

KOREA

Korea has achieved remarkable growth and global integration as a high-technology industrialised economy. It has performed exceptionally well over the last few decades in catching up with leading OECD economies, and innovation has played an important role in narrowing the gaps.

Korea has the fourth highest R&D intensity in the OECD after Sweden, Finland and Japan, with gross expenditure on R&D (GERD) increasing from 3% of GDP in 2006 to 3.4% in 2008. Average annual growth in real GERD was almost 10% between 2000 and 2008, and in 2008 its GERD per capita of USD 931 (in current PPP) was above average. Industry financed 73% of GERD and the government funded 25%. GERD was also performed mainly by industry (76%), followed by the government (12%) and the higher education sector (11%). Business expenditure on R&D (BERD) was also high in 2008, edging up to 2.54% of GDP. In that year, venture capital investment was 0.07% of GDP, below the average.

In 2008, Korea's 44 triadic patents per million population was just above the OECD average, despite a country share in triadic patent families that had risen from 1.6% in 2000 to 4.3%. Its 762 scientific articles per million population was very close to the OECD average. A low 9% of manufacturing firms introduced new-to-market innovations during 2005-07, and a small 17.1% of manufacturing firms undertook non-technological innovation.

Korea's innovation landscape is dominated by the domestic private sector, with little apparent international integration. In 2005-07, 8% of manufacturing firms collaborated on innovation and 5% of Patent Cooperation Treaty (PCT) patent applica-

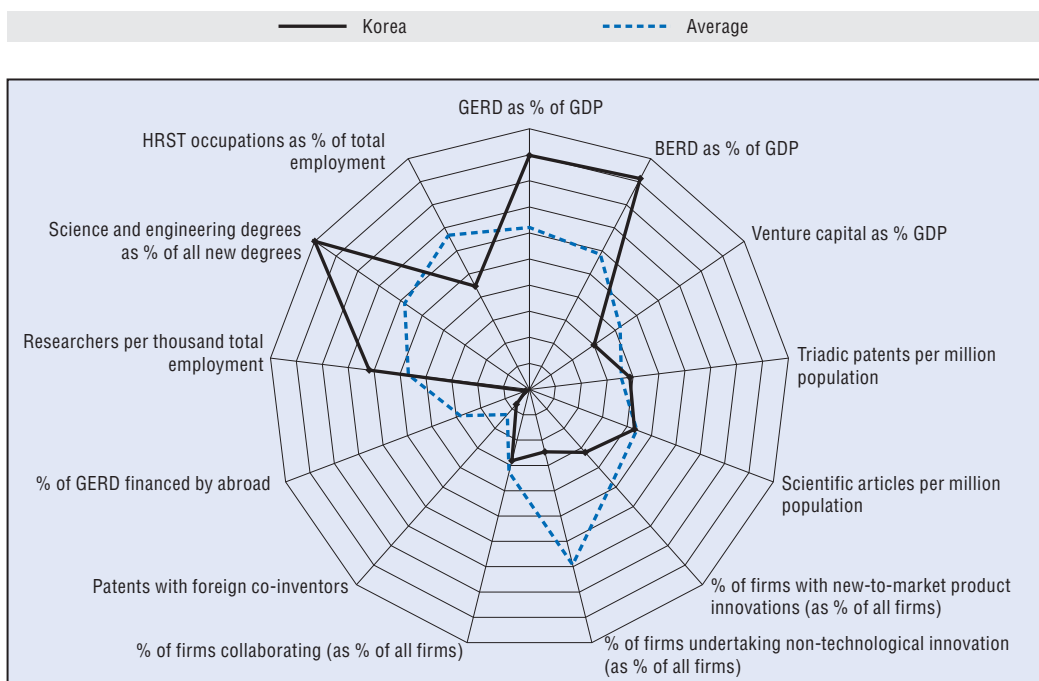
tions were with foreign co-inventors, both slightly below the average. The 0.2% of GERD financed from abroad in 2008 was the lowest in the OECD area.

Indicators on human resources in science and technology (HRST) are strong. Researchers per thousand employment have increased steadily from five in 2000 to ten in 2008, above the OECD average. From 1998 to 2008, researcher numbers increased at a compound annual rate of 9.8%. Science and engineering degrees accounted for 36% of all new degrees, the highest in the OECD. However, at 19% of total employment, HRST occupations ranked relatively low compared with other OECD countries.

Korea adopted various economic reforms following the Asian financial crisis of 1997-98, including greater openness to foreign investment and imports. The effect of the latest global financial and economic crisis was therefore comparatively moderate. Average annual GDP growth was 4.8% between 2000 and 2007, and then slowed to 2.3% in 2008 and 0.2% in 2009, while the unemployment rate increased moderately from 3.2% in 2006 to 3.6% in 2009. Labour productivity remained strong, growing by an average annual 4.7% from 2001 and declining slightly in 2009. Relative to the United States GDP per capita was 59% in 2008.

Some bottlenecks that hamper Korea's science and innovation performance include a relatively weak sector of small and medium-sized firms and weak performance in the services sector. It also faces increasing competition from newly industrialising economies.

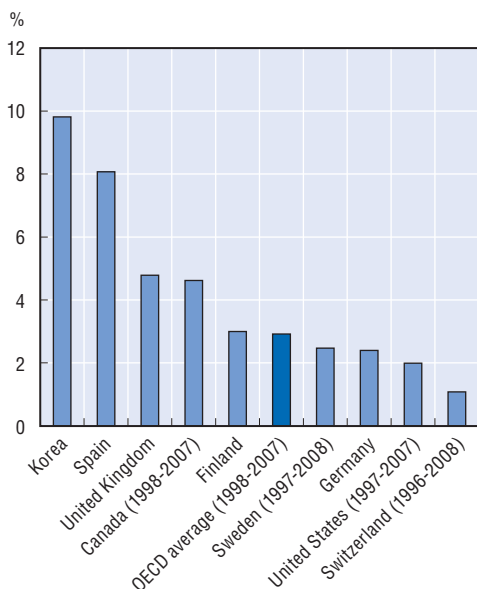
Science and innovation profile for Korea



StatLink <http://dx.doi.org/10.1787/888932334336>

Growth of business researchers

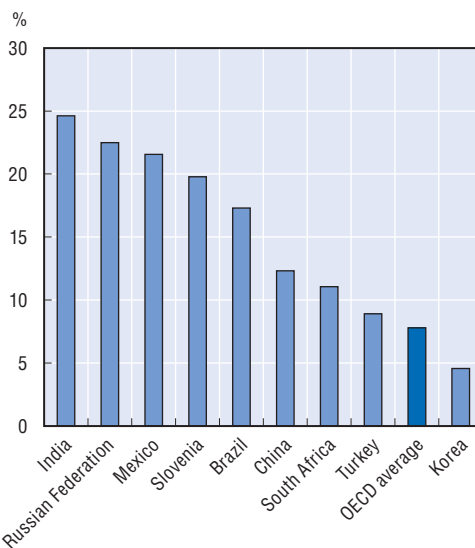
Average annual growth rate, 1998-2008



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Patents with foreign co-inventors

Percentage of PCT applications, 2005-07



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