



How have French exports fared as regards price and cost competitiveness since the start of the 2000s?

After a first decade marked by deterioration in its cost competitiveness relative to Germany in particular, France has fully made up the difference in this loss of competitiveness since 2010. Meanwhile, France's goods and services export performance stabilised prior to the 2020 pandemic. We used an econometric study to quantify the contribution of price and cost factors as well as other non-price and non-cost factors to changes in France's export competitiveness compared to Germany, Italy and Spain during this period. Cost competitiveness differences had an unfavourable impact before the great financial crisis. Since 2010, the restored price and cost competitiveness made it possible to make up only a small share of the lost ground relative to other large euro area countries given on-going deterioration in other export performance factors (non-cost competitiveness).

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-3.6%

the average annual growth difference of exports between France and Germany, from 1999 to 2007

14%

the cumulative decline in relative unit labour costs between France and Germany since 2007

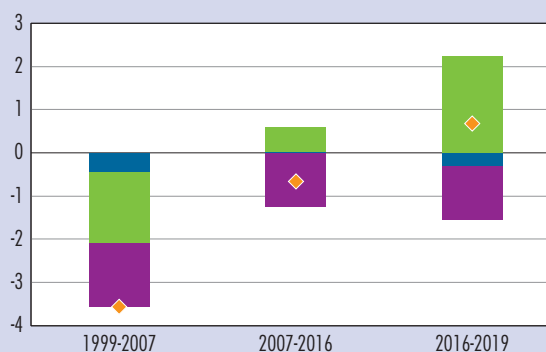
-1.2%

the contribution of unexplained factors ("non-price" and "non-cost") to the average annual performance difference between France and Germany since 2007

Developments in French exports of goods and services compared to Germany

(average annual growth rate in logarithmic points)

- Foreign demand (geographic specialisation)
- Price and cost competitiveness
- Non-price and non-cost competitiveness (residual factor)
- ◆ Export performance



Sources: Eurosystem, authors' calculations.



1 France's market share of exports has stabilised in the past decade

After a marked deterioration between the start of the 2000s and the great financial crisis of 2008-10, France's market share for exports of goods and services has stabilised since 2010 (see Chart 1). Indeed, the macroeconomic "performance" of French exports, measured by the ratio of exports (in value or volume) relative to foreign demand,¹ stabilised at the end of the financial crisis. This trend break also occurred in Italy and Spain, which experienced significant nominal adjustments at the height of the sovereign debt crisis.

In 2019, just before the pandemic, France was in the process of recovering export market share, whereas Germany's export performance decreasing due in part to temporary difficulties in the automotive sector.

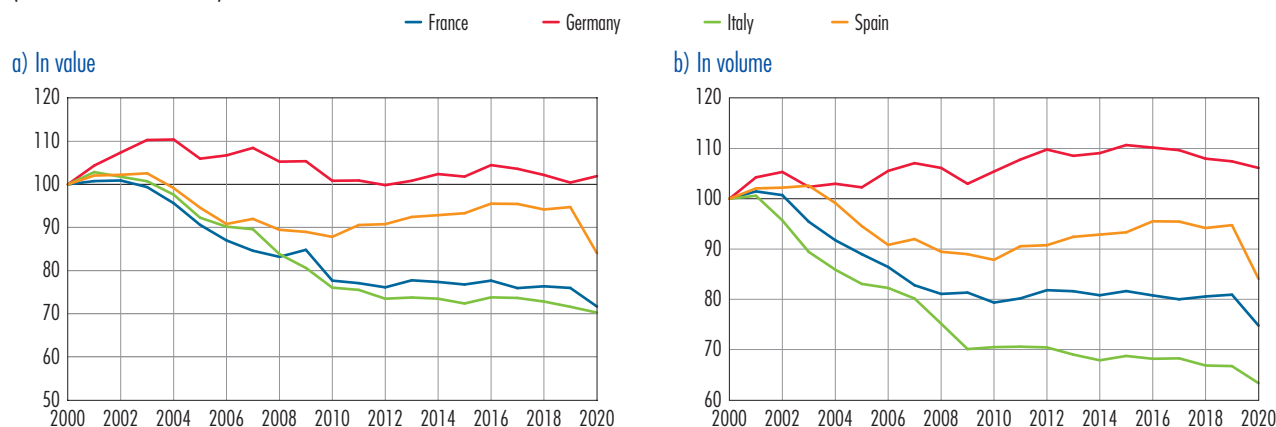
The Covid-19 crisis had a major impact on French exports in 2020. The deterioration in export performance was

mainly due to unfavourable specialisation, with the significant share of the aeronautical sector (see Berthou and Gaulier, 2021). Similarly, travel restrictions significantly weakened French exports of services. In Spain, the highly unfavourable export performance in 2020 also resulted from the collapse in demand for travel, which is not reflected in the foreign demand indicator.

The year 2020 was atypical in terms of the role of sectoral specialisation, since global demand in the aeronautics sector generally used to favour French exports. Overall, France's specialisation proved to be an asset as of the mid-2000s, even relative to Germany (see Gaulier *et al.*, 2013 – Table 3, updated in Bas *et al.*, 2015). The growth of travel in international trade also benefited France, albeit to a lesser extent given the significant regional specialisation in this sector (less dynamic European markets – see Camatte and Gaulier, 2018). Lastly, services excluding travel were a growth driver for France's foreign trade between 2000 and 2019 (see Bui Quang and Gigout, 2021).

C1 Goods and services export performance of the euro area's four largest economies

(index = 100 in 2000)



Sources: Eurosystem, authors' calculations.

Note: Export performance is defined as the ratio of exports to foreign demand. Foreign demand is expressed in value and calculated by combining foreign demand in volume and prices of competitors.

¹ Foreign demand is calculated using the weighted average of imports for export trading partners. It therefore reflects differences in demand due to the geographic breakdown of exports excluding those related to sectoral specialisation (e.g. in 2020, France's aeronautical sector and Spain's tourism sector).



2 France's cost competitiveness has improved since 2008

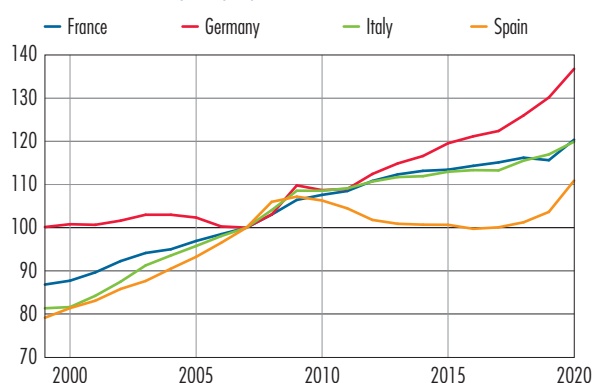
France has significantly improved its cost competitiveness relative to Germany following a lengthy period of deterioration (see Chart 2 and Box 1). Since 2008, the cumulative decline in France/Germany relative unit labour

costs (ULCs) was approximately 14%. Just before the pandemic, France had therefore completely recovered its loss of cost competitiveness relative to Germany observed since the early 2000s. Nevertheless, between 2008 and 2017 France saw its cost competitiveness decline relative to Spain, which experienced a significant drop in its wage costs during the euro area sovereign debt crisis.

C2 Unit labour costs (ULCs) in the euro area's four largest economies and cost competitiveness ratio between France and Germany

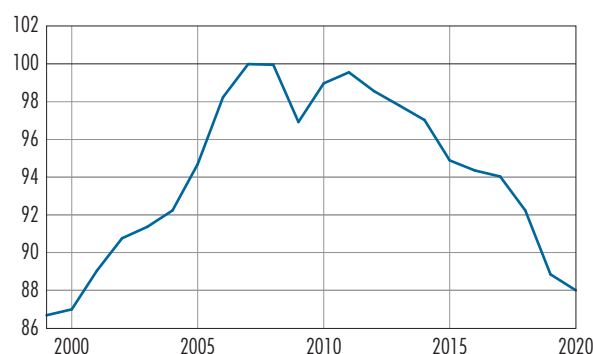
(overall economy, index = 1 in 2007)

a) ULCs France, Germany, Italy, Spain



Sources: National accounts, authors' calculations

b) ULC France/ULC Germany



BOX 1

Long-run cost competitiveness between France and Germany

Methodology

Using OECD data (STAN database),¹ we can calculate unit labour costs (ULCs) over a long period since 1970, and the CEPII data (CHELEM database)² allows us to compare export performances since 1967.

In these two databases, Germany was exclusively the Federal Republic of Germany (FRG) before 1991. Furthermore, in this study, two versions of national accounts data are used, before and after 1991, in order to analyse Germany over a long period. This break in the data requires caution when interpreting long-term trends.

Over a long period, the effects of specialisation (notably sectoral) account for a share of the performance. Relative exports are therefore used here without comparing them to the foreign demand indicator that incorporates sectoral developments. Similarly, the ability to maintain prices or high margins is a competitiveness factor, which justifies the use of export data in value for this exercise.

.../...



ULCs are calculated for the overall economy, since the non-traded sector contributes to cost competitiveness through input costs.

Main observations

Changes in cost competitiveness and in France/Germany relative export developments can be analysed using three periods since the 1980s.

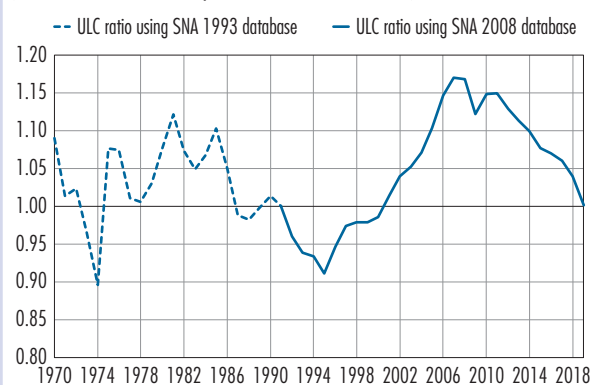
From the mid-1980s to the mid-1990s, competitive disinflation in France combined with the effects of German reunification helped significantly improve France's relative unit labour costs (ULCs). This period was also characterised by an improvement in France's export performances relative to Germany, which lasted until the end of the 1990s and the entry into the euro.

Since the entry into the euro and the 2008-09 financial crisis, however, Germany's wage moderation led to a deterioration in France's cost competitiveness and exports relative to Germany.

Between 2008 and 2019, France made up for most of this deterioration in cost competitiveness relative to Germany observed as of 2000 thanks to the combined effects of accelerating wage growth in Germany and cost reduction efforts in France (Tax Credit for Competitiveness and Employment or CICE), Responsibility and Solidarity Pact, etc.). Nevertheless, the deterioration in France's relative export performance continues, albeit at a slower rate. This suggests that other factors (non-cost competitiveness) are continuing to hamper French exports.

Ca Ratio of unit labour costs between France and Germany

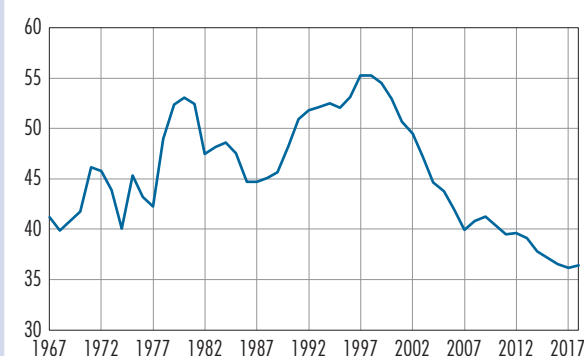
(index = 1 in 1991, year of break in series)



Sources: OECD (STAN database), European Commission (AMECO database); author's calculations.
Notes: for the STAN database, SNA 1993 standard until 1991 and SNA 2008 standard as from 1991.
Unit labour costs (ULCs) calculated for the overall economy. For Germany, FRG data before 1991.
Final year, 2019, obtained using the growth rate of ULCs in the AMECO database.

Cb Ratio of exports of goods (in value) between France and Germany

(as a %)



Sources: CEPII (CHELEM database), author's calculations
Note: For Germany, FRG data before 1991.

1 Structural analysis database.

2 Harmonised accounts on global trade and the economy.



3 Non-price and non-cost determinants of French exports

Breakdown of determinants of export competitiveness

Using a breakdown of export competitiveness determinants (see Box 2) for the four largest euro area economies (France, Germany, Italy and Spain) we distinguish the factors attributable to (i) the geographic structure of exports, (ii) price and cost competitiveness,² and (iii) a residual factor, or non-price and non-cost competitiveness.

In the France-Germany comparison for the period 1999-2019, we identify three sub-periods (see Chart 3).

- **Before the Great Recession, from 1999 to 2007, France experienced a sharp deterioration in its export competitiveness relative to Germany.** This trend was mainly due to the deterioration in price and cost

competitiveness, deterioration in non-price and non-cost competitiveness and, to a lesser extent, a less favourable geographic breakdown of demand from trading partners than was the case for Germany.

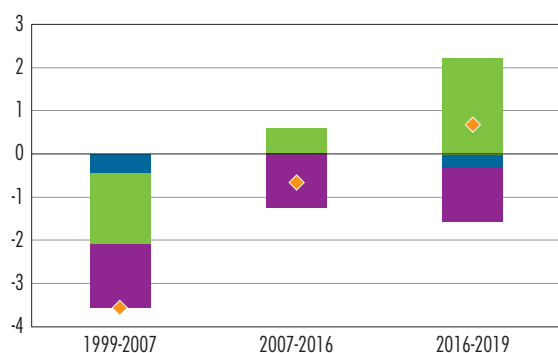
- **During the Great Recession and until 2016, France's export performance relative to Germany continued to deteriorate, but at a slower pace, thanks mainly to the improvement in price and cost competitiveness.** However, the share not explained by differences in the changes in market shares between the two countries (non-price competitiveness) still affect France's export performances.
- **Between 2016 and the eve of the Covid-19 crisis, France's export performance improved thanks to the recovery in price and cost competitiveness.** Nevertheless, non-price and non-cost competitiveness continues to adversely affect French exports.

C3 Developments in exports of goods and services (in volume) of France relative to Germany

(average annual growth rate in logarithmic points)

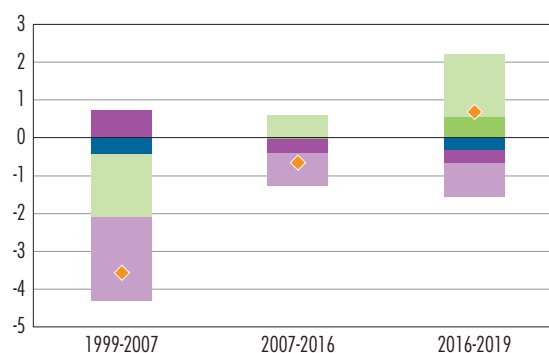
a) Summary

- Foreign demand (geographic specialisation)
- Price and cost competitiveness
- Non-price and non-cost competitiveness (residual factor)
- ◆ Export performance



b) Detail

- Foreign demand (geographic specialisation)
- Price competitiveness
- Cost competitiveness
- Other supply factors (potential growth effect)
- Other export performance determinants
- ◆ Export performance



Sources: Eurosystem, authors' calculations.

² Cost competitiveness is measured by the ratio of unit labour costs (total cost of labour for the overall economy divided by real GDP) to export prices. Price competitiveness is measured using the price of French exports relative to competitors' export prices. The contributions of the two variables are first added together (see Chart 3a) then presented separately (see Chart 3b).



France's export performance over the 2016-19 period is mainly attributable to the significant improvement in cost competitiveness (see Chart 3b above). This improvement helps support the profit margins of companies located in France, which fosters investment in research and development or investment in additional production capacity.

Price competitiveness also seems to play a favourable role, albeit to a lesser extent in the most recent period.

French companies probably chose to shore up their profit margins instead of engaging in price competition. Overall, however, it remains very difficult for two reasons to distinguish precisely between cost competitiveness and price competitiveness using our estimates. First, the export deflator is an imperfect measure of the price set by individual exporters, which leads to a statistical risk related to the measurement of export price indices for France and its competitors. Second, price competitiveness is inherently linked to the "quality" of products sold, which in turn depends on companies' research and development efforts and hence on their profit margins.

During the 2016-19 period, French exports remained at a disadvantage as regards non-price and non-cost competitiveness relative to Germany (see Chart 3b, "Other determinants of export performance"). Two factors account for the deterioration of this non-price and non-cost competitiveness. First, we observe a deterioration in potential supply (measured by potential GDP), which in our data, for example, is a proxy of the role played by the density of the industrial fabric in France. Second, the "other determinants of export competitiveness" in Chart 3b represent the "residual factor" of our export equation, which records all of France's other determinants of export performance not captured in the variables used in the econometric model. Overall, for the most recent period, France's insufficient non-price and non-cost competitiveness continues to adversely affect exports relative to Germany, despite the improvement in corporate profit margins (thanks to a decrease in unit labour costs in France relative to Germany), which should foster new investments, in particular in research and development. One plausible explanation is that the research and development efforts, for example, can only sustain non-price and non-cost competitiveness after a period

of a few years. Another possible explanation is that the recovery in profit margins of companies located in France has underpinned activity thanks to increased profitability but without fostering new investments that boost exports.

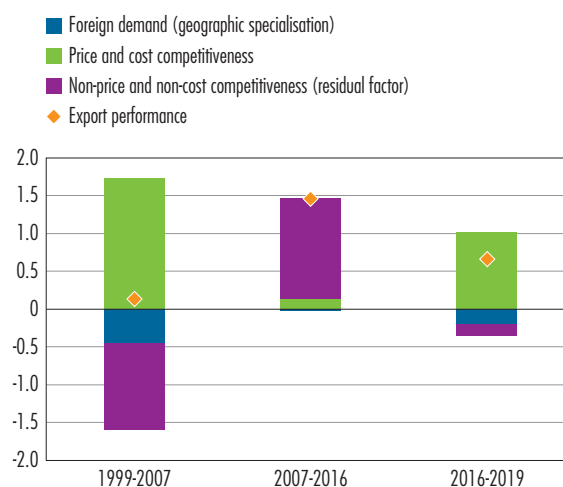
Lastly, demand effects related to the geographic breakdown of French exports had a neutral or slightly negative impact on performance relative to Germany.

Compared to Italy and Spain (see Charts 4 and 5 below), France enjoyed a price and cost competitiveness advantage before the Great Recession (1999-2007). However, this advantage was entirely offset by a relative disadvantage in terms of non-price and non-cost competitiveness. During the 1999-2007 period, France's export performance relative to these economies was very comparable.

During the Great Recession and the euro area sovereign debt crisis, France appeared to improve its non-price and non-cost competitiveness relative to Italy in particular, but that could be due to financing difficulties experienced by Italian companies at the height of this crisis and the fragility of the Italian banking sector during that period.

C4 Trend of French exports of goods and services (in volume) relative to Italy

(average annual growth rate in logarithmic points)

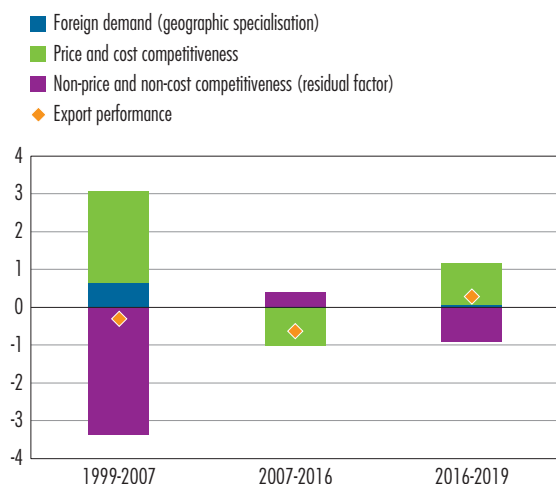


Sources: Eurosystem, authors' calculations.



C5 Developments in French exports of goods and services (in volume) relative to Spain

(average annual growth rate in logarithmic points)



Sources: Eurosystem, authors' calculations.

During the more recent period (2016-19), France improved its export performance relative to Italy and to a lesser extent to Spain, thanks again to recovery in price and cost competitiveness. However, non-price and non-cost competitiveness continues to have a negative effect, albeit to a lesser degree relative to the period before the great financial crisis.

What is meant by “loss of non-price and non-cost competitiveness”?

The results of our estimates highlight a recurring finding when analysing the export difficulties of French companies: they seem to be hampered more by a lack of non-price or non-cost competitiveness than from excessively high price levels. This has been observed in a number of research studies on French export competitiveness in the past decade.³ This non-price and non-cost competitiveness deficit appears to have a structural impact on French exports, whereas price or cost competitiveness gaps relative to our main euro area trading partners determine the magnitude of our losses in market share or our export performances, or their stabilisation, at least since France joined the euro.

This poorer non-price and non-cost competitiveness is not solely due to lower quality products manufactured and sold by French companies. At the macroeconomic level, for example, it can result from the choices of large groups in terms of how they organise their production. These groups choose where to locate their companies based on a number of factors: labour cost differences, corporate tax rates (Aussilloux et al., 2020), employee training and its suitability for production needs, centrality of a production site and sub-contractor network density. The centrality of Germany's geographic industrial base, notably with the proximity of a very dense sub-contractor network in its eastern neighbours, undoubtedly helped it maintain its position in the value and export chains thanks to reduced costs for production inputs. Production site competition is increasingly seen at the regional level (Europe) as opposed to the global level (Berthou et al., 2020), as evidenced by the automotive sector.

Moreover, cost competitiveness and non-cost competitiveness may be linked. German industrial companies, for example, were able to preserve their industrial base at the national level by negotiating wage moderation in exchange for keeping jobs at sites that use productivity-enhancing robotisation (Dauth et al., 2021). Germany's corporate governance model and in particular the closer proximity of decision-making centres and production sites helped to promote this type of agreement (Vicard, 2020).

In addition to the choice of industrial company locations, the size of the residual factor in our export equations also measures the ability of French companies to respond to demand from their main trading partners. This ability depends on France's sectoral specialisation (generally favourable before the Covid-19 crisis), the geographic breakdown of our export markets (slightly unfavourable before 2020), and also a “performance” effect. This latter effect can be explained by several factors: product line positioning, technological content of products sold, complementarity between competitiveness of supply in goods and services, degree of participation in international supply chains, management quality or even export financing constraints.

³ See in particular Berthou and Emlinger, 2011, Bussière et al., 2014, Bas et al., 2015, or Emlinger et al., 2019.



BOX 2

Econometric model: export equations

The model is estimated using panel data because it seeks essentially to assess the differences between the four largest euro area countries by considering homogenous responses to given variables. This panel estimate makes it possible to introduce time fixed effects (quarterly) that capture all common unobservable or hard-to-measure factors (in particular the emergence of new competitors). Country fixed effects capture gaps in average levels across countries (they disappear in the dynamic results presented here). Using both time and country effects provides more information for estimating interest coefficients.

Price competitiveness is measured by the ratio of the export deflator to the prices of competitors in euro. This variable shows a negative and high elasticity in absolute terms: -1.53 . The estimates based on time series display elasticities that are generally less than half as large. Taking into account long-term supply and costs (see below) as well as unobserved factors common to the four European countries using the panel estimate (fixed country and year effects) may explain this high elasticity.

Prices cannot be a sufficient measure of competitiveness because of measurement errors but also because some companies are price takers and only export if the international price is greater than their unit cost. A change in costs increases or reduces the number of exporting companies without affecting prices. We choose to add to the relative price, which remains relevant for companies in imperfect competition, a cost variable equal to unit labour costs (for the overall economy) relative to the export price, i.e. the inverse of the price-cost margin. We obtain elasticity of -0.95 , very close to the result obtained by Bussière et al. (2014) in a cross-section estimate for the euro area countries taking into account GDP as a supply variable (with unitary elasticity here as well).

Over the very long term, exports change in line with GDP. Potential GDP is used as a measure of the supply of goods and services and can capture a variety effect (marketing of a more differentiated supply capable of satisfying the demand from a greater number of consumers). The unitary elasticity is confirmed by the data and incorporated in the final model. The output gap, which corresponds to the difference between actual and potential GDP, does not enter significantly into the equation. The role of GDP does not appear to involve demand effects; however, the separation between potential GDP and the cycle is not self-evident, especially in the case of hysteresis.

Deviations from changes predicted by the model are measured by the equation's residual factor, which is specific to each country. This residual factor includes the effects of "non-price competitiveness" (product line positioning, market power, etc.) but also includes other unobserved factors, such as the consequences of globalisation strategies of multinational corporations (see Emlinger et al., 2019) as well as measurement errors and bias inherent in any statistical model. The suitability of sectoral specialisation to global demand is among the factors very imperfectly captured by potential GDP and thereby amplifying the unexplained factor.



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