

## AUSTRALIA

The Australian innovation landscape displays a number of notable strengths. Its scientific publications are well above average: 780 scientific articles per million population (over 2% of world publications), and 16th worldwide for publication impact. Australia also has a strong skills base. Human resources for science and technology represent 38% of the labour force and in 2004 it had 8.4 researchers per 1 000 total employment, because of strong employment of researchers in the higher education sector.

Gross domestic expenditure on R&D (GERD) rose to 1.78% of GDP in 2004. Most of the increase is due to business sector investment. Growth in the higher education sector was modest and government R&D expenditure fell in absolute terms. Business expenditure on R&D (BERD), at 1.04% of GDP in 2005, was below the OECD average of 1.53%. The business sector financed around 53% of GERD in 2004, and 41% of BERD was performed by SMEs. The services sector accounts for a higher proportion of total business R&D (around 41% in 2003) than in most OECD countries.

More broadly, Australia's economy has benefited from the global commodities boom, and has grown strongly in recent years. Since 2000, GDP growth has averaged around 3% a year in real terms and in 2008 the unemployment rate has fallen to around 4%, its lowest level since the 1970s. Productivity growth, measured by change in GDP per hour worked, has been above the OECD average, and combined with labour utilisation this has resulted in good growth in GDP per capita in recent years.

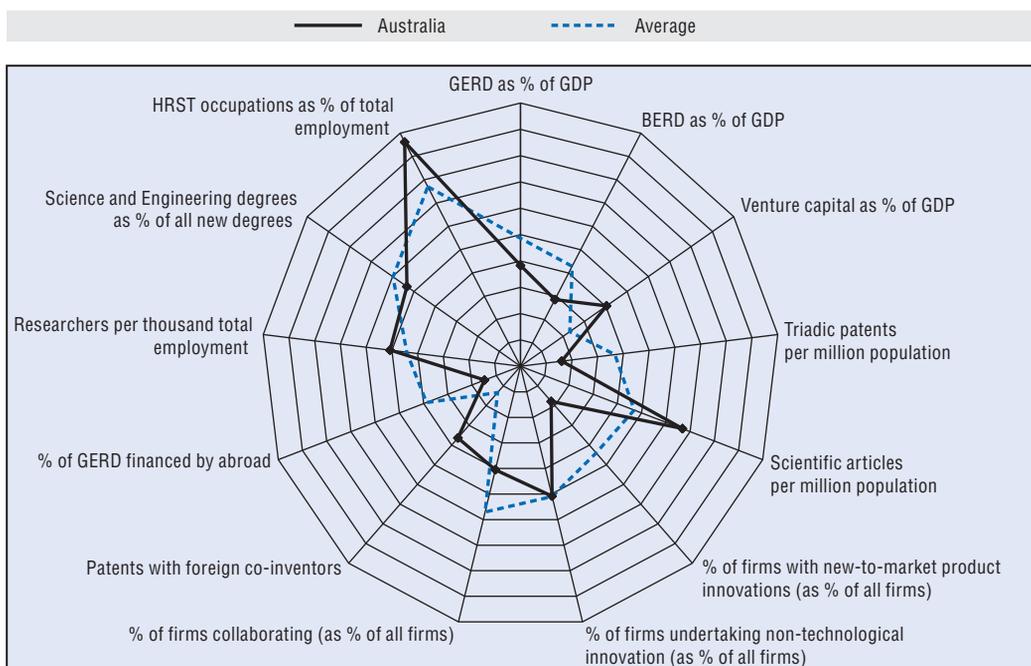
At 19 per million population, Australia is not a strong performer in terms of triadic patent families. Although patenting has increased in recent years, it accounted for just 0.76% of the world share of triadic patent families in 2005. The low level of patenting and BERD reflects Australia's structural characteristics, with large resource and agricultural sectors and a relatively small manufacturing sector. Linkages are weak, with only around 9% of innovating firms co-operating with an external partner for their innovation activities; only a small number and proportion of patents are developed with co-inventors.

However, around 41% of Australia's firms are technologically innovative. Most innovation is incremental, with only 7% of SMEs and 12% of large firms introducing new-to-the-market product innovations. Non-technological innovation was undertaken by 31% of firms.

The newly elected government has outlined a framework for innovation policy to stimulate performance across the economy. The recently created Department of Innovation, Industry, Science and Research has announced a review of Australia's innovation system to identify gaps and weaknesses in the system and develop proposals to address them.

Looking ahead, key topics of policy debate include developing an integrated approach to science and innovation as well as improving links with global research and innovation systems. The long-term issue is to sustain economic performance and competitiveness while addressing social and environmental challenges.

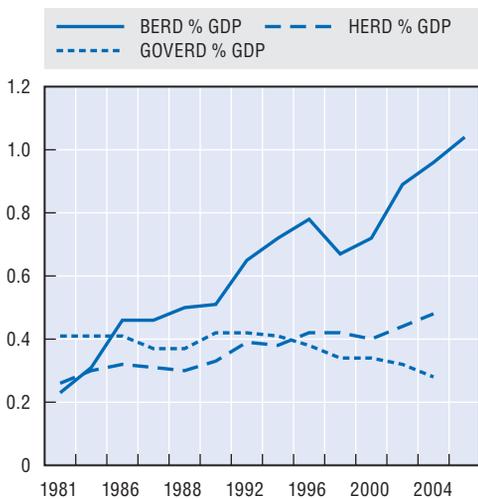
### Science and innovation profile of Australia



StatLink <http://dx.doi.org/10.1787/451718030211>

### R&D by sector of performance

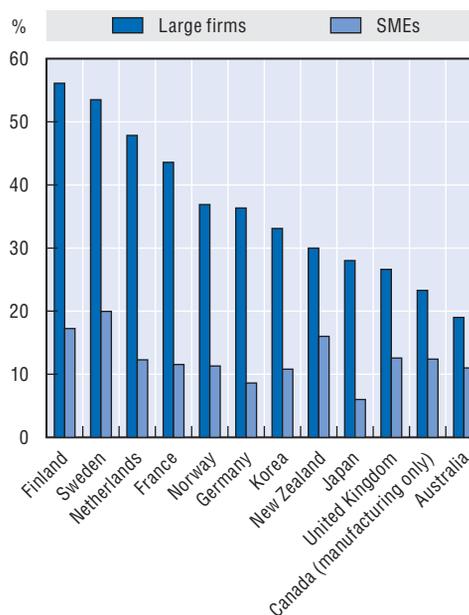
As a percentage of GDP



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### Firms collaborating in innovation activities, by size, 2002-04 (or nearest available years)

As a percentage of all firms



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