



The Importance of the Chemical Industry for China's Industrial Sector

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As anyone working in the chemical industry will tell you, the chemical industry is an important contributor to China's GDP. But how important is it really? And is its importance increasing or decreasing? A look at China's statistical data will help answer these questions.

Chemical production is part of the industrial sector, which accounted for 33.9% of China's GDP in 2017. Within this sector, it accounts for about 7% of the value added, or 2.4% of China's total GDP. Is this a lot? Maybe rather less than one would have imagined. On the other hand, a study such by the International Council of Chemical Associations indicates that for every US\$1 generated by the chemical industry, US\$4.20 is generated anywhere in the economy. That would increase the direct and indirect GDP contribution of China's chemical industry to about 10%.

Let us take a closer look at the statistical data, as summarized in Fig. 1.

Note that the figure shows relative figures for any parameter, i.e., the ratio of the chemical sector to the total industrial sector. So, an increase indicates that the chemical sector has become a more important part of the industrial sector – it does not necessarily indicate an increase in absolute terms.

For the number of enterprises, this share is relatively constant over the decade observed, staying within a 6%-7% range, though with a slight decline in the recent past. In particular, between 2014 and 2017 the number of chemical enterprises fell by 7.5%, a much faster decline than the 1.4% decline observed for all industrial enterprises. This probably indicates the higher consolidation

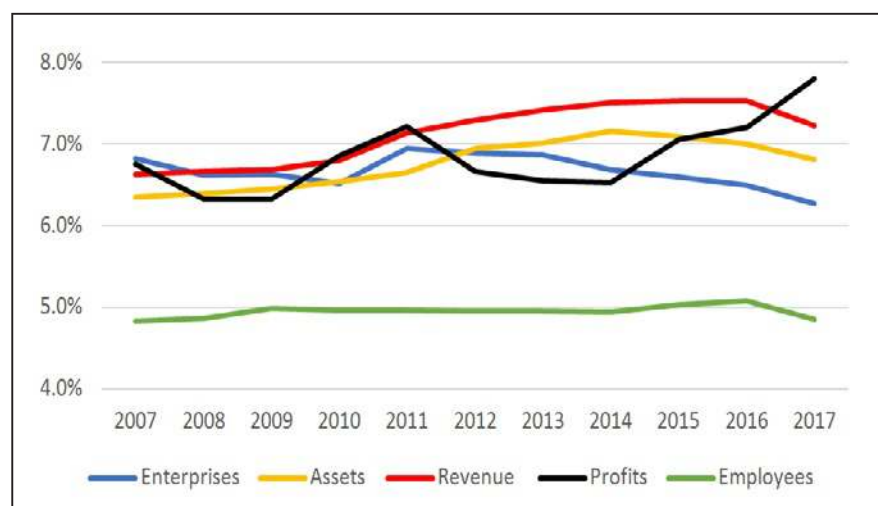


Fig. 1: Share of China's chemical industry as part of the Chinese industrial sector, by parameter and year



Tab 1 Ranking of chemicals production among China's industrial segments by revenue

Parameter	Ranking among industrial segments (2007)	Ranking among industrial segments (2017)
Number of enterprises	3	4
Total assets	4	3
Revenue from primary business	2	3
Total profits	3	2
Average number of employees	7	5

pressure on the chemical industry caused by tightened environmental regulation.

In contrast, the share of employees of the chemical sector has stayed at an almost constant level during the last decade. In absolute terms, this means the number of chemical employees has been declining in recent years.

For the three remaining parameters (assets, profits and revenue), the chemical sector has slightly increased its share of the total industrial sector over the last 10 years. However, for the share of revenue and assets, the most recent data indicates a slight decline that is not observable for profits.

Overall, the analysis confirms the status of the chemical sector as an important part of the Chinese industrial sector. However, there are also some signs of a slight reduction in importance compared to newer, faster-growing segments such as automotive production and production of computers. For example, the chemical sector has slid

down the ranks with regard to the number of enterprises, the total assets and the revenue (see Tab. 1).

Further evidence for a relative decline of the importance of the chemical industry comes from a comparison between China GDP growth and revenue growth of the chemical industry (for which data of the National Bureau of Statistics was used). As

obvious in Fig. 2, while chemical revenue growth was above GDP growth in the first few years of the observation period, it is now lower. Of course, the chart also shows the higher volatility of chemical industry growth, which is at least partly due to the strong impact of the oil price.

In a way, this is not surprising. In Western countries, chemicals have been perceived as

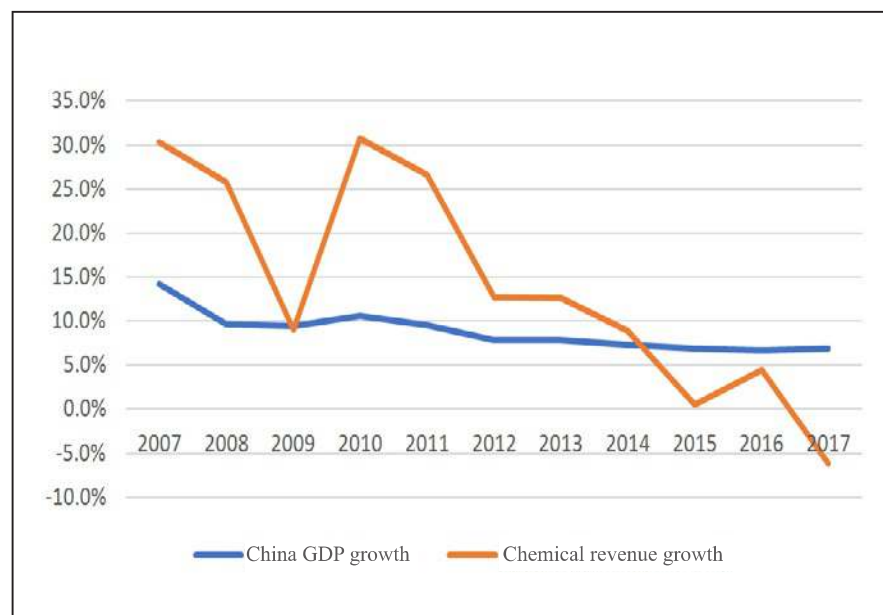


Fig. 2: Year-on-Year growth of Chinese GDP and of revenue of Chinese chemical industry



a mature industry sector for quite a while. Chinese industry participants do well to adapt to this maturation in China, too. It will particularly mean lower growth rates and ongoing industry consolidation. In fact, industry maturation has already hit some of the most commoditized parts of the industry. For example, Chinese sulfuric acid production is no longer decreasing but has even showed a slight decline in the past few quarters (Fig. 3).

In conclusion, the picture is mixed. While China's chemical industry is and will remain an important part of China's GDP, and will very likely keep growing in absolute terms, its importance is likely to be shrinking in the

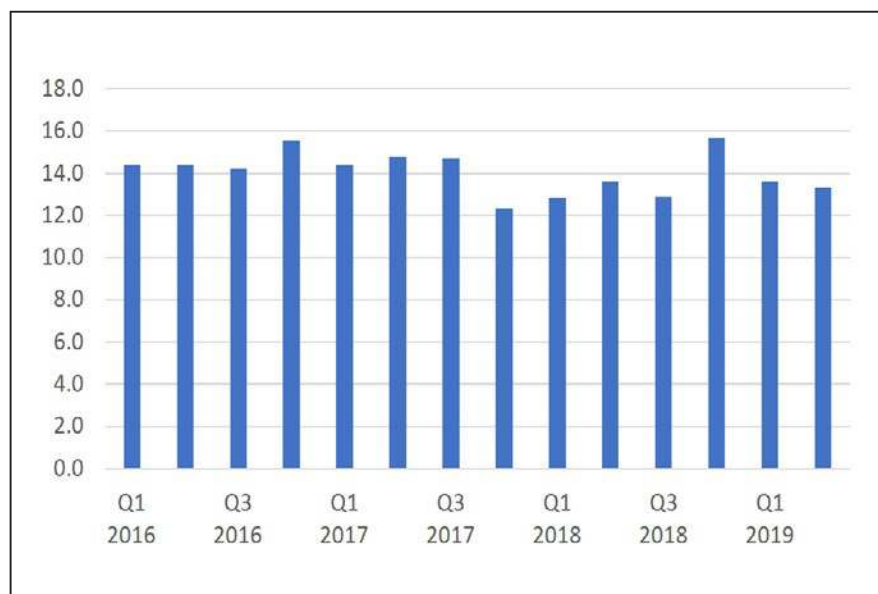


Fig. 3: Quarterly Chinese production of sulfuric acid (million tons)

longer run. For industry participants, this may mean that the focus should be on activities that are aligned with these developments, e.g., participation in industry consolidation, rather than in activities that rely on continued high growth, e.g., large capacity expansions. ■

