Spanish industry as a whole has been heavily penalised compared to French industry due to the effects of sectoral composition (the weight of energy-intensive industries is greater in Spain and that of "other transport equipment" is less). Thus, industrial production grew less quickly in Spain than in France over the period, by a difference of around one point.

►8. Breakdown of factors accounting for the difference in change in the IPI between the major European economies and France

(change in % and contributions cumulated in points; difference compared to France)



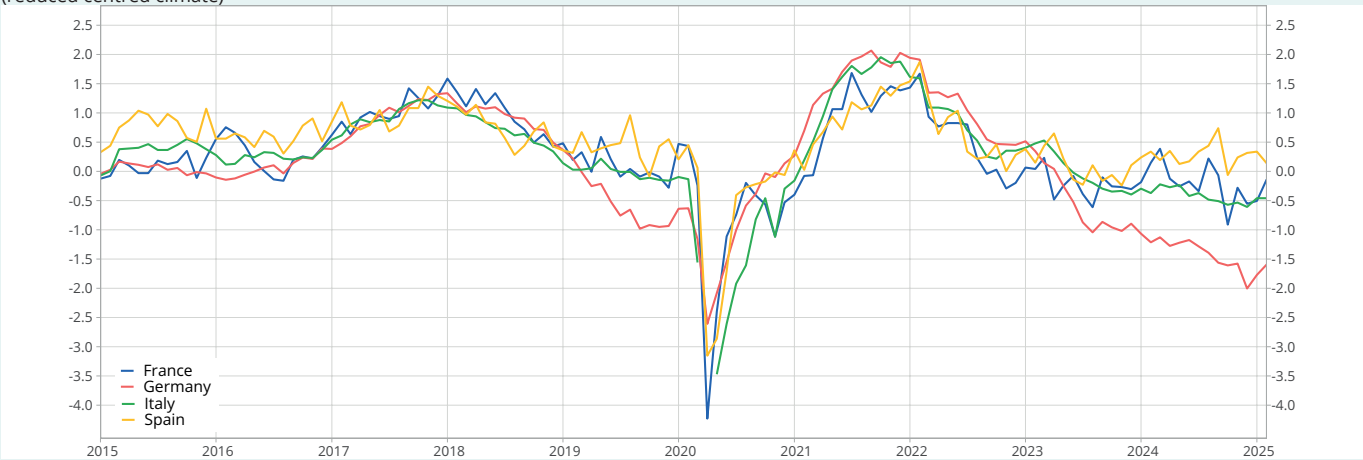
Last point: 2024.
Note: the structural effect in each country is obtained from the balance between the country-France difference on the one hand and the sum of the contributions of sectoral dynamics to this difference.
How to read it: on average in 2024, compared to 2021, the structural effect in the difference in production in the manufacturing industry in France and Germany was -1.4 points. However, the difference in dynamism in the automotive sector in Germany contributed 0.4 points more to the total production index compared to France.
Source: INSEE, Destatis, Istat, INE, INSEE calculations.

The decline in German industry is expected to continue throughout the forecasting period

The decline in German industry began in 2018. In addition to cyclical effects linked to the increase in energy prices, the German economy suffers from weak demand for its goods, especially in the automobile industry, due to growing competition from Chinese industry. The structural dimension of this decline and the disappointing results in the business tendency surveys (►**Figure 9**) suggest that this further downturn is likely to continue into the coming quarters. In addition, German industry is significantly more exposed to US tariff measures (►**Sheet Eurozone**).

While the German economy has slowed substantially in recent years, this has also affected the other European economies, because the industries of the Member States are all highly interconnected (►**Italy bank 2025 [3]**). Thus, in all likelihood, the slowdown in the German manufacturing industry will continue to hold back the entire Eurozone in the coming quarters. ●

►9. Manufacturing industry in Germany: the business climate is scarcely encouraging for future production
(reduced centred climate)



Last point: February 2025.
How to read it: in Spain, in February 2025, the business climate in the manufacturing industry was 0.1 standard deviations above its long-term average (average over the period January 2005 to February 2025).
Source: DGECFIN surveys, INSEE calculations.

Bibliography

[1] Larrieu S. (2024), "Quel est vraiment le poids de l'industrie en France et en Allemagne?", blog Insee 2024.

[2] Iasoni E., Roulleau G., Zaidan S. (2024), "About a quarter of the losses of market share in the Eurozone since the health crisis stem from the energy price shock, but do not appear to be due to energy-intensive products alone", *Economic outlook*, INSEE, July 2024.

[3] Banque d'Italie (2025) "The recent weakness of manufacturing in Germany and its impact on the rest of the euro area", *Economic Bulletin*, Issue 1, Bollettino Economico n. 1 - 2025. ●