

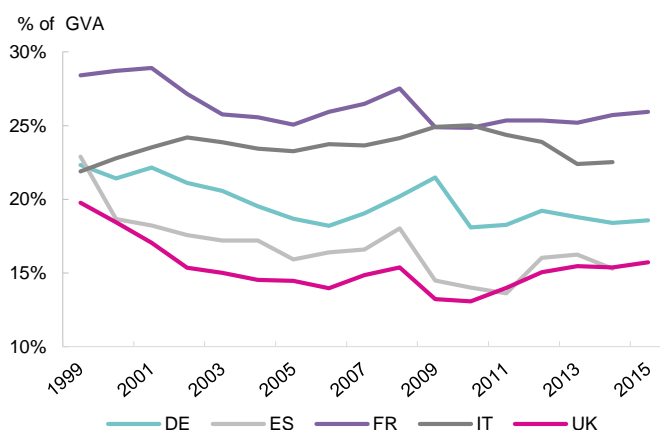
# How weak is manufacturing investment in the UK?

## Key points

- Manufacturing investment as a share of value-added is weaker in the UK than in major European countries.
- The UK underperformance predates the financial crisis. Manufacturing investment fell sharply in the decade leading to the financial crisis and at a stronger pace in the UK than in its major European competitors. Although it has rebounded more strongly since the financial crisis, the gap between the UK and its major European partners still persists.
- The asset composition of UK manufacturing investment reflects a lower spending in machinery and equipment compared with Italy and Germany and a lower R&D intensity compared with France.

## Manufacturing investment is lower in the UK than in major European countries

Chart 1. Manufacturing investment  
Share of gross value-added (GVA) in volume terms, 1999-2015

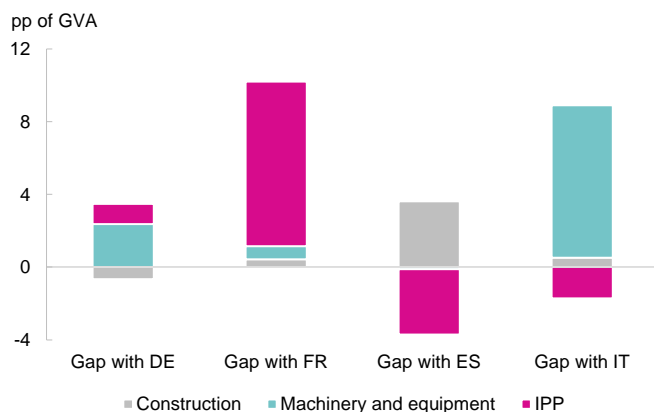


Manufacturers in the UK allocate a lower share of their value added to capital spending when compared with manufacturers in other major European economies.

In 2015, the volume of total manufacturing investment stood at 15.7% of the sector's value added in the UK compared to 25.9% in France and 18.6% in Germany.

## Mind the gap(s)

Chart 2. Asset breakdown of the investment gap  
Percentage points of gross value-added (GVA) in volume terms, 2015\*



The differential between the UK and France is mainly related to the UK's lower investment in intellectual property products (IPP).

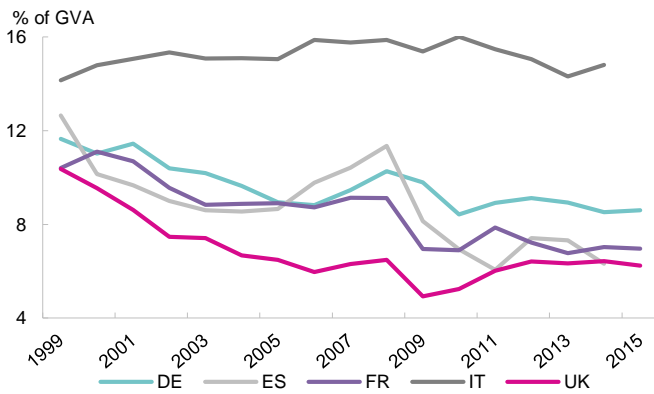
The UK's lower investment in machinery and equipment explains the gap with Germany and, to a greater extent, with Italy.

Although investment rates in the UK and Spain are similar, the composition of investment varies largely – with higher IPP investment but lower construction investment in the UK compared with Spain.

\*2014 for Italy and Spain

# The gap with Germany and Italy – Not enough machines

**Chart 3. Manufacturing investment in machinery and equipment**  
Share of gross value-added (GVA) in volume terms, 1999-2015

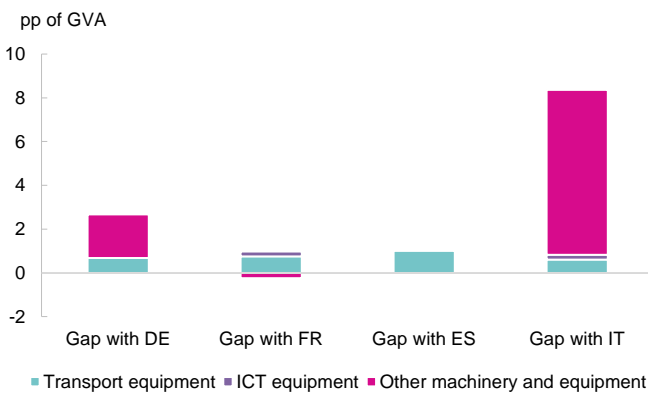


Starting from a similar position in 1999, UK machinery investment fell sharply in the decade leading to the financial crisis, widening the gap with European countries.

UK manufacturers closed the gap with their French counterparts following the financial crisis. This reflects the stronger post-crisis recovery in UK manufacturing investment, particularly driven by a boost in consumer demand, whereas French manufacturers continued to face a more subdued domestic outlook.

Yet the gap with Italy and Germany did not recede.

**Chart 4. Asset breakdown of the investment gap in machinery and equipment**  
Percentage points of gross value-added (GVA) in volume terms, 2015\*



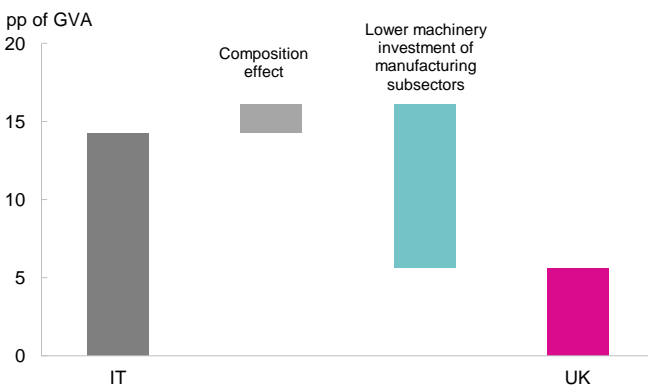
The asset composition of machinery investment partly explains these differences. UK manufacturers are more reliant on transport services, hence a lower investment in transport equipment than their German (0.7pp) and Italian (0.6pp) competitors. Besides, differences in ICT investment are relatively small.

By contrast, investment in other machinery and equipment is considerably lower in the UK than in Germany (2pp) and Italy (7.5pp).

\*2014 for Italy and Spain

**Chart 5. What explains the gap with Italy?**

Percentage points of gross value-added (GVA) in volume terms, 2011\*



The specialisation of the UK manufacturing sector is not to blame for the differential with Italy. Because UK manufacturing is more specialised in capital-intensive sectors, the composition effect actually offsets some of the gap between the UK and Italy in terms of machinery investment rates.

The UK lag in machinery investment stems from the underperformance of individual industries, a trend that is uneven across subsectors and could reflect various explanations.

\*Methodology in page 4

**Chart 6. Subsectors' contribution to the gap in machinery investment**

Percentage points of gross value-added (GVA) in volume terms, 2011\*



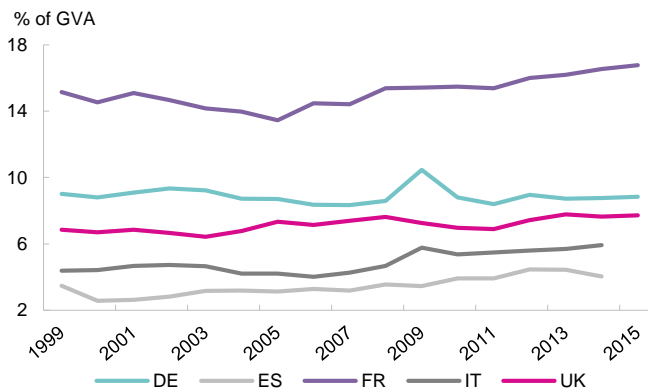
Other manufacturing (furniture, wood and paper, textiles) and oil and gas account for a third of the differential with Italy. These sectors also contracted as a share of UK manufacturing. The investment gap could thus reflect a reallocation of UK capital towards other sectors of specialisation.

On the other hand, the large contribution of labour-intensive industries (e.g. food and drink) could suggest a slower pace of automation. UK manufacturers use 71 robots per 10k employees compared to 301 in Germany and 160 in Italy.

\*Latest data available at the subsector level. Note: Key on page 4

## The gap with France – Not enough R&D

**Chart 7. Manufacturing investment in intellectual property products (IPP)**  
Share of gross value-added (GVA) in volume terms, 1999-2015

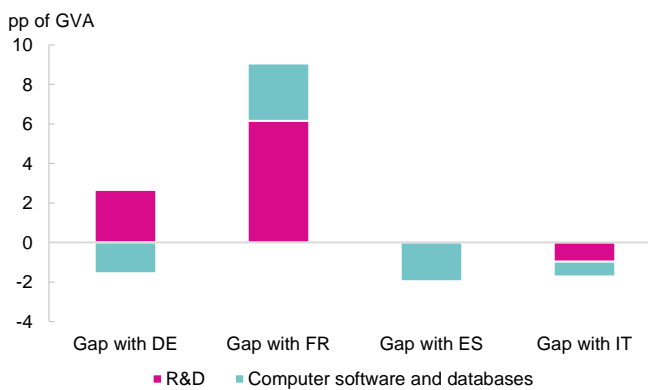


By contrast to the overall investment performance, the UK investment rate in intellectual property products (IPP) increased in the past 15 years from 6.9% of manufacturing value-added in 1999 to 7.7% in 2015.

The improvement was only marginal however, as the UK is still lagging behind Germany where the IPP investment rate stagnated over the same period.

Most importantly, French IPP intensity grew at a sustained pace in the last decade, resulting in a wider gap with the UK.

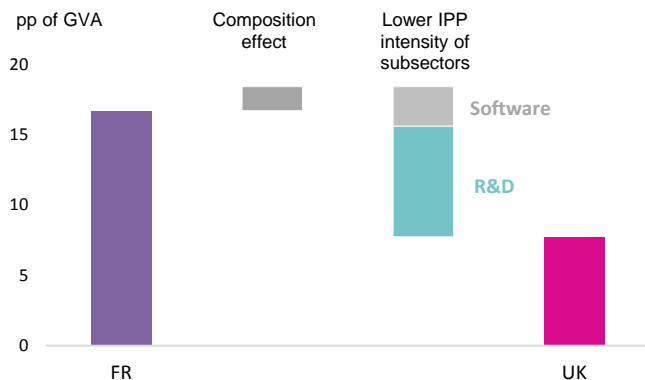
**Chart 8. Asset breakdown of the IPP investment gap**  
Percentage points of gross value-added (GVA) in volume terms, 2015\*



A further asset breakdown of IPP investment shows UK manufacturers are underspending in R&D compared with their French and, to a lower extent, German competitors.

By contrast, UK investment rate in computer software and databases outpaced that of Germany, Spain and Italy in 2015, indicating the uptake of 4IR-related technologies is faster in the UK than in these countries – yet happening at a slower pace than in France.

*\*2014 for Italy and Spain*  
**Chart 9. What explains the IPP investment gap with France?**  
Percentage points of gross value-added (GVA) in volume terms, 2015



Differences in specialisation between the UK and France do not explain the lower IPP intensity of the UK manufacturing sector. In fact, a subsectors' decomposition of the IPP investment gap shows UK manufacturing is more specialised in knowledge-intensive industries as the positive contribution of the composition effect could suggest.

The gap in IPP investment between France and the UK is rather a reflection of the lower R&D intensity of individual subsectors in the UK.

*\*Methodology in page 4*  
**Chart 10. Subsectors' contribution to the gap in R&D intensity**  
Percentage points of gross value-added (GVA) in volume terms, 2015\*














Within manufacturing, transport accounts for half of the difference in R&D intensity between the UK and France in 2015. This masks divergent trends in R&D investment of transport subsectors however, with automotive accounting for a growing share of R&D spending while the share of R&D in aerospace has declined in recent years.

Besides, UK electronic and pharmaceutical sectors both account for almost a quarter of the R&D gap with France.

\*Note: Key on page 4

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## KEY

	Manufacture of food products, beverages and tobacco
	Manufacture of coke and refined petroleum products
	Manufacture of chemicals and chemical products
	Manufacture of basic pharmaceutical products and pharmaceutical preparations
	Manufacture of rubber and plastic products and other non-metallic mineral products
	Manufacture of basic metals and fabricated metal products
	Manufacture of computer, electronic and optical products
	Manufacture of electrical equipment
	Manufacture of machinery and equipment n.e.c.
	Manufacture of motor vehicles, trailers, semi-trailers and of other transport equipment
	Other manufacturing, including: wood and paper, textiles, furniture, repair and installation of machinery and equipment

## Data sources

Eurostat Annual National Accounts database (ESA 2010) – Breakdowns of gross fixed capital formation by asset type, industry and sector. Data refer to investment in manufacturing by the business sector.

## Notes

Most recent data: 2015 for France, Germany, UK; 2014 for Italy and Spain. The detailed breakdown of gross fixed capital formation by industry (up to 64 subsectors – NACE rev. 2) is only available for France, Italy and the UK.

## Methodology: decomposition of the investment gap

The investment gap is the difference between the UK and its partners in gross fixed capital formation as a share of gross value-added (GFCF/GVA). It is decomposed into two components: (i) a composition effect – i.e. differences in investment rates stemming from differences in the structure of the manufacturing sector; and (ii) differences in subsectors' investment intensity. The latter is further decomposed at the subsectors level in order to account for sector-specific investment gap.

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## About EEF

EEF, the manufacturers' organisation, is the representative voice of UK manufacturing, with offices in London, Brussels, every English region and Wales.

Collectively we represent 20,000 companies of all sizes, from start-ups to multinationals, across engineering, manufacturing, technology and the wider industrial sector. We directly represent over 5,000 businesses who are members of EEF. Everything we do – from providing essential business support and training to championing manufacturing industry in the UK and the EU – is designed to help British manufacturers compete, innovate and grow.

From HR and employment law, health and safety to environmental and productivity improvement, our advice, expertise and influence enables businesses to remain safe, compliant and future-focused. More information at [www.eef.org.uk](http://www.eef.org.uk)

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