Flash Economics

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Why France has deindustrialised and failed to develop its technology sector

France's deindustrialisation is marked and has not been offset (as in the United States, for example) by the development of a significant technology sector.

Deindustrialisation stems from:

- High labour costs in industry;
- Insufficient automation and R&D efforts.

The lack of development in the technology sector stems from:

- Difficulties in financing start-ups of more than a modest size, given the absence of pension funds;
- The low proficiency in science of the French;
- Insufficient R&D spending and technological investment by companies.

The result of deindustrialisation combined with weak development of the new technologies sector is a decline in the expertise level of the French economy and a worsening of foreign trade.

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France's deindustrialisation is marked

France's deindustrialisation is marked (Chart 1), as can be seen, for example, when comparing the weight of the manufacturing industry in France and Germany. **Unlike in the United States, this deindustrialisation has not been offset by a significant growth of the technology sector** (Charts 2a/b).

Chart 1
Real value added in manufacturing
(as % of real GDP)

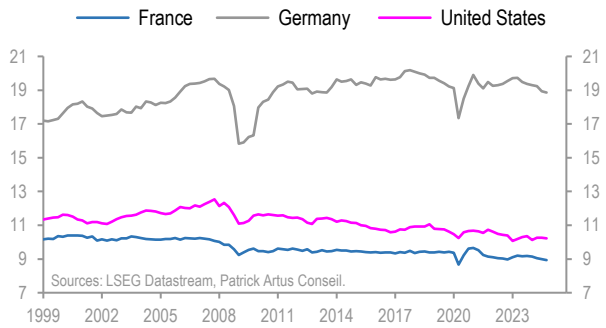


Chart 2A
Investment in information and communication technologies (in value terms, as % of nominal GDP)

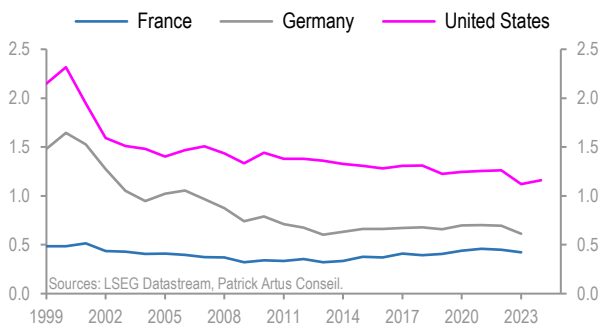
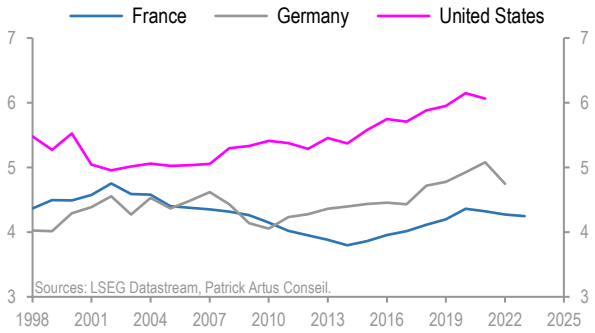


Chart 2B
Gross value added of the ICT sector
(as % of nominal GDP)



On the one hand, we attempt to analyse the roots of France's deindustrialisation, **and, on the other, the slow development of the new technologies sector**.

The roots of France's deindustrialisation

France's deindustrialisation stems from:

- **The high cost of labour, including social security contributions** (Table 1), which encourages relocation, especially given the low expertise level of industry;

Table 1: Mean nominal hourly labour cost per employee in the manufactring sector (2023, USD)

Country	Mean nominal hourly labour cost (USD)
Thailand (2016)	1.7
Philippines (2019)	2.1
Brazil (2020)	2.5
Turkey	5.8
China	9.5
Romania	10.5
Poland	14.2
Hungary	14.7
Portugal	15.8
Slovakia	18.2
South Korea (2024)	21.1
United Kingdom (2019)	26.3
Spain	28.0
Slovenia	28.1
Italy	32.7
United States	43.7
France	**48.2**
Germany	49.7

Sources : ILO, LSEG Datastream

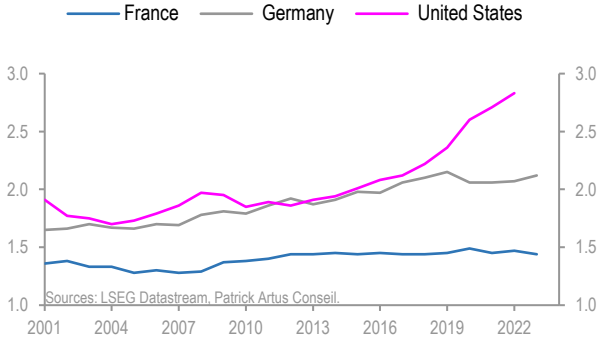
- The industry's low level of expertise, which stems **from the low scale of automation** (**Table 2**), **and the low level of corporate research and development** (**Chart 3**).

Table 2: Robots installed per 10,000 employees in the manufacturing industry (2023)

Country	Robots per 10,000 employees
South Korea	1012
China	470
Germany	429
Japan	419
Sweden	347
Denmark	306
Slovenia	306
Switzerland	302
United States	295
Netherlands	264
Austria	245
Italy	228
Canada	225
Belgium	224
Czech Republic	207
Slovakia	201
France	**186**
Spain	174
Finland	173

Source : World Robotics 2024

Chart 3
Corporate R&D spending (as % of nominal GDP)



Roots of the slow growth of new technologies in France

The slow development of the new technology sector in France can be explained by:

- **Financing difficulties**, resulting from the virtual non-existence of pension funds and its corollary: **the small size of venture capital funds**, which, in 2024, raised €2.8 billion in France compared to $250 billion in the United States;
- The shortage of **corporate R&D spending** (Chart 3, above) **and investment in new technologies** (Chart 2a, above);
- **The low level of scientific proficiency in France**, particularly among young French people (**Table 3**).

Table 3: Results of OECD PISA surveys (numeracy score, by decreasing score in the 2022 survey)

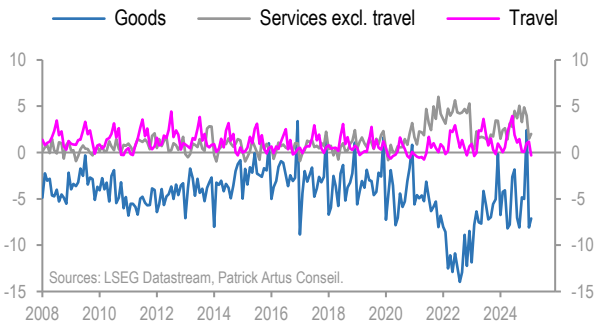
Pays	Score
Singapour	575
Japan	536
Korea	527
Switzerland	508
Canada	497
Netherlands	493
United Kingdom	489
Sweden	482
Germany	475
France	**474**
Spain	473
Italy	471

Source: OCDE

Summary: deindustrialisation and weak development of new technologies in France

France is both deindustrialised and characterised by a weak development of the new technologies sector. As a result, there has been **an overall decline in the quality of the French economy and a deterioration in foreign trade** (**Chart 4**), despite the success of selected industries (aerospace, luxury goods and, to a lesser extent, pharmaceuticals) and tourism.

Chart 4
France : Trade balance in goods and services
(monthly data, EUR bn)



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