

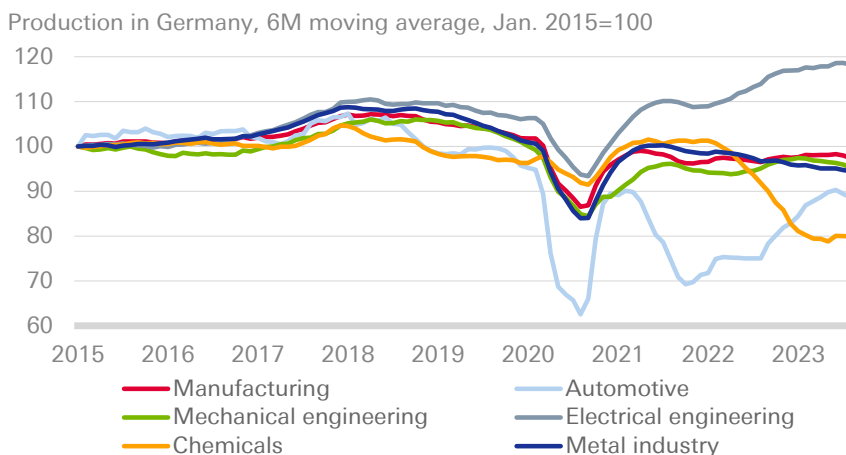


German industry: Structural change underway

The production trend of the major industrial sectors in Germany was fairly uniform from 2015 until the start of the coronavirus pandemic. Since then, the coronavirus crisis, the energy price shock and structural sectoral trends have led to significant distortions. Compared to the beginning of 2015, manufacturing in the most dynamic sector (electrical engineering) has increased by 18%. In the chemical industry, there has been a 20% decline over the same period.

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Figure 1: German industry: Structural transformation underway



Source: Federal Statistical Office

The chart indicates some structural shifts in the German industrial landscape:

- Among the industrial sectors considered, only **electrical engineering** has managed to increase its production compared with pre-coronavirus levels. In all other sectors, output is currently (significantly) below the historic highs reached in 2017/18. We also believe the medium-term prospects for electrical engineering in Germany are quite favorable because the sector should benefit from a number of megatrends, some of which are being pushed by the government. These include decarbonization and electrification (climate protection and energy transition) and digitization, which will lead to additional orders. What is more, the sector is less affected by the high energy prices in Germany because its production is not energy-

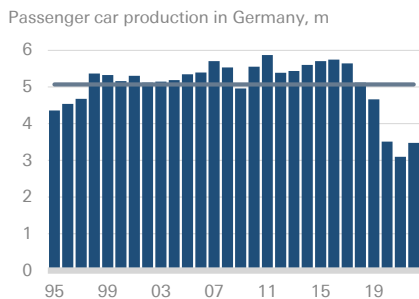


intensive.

- Besides electrical engineering, we are also fundamentally optimistic about **mechanical engineering** in Germany. It is true that the global economic slowdown has had a negative impact on orders and production for some months. Nevertheless, trends toward robotics and automation, the global expansion of physical infrastructures, the drive for greater resource and energy efficiency, and the linking of traditional mechanical engineering with digital technologies (artificial intelligence, Industry 4.0, etc.) all point to increased demand for modern machinery. Like electrical engineering, mechanical engineering does not produce in an energy-intensive way. The sector has also succeeded in recent decades in consolidating its position in international price competition by focusing on high-quality specialized machinery. Historically, the German mechanical engineering sector has also been able to cushion the devaluation of currencies from competitor countries against the German mark and the euro. Finally, the medium-sized structure of the sector speaks for a greater attachment to Germany as a business location. The biggest challenge is likely to be securing sufficient skilled workers in Germany in the medium term to ensure that the sector remains among the world leaders in the individual branches of mechanical engineering.
- Since the coronavirus pandemic, volatility in the **automotive industry** has been by far the most pronounced. At the beginning of the coronavirus crisis, the industry briefly drove production down much more sharply than other sectors due to pandemic-related restrictions and in anticipation of falling demand. The subsequent recovery was and continues to be hampered by the lack of availability of inputs (semiconductors) and other supply chain disruptions. In addition, global auto demand remained subdued throughout the period. As a result, a good 5.3 million fewer cars were produced cumulatively in Germany from 2020 to 2022 than from 2017 to 2019 (-34.6%). In addition to the special factors, the transformation in the sector towards electromobility is likely to lead to net losses in value added in Germany. Production cutbacks are likely to be unavoidable, particularly for suppliers mainly producing parts and components for cars with internal combustion engines. Nevertheless, the German automotive industry has good chances in the battle for market share in the field of e-mobility, especially in the premium segment. A recent ifo study shows that German companies are very well positioned in terms of innovative capacity and employee qualification levels. Irrespective of the trend towards e-mobility, it will probably be more difficult to build cars in the volume segment in Germany in the future for cost reasons. Thus, we believe it is unlikely that production levels will return to previous highs.



Figure 2: Car production at a historically low level



Source : VDA

Figure 3: Steel production in Germany below long-term average



Source : WV Stahl

- The **chemical industry** has been particularly hard hit by the war in Ukraine and the subsequent rise in energy prices, as well as the halt in direct Russian deliveries of pipeline gas to Germany. At the current margin, production in the industry is 23.6% below the peak at the end of 2017, and we expect much of this decline to be structural in nature, with the lost production not returning to Germany. Other energy-intensive sectors such as the building materials and paper industries (not shown in the figure) have also suffered significant declines in production in recent quarters, but in the case of the building materials industry these can also be explained by the recent weak development in the construction sector. Concessionary industrial electricity prices for energy-intensive sectors, which are already questionable for competition reasons, are likely to slow down the loss of value added at the site, but not stop it entirely. The energy and climate policy outlook is likely to be too uncertain for this, and the expected difference in energy prices compared with other countries (including the US and China) is likely to remain too large.
- In the **metals industry**, fluctuations in domestic production have been comparatively small since 2015. However, the weaker economy and higher energy prices have been reflected in a downward trend in production since the beginning of 2021. Within the metals industry, we are more optimistic for the manufacture of metal products than for metal production. The latter is coming under structural pressure from high energy prices. We believe it is unlikely that all capacities can be maintained in Germany in the desired green transformation of metal production. This applies, for example, to the planned transformation of steel production to green hydrogen. Due to global overcapacities in the sector, high energy prices in Germany and uncertainty regarding the physical supply of green hydrogen, steel production in terms of volume is likely to trend to decline in the coming years. Even government subsidies for the transformation are unlikely to prevent this entirely, especially as the financial capacity of the state is limited. Steel will still be produced in Germany in the future. However, we believe a lower and possibly declining level is in the cards. In 2022, steel production in Germany was 15% lower than in 2017.

Structural change also triggered by regulation

Structural change is underway in German industry and could accelerate further in the coming years. There will be (relative) winners and losers. In principle, industrial structural change is nothing new – and nothing negative. In earlier decades, for example, the textile and apparel industry played a much greater role in Germany than it does today. However, due to wage cost differences, the clothing industry, for example, relocated its production to foreign sites with lower wages at an early



stage. As a result, consumers in Germany benefited from lower prices for clothing. In this structural change, the textile industry has, over the decades, concentrated more on so-called technical textiles, where innovative strength is in demand. German companies are well positioned in this field, and manufacturing in Germany is still worthwhile. Another example of long-term structural change is consumer electronics. Here, the majority of products sold in Germany are not produced locally but abroad (Asia), where production conditions are more favorable.

In the past, such structural shifts were often a market result (e.g., wage cost differences). However, future structural change is also likely to be triggered in part by different regulatory framework conditions. These include not least energy and climate policy, on the one hand with its influence on energy prices and security of energy supply, and on the other with subsidies motivated by climate policy to promote manufacturing in Germany.

We expect the share of manufacturing in total gross value added to decline further in the coming years. In 2016 it was 22.9%. Last year, it was 20.4%. In the future, it will be more important to distinguish between Germany as an industrial location and German industrial companies. Germany's position in international competition has tended to deteriorate regarding classic location factors such as the tax burden on corporations, wage levels, energy costs, digital infrastructure or flexibility in working hours. It is true, however, that Germany still has a high level of innovative strength. Still, unfavorable economic conditions are a burden for the near future. In contrast, large industrial companies in particular can shape their production sites over time according to their individual cost and customer structures.

Figure 4: Industry is declining in importance



Source: Eurostat



Appendix 1

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