NEW ZEALAND

Innovation is central to meeting the ongoing challenge of boosting New Zealand's productivity growth to raise income per capita. The innovation system has been shaped by the country's features: its relative geographic remoteness, small size, demanding physical topography, and focus on exploiting natural resources. A more innovative economy requires an excellent business environment, robust steering and financing mechanisms for the public research system, and strong domestic and international networks for knowledge flows.

The share of gross domestic expenditure on R&D (GERD) in GDP has changed only slightly over the past decade. At 1.16% (about half the OECD average of 2.26%), New Zealand is in the bottom third of OECD countries on this measure. Business expenditure on R&D (BERD) has grown, but at 0.49% of GDP, remains below the OECD average. New Zealand's industrial structure, with a strong contribution from the agriculture, forestry and fishing sector and a relatively small manufacturing sector, may contribute to low R&D intensity, as innovation that is not based on R&D or other technically challenging activities may not be captured by the available quantitative indicators.

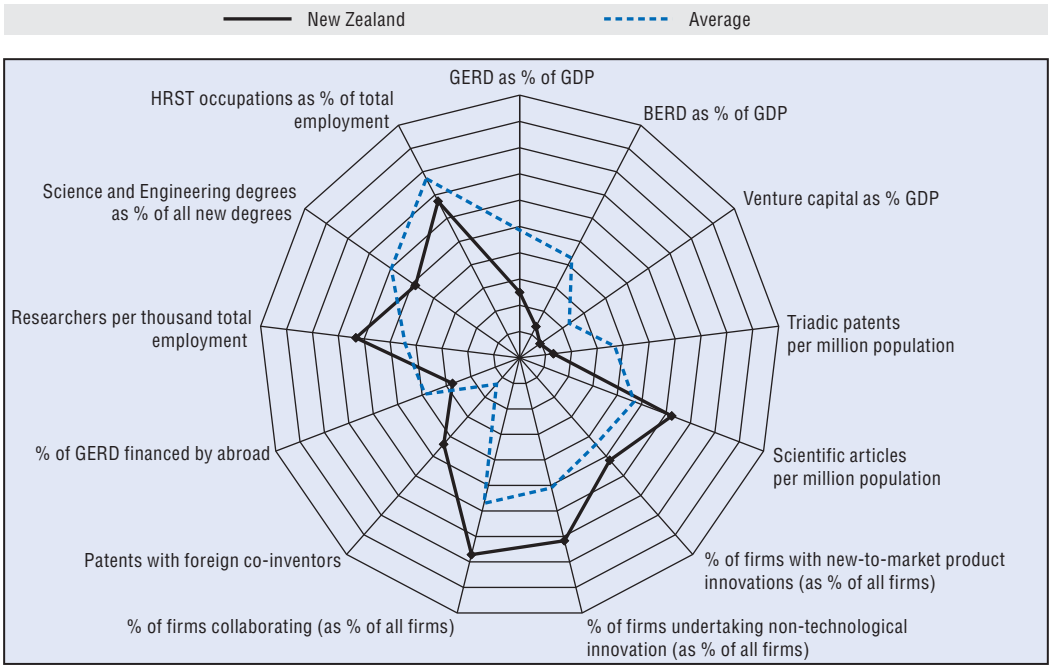
The development of skilled, adaptable human resources for science and technology is vital for New Zealand. Their share in total employment is below the OECD average, although the number of researchers (full-time equivalent) almost doubled from 1999 to 2005 and their share in total employment now exceeds the OECD average. New Zealand differs from some leading OECD countries in awarding more science degrees than engineering degrees. Skilled immigrants make an important contribution to the workforce: some 30% of university-qualified people were born overseas.

New Zealand's performance with regard to research outputs is mixed. Triadic patent family activity is well below the OECD average, as is the share of high- and medium-high-technology industries in patent activity. However, the biotechnology sector is rapidly accumulating patentable knowledge in several important market niches, and scientific publications per capita are well above the OECD average. International co-operation on innovation by firms is also strong.

More than in many other OECD countries, the government plays a major role in the innovation system; it finances more than 40% of investment in R&D and owns significant science infrastructure. Following the 2007 *OECD Review of Innovation Policy: New Zealand*, the government is developing policy initiatives to support business R&D and make the public sector's contribution more effective, with the introduction of a R&D tax credit and a "stable funding initiative" to improve the certainty of publicly funded research programmes.

Looking ahead, important policy issues include ways to improve international links and access to knowledge in overseas markets and to help firms to succeed in areas of current strength and in emerging industries. Improving the availability of broadband Internet, and enabling low-technology sectors to improve productivity by applying advanced science and technology, are also important areas for consideration.

Science and innovation profile of New Zealand



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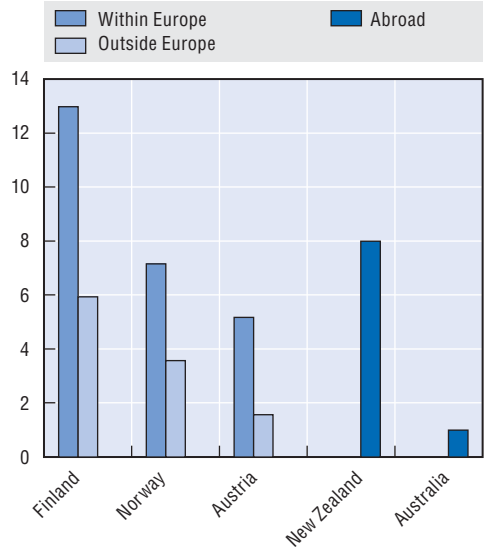
Firms with foreign co-operation on innovation, 2002-04 (or nearest available years)

As a percentage of all firms



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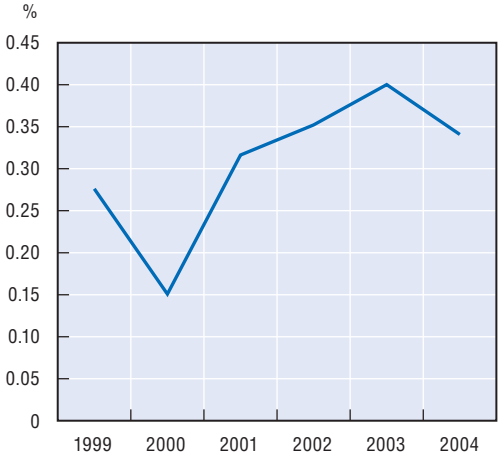
New Zealand's share of world biotechnology patent applications to the European Patent Office

Percentage share



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