RUSSIAN FEDERATION

The Russian research and innovation system suffered a sharp decline in funding during the 1990s and only in recent years has it begun to recover. R&D intensity fell from over 2% of GDP in 1990 to 0.74% in just two years, and after reaching 1.28% in 2003, it declined to 1.08% in 2006. The government finances the bulk of R&D; less than a third comes from industry. Business R&D intensity is a low 0.72% of GDP, less than half the peak of 1.57% in 1998. Foreign funding increased from 1994 to 2006, from 2% to 9.4% of gross domestic expenditure on R&D.

With the fourth largest researcher stock worldwide, Russia is well endowed with human resources for science and technology (HRST). Today, it has 6.8 researchers per 1 000 total employment, more than the EU15, despite large outflows in the 1990s. Russia has a very high level of attainment of tertiary education (55% of the population aged 25 to 64 years), and the share of science and engineering doctorates in all new doctoral degrees is above the OECD average.

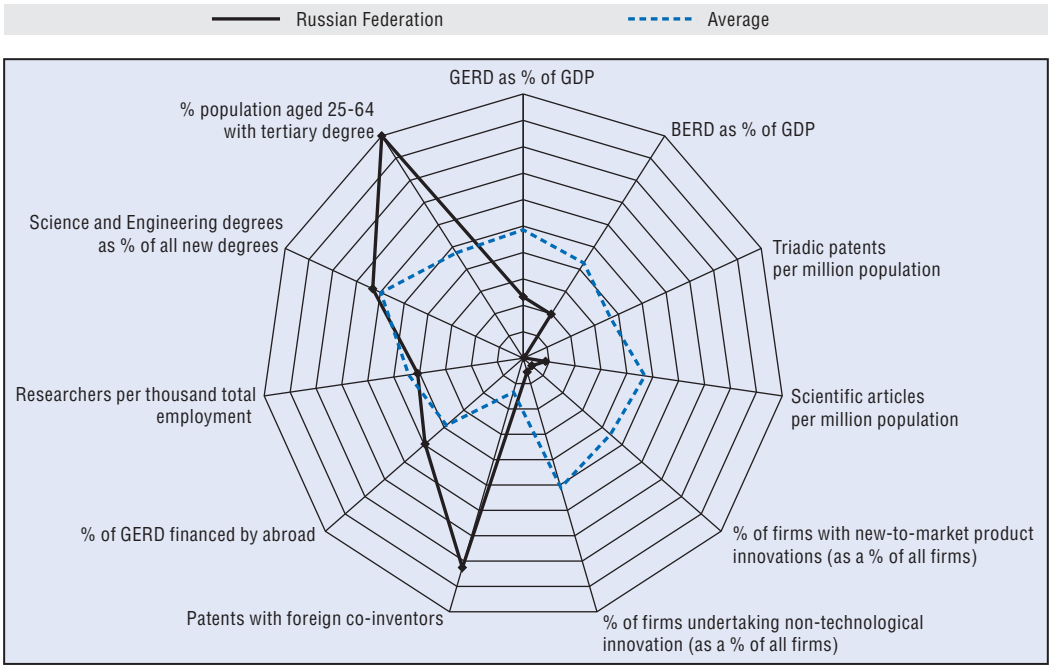
R&D output is modest and has declined over the past decade. Russia accounted for 2% of world scientific articles in 2005, down from 3.3% in 1995, and holds 0.1% of triadic patent families (the same share as South Africa). Russia has a very large share of inventions held by foreign owners and a high share of patents co-invented with foreigners. This is not only due to the high level of foreign funding, but also to the important role played by foreign investors in R&D in bridging Russia's science and innovation.

Russia's transition to a market-based economy has so far not markedly changed its R&D sector. The bulk of R&D continues to be performed by the research institutes, and links to the domestic business sector are weak. There are signs of change, however: the new legal status of non-profit organisations makes academies autonomous in terms of managing their activities, researchers' salaries have been raised and universities are better funded.

Russia has made progress in formulating innovation policy and creating an innovation governance system (for example, developing the legal base, engaging more ministries in innovation policy, learning from abroad with regard to priority setting, and monitoring innovation). To regain its former position in global science and technology, the government has adopted a strategy for the development of science and innovation to 2015 in order to improve government funding programmes and to foster science and industry linkages. New government funding programmes have been established to support R&D in priority industries, including space and aviation, nanotechnology, biotechnology and software, and to support the development of HRST.

A number of challenges lie ahead. At a broad level, the responsibilities of the various actors in the innovation system must be redefined to fit a more dynamic and open market economy, and new means of interaction between them need to be developed. Specific challenges include stimulating business investment in R&D and innovation, creating better infrastructure for the commercialisation of research (including the enforcement of intellectual property rights), making the allocation of public resources more competitive, and fostering better integration of science and higher education.

Science and innovation profile of the Russian Federation



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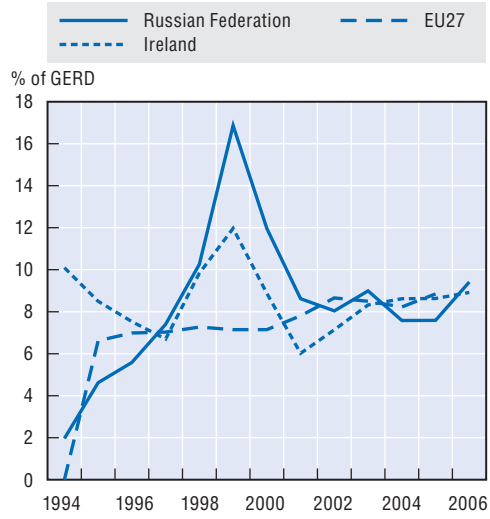
Foreign funding of R&D, 1994-2006

As a percentage of gross domestic expenditure on R&D



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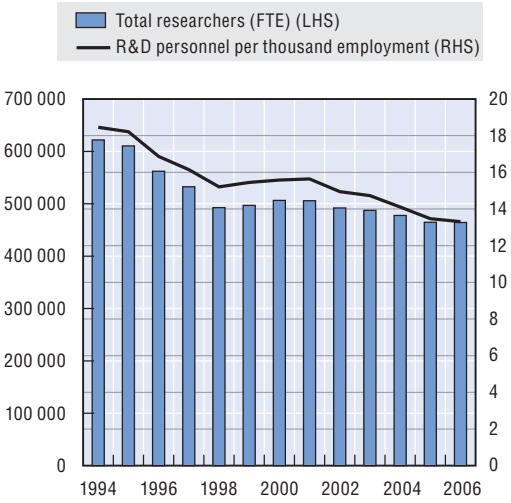
Human capital, 1994-2006



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