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BELGIUM

Belgium's innovation system has some strong features: human resources in science and technology represent over 30% of total employment, and the number of science and engineering degrees as a percentage of all new degrees is around the OECD average. It is among the OECD leaders in terms of collaboration by large firms with partner organisations on innovation, with over 60% collaborating with another entity, more than 30% collaborating with higher education institutions, and around 20% collaborating with government institutions in 2002-04. Moreover, the innovation system is very open, with a considerable share of R&D financed by foreign sources and an above-average share of patents with a foreign co-inventor.

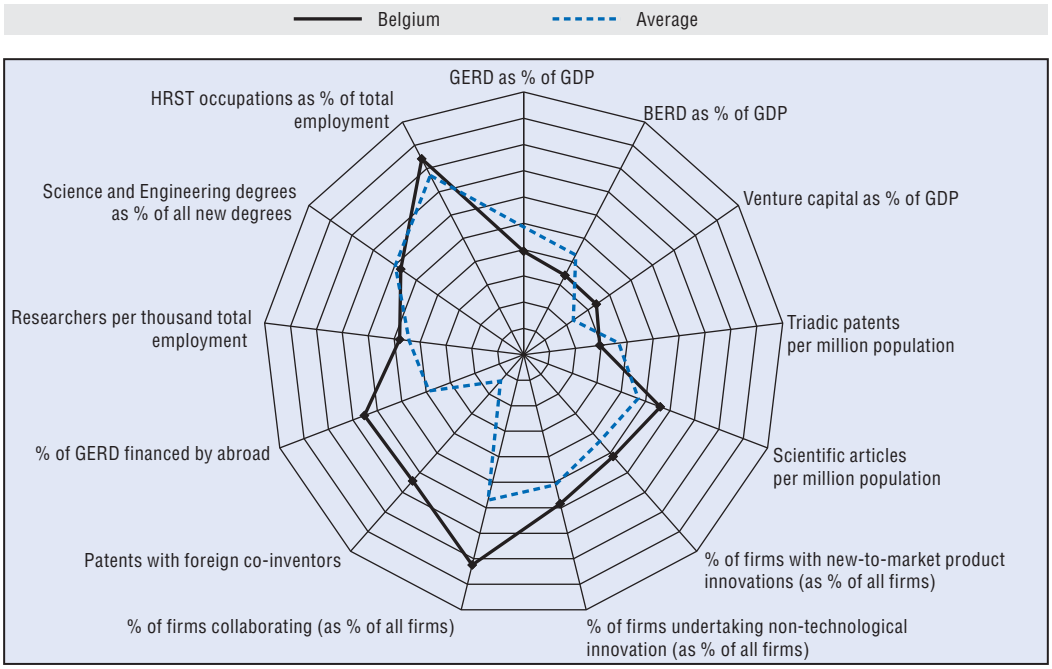
However, at 1.83% R&D intensity is below the OECD average of 2.26%, and venture capital markets are poorly developed. Business enterprise R&D fell from its 2001 peak of 1.51% of GDP to 1.24% of GDP in 2006, and is highly concentrated in a limited number of large (often foreign-owned) firms and sectors. In addition, the federal nature of Belgium, with competences shared among various levels of government, has led to some fragmentation in the governance of the system.

The economy, benefiting from a favourable international economic environment, has grown relatively strongly over the past few years. However, annual labour productivity growth from 2001 to 2006 was around 1.5%, below the OECD average of 1.8% and below its 1995-2000 level of 1.9%. Combined with some weaknesses in the innovation system, these trends have raised awareness of the need to boost innovation to ensure the country's future prosperity.

Research and innovation have become a top priority of the regional and federal governments. The federal government has continued to strengthen fiscal measures to foster R&D and investment in innovation, and the regions have developed and implemented a wide variety of programmes to foster science-industry linkages. The Brussels-Capital Region has launched a Regional Plan for Innovation (2007-13); Wallonia is implementing the Priority Action Plan for the Future of Wallonia 2006-09; and Flanders has approved an Innovation Policy Plan with nine action lines based on an integrated third generation innovation vision. Also, the already extensive horizontal IWT programme for R&D business support was recently expanded.

These initiatives have led to various measures, such as a decrease in the wage costs of researchers via tax deductions and the introduction of R&D tax credits. At the regional level, the Brussels-Capital Region has a public-private scheme for funding up to 75% of R&D activities, and the creation of innovative spin-off companies is encouraged. In Wallonia, five competitiveness poles trigger collaboration by the region's universities and companies; they address all aspects of R&D, industrial realisation, and training of the necessary workforce. In Flanders, ten sector-based competence poles have been established, aimed at co-operation between economic and knowledge actors. The Baekeland programme will set up public-private funded fellowships for PhD students as a way to facilitate knowledge transfer. In addition, the Hercules Foundation was created to support large research infrastructure.

Science and innovation profile of Belgium



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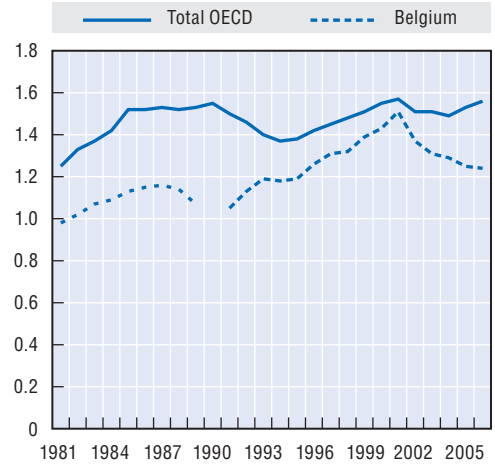
Business Enterprise R&D, 1981-2006

As a percentage of GDP



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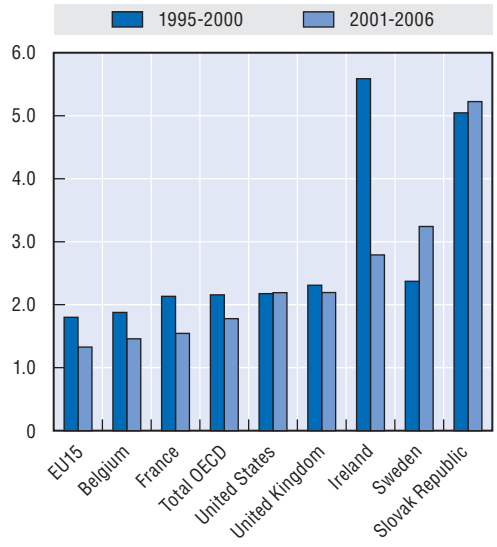
Labour productivity growth, 1995-2000, 2001-06

Average annual percentage change



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Chapter 3

Science and Innovation: Country Notes

This chapter complements Chapters 1 and 2 by providing an individual profile of the science and innovation performance of each OECD country, as well as observers to the OECD Committee on Science and Technology Policy (Brazil, Chile, China, Israel, Russia and South Africa), in relation to their national context and current policy issues. The graphs enable countries to see some of their relative strengths and weaknesses as compared to other countries' performance.

The common indicators in the first (radar) graphs were selected on the basis of current policy issues. They focus on research and innovation inputs, scientific and innovation outputs, linkages and networks, including international linkages, and human resources. A standard set of indicators is used; however, when data are not available, alternative indicators may be applied. The annex provides a full list and description of the indicators, methodological notes and data sources.

For each indicator in the radar graph, the country with the maximum value is set at 100, taking into account all OECD and non-OECD countries with available data. The average is calculated by taking into account all OECD countries with available data (non-OECD countries are excluded from the average). The annex provides further details.

The radar graphs are accompanied by country-specific figures that further illustrate national characteristics and underpin policy-specific comments. The selection of comparator countries in these graphs aims to highlight the general position of the focal country and, in some instances, data on other countries may also be shown.

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