

Investing in the Future of Jobs and Skills. Scenarios, implications and options in anticipation of future skills and knowledge needs for the Chemicals, Pharmaceuticals, Rubber and Plastic Products Sector.

Policy Summary

The sector employs 3.75 million persons, or 1.7% of total EU employment. This roughly equally split between the chemicals and pharmaceuticals industry and the rubber and plastic products industry. In 2006 the sector generated €322 bn of value added, equivalent to 2.8% of EU GDP, and €799 bn in total sales. The sector grew almost twice as fast as the economy as a whole during the last ten years, predominantly driven by an expanding European and world economy, with pharmaceuticals showing the strongest expansion, followed by basic chemicals. The rubber and plastic products grew in line with GDP, but faced strong growth in the new Member States – proof of increasing specialisation within the EU. However, the new Member States still have a much higher share of employment (19%) as compared to total value added (5%). Overall the sector experienced a slight employment decline despite large output increases, driven by high labour productivity growth. In contrast witnessed the new Member States employment growth (1.4% annually). Large firms dominate the sector and provide more than half of sector employment, although SMEs show the fastest growth. Despite remaining global export leader, the EU chemicals industry's competitiveness has come increasingly under threat, due to high production costs, low market growth, delocalisation of user industries and, last but not least, the build-up of efficient large-scale capacity and competition elsewhere. Globalisation, however, also provides new opportunities. Higher value added, greening and eco-efficiency are major challenges for the European chemicals industry, with innovation, regulation and scarcity of resources (oil, gas and energy) being key drivers.

The sector's workforce is structurally older than in other sectors, with a lack of younger employees and an older generation ready for retirement, posing a potential skills gap especially where tacit knowledge is concerned in many technical functions (metal, machinery, precision workers). Generally, a trend from lower skilled to medium- and high-skilled employment can be observed. This trend is especially pronounced in the technical occupations, with a strong upgrading to the mid-educated level. This general trend of up-skilling across job functions is bound to continue in the coming years. Across all job functions soft skills will become increasingly important, especially for high skilled professional jobs. Due to the changing nature of jobs, predefined technical knowledge capabilities will become less important. Skills to adapt and learn new competences and life-long learning will be put at a premium.

In addressing future skills and knowledge needs, appropriate and timely joint action is needed by all stakeholders: industry (firms, sector organisations and social partners), training and education institutes, intermediary organisations and government (EU, national, regional and local). Targeted and reliable monitoring to enable balanced decision-making is vital. Adapting and modernising vocational education and training (VET) systems is key, especially in the new Member States, as is enhancing flexibility through the modularisation of training. In-company training and lifelong learning need support, especially for SMEs. Improving information exchange between firms and training institutes, developing sectoral learning strategies and establishing partnerships for innovation and job creation should be pursued proactively. Benchmarking and best practices can help implement this. International and intersectoral acknowledgement of certificates should increase European labour mobility across sectors and countries. Supply of special courses for older workers could 'tie' them longer the sector. More attention should be paid to interdisciplinary and multidisciplinary knowledge, multi-skilling and intercultural and language skills. Furthermore, it is essential to improve the image of the sector – to the young and to society at large, positioning chemicals as a provider of sustainable solutions. Investing strongly in human capital and lifelong learning, diversification of staff (women), and attracting top international talent all help to sustain a competitive labour force in Europe.