

In Germany, consumer confidence and industrial confidence go hand-in-hand

In Germany, the outlook of households and that of businesses in the industrial sector are more strongly correlated than in neighbouring European countries. This correlation has persisted over the recent period, with industrial difficulties mirrored by a downturn in the morale of German households. The strength of this connection between consumer confidence and the business climate in the industrial sector no doubt reflects the substantial contribution of this sector to total value added and employment in Germany. With industry enduring a tough spell, this strong link could put the whole German economy at risk if the turbulence is passed on to consumption, which is currently the principal driver of German growth.

In spite of high wages and fiscal measures conducive to household consumption, the German household confidence survey suggests that consumer confidence has been in steady decline since 2018, after peaking at one of the highest levels seen since 2010. German households seem more concerned than their European neighbours by the growing economic uncertainty. Indeed their confidence levels appear to be more strongly correlated with the confidence indicator for industry than they are in other countries. The recent woes of German industry, caused by a downturn in domestic and international orders, as well as the difficulties witnessed in the automotive and chemical industries, could thus be undermining household morale (*Graph 1*).

In Germany this correlation is strong and stable over the long term

Between January 1991 and November 2019, the average correlation coefficient between the indicators of consumer confidence and industrial confidence in Germany was 0.76. Calculated for the same period, the correlation is weaker in Germany's neighbours (0.71 in Spain, 0.52 in France and 0.45 in Italy). Nevertheless, the correlation between household confidence and industrial confidence has varied

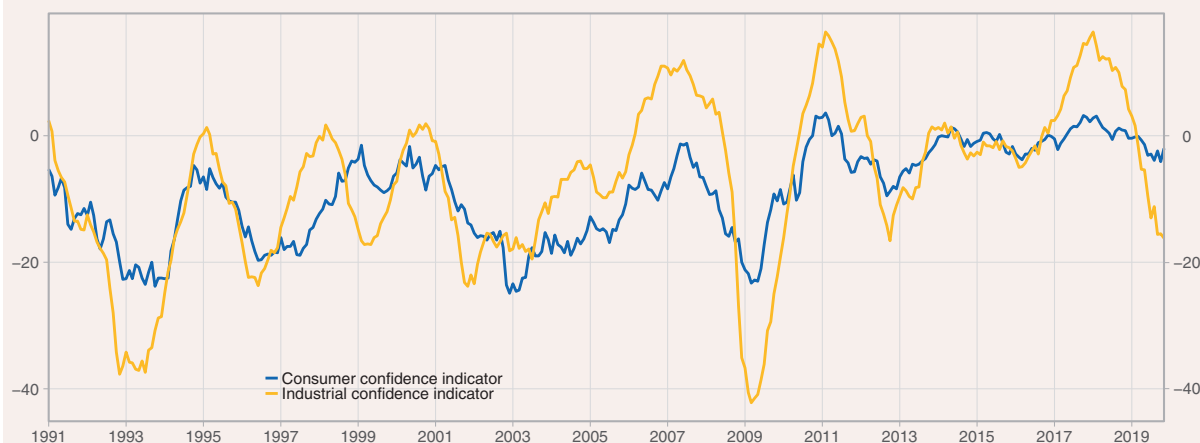
over time. *Graph 2* represents the correlation values for successive five-year periods. In Germany, the correlation between the series for household confidence and industrial confidence has always been strong and has not dipped below 0.7 since 2006. In France, Spain and Italy, on the other hand, the connection between the two series deteriorated considerably following the economic crisis (particularly between 2009 and 2014). After rising for a time, that correlation has declined in recent years. In Germany, however, the correlation has remained higher than 0.8 in recent years.

However, not all components of household confidence¹ are correlated with industrial confidence in the same manner (*Graph 3*). The correlation is stronger when it comes to households' opinions on the general economic situation and the likelihood of making major purchases in the immediate future. German households thus appear to have a coherent view of the economic circumstances, and their confidence is impacted by the troubles affecting the industrial sector. Nevertheless, the industrial confidence indicator is less strongly correlated with future saving plans. The exposure of German industry to trade wars may thus not necessarily prompt

1. The household confidence indicator is constructed as the mean value of the balances of opinion from the questions pertaining to household finances over the past 12 months and for the coming 12 months, the general economic outlook for the coming 12 months and the major purchases households expect to make in the coming 12 months (in bold in *Graph 3*).

1 – Consumer confidence and industrial confidence in Germany

Balances of opinion in points



Note: the correlation coefficient between these two series for the period January 1991 to November 2019 is 0.76.

Source: DG ECFIN

German households to increase their precautionary savings.

In neighbouring countries, the degree of correlation between the different components of the consumer confidence survey and those of the industrial confidence indicator is most of the time lower than it is in Germany. A weakened industrial outlook therefore has less of an impact on the consumption behaviour and financial expectations of French, Spanish and Italian households. Similarly, households in these three countries appear to be less sensitive than German households to the general economic outlook, past and future.

At the same time, studying the correlation between consumer confidence and the different components

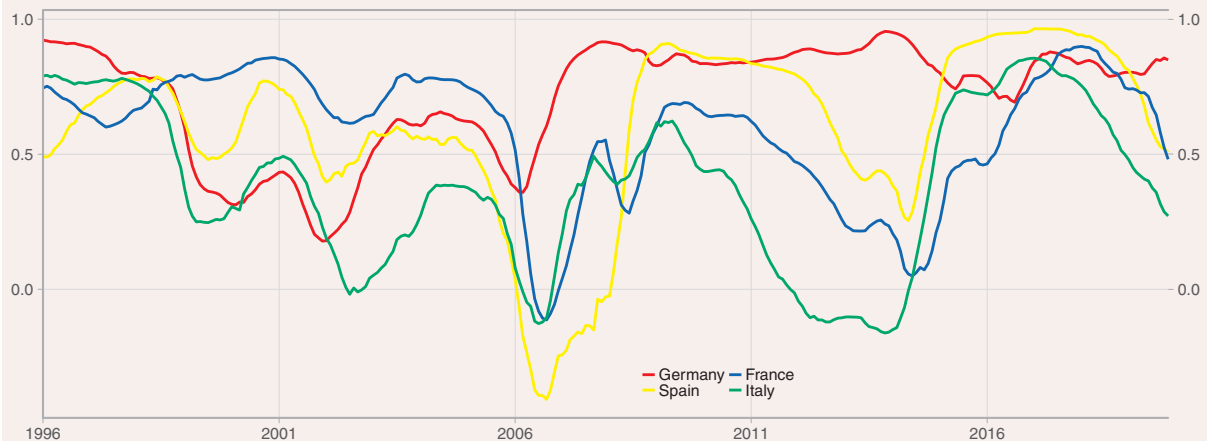
of the industrial confidence index cannot establish links different in nature between industrial balances of opinion. The different aggregates used to construct the industrial confidence indicator (order books, inventory of finished products and predicted variation in output for the next three months) are more closely linked to one another than the components of consumer confidence. The correlation with consumer confidence is therefore largely the same for all of the components of industrial confidence.

A correlation driven by the relative weight of the industrial sector

The strong correlation between the outlook of German households and the business climate in the industrial sector is no doubt linked to the important

2 – Variation in the correlation of the consumer confidence and industrial confidence data series for Germany, France, Spain and Italy

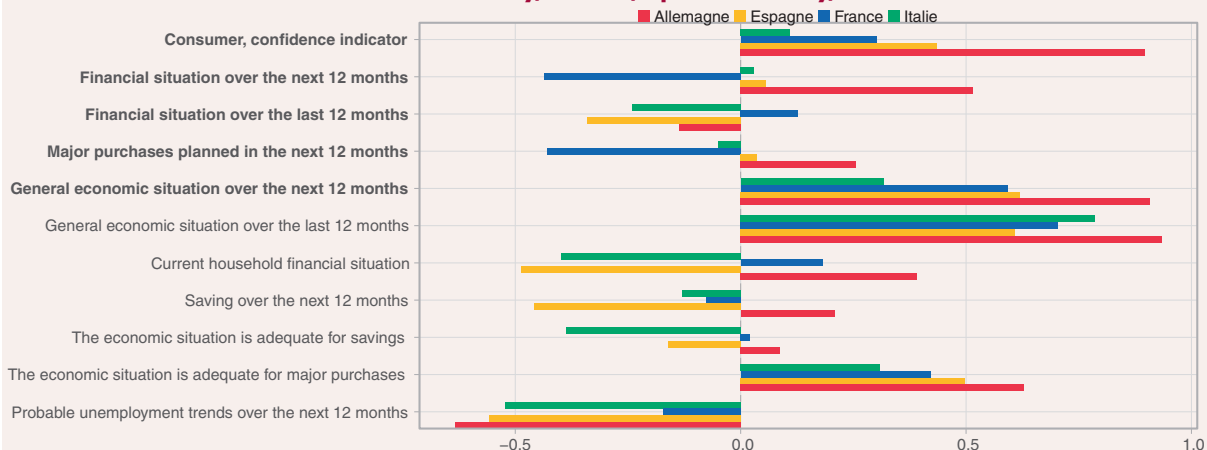
correlation coefficient over five rolling years



How to read it: each point on the x axis marked with a date «» represents the correlation between the two series between the date t and t - 5 years. For example, between January 1991 and January 1996, the correlation calculated in level terms between the consumer confidence and industrial confidence indicators in Germany was 0.92.

Source : DG ECFIN, INSEE calculations

3 – Correlation between industrial confidence and the different components of the consumer confidence index in Germany, France, Spain and Italy, since 2015



How to read it: in Germany between January 2017 and November 2019, the correlation coefficient calculated in level terms between the industrial confidence indicator and the household indicator for the general economic outlook over the coming 12 months was 0.91. The highlighted components are those used to calculate the confidence indicator published by DG ECFIN.

Source: DG ECFIN, INSEE calculations

International developments

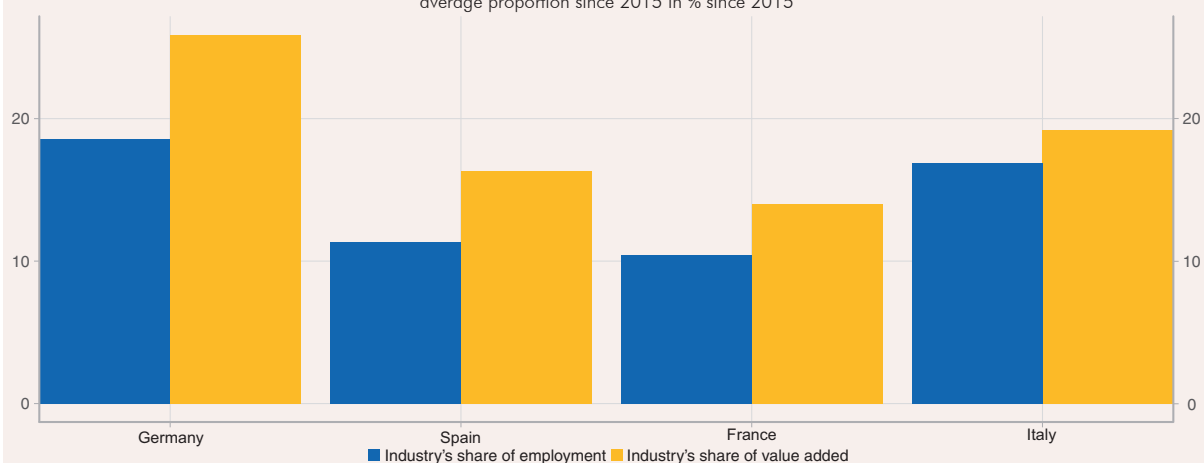
role this sector occupies in the German economy, and particularly its contribution to overall value added and employment (*Graph 4*). Since 2015, an average of 18.6% of German jobs have been connected to industry (8 million out of a total of 43 million people in employment). The weight of industry in the total value added of the German economy is even greater, at 26%. Additionally, the difficulties faced by business are likely to spread more quickly in Germany than elsewhere, most notably France. In Italy, although industry is almost as big an employer as it is in Germany, its contribution to value added is considerably lower (19%); this might go some way to explaining why the correlation between household and business tendency surveys has been in decline since 2017 in Italy, while remaining stable in Germany. In

France and Spain, where the proportion of industrial jobs does not exceed 12% of total employment and where the value added of industry accounts for less than 16% of the national total, the correlation has also deteriorated, especially since 2018.

While the household confidence indicators, influenced by other social and political factors, are not generally the best predictors of economic activity, they do still have a certain connection to consumption. The correlation between household morale and the industrial climate may thus not be entirely without consequences if it continues: the difficulties experienced by German industry, owing particularly to the fall in world demand, could potentially spread to domestic demand, which is currently the primary driver of German growth. ■

4 - Weight of industry in total employment and value added.

average proportion since 2015 in % since 2015



Source : Eurostat