

## THE NETHERLANDS

The Netherlands is among the OECD leaders in knowledge creation: it ranked fifth in scientific publications per capita in 2005 and its publications were third in terms of prominence. It also ranked fifth in terms of triadic patenting per capita, partly owing to strong innovation in key multinationals, such as Philips. Moreover, a relatively large workforce is engaged in occupations requiring human resources for science and technology and its innovation system is very open. A considerable share of R&D is financed by foreign sources, and a relatively large share of firms collaborate on innovation.

However, R&D intensity is below the OECD average and has fallen substantially since the early 1990s. Industry-financed R&D fell from a peak of 1.13% of GDP in 1987-88 to 0.9% in 2003, while government-financed R&D fell from a peak of 1.0% of GDP in 1990 to 0.64% of GDP in 2003. Moreover, the research workforce is relatively small by international standards.

The structural characteristics of the economy include a relatively large services sector, a relatively small high-technology sector and high concentration of R&D in a limited number of multinational firms (Philips, Unilever, Shell, Akzo/Nobel, DSM and a few others), some of which are in low- and medium-technology sectors. These are among the reasons for the relatively low R&D intensity. Another may be the relatively low R&D intensity of foreign direct investment.

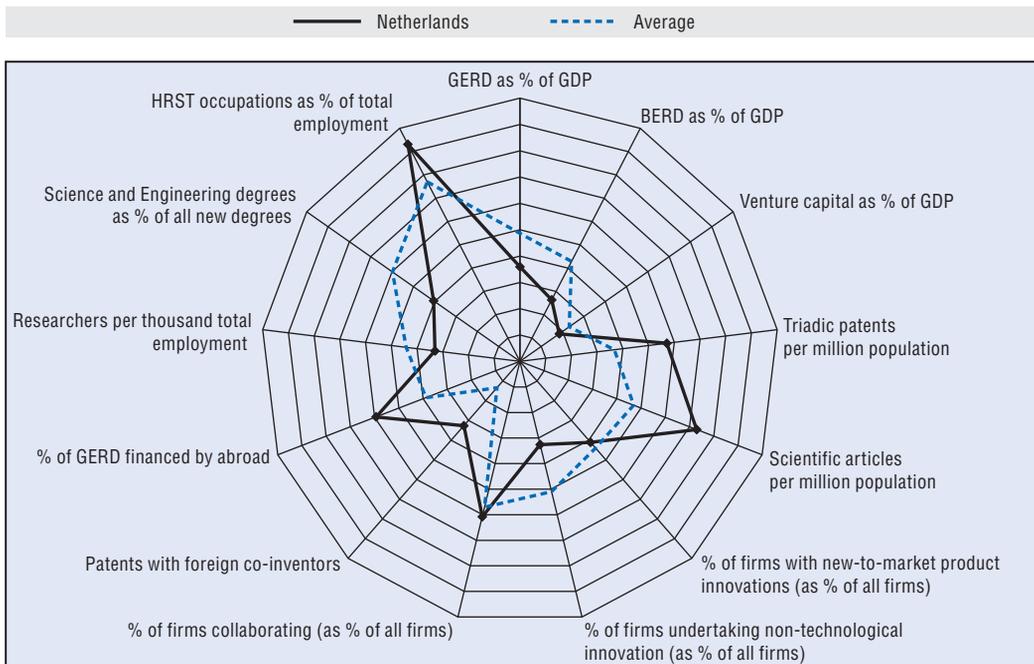
An important weakness of the innovation system may be the low level of innova-

tion in services and relatively weak success in turning knowledge into stronger economic performance. The country's traditional strength is in services related to trade and distribution, but measures of innovation and productivity growth in services show relatively poor performance compared to some other OECD countries.

While the economy continues to perform well, with a strong competitive position and low unemployment, weaknesses in terms of innovation raise concerns about long-term growth and the country's future competitive position. Recent government initiatives, such as the Innovation Platform, and specific policy instruments, such as the Innovation Voucher, have aimed at broadening the basis for innovation beyond the traditionally strong multinationals, by involving more SMEs in innovation and by encouraging collaboration with public knowledge institutions.

A key policy issue in the Netherlands is the appropriate balance between supporting innovation in key areas of competitive advantage to build critical mass and supporting a broader range of activities. A related question concerns how generating new knowledge and technology can be combined with the wider diffusion of existing knowledge and technology, *e.g.* to the services sector. A third area of debate concerns how the very open Dutch economy and innovation system can obtain greater benefits from the growing internationalisation of research and innovation, including by attracting more foreign investment.

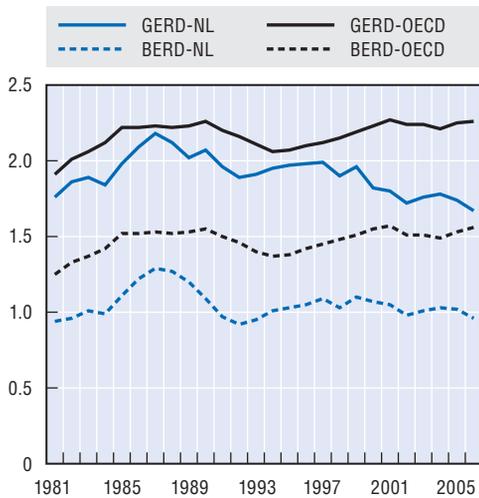
### Science and innovation profile of the Netherlands



StatLink <http://dx.doi.org/10.1787/453425051623>

#### R&D intensity, 1981-2006

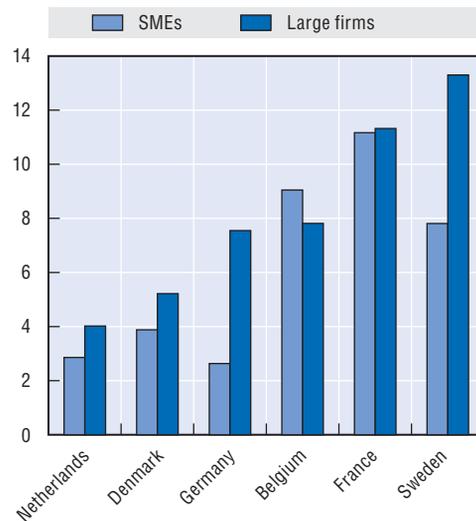
As a percentage of GDP



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#### Share of turnover due to new-to-market product innovations, by firm size, 2002-04

As a percentage of turnover



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