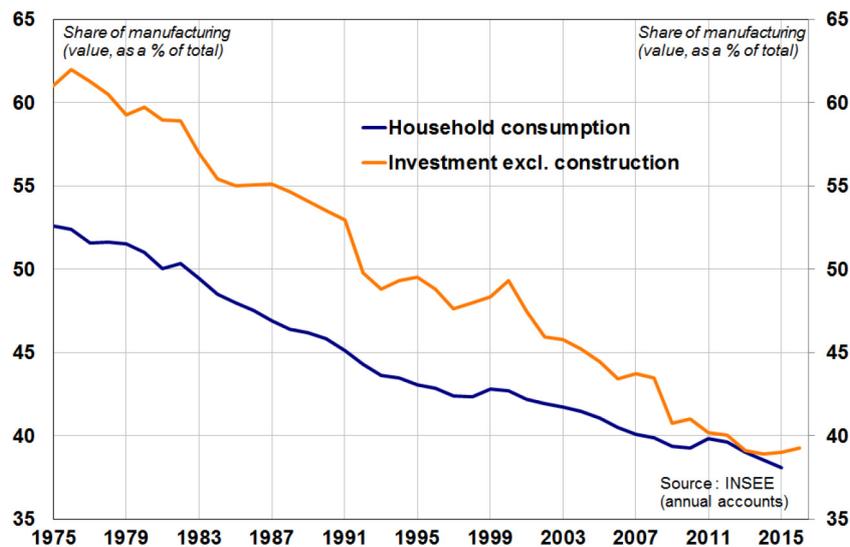


The causes of deindustrialisation in France

By Yannick Kalantzis and Camille Thubin

The share of the manufacturing industry in French GDP has fallen by 9 percentage points over the past forty years. This decline is mainly due to technical progress and consumer preferences. Foreign trade has only played a minor role.

Chart 1: Decline in the share of manufacturing in consumption and investment in France



What explains the decrease in the industry's share in GDP in value terms, from 19% in 1975 to 10% in 2015? Three factors are generally put forward: technical progress, consumer preferences and foreign trade. In this post, their impact is assessed on the basis of the simple idea that national industrial production is either i) consumed locally, or used by ii) investors or iii) other firms in their production process, or iv) exported; we therefore analyse the decline in the share of industry in GDP according to: the content of consumption in manufactured goods, that of investment, the origin of inputs in the production process, and foreign trade. Finally, we quantify their respective contributions.

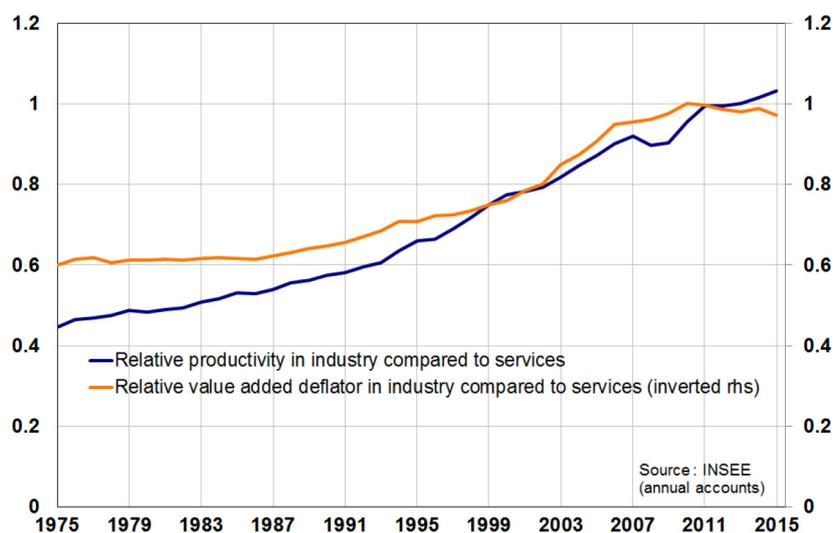
Decrease in the share of industry in consumer spending

Households have cut back the share of manufactured goods in their consumer spending over the past forty years, in favour of services (see Chart 1). This development can be attributed to consumer preferences or technical progress. The relative quantities of manufactured goods and services depend on consumer preferences. As their income rises, households consume more services to the detriment of industrial goods,

according to Engel's law. This law makes a distinction between superior goods (sophisticated services and products) whose share in the budget increases over time, and inferior goods (food and low technology products).

However, the decline in the share of industrial goods in household spending in value terms may also be due to technical progress. Thanks to innovation, industry has recorded faster productivity gains which have resulted in lower relative prices (see Chart 2, where the productivity differential between industry and services has moved in tandem with the relative price of services). This fall in prices leads to a decline in the industry's share in consumption in value terms, provided that it is not fully offset by the increase in the quantities consumed.

Chart 2: faster productivity gains in industry



According to national accounts data, the decline in the share of industrial goods in consumption in value terms stems almost as much from the fall in relative volumes as from relative prices. Technical progress has therefore played a major role in this development, as well as changes in preferences, since relative quantities have decreased despite the fall in their relative price.

Negative contribution of investment and production structures

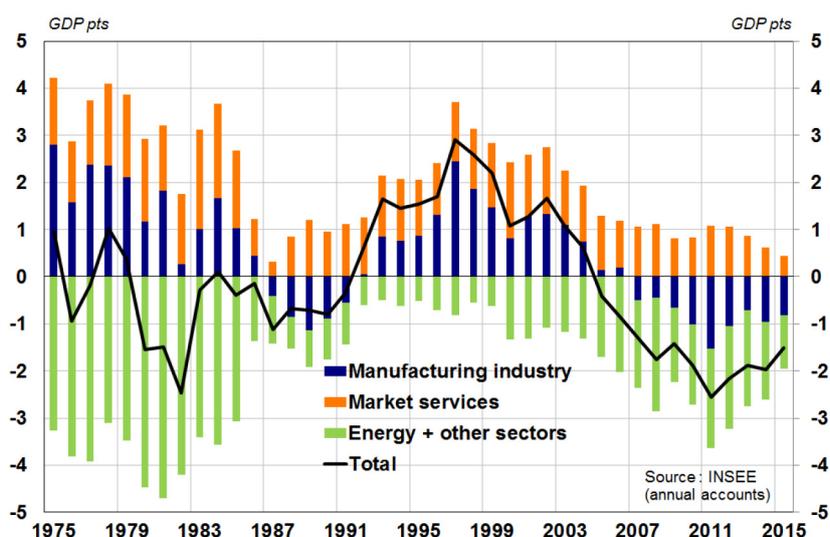
Like consumption, investment has also been more oriented towards services (see Chart 1). Similarly, changes in the structure of production have had an adverse effect on industry. In particular, spending on services by the manufacturing sector has increased. This development is not the result of outsourcing which consists in transferring activities previously performed by industry (accounting, etc.) to services. It almost exclusively reflects an increase in the relative price of services, and not that in relative volumes. Technical progress, which is behind the rise in the relative price of services, is the factor at work in this development.

Changes in commercial specialisation to the detriment of industry

Finally, foreign trade can influence the pace of deindustrialisation through two distinct channels: trade specialisation and the nation's net savings. Each economy is more or less specialised in industry according to its comparative advantages: for a given total trade balance, an economy specialised in industry will have a higher industrial balance and a lower balance in other sectors, which is associated with a higher share of industry in GDP. In addition, for a given specialisation, an economy's total trade balance reflects its net savings. As trade remains dominated by industrial goods, the share of industry in GDP is therefore also linked to the total trade balance – consisting mainly of manufactured goods – i.e. to net savings.

The trade balance of manufactured goods is weaker today than it was forty years ago, despite a temporary improvement in the 1990s (see Chart 3). Its contribution to the process of deindustrialisation is the result of a specialisation effect rather than a deterioration in France's total trade balance (net savings effect). Indeed, the oil counter-shock of the mid-1980s and France's lesser dependence on oil have helped to reduce the energy deficit while the total trade balance for the past ten years has been at a level close to that of 1975-1985. For a given net savings level, France therefore needs to export fewer manufactured goods to finance a lower energy bill (see Chart 3).

Chart 3: the trade balance on manufactured goods is weaker today than it was forty years ago



Technical progress and consumer preferences: the drivers of deindustrialisation

In order to quantify the contributions of these developments to the decline in the share of industry in GDP, we use a four-sector analytical framework (manufacturing industry, market services, construction, other sectors) that distinguishes between the components of final demand. Data from INSEE's input-output tables from 1975 to 2015 are fed into it. The contribution of foreign trade is broken down into a specialisation effect and a net savings effect using a revealed comparative advantage method similar to that used by CEPII. We obtain the following results:

- 47% of the decline in the share of the manufacturing industry in GDP can be attributed to changes in the structure of production (of which 26% is due to the increase in the manufacturing sector's spending on services), which results almost exclusively from technical progress,
- 39% of the decline in the share of the manufacturing industry in GDP is due to changes in households' consumption pattern - which is the result of both technical progress and consumer preferences,
- the contribution of the non-construction investment structure amounts to 13%,
- changes in the external balance only account for 13% of the decline (of which 9pp is linked to a specialisation effect and only 3pp to a net savings effect).

In addition to these downward contributions, there is a residual upward contribution, explained by other factors whose impact is secondary, such as the composition of government consumption.