

Oxford Economics Report - Executive Summary

Oxford Economics has conducted, on behalf of Cefic, evidence-based research on the 'Evolution of competitiveness in the European Chemical industry: historical trends and future prospects'.

The chemical industry (defined in this report to exclude pharmaceuticals) is one of the EU's most successful sectors, boasting €527 billion in sales in 2013, making it the second-largest global producer. Despite this strength, the current situation appears to be cause for worry. The chemical sector was severely affected by the 2008-09 global recession, and after a rapid cyclical turnaround, production has stagnated since early 2011. Over a longer time horizon, the EU's share of global production and exports has fallen considerably, potentially suggesting a decline in competitiveness, amongst other factors.

In order to better understand the competitive performance of the EU chemical industry in the global market, Oxford Economics has applied the constant-market share methodology to chemical exports coupled with econometric analysis.

Using constant-market share analysis of chemical exports at the aggregate and subsector level for the EU and several other large developed and developing countries that are significant chemical producers, this report confirms that the majority of the decrease in extra-EU export market share observed over the past 20 years (including that since the 2008-09 financial crisis) is due to declining competitiveness as opposed to slow-growing destination markets. Declines have also been seen in other developed nations at the expense of China and Saudi Arabia, although the magnitude of the European decline is larger than that of the United States. The decline has been driven primarily by petrochemicals and polymers. Due to the erosion of competitiveness, the EU has slipped from number three to four out of seven leading global chemical exporters with regard to absolute levels of competitiveness. Within the EU, the countries with the highest level of competitiveness are the Netherlands, Belgium and Germany, while Spain and Poland have leapt in the rankings at the expense of France and the UK.

There are many potential reasons for the EU's competitiveness decline, including high energy prices, lagging innovation, currency appreciation, high labour costs, regulatory and tax burdens, among others. This report uses an econometric model that links changes in chemical competitiveness to these potential drivers, and finds that sector R&D intensity, energy prices and the exchange rate all have strong quantitative links to competitiveness. Higher labour costs are associated with declines in competitiveness, but the quantitative effect is not large.

The results provide rigorous evidence-based support to two hypotheses about chemical competitiveness:

- The US shale gas boom has improved the competitiveness of US producers (particularly in petrochemicals and polymers) relative to European countries and Japan
- Product and process innovation are a critical factor in delivering more value to the customer to compensate for cost disadvantages in developed countries.

We also think that the regulatory burden and quality of infrastructure are important drivers of competitiveness, but a lack of chemical sector specific data prevented us from rigorously testing this hypothesis.

The econometric results allow scenario analysis, by which alternative assumptions about the future path of the drivers in the EU can show us the implied change in export competitiveness, and hence export market share.

In terms of magnitude, a reduction in European energy prices would provide the most pronounced boost in competitiveness. Encouraging more R&D investment is also critically important, in order to sustain these competitiveness gains and form the foundation for the longer-term growth of the sector. Taken together, they hold the potential of halting the secular decline of chemical export market share observed over the past decade, adding €35 billion to EU GDP and creating more than half a million new jobs across the economy over the next 15 years.

The full report can be downloaded from <http://www.cefic.org/Documents/PolicyCentre/Competitiveness/Oxford-Study-2014.pdf>

