Recent dynamics in inflation in France, Germany, Italy and Spain are linked to the increase in energy prices, but with specific features in each country

After falling in 2020 in the main Eurozone economies, inflation showed a significant upswing in 2021. This rise was mainly due to the rebound in energy prices, which had fallen to very low levels in 2020. In 2021, two types of country profiles stand out. One the one hand, Germany and Spain saw a sharp rise in inflation which exceeded its pre-crisis average, while on the other hand, France and Italy saw more moderate increases. For Germany, in addition to the base effect of the one-off cut in VAT in H2 2020, the carbon tax introduced at the beginning of 2021 contributed to pushing inflation upwards, whereas in Spain the rise was driven by electricity consumer prices, which are highly reactive to variations in production prices. These rises are likely to be passed on to prices of products other than energy to a greater extent in coming months. The rise in consumer prices does not seem to be having a knock-on effect on wages for the moment, however.

Inflation increased significantly in 2021 after falling in 2020, due mainly to the fall in energy prices

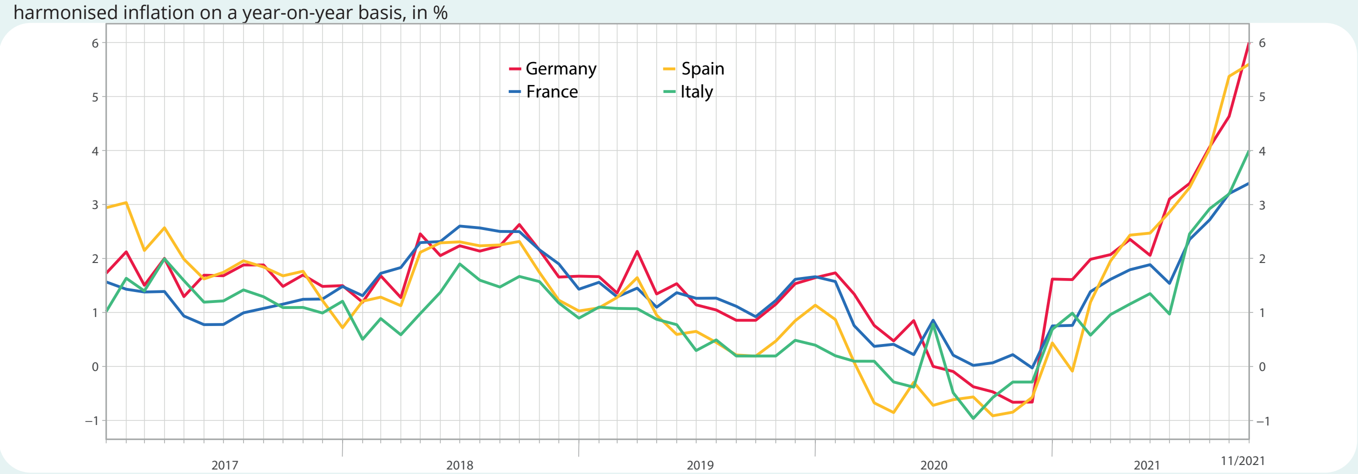
Since the end of 2020, inflation has increased significantly in the main economies of the Eurozone (► Figure 1). In November 2021, the rise in the harmonised consumer prices index[1] (IPCH) had reached 6.0% year-on-year in Germany, 5.6% in Spain, 4.0% in Italy and 3.4% in France. In Germany and Spain, these inflation rates are the highest observed since the creation of the index in 1996. France and Italy, meanwhile, are at slightly lower rates than in the summer of 2008, which marked their all-time high.

However, this continuous rise in inflation come after the particularly low price levels reached during the health crisis. In 2020, the HCPI fell in several Eurozone countries, mainly driven by the fall in energy prices, and notably in oil (► Figure 2). At the time, the fall in activity worldwide caused a drop in demand for energy around the world, which decreased more than supply, thereby driving a fall in energy prices.

In Spain and in Italy, this fall in energy prices, and notably in fuels, caused a sharp decline in the HCPI in spring 2020: inflation went negative from April in Spain and from May in Italy. In Germany, where inflation also fell in spring 2020 due to energy prices, there was a further fall in the summer further to the cut in VAT made from July through to December in order to stimulate consumption: inflation then became negative there, driven down not only be energy prices, but also by those of other products, notably manufactured goods. In France, the fall in inflation was also significant, but more moderate than

1 The HCPI should be preferred for international comparisons because the unlike the national CPIs, it is based on the same basket of goods in all the different countries (although the structure of the basket of products reflects that of household consumption, and therefore differs from one country to another).

► 1. Variation in the HCPI in the four main Eurozone economies
harmonised inflation on a year-on-year basis, in %



How to read it: in November 2021, according to the provisional estimate, year-on-year inflation stood at 6.0% in Germany, 5.6% in Spain, 4.0% in Italy and 3.4% in France.
Source: Eurostat

in the neighbouring countries. Inflation remained positive there or close to zero towards the end of 2020. Finally, although energy prices were the main factor in the fall in inflation in 2020, other consumption items also made their contribution, such as services and in particular air transport in France, and tourist packages in Germany and Spain, which were very sluggish or even saw their prices fall, against a backdrop of travel restrictions.

These different factors partly explain the difference between inflation in France and Germany at present. While inflation was comparable in the two countries over the period prior to the health crisis, in November 2021 it was more than two points higher in Germany. German inflation was driven this year by the introduction of a carbon tax at the beginning of 2021 and by the return to the normal VAT rate after the one-off reduction over H2 2020. In November 2021, there was also a stronger acceleration in inflation in Germany than in France, as the transmission of higher energy and commodity prices to consumer prices of manufactured goods would appear to have been visible already to a slight extent in Germany, but not yet in France.[2]

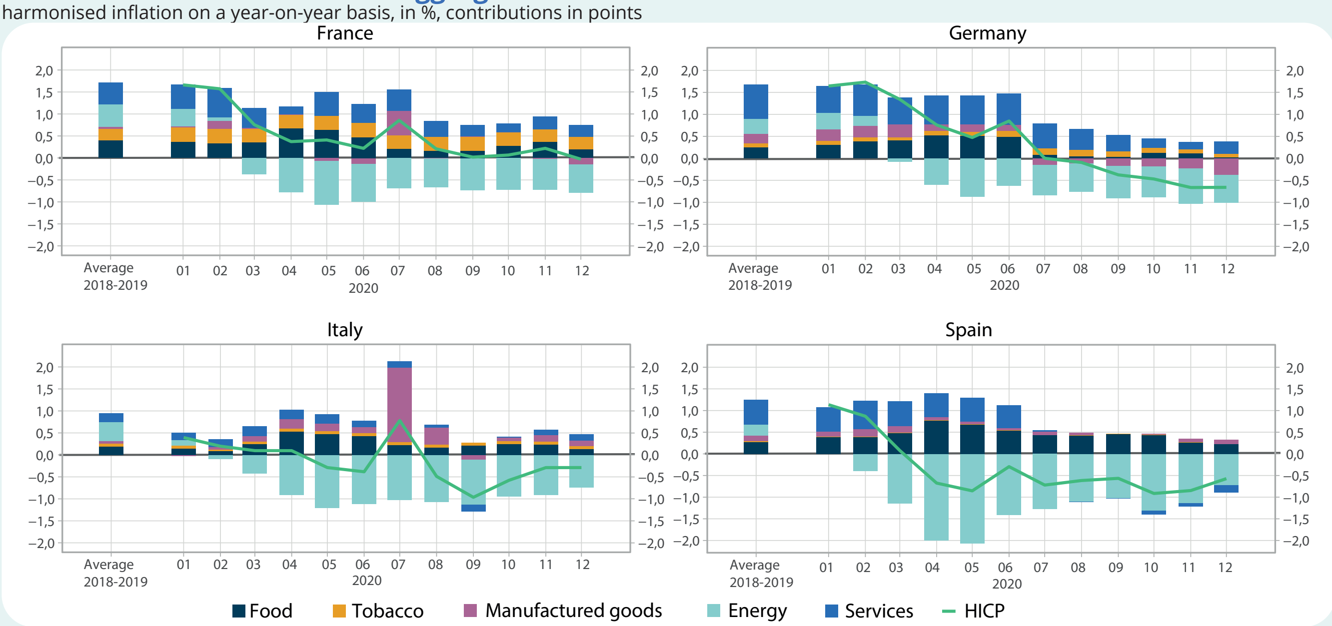
In addition to the 2020 base effect, the sharp rebound in inflation in 2021 was driven by energy everywhere, although with specific features from one country to another

Traditionally, inflation is analysed via the year-on-year variation in consumer prices, and therefore necessarily depends on price levels in the previous year. As regards 2021, the low prices in 2020 therefore automatically induce a high year-on-year variation in the HCPI, in other words high inflation.[3] One way of removing this "base effect" and the specifics of 2020 consists in analysing the HCPI on a two-year basis, meaning in relation to the same month in 2019, rather than in 2020. In the rest of this part, the HCPI is therefore presented on an annualised two-year basis and it is this "two-year inflation" that is analysed.

2 This comparison is based on analysis of the components of the CPI, as the components of the HCPI for November for Germany and France were not available in time for this publication.
3 Additionally, the structure of the weights of the aggregates within the HCPI for 2021 was adjusted more significantly than usual further to the atypical profile of consumption in 2020 (► Box 1 in the Inflation sheet).

► 2. Contribution of the main aggregates to the HCPI for the four main Eurozone economies in 2020

harmonised inflation on a year-on-year basis, in %, contributions in points



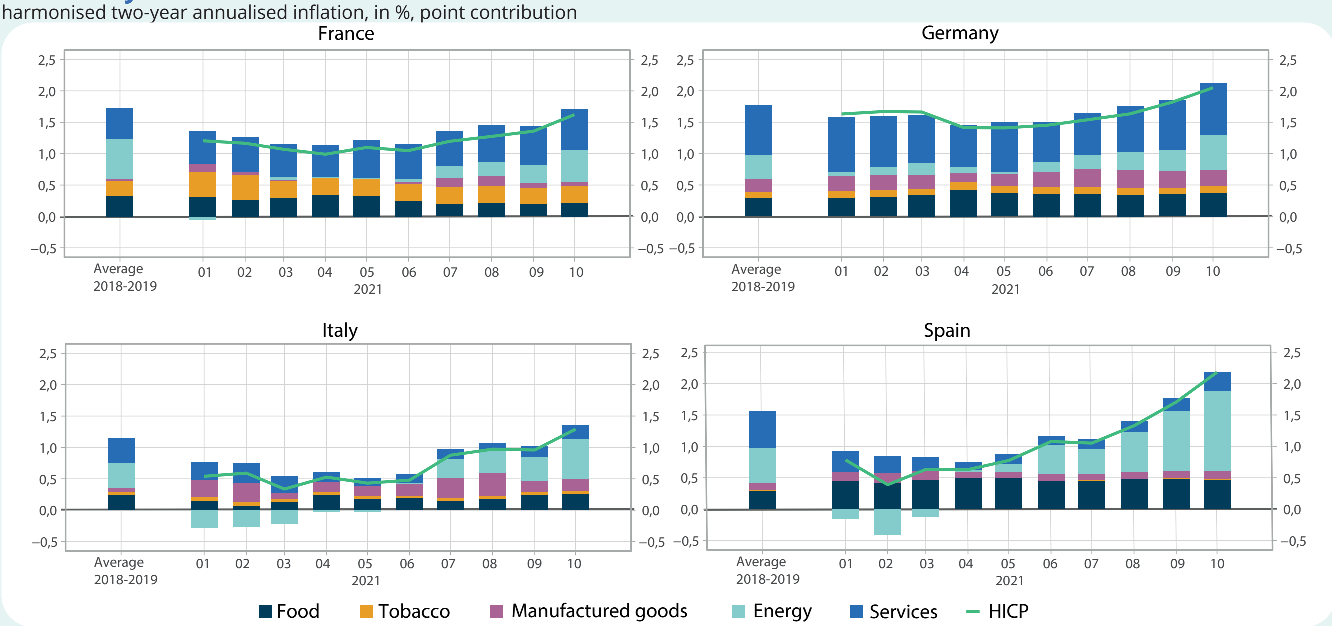
How to read it: in France in December 2020, harmonised inflation stood at 0.0% year-on-year and the contribution of food was 0.2 points.
Source: Eurostat

In the four main economies in the Eurozone, this two-year inflation showed an upward trend in 2021, with sharp increases in Spain and in Italy, and more modest and similar increases in France and Germany (► Figure 3). The level reached in October stood at an annualised rate of a little over 2% in Germany and in Spain, and at around 1.5% in France and in Italy, representing a much more moderate level than that of the year-on-year variation in the HCPI, as seen previously.

The increase in energy prices contributed significantly in all four countries to the rising trend in inflation over the two years in a symmetrical manner to the situation observed in 2020. This was the case notably in Spain and in Italy, where the contribution of energy was amplified considerably over recent months. In Germany and France, the contribution of energy has appeared less dynamic than in Spain and Italy since the start of the year. To understand these differences

► 3. Two-year inflation in the four main Eurozone economies in 2021

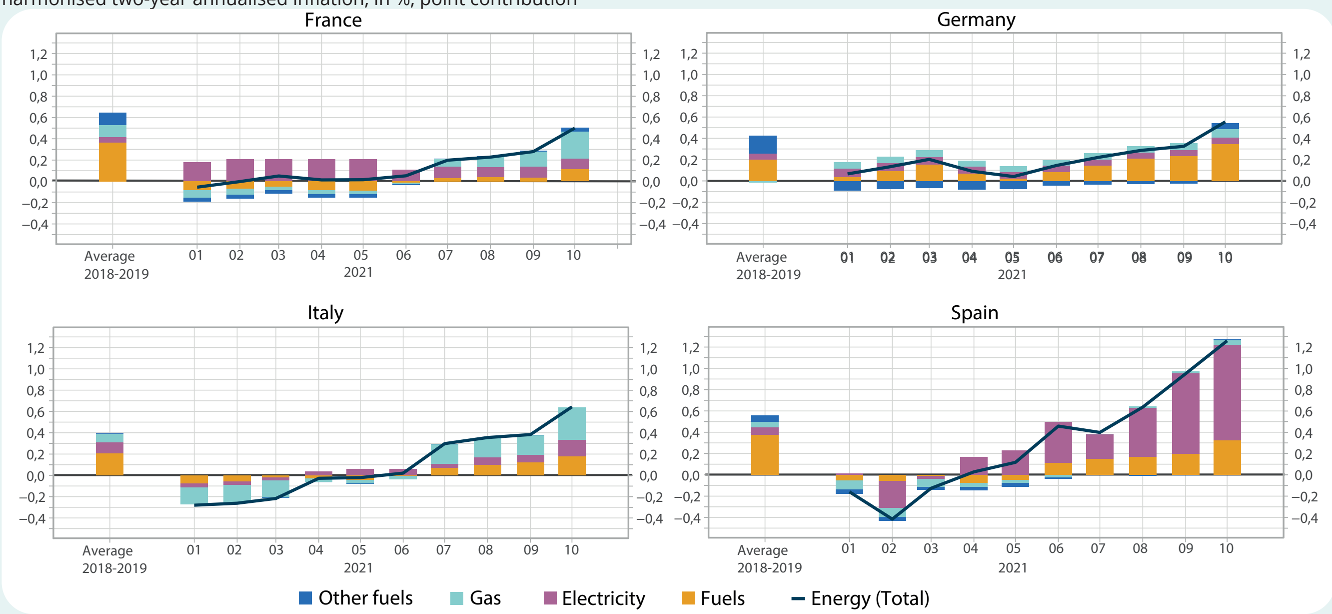
harmonised two-year annualised inflation, in %, point contribution



How to read it: in France in October 2021, the contribution of food to the variation in harmonised inflation over two years on an annualised basis was 0.2 points.
Source: Eurostat

► 4. Breakdown of the contribution of energy to two-year inflation, in the four main Eurozone economies

harmonised two-year annualised inflation, in %, point contribution



How to read it: in France in October 2021, the contribution of energy to two-year inflation on an annualised basis came to 0.5 points, of which 0.1 points for fuels.
Source: Eurostat

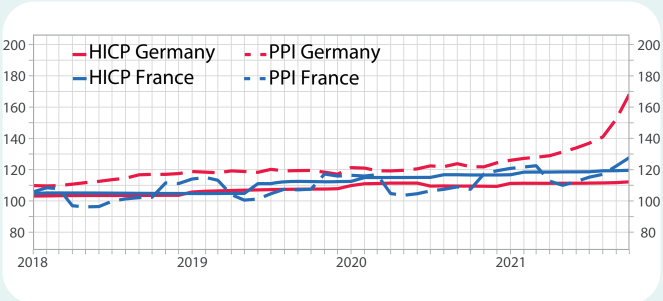
in scale and dynamics between countries, we broke down the energy contribution into three main components: fuel, gas and electricity.

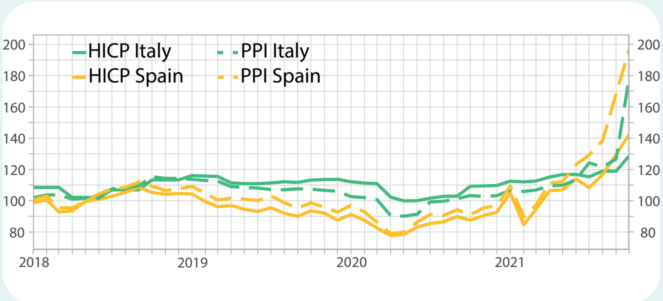
In Spain, the particularly strong increase in energy inflation over the two years was driven mainly by electricity prices (► **Figure 4**). In Italy, the contribution of electricity also appears to have been positive, but to a lesser extent, with the main factor in the rise in two-year energy inflation being the price of gas. This was also the case in France, while in Germany it was fuels that made the main contribution to energy inflation, with gas and electricity playing only a very moderate role.

The singular situation in Spain regarding electricity may be a result of specific national mechanisms in passing on energy production prices to households. In Spain and Italy, for instance, electricity consumer prices appear quite closely correlated to production prices: in Spain in particular, the significant rise the consumer price of

► 5. In Italy and Spain, the consumer price index (HCPI) for electricity follows the producer price index (PPI) for electricity closely

indicies in base 100=2015

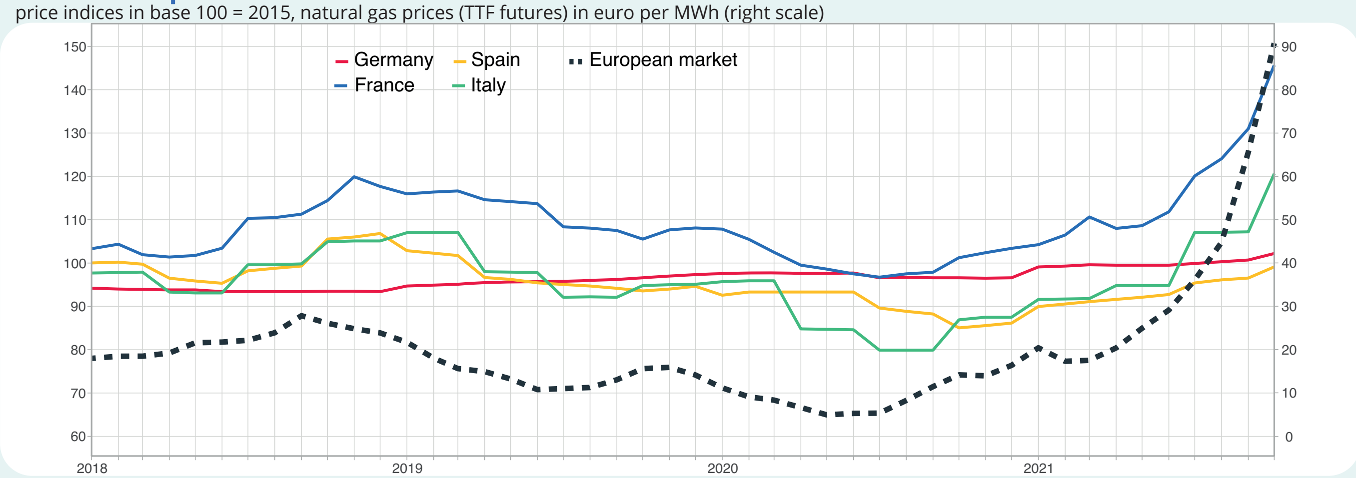




How to read it: in Germany in October 2021, the producer price index in the German industry for “electricity production, transport and distribution” for the German market stood at 168.
Source: Eurostat

► 6. In France and Italy, the consumer price index for gas has a similar profile to that of gas prices on the European market

price indices in base 100 = 2015, natural gas prices (TTF futures) in euro per MWh (right scale)



How to read it: in France in October 2021, the consumer price index for gas stood at 146.
Note: the TTF price of natural gas is the value of contracts at the next maturity date for natural gas in the Netherlands. It is the European benchmark for natural gas market prices.
Source: Eurostat

► 7. Weight of the different components of the “energy” aggregate in the four main Eurozone economies

weight as a ‰ of household consumption

	France	Germany	Italy	Spain
Fuels	32	33	41	52
Electricity	32	30	23	35
Gas	13	27	23	14
Others	10	17	3	5
Total energy	87	108	89	106

How to read it: in France in 2020, the “energy” aggregate represented 87‰ of household consumption. The “fuels” component represented 32‰ of household consumption.
Note: the weights of the different components in household consumption in 2020 were used in the calculation of the HCPI for the year 2021.
Source: Eurostat

electricity since spring 2021 can be seen to be parallel to a sharp rise in production prices (▶ Figure 5). In Germany and in France, meanwhile, the variations in consumer prices would appear to follow those in production prices only with a time lag and in a manner that is smoothed out over a longer period. One explanation is no doubt to be found in the pricing mechanisms for the electricity supplied to households: in Spain, the development of dynamic pricing for electricity makes the consumer price more dependent on fluctuations in production prices;[4] in France, this type of pricing is marginal compared to regulated prices that are revised twice a year.[5] Spain is also the country where electricity represents the largest weight in household consumption, which increases the contribution of this component to the HCPI (▶ Figure 7).

The prices for gas followed the same upward trend, with Germany being the exception. Once again, this can be explained by the different pricing models. In Germany, energy distributors review their prices annually. Consumer prices would therefore appear to have adjusted slowly following the rise in production prices.

More generally, energy distributors may have been able to limit their price rises by profiting from a reduction in the tax on electricity in January 2021.[6] In the four countries, measures have been taken to contain this rise in energy prices that weighs down on household purchasing power, in many cases paying particular attention to the least advantaged households[7]: energy vouchers,[8] tax reductions, price regulation, etc.

In addition, the increase in fuel prices linked with that in oil prices also contributed to the rise in inflation over the two years in the different countries. This remained limited in its extent, however, as oil prices in 2019 were between €50 and €65, which is to say comparable to the levels in spring 2021. It was in Germany that the contribution of fuels would appear the largest on average, however: this may be a result of the carbon tax introduced in January 2021 in the German taxation system and which has increased fuel prices since then.

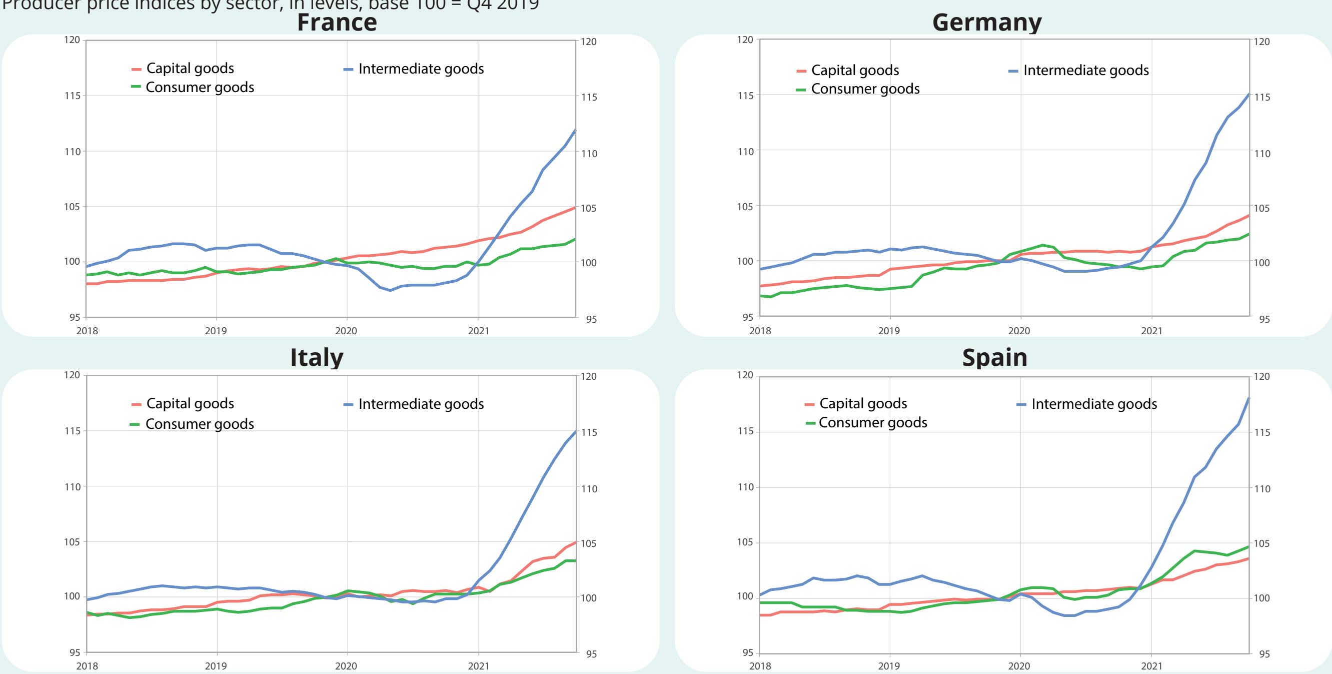
Price rises likely to be passed on to products other than energy to a greater extent in coming months

Energy aside, other inputs have also seen sharp price rises since the beginning of 2021, in particular mineral and agricultural commodities. However, unlike energy which is passed on directly to consumer prices through

4 In Spain, "small" consumers who opt for regulated prices can choose between a fixed price that is revised each year or a price that is variable from day to day and index-linked to the wholesale price of electricity. https://iea.blob.core.windows.net/assets/2f405ae0-4617-4e16-884c-7956d1945f64/Spain2021.pdf.
5 https://www.cre.fr/content/download/24367/304131
6 In 2021, the German tax for the financing of renewable energies was cut by 3.9% to foster economic recovery.
7 https://www.bruegel.org/publications/datasets/national-policies-to-shield-consumers-from-rising-energy-prices/
8 Energy vouchers do not change the price paid by households and therefore have no effect on the HCPI.

▶ 8. The intermediate goods industries have seen a significant increase in their production prices since the end of the year 2020

Producer price indices by sector, in levels, base 100 = Q4 2019



Source: Eurostat

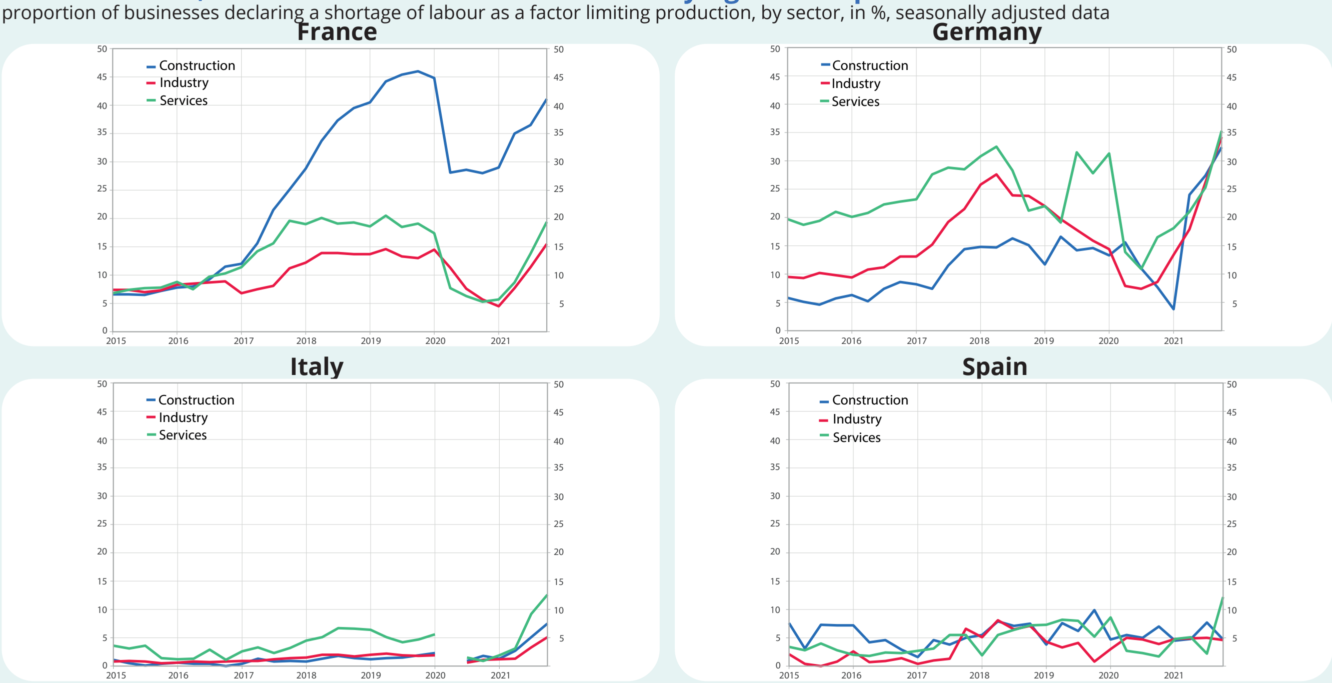
fuels and heating energy consumed by households, the rise in the prices of other inputs was only visible in October in products situated upstream from the household consumption basket.[9]

In the main Eurozone economies, producer price indices (PPI)[10] in industry have thus been increasing since the start of 2020, with pronounced differences between types of industry. Industries producing intermediate goods have seen a very sharp rise in their producer prices year-on-year, on account of their more direct reliance on commodities and fossil fuels.[11] For finished products, meanwhile, which is to say consumer goods[12] and capital goods,[13] production prices are currently showing much more moderate increases (► **Figure 8**).

This moderate rise in the production prices of consumer goods, compared to that for intermediate goods, shows the time lag necessary for prices to be passed on through the production chain. In this respect, the increasing prices for intermediate goods suggest that inflation in the prices of manufactured goods and foodstuffs (excluding fresh products) could increase significantly in coming months. Under the assumption that energy prices do

9 Among consumer goods, foodstuffs are already showing a rise in production prices.
10 Producer price indices track variations in the prices paid to producers on different markets. There therefore provide a vision of changes in prices ahead of the HCPI.
11 Intermediate goods industries within the meaning of the MIG (main industrial grouping) classification: chemical industry, manufacture of paper, manufacture or rubber and plastic products, and other non-metallic mineral products, metallurgy and manufacture of metal products, except for machinery and equipment,
12 Food industries, apparel industries, printing and reproduction, pharmaceutical industry, manufacture of furniture, etc.
13 Manufacturing of machinery and equipment not included elsewhere, manufacture of motor vehicles and building of ships and boats., etc.

► 9. In H2 2021, recruitment difficulties are intensifying for European businesses
proportion of businesses declaring a shortage of labour as a factor limiting production, by sector, in %, seasonally adjusted data



Note: this data is drawn from the business tendency surveys. This is the proportion of businesses that identified a shortage of labour as a factor limiting production. The question is asked quarterly in the sectors of industry and services. It is monthly in the construction sector and has been switched to a quarterly basis by keeping the point from the first month in the quarter. In April 2020, the surveys were not conducted in Italy. These statistics correspond to the European surveys centralised and harmonised by DG ECFIN and their value may differ from those published by INSEE from the same source: the trends are nonetheless similar.
Source: Eurostat

remain stable, meanwhile, energy inflation should fall mechanically, as 2022 prices are seen in relation to the upward dynamics in 2021.

For the moment, the rise in consumer prices does not seem to be being passed on to wages

In addition to rising prices for intermediate goods and the repercussions for consumer prices, other factors are likely to play a part in rising inflation: labour market tensions. In the four main Eurozone economies, according to the tendency surveys, the share of businesses declaring that a shortage of labour is limiting their production increased significantly in 2021 (▶ **Figure 9**). This proportion had reached a low point in spring 2020, but has returned to or exceeded its pre-crisis levels in most countries and sectors. In Germany, for instance, the declared difficulties have been increasing continually since the health restrictions were ended in spring 2021, and have significantly exceeded their levels over the past six years in construction and industry, as well as in services to a lesser extent. In France, the increases have been more modest, but the levels reached in October 2021 were close to the highest over the past six years. In Italy and Spain, services are particularly hard hit, with a share of businesses declaring that they are having recruitment difficulties now well above the highest points in recent times.

However, hourly wages do not seem to be showing any particular increases that might be a sign of a knock-on effect of prices on wages, at least at this stage: since the summer of 2020, the hourly wage would appear to be remaining on the same trend as in recent years, in manufacturing industry, construction and in services (▶ Figure 10). The only exception to this is the hourly wage in the construction sector in Italy which has seen a sharp increase since the end of the crisis. This is linked to the dynamic levels of investment in construction in the country and does not seem to be linked to inflation. In Q3 2021, investment in construction was 13.4% above its level in Q4 2019. ●

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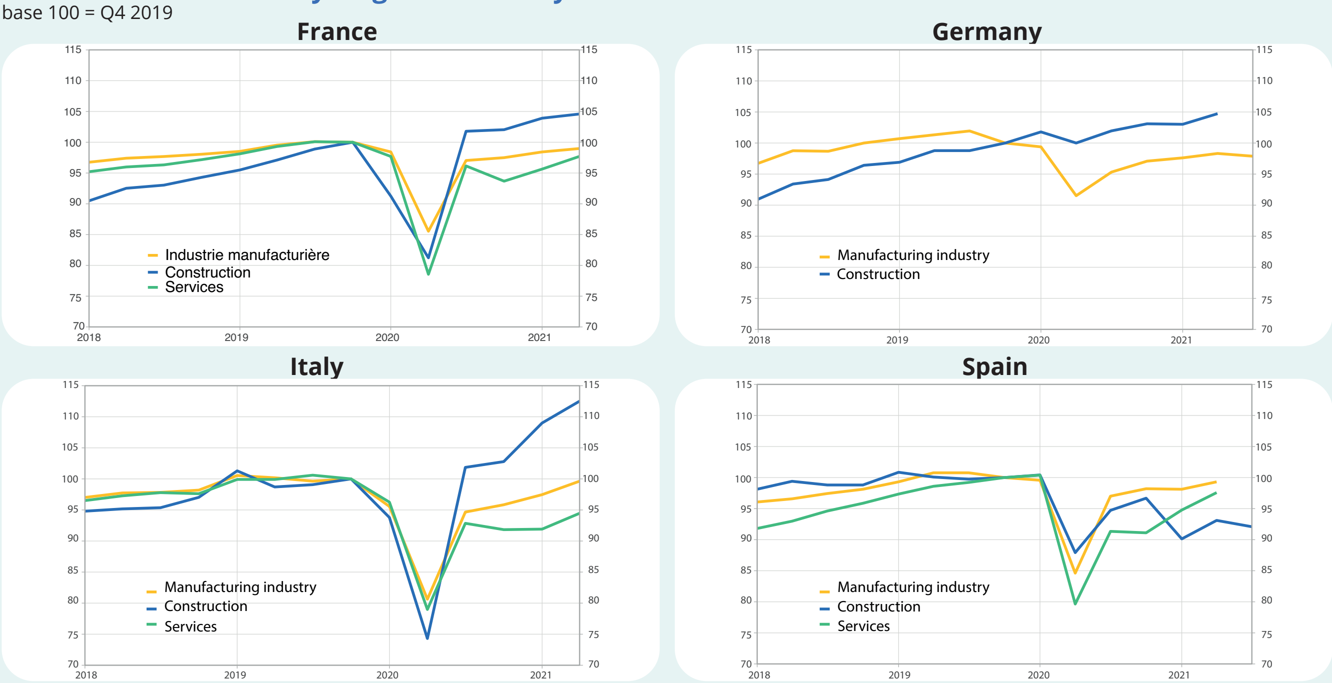
▶ 10. Variation in hourly wages in industry and services in the main Eurozone economies
base 100 = Q4 2019



Note: services = service activities required by the STS Regulation.
Source: Eurostat