Horizon 2015

Is the European chemical industry losing its global leadership?

cefic

What future for the European chemical industry?

The European position as a major production and R&D base for the chemical industry is eroding. This is the conclusion from a major Cefic study published in March 2004. The study, called 'Horizon 2015: Perspectives for the European Chemical Industry' and conducted by 150 experts, shows that the industry's long-term competitiveness can only be secured if industry and public authorities take decisive action together. This has serious implications for the rest of the European economy.

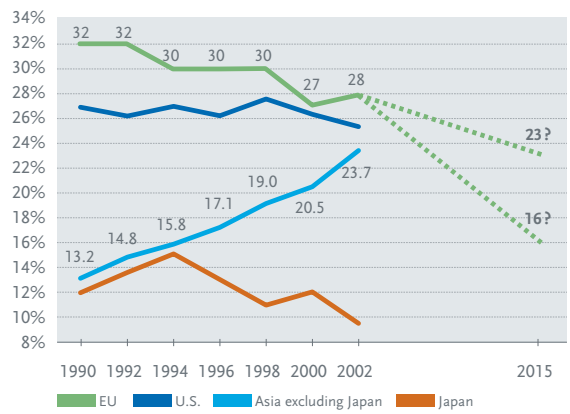
Europe needs a healthy chemical industry

Declining global leadership

The EU's share of global chemicals production will decrease over the next decade, largely reflecting the emergence of Asia as an economic powerhouse. The drop could be dramatic: In 1992, the EU was the world's largest chemicals producing region with 32% of world output. Whether the EU retains a significant share of the global chemicals market by 2015, however, will largely depend on industry and European authorities acting together to take appropriate measures.

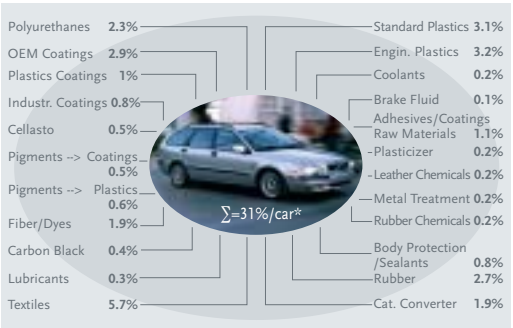
This could have important consequences on the overall economy. The chemical sector supplies virtually all other sectors of European industry and chemicals are an important part of the broader industrial value chain. To take just one example, chemical products account for nearly one-third of the material costs in the manufacturing of an automobile. Chemicals are behind many new applications in other manufactured goods.

The EU's share of global chemicals production is dropping



Source: Cefic
Note: figures exclude pharmaceuticals and are previous to Enlargement

Chemical products account for nearly one-third of the material cost of an automobile



Source: Cefic

* European middle class car

Potential for innovation at stake

The chemical industry is a major source of new applications in other sectors of the economy where it helps generate added value. Chemistry underpins many innovations in information technology, aerospace, medicine, hygiene, nutrition, mobility, housing, clothing and other areas.

Chemistry is fully part of the next wave of industrial innovation. It is closely linked to new developments in bio- and nanotechnology, which are giving birth to many new applications and processes. If the European chemical industry is in jeopardy, then so is Europe's potential for industrial innovation.

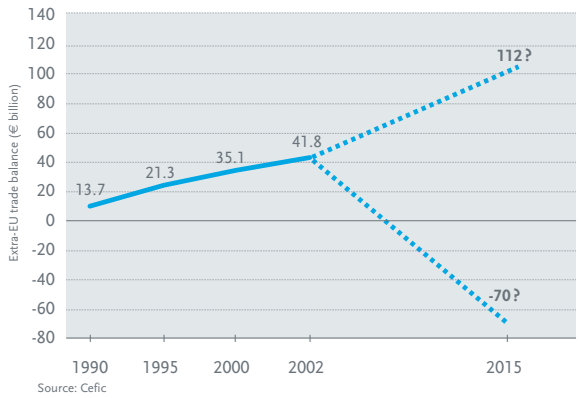
Casting uncertainty on the EU's trade balance

Chemicals accounted for an impressive 45% of the EU manufacturing surplus in 2002 and thus represent a major source of economic strength for Europe. Beneath the surface, however, the trade picture isn't nearly as impressive.

A growing volume of EU chemical exports actually reflects efforts to develop new, offshore markets – before massive new production capacity comes on stream in Asia and other parts of the world. Petrochemical imports from the Middle East, meanwhile, are on the rise, reflecting substantial investment in local capacity. Current export volumes, therefore, are unlikely to be sustained.

The picture by 2015 could be entirely different: If nothing is done to improve the industry's competitiveness, the EU's chemicals trade surplus will most likely either have shrunk dramatically or swung to a deficit. Creating the right conditions, however, could help maintain – or even increase – the positive trade balance and thus preserve a vital economic health factor.

EU's chemicals trade surplus in jeopardy
(Figures exclude pharmaceuticals)



Source: Cefic

The EU chemical industry is losing its competitiveness

A less favourable business environment

Regulation, energy and transport have a strong impact on the industry's competitiveness. On all three counts, the picture in Europe compares unfavourably to that in other parts of the world.

Regulation

On the regulatory front, the EU is continuing to tighten its health, safety and environmental laws, more than in most other parts of the world. Introducing a new chemical substance in the EU takes three times longer and costs 10 times more than in the U.S. – and regulation presently in the EU pipeline is unlikely to make things easier or less costly in the future.

Energy

The chemical industry is energy-intensive. The liberalisation of EU gas and electricity markets, however, is still far from completed, resulting in higher energy costs than in North America and Asia. European producers, meanwhile, are making successful efforts to meet the EU's greenhouse-gas commitments under the Kyoto Protocol.

Transport and logistics

Europe's transport infrastructure is severely overloaded. Meanwhile, the liberalisation of transport services such as rail remains unfinished as is completion of a seamless, cross-border pipeline network for ethylene, propylene and other olefins. The result is that logistics costs are 13% higher in Europe than in the U.S., another important disadvantage for the EU chemical industry.

The consequences...

The extra cost burden is reflected in the European chemical industry's operating margins, which are substantially lower than those of its U.S.-based competitors. This profitability gap has widened consistently over the past 10 years, reflecting Europe's weakening competitive position. As an importer of raw materials and as a major exporter of chemicals, it is all the more important for the EU to address the key competitive factors of regulation, energy and transport.

Shrinking capital investment

Investment in the EU's chemical sector is shrinking steadily, reflecting lower return expectations and undermining the industry's long-term competitive position. The industry's capital spending has dropped to 5% of sales from 6.5% of sales in the 10 years to 2002.

The international investment picture is even more worrisome. Direct investment by the EU chemical industry in non-EU countries totalled € 27 billion in 2000, a figure five times larger than the € 5.2 billion invested by foreign industrialists in the EU chemical sector during the same period. The capital outflow by the EU chemical industry represented no less than one-third of all direct foreign investment by the entire EU manufacturing sector.

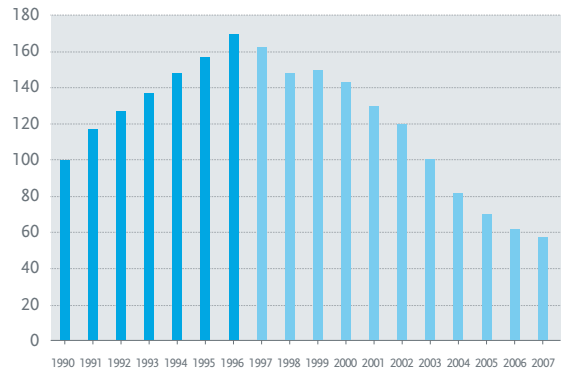
Eroding human investment, R&D and skills

Europe's chemical industry is making a major contribution to satisfying society's needs with new products. But preserving this ability to innovate rests on continued investment in skills, research and development.

R&D spending by the chemical sector in the EU compares unfavourably with other regions. In 2002, R&D expenditure as a percentage of sales amounted to 1.9% in the EU chemical industry – down from 2.4% in 1998.

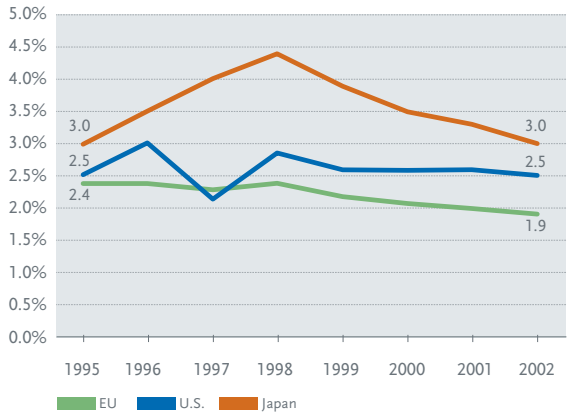
This is significantly less than R&D spending of 2.5% in the U.S. and 3% in Japan during 2002. Even more worrying for the long term is the fast dwindling number of students graduating in chemical-related disciplines in Europe.

Chemical and industrial chemicals* graduates in Germany, Italy, UK and the Netherlands**



Source: Cefic
* Including pharmaceutical
** estimated data for UK: 1990-1995
2004 - 2007: estimated

Chemical industry R&D expenditure
(in relation to sales)



Source: Cefic

Time for action

There is little room for doubt: The future of chemical production in Europe is at risk.

A strong chemical industry is essential to Europe's potential for innovation, its prosperity and the well-being of its citizens. Action is urgently required.

It's not too late to act. The key competitiveness factors identified in the Horizon 2015 study – innovation, regulation, market access, energy, logistics and reputation – can and must be driven in the right direction.

In order to maintain a significant, prosperous production base in Europe, industry needs to act jointly with public authorities. There is a vital need for the development of a EU-wide, coherent industrial policy for the chemical sector – as is already the case for the aerospace, textiles, shipbuilding and pharmaceutical sectors, and in line with the Union's Lisbon agenda.

As a first step in this direction, Cefic proposes the **establishment by early 2005 of a senior EU advisory group** with the mission to develop a clear, measurable long-term vision for the chemical industry and to propose effective actions.

This senior advisory group would bring together representatives of the EU Commission, Parliament and Member States, leaders of large and small chemical companies and their customers, trade unions and academia. It would make recommendations to the EU Competitiveness Council – a concrete step in helping the Council meet its stated objective to transform the EU into "the world's most competitive and dynamic knowledge-based economy."

The executive summary of the study 'Horizon 2015: Perspectives for the European Chemical Industry' is available at **www.cefic.org/horizon2015**

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Cefic - The European Chemical Industry Council

"Chemistry: elements of life"

Cefic is the Brussels-based organisation representing national chemical federations and chemical companies in Europe*. Cefic represents, directly or indirectly, around 29,000 large, medium and small companies in Europe, which employ about 2 million people and account for more than one third of world chemicals production.

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* EU + Switzerland + Norway + Turkey

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