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Belgium

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BELGIUM

The shape of Belgium's science and innovation profile reveals a number of strong features. Investment in human resources in science and technology (HRST) is a policy priority. Belgium has 8 researchers per thousand employment, slightly above the OECD average. Science and engineering degrees represented 23% of new degrees in 2007, marginally above the OECD average, and in 2008 HRST occupations accounted for 32.5% of total employment.

Belgium's profile also reveals areas for improvement. In 2008, gross expenditure on R&D (GERD) was a relatively low 1.9% of GDP, although it has grown in constant terms in recent years. In that year, business expenditure on R&D (BERD) was a steady 1.3%, while venture capital was on the average at 0.10% of GDP. R&D expenditure in the pharmaceutical industry exceeds the OECD average as a percentage of both BERD and GDP.

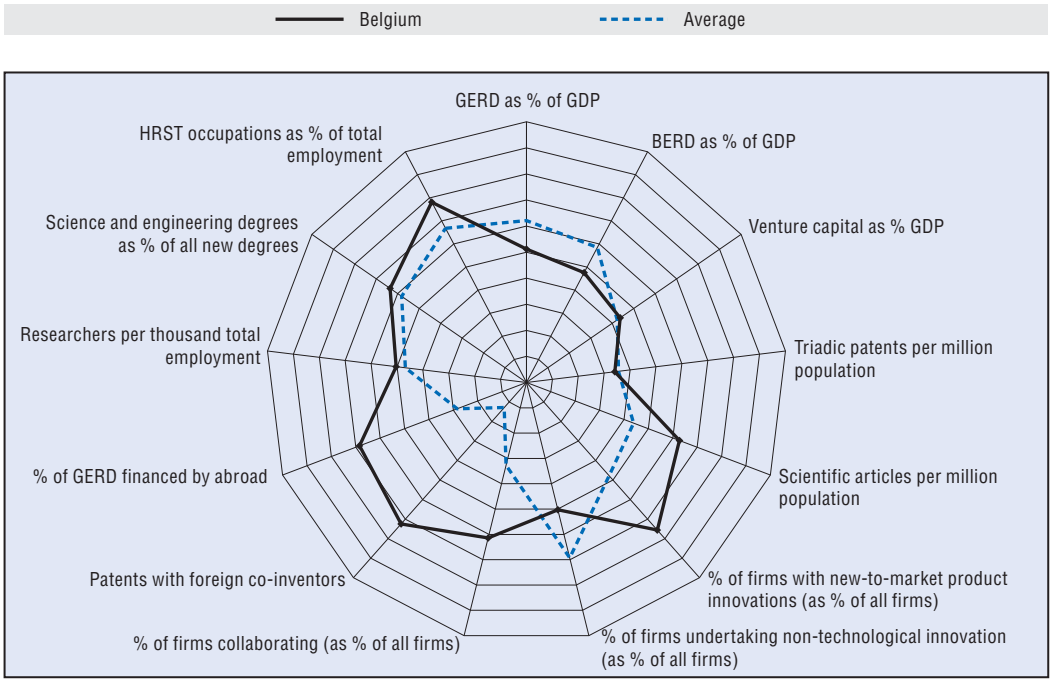
Belgium accounted for a relatively low 0.8% of total triadic patent families in 2008. With 39 triadic patents per million population, it stands marginally below the OECD average, and lower than a decade earlier. Its 1 110 scientific articles per million population are above the average and account for 1% of the world total. More than one in five Belgian firms introduced new-to-market product innovations in 2004-06, and 48% of SMEs and 76% of large firms undertook non-technological innovation, predominantly in the manufacturing sector.

Innovation linkages in Belgium are strong. A relatively high 18% of firms collaborated on innovation activities during 2004-06, and a high 44% of Patent Cooperation Treaty (PCT) patent applications were with foreign co-inventors. In 2007, 13% of GERD was financed from abroad, a further sign of strong international integration. Another indication of Belgium's openness is the 59% of R&D expenditure by foreign affiliates as a percentage of total R&D, the third highest in the OECD area.

Belgium's GDP grew at a compound annual rate of 2% between 2001 and 2008, but in 2009 the economy contracted by 3.1%, with the unemployment rate increasing to 7.9%. Belgium's GDP per capita relative to the United States was 75% in 2008, while GDP per hour worked relative to the United States was 98%.

Innovation in Belgium is guided by policies in the three regional governments: Flanders, Wallonia and Brussels Capital. In 2005, Wallonia adopted a number of documents that remain the baseline for policy in the period to 2010. The Marshall Plan2.Green was recently updated to reflect the integration of sustainable development as a priority. Flanders in Action (FIA) is the action plan meant to lead Flanders to the top five regions in Europe, and the main document governing innovation policy in the Brussels Capital region is the 2006 Regional Innovation Plan for 2007-13. The federal finance agency (FPS Finance) has recently increased R&D tax credits to EUR 470 million, nearly doubling the share of the federal government in public R&D funding.

Science and innovation profile of Belgium



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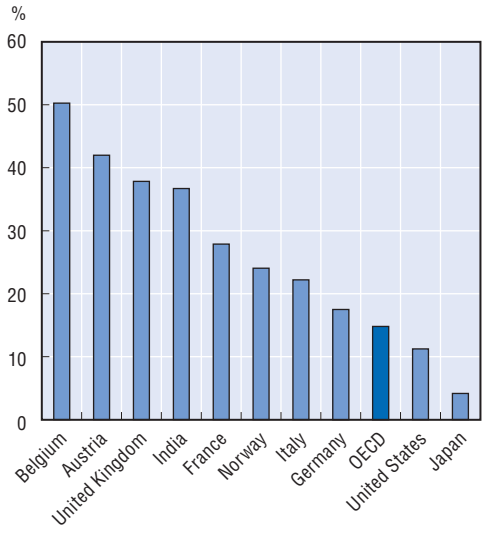
Foreign ownership of domestic inventions

Percentage share, 2004-06



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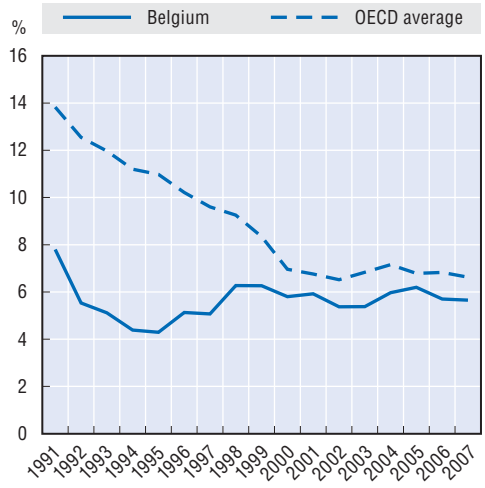
BERD financed by government

Percentage share of total BERD, 1991-2008



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