

What are the economic objectives of industrial investment in France and in Europe, according to the business tendency surveys?

INSEE's business tendency survey on investments in industry gives a picture of the long-term evolution of economic motivations for industrial investment: increasing production capacities, attempting to boost productivity or replacing obsolete or dated assets. In France as in other European nations, the share of investment dedicated to replacing old equipment has been increasing over the long term, while investment in improving productivity is shrinking. The proportion of investment devoted to production capacity fluctuates with the economic cycle. In France this share has been picking up since 2013, but remains below the level reported by German industrial firms.

Expanding capacity, productivity, replacing existing equipment: what are the economic motivations which drive investment?

Corporate investment encompasses all purchases or modifications of assets intended to improve their productive capabilities. The economic motivations behind such investments can be grouped into three main categories: increasing production capacities, attempting to boost productivity or replacing obsolete or dated assets.

Investment in production capacities aims to increase total output, making more of an existing product or else introducing new products. This allows for an increase in output, and potentially the creation of new jobs. Investment in productivity is aimed primarily at bringing down production overheads or introducing new techniques in order to make production more efficient. It aims to boost productivity, but not necessarily employment. Finally, some investments are required to deal with the obsolescence or ageing of existing assets, corresponding to the concept of consumption of fixed capital as used in the national accounts.

In theory, most capacity investments occur during the expansion phases of the economic cycle and when businesses are not constrained by demand. Investments in productive capacity and replacing existing equipment are less sensitive to the economic cycle; nonetheless, they evolve in parallel with

transformations in production capacities linked to technological innovation.

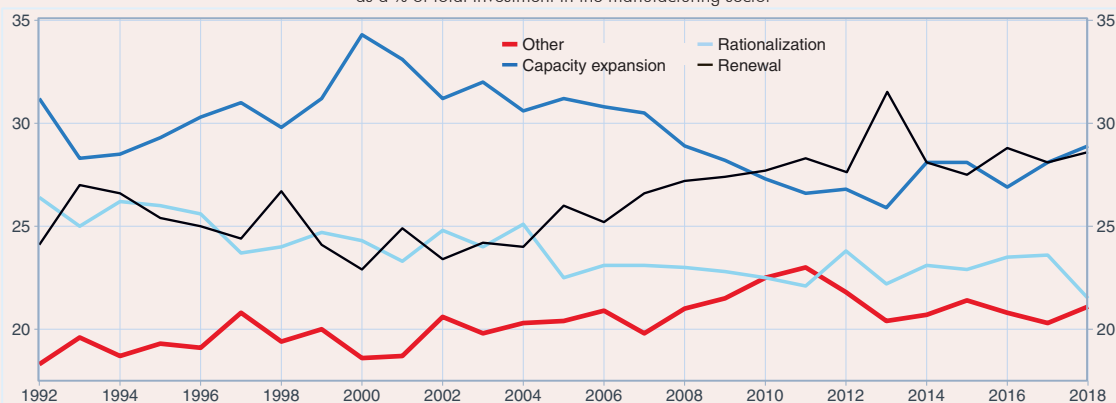
The INSEE business tendency survey on industrial investments provides a picture of the long-term evolution of economic motivations for industrial investment, based on the declarations of businesses in this sector. Since this survey is part of a harmonised system of European surveys overseen by the European Commission's Directorate General for Economic and Financial Affairs (DG-ECFIN), we can compare the French results with those from our European neighbours. However, this European system does not impose a unified definition of what constitutes investment. In France the survey focuses primarily on physical assets, with software the only intangible asset taken into consideration (see *Source and Methodology*)

In the French industrial sector, a growing share of investment is devoted to replacing existing equipment

According to the INSEE business tendency survey on industrial investments, the proportion of overall industrial investment devoted to replacing existing capital assets has been growing almost continuously since the year 2000, after shrinking slightly in the latter half of the 1990s (*Graph 1*). This proportion shrank from 25% of total investment in 1995 to 23% in 2000, before growing to approximately 30% in 2018. The growing share of replacement investment since 2000 could reflect a decrease in the average

1 - Economic objectives of industrial investment in France

as a % of total investment in the manufacturing sector



Note: these data are supplied to the DG-ECFIN, and may differ slightly from the data published on the INSEE website (see 'Source and Methodology' for further details of how these data series are constructed).

Source: INSEE

lifespan of businesses' productive assets, particularly due to the structural effects of capital stocks. Over the long term, the investment rate in intangible assets has increased at the expense of assets in the categories "other civil engineering works" and 'other machinery and equipment' (INSEE, 2017). But assets such as software programmes have a relatively short lifespan: the life expectancy of a programme is 5 years in the national accounts, compared with 60 years for civil engineering works and around 15 years for equipment.

Conversely, the proportion of investment devoted to streamlining or modernising production facilities, i.e. cutting costs or improving productivity, has been falling continuously since 1992. It fell by 5 points between 1992 and 2018. In particular, the share of investment devoted to automating manufacturing processes fell sharply until 2011. On the other hand, investment aimed at improving energy efficiency grew in the period to 2011.

The share of investment devoted to expanding capacity has been growing since 2013

According to the responses to the tendency survey, the share of industrial investment devoted to expanding production capacities peaked in 2000 after a decade of growth, before shrinking from 2000 to 2004. Meanwhile, output from the industrial branch grew significantly in volume terms between 1994 and 2001, then shrank in 2002 and 2003 as a result of the deterioration in the global outlook. The proportion of investment devoted to improving capacities then remained broadly stable until 2007, despite the upturn in industrial output from 2004 onwards. As a result of the 2008 crisis, industrial output dropped and the share of investment devoted to expanding productive capacities also shrank sharply. Industrial output picked up in 2010, albeit only briefly, and began a more sustained comeback in 2013. Capacity investment continued its downward trend until 2013, before picking up again. In 2018 it has returned to its 2008 level. According to the expectations of business

leaders surveyed in April 2019, this share should see another slight increase in 2019 (INSEE, 2019).

The questionnaire used in this INSEE survey serves to break down capacity investment into different sub-categories: investment devoted to increasing output of existing products, or investment related to the introduction of new products. Capacity expansion to produce existing products is correlated to the economic cycle in the manner described above (*Graph 2*). The share of investment related to the introduction of new products, which is probably more sensitive to changes in technology, does not appear to be correlated with the economic cycle. The latter share shrank gradually between 1991 and 2018 (-2 points). It accounts for a larger share of the investments made by companies with 500 or more employees, where it is in decline. Its share is smaller but generally stable in companies with fewer than 500 employees.

Finally, other economic objectives – such as improving safety or working conditions, or protecting the environment – have come to occupy a growing share of the investments declared by businesses in the industrial branch (+3 points between 1991 and 2018).

Trends which can also be observed in other European nations

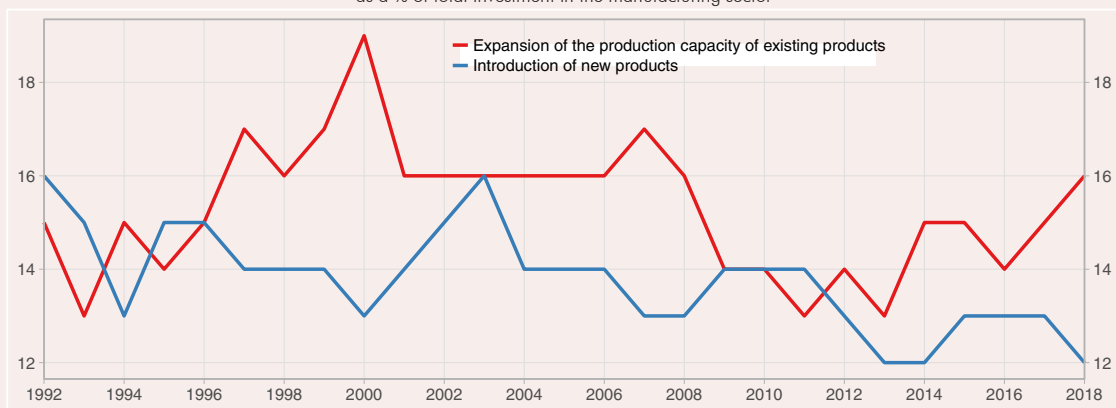
In France, the UK and Spain, the investment rate in the industrial branch has increased since the turn of the millennium.

The trends observed in France (an increase in replacement investment and a decline in investment in production capacities) can be found in several other European countries. Between 2000 and 2018 the proportion of investment devoted to replacing existing capacities also increased in the United Kingdom and Spain (*Table*). This increase was less pronounced in Germany, but can still be detected over the long term.

The proportion of investment devoted to production capacities fell between 2000 and 2018 in Germany, the UK and Italy. In Spain it increased over the same period.

2 - Share of investment in industrial production capacity in France

as a % of total investment in the manufacturing sector



Source: INSEE

French developments

The decline in the proportion of investments devoted to improving productivity has been much more pronounced in Germany than it is in France. In the 1990s this share was bigger in Germany than in France (around 30%, compared with just over 25% in France), but by 2018 the share of productivity investment stood at 13% in Germany and 22% in France.

Investment in production capacity is more often prioritised by German industrial firms

Germany differs from France in terms of the large proportion of industrial investment devoted to expanding production capacities,

especially in the years 2005 to 2016 (Graph 3). In Germany, the share of capacity investment boomed between 2005 and 2008, rising by 12 points, in line with the dynamic performance of the industrial branch. The share of capacity investment then dropped off severely during the crisis, but rapidly bounced back and remained several percentage points above the share in France, which continued to fall until 2013. Between 2013 and 2016, the share of capacity investment remained much more dynamic in Germany than in France, but more recently (in 2017 and 2018) it has fallen at the expense of 'other' economic objectives (safety, regulations and environmental considerations, for example). ■

Rate of investment and breakdown of industrial investments by economic purpose for selected European countries

in%

	France	Allemagne	Royaume-Uni	Espagne	Italie
Average 2000-2003					
Rate of investment in the industrial branch	25	24	19	21	27
Breakdown of investments in the manufacturing sector					
Renewing existing capacities	24	27	36	17	38
Expanding capacities	33	35	31	40	28
Streamlining	24	23	17	27	22
Other	19	16	16	16	12
Average 2015-2018					
Rate of investment in the industrial branch*	29	21	22	27	26
Breakdown of investments in the manufacturing sector					
Renewing existing capacities	28	27	42	20	36
Expanding capacities	28	36	33	32	30
Streamlining	23	14	8	28	21
Other	21	22	18	20	13

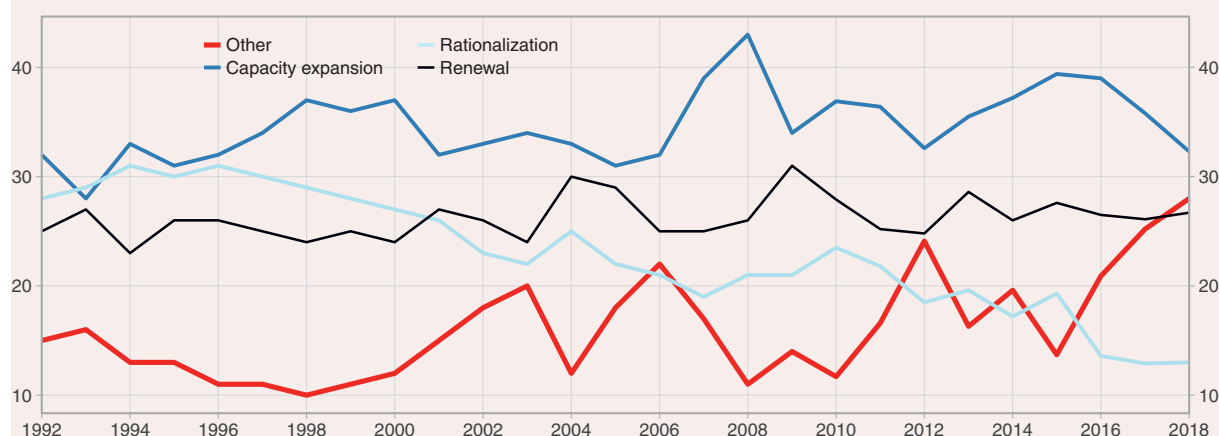
Note: to a certain extent the differences in the investment rate between countries can be explained by differences in the way certain items of investment expenditure are entered into the national accounts, particularly investment in software.

* average 2015-2017

Sources: Eurostat (national accounts), DG-ECFIN

3 - Economic objectives of industrial investment in Germany

as a % of total investment in the manufacturing sector



Source: DG-ECFIN,

Source and Methodology

The business tendency survey on investments in industry is a quarterly survey conducted by INSEE which reaches around 3500 businesses in the industrial branch. The rate of response is around 65%. It is primarily concerned with physical assets (machines, equipment and construction); in terms of intangible investments, only software is taken into account. Twice yearly, in April and October, businesses are also surveyed on the economic motivations behind their investment decisions (multiple responses are allowed):

“For each motivation, please indicate whether you have made or plan to make investments for which this is the principal motivation:

- Replacing old equipment, maintenance,
- Modernisation, streamlining (in order to reduce production costs or improve productivity)
- Expanding your capacity to produce existing products
- Introducing new products,
- Other purposes: safety, the environment, working conditions...

Are the modernisation investments you have made or are planning to make primarily aimed at:

- automating existing manufacturing processes
- introducing new manufacturing techniques,
- making energy savings.”

When multiple primary motivations are cited, they are weighted to obtain a total of 100. For example, if a company reports two principal motivations then each will be assigned a weighting of 50%. Businesses are surveyed in April on their investments in the previous year and the current year, and in October on the current year and the year ahead. The results presented here correspond to the responses received in October regarding investments in the current year made by businesses in the manufacturing sector.

The INSEE investment survey is part of a harmonised system of European surveys overseen by the European Commission’s Directorate General for Economic and Financial Affairs (DG-ECFIN). This allows us to compare the French results with those from business tendency surveys for industry conducted by our European neighbours. In October they also include a question on the economic objective of investments, with four major motivations: “replacement”, “expanding production capacities”, “streamlining” and “other”. However, the national surveys differ in terms of the way the questions are worded, as well as the number of questions and the way they are administered. The survey methods, weighting systems and sample sizes also vary from one country to the next. Finally, there is no unified definition of what constitutes investment. As such, quantitative comparisons between countries need to be approached with a certain degree of caution. Nevertheless, the year-on-year trends can still be analysed pertinently. ■

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