

THE NETHERLANDS

Economic activity in the Netherlands is dominated by food processing, chemicals, petroleum refining, electrical machinery and a highly mechanised agricultural sector. Its science and innovation profile shows strong outcomes and sound linkages despite weak input indicators.

The Netherlands has one of the strongest patent intensities of all OECD countries. In 2008, it had 66 triadic patents per million population, well above the OECD average. It also had 1 331 scientific publications per million population, the eighth highest in the OECD, and accounted for 1.3% of world output. The 17% of firms that introduced new-to-market product innovations during 2004-06 was slightly above the average, while the 30% of firms undertaking non-technological innovation during that period was low compared to other countries.

Gross expenditure on R&D (GERD) was 1.8% of GDP in 2008, below the OECD average and lower than in 2006. This ratio has fallen consistently from a peak of 2% in the late 1980s. Industry financed 49% of GERD in 2007, and the government 37%. Venture capital investment was on the average at 0.1% of GDP. The low R&D intensity can be ascribed to the structure of the economy: a large services sector, a small high-technology sector and a high degree of concentration of R&D in a few multinational firms, some of which are active in low and medium-technology sectors. R&D investment is increasingly concentrated in information and communication technology and 85% of businesses have their own website. The Netherlands also invests intensively in regenerative medicine.

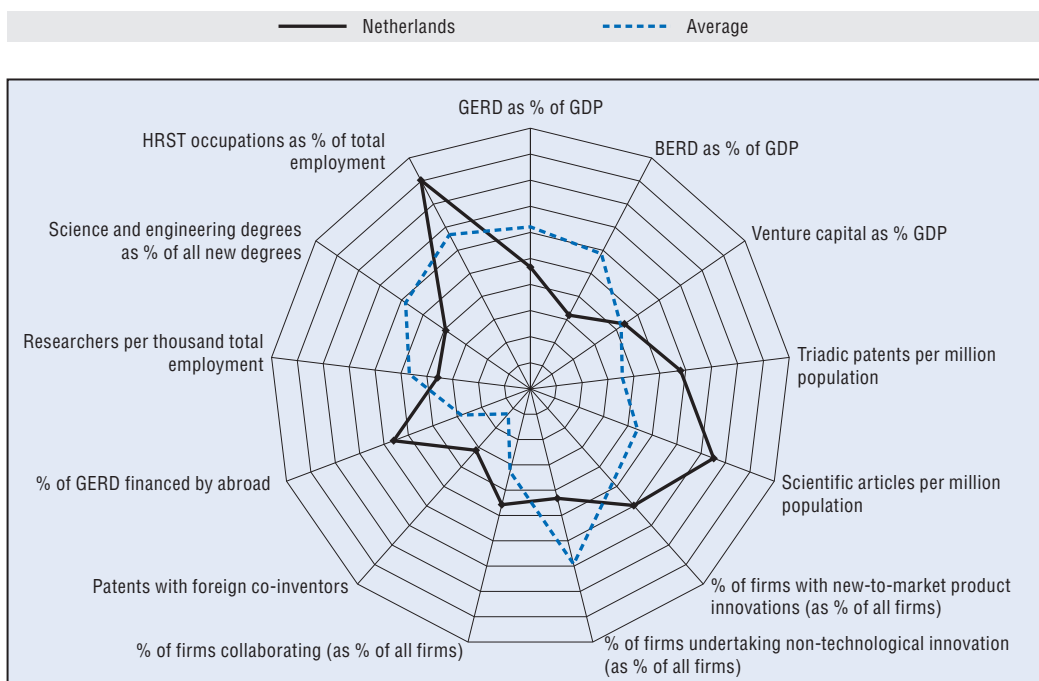
Innovation linkages in the Netherlands are strong. A higher than average 14% of firms collaborated on innovation activities during 2004-06. The share of Patent Cooperation Treaty (PCT) patent applications with foreign co-inventors during 2005-07 was almost 20% and the 10.7% of GERD financed from abroad exceeded the average (5.4%).

Performance in human resources in science and technology (HRST) are mixed. The Netherlands' six researchers per thousand employment and 14.2% of science and engineering degrees in all new degrees are both below the average. However, HRST occupations represented a high 38% of the workforce in 2008, and half of these positions were filled by women.

The Dutch economy expanded by an average annual 2% a year between 2001 and 2007. GDP slowed sharply from 3.6% in 2007 to 2% in 2008, and contracted by 4% in 2009; unemployment rose to 6.1%. Labour productivity growth has stagnated, falling by 1% a year since 2006. GDP per capita in 2008 was 87% relative to the United States.

Recent steps taken to strengthen innovation in the business sector include an expansion of the basic innovation package, which has been better aligned with the needs of business. The successful Innovation Voucher Scheme will be simplified and provided in digital format. In response to the global economic crisis, the government has allocated additional funds in its budget for the R&D Promotion Act (WBSO), to support the business sector. The government is pursuing a "key areas approach" focused on the development of strong and internationally prominent clusters.

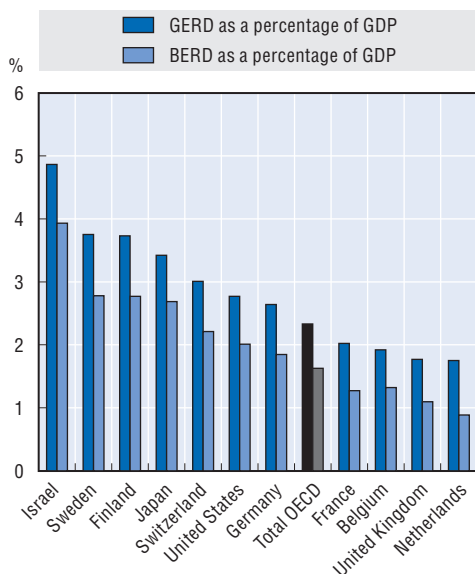
Science and innovation profile of the Netherlands



StatLink <http://dx.doi.org/10.1787/888932334507>

BERD and GERD intensity

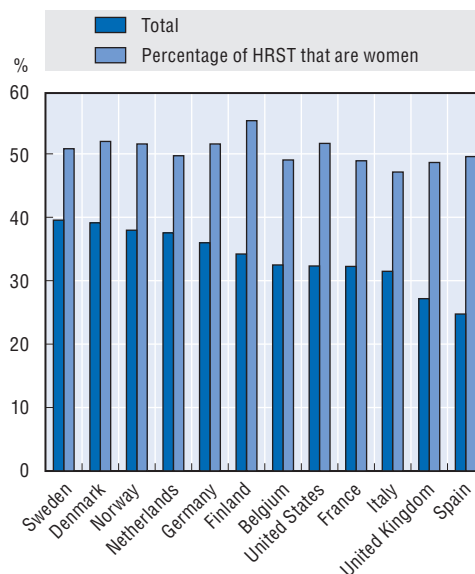
As a percentage of GDP, 2008



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HRST occupations in total employment

As a percentage of total employment, 2008



StatLink <http://dx.doi.org/10.1787/888932334545>