

NEW ZEALAND

Over the past two decades the New Zealand economy has undergone substantial reform and has diversified significantly. This has broadened the technological capabilities of the manufacturing sector, although high-technology exports are still a relatively low share of total exports. The agricultural sector's contribution to GDP is higher than in most OECD countries.

New Zealand's indicators in human resources in science and technology (HRST) are strong. Tertiary graduation rates are high, but more than 40% of doctoral candidates are non-citizens. In 2007, 11 researchers per thousand employment was well above the OECD average. Only 17.3% of all new degrees were science and engineering degrees. HRST occupations accounted for 29% of total employment, just above average. Tertiary-level graduates are well represented in the workforce, and the earnings premium from tertiary education has increased significantly in recent years.

Gross domestic expenditure on R&D (GERD) was 1.2% of GDP in 2007, slightly up from 1% in 2000, but this still leaves New Zealand among the bottom ten OECD countries. GERD in real terms increased by a compound annual rate of 4.5% between 2001 and 2007, but GERD per capita remains comparatively low.

In 2007, industry financed a comparatively low 40% of GERD and the government funded 43%. At 0.5% of GDP, industry-financed GERD was below average (1.5%). Business expenditure on R&D (BERD) increased from 0.4% of GDP in 2000 to 0.5% of GDP in 2007, but also remains below the OECD average. In 2007, small and medium-

sized enterprises performed almost 75% of business R&D in New Zealand.

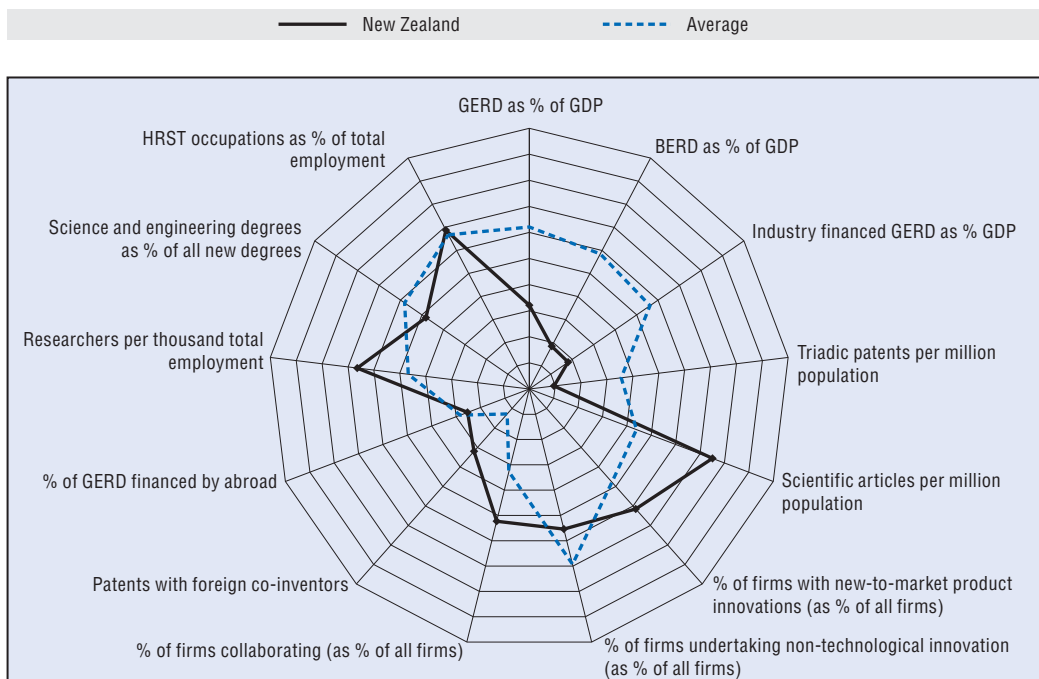
Despite weak input indicators, New Zealand performs well on innovation outcomes. Although its 11 triadic patents per million population were at the lower end of the spectrum in 2008, its 1 330 scientific articles per million population were well above the OECD average. A high 18% of firms introduced new-to-market product innovations during 2004-06, but a below-average 39% of firms undertook non-technological innovation.

Results for innovation linkages are mixed. An above-average 15.5% of firms collaborated on innovation activities, while one in five Patent Cooperation Treaty (PCT) patent applications during 2005-07 had foreign co-inventors. The 5% of GERD financed from abroad was slightly below the average.

New Zealand experienced robust average annual GDP growth of 3.5% between 2001 and 2007, but this fell to 1.8% in 2008. GDP contracted by 1.5% in 2009 and unemployment rose sharply from 3.7% in 2007 to 6.1% in 2009. Labour productivity slowed from high levels in the 1990s to around 1% in the 2000s.

The New Zealand government recognises the primary contribution of research to economic growth. A new investment structure for research, science and technology has identified new priority areas, which include high-technology industries, the biological economy, energy and minerals, hazards and infrastructure, the environment, health, along with top talent, international relationships and research infrastructure.

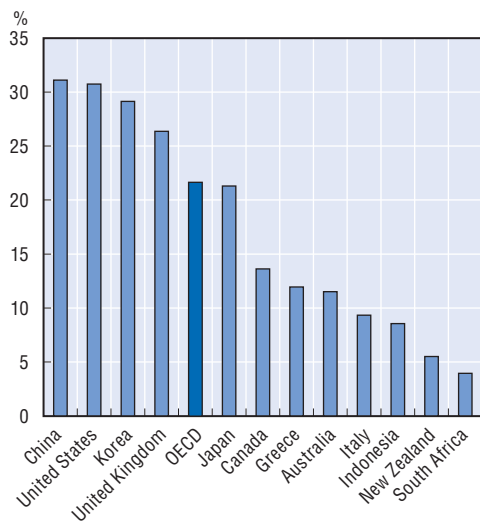
Science and innovation profile of New Zealand



StatLink <http://dx.doi.org/10.1787/888932334564>

High-technology exports

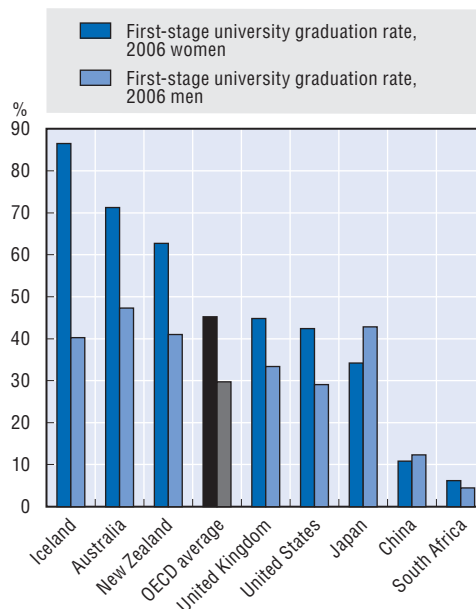
As a percentage of total manufacturing exports, 2008



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Graduation rates at first-stage university level

As a percentage of the relevant age cohort, 2006



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