

UNITED STATES

Following a period of robust expansion since 2001, economic growth in the United States slowed at the end of 2007. The diffusion of information and communication technologies (ICTs) continues to fuel productivity growth, especially in the business services sector.

The United States is an innovation powerhouse, but its lead is increasingly challenged from some of its main international trading partners and emerging economies. R&D intensity fell slightly to 2.6% of GDP in 2006, down from 2.7% of GDP in 2001, although total R&D expenditure expanded in real terms to USD 344 billion, led by increases in business sector R&D spending (USD 208 billion in 2006). The share of R&D performed by government has fallen (to 11.1% in 2006), while that of the higher education sector has grown (to 14.3% in 2006 compared to 12.1% in 2001).

In the United States, the majority of business R&D spending is by manufacturing firms in high-technology sectors (63% of total manufacturing R&D is high-technology compared to 47% in the EU and 43% in Japan). At the same time, the US share of total OECD technology exports fell between 1996 and 2005 while that of Germany and Korea increased. Since the early 1990s services R&D has been growing at a rapid rate – exceeding that for manufacturing R&D. In 2003, services R&D had expanded to account for 36% of total business R&D.

The United States has 1.4 million researchers, or 9.6 per 1 000 total employment, but growth has slowed relative to dynamic economies in the EU and in China. In 2005, S&E degrees in the United States accounted for just over 15% of all new degrees compared to around 25% in Japan

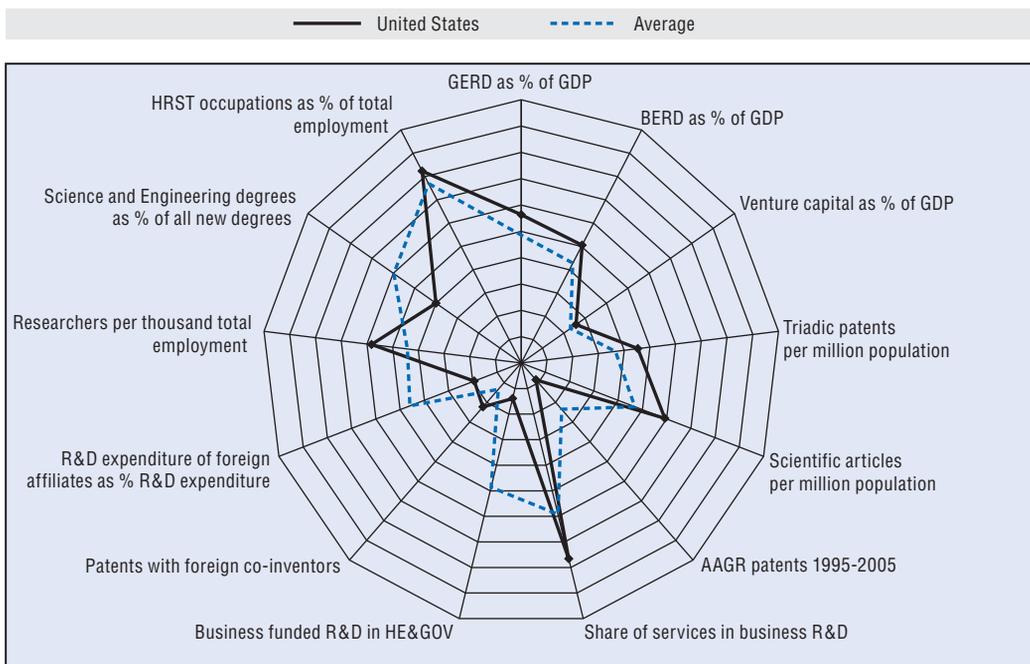
and close to 40% in Korea and China. Participation in S&E education by women and minorities in the United States is low, notably at the graduate level, and is only partially offset by the large number of foreign students: in 2006, 38% of all S&E doctorates were awarded to foreigners, with more than two-thirds from Asia.

US output of scientific publications is second only to the EU and is world-class in fields such as nanosciences, environmental sciences and biosciences, which have benefited from large increases in federal research funding (*e.g.* through the National Institutes of Health). The United States retains its lead in innovation in critical sectors such as pharmaceuticals and ICTs, in which it invests more than any other OECD country. Since 1995, however, growth in triadic patent filings has slowed while other countries continue to catch up.

The federal policy framework for research and innovation was recently strengthened by the *America Competes Act* of 2007, which follows on the American Competitiveness Initiative (ACI) of 2006. The main policy focus is on increased support for basic research, particularly in key physical science and engineering areas, in order to tackle global challenges such as energy and climate change, and on support for human resources in science and technology. However, budgetary cuts – owing to growing federal deficits – have resulted in slower than anticipated spending increases in the main federal research agencies.

Federal support to industry performed R&D in 2005 reached USD 22.5 billion (not including another USD 2.4 billion for industry managed federal labs), while the federal R&D tax credit accounted for more than USD 5 billion in foregone tax revenue in 2005.

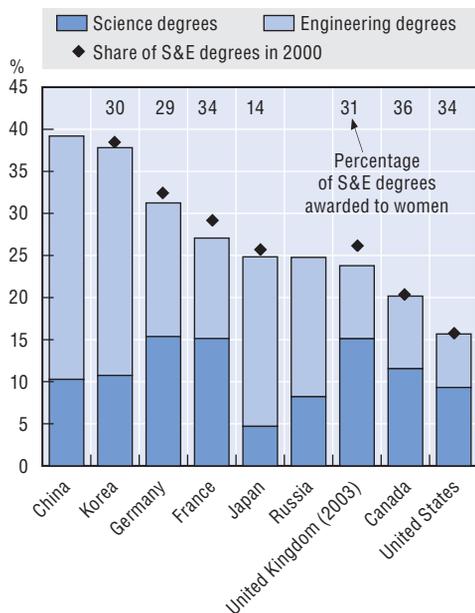
Science and innovation profile of the United States



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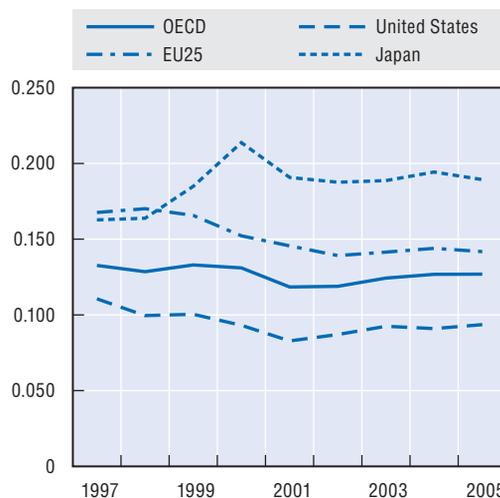
Science and engineering degrees, 2005

As a percentage of total new degrees



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Ratio of triadic patent families to industry-financed R&D: main OECD regions, 1995-2005



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