

ITALY

Italy's share in world trade has declined and low productivity growth has led to a widening gap in GDP per capita with the best OECD performers. Restoring economic dynamism will require addressing various challenges. Improving the environment for innovation is a crucial part of the solution.

Spending on R&D is below the OECD and EU average, and in 2005, R&D intensity (gross domestic expenditure on R&D [GERD] as a percentage of GDP) was 1.1%, compared to 2.25% for the OECD area and over 1.7% for the EU. The private sector financed only 40% of R&D and performed 50%, compared to OECD averages of 63 and 68%, respectively.

Weak investment in R&D may reflect the specialisation of firms in traditional sectors and the prevalence of small family businesses. However, strict regulations also reduce incentives for firms to operate efficiently, invest in innovative technologies and undertake organisational change. In recognition of this, the government has begun to liberalise certain sectors by lowering entry barriers and removing price and quantity restrictions.

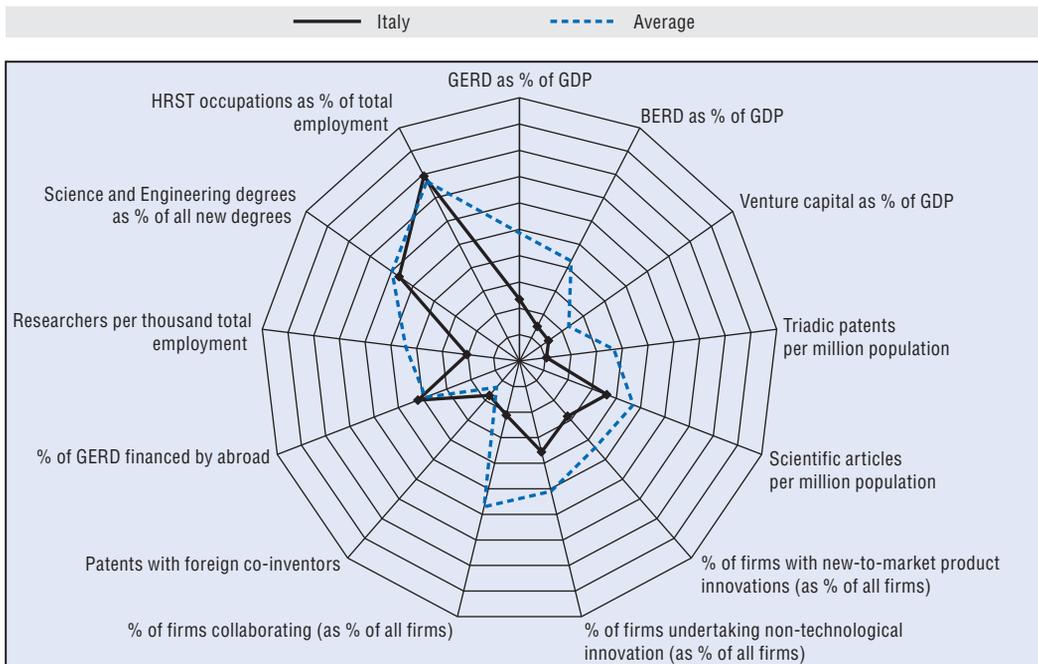
While occupations for human resources in science and technology grew strongly from 1996 to 2006 (averaging over 4% a year, compared to around 3% for the EU19), Italy has one of the lowest shares of researchers in total employment in the OECD area, with 3.4 researchers per 1 000 total employment, compared to 7.3 for the OECD area; average annual growth in researchers was negative from 1996 to 2005, at -0.1%, compared to 2% for the OECD area. Innovation performance,

as measured by triadic patenting activity, scientific publications and firms with new-to-market products, is also below average. The lack of strong interaction between academia and industry may be a factor.

To address these issues, a number of policies seek to stimulate R&D and innovation. For 2007-09, a tax credit provides up to 15% of the costs of pre-competitive industrial R&D (and up to 40% if the costs involve contracts with universities or public research entities). A Fund for Competitiveness and Development was created to support industrial innovation projects in such areas as energy efficiency, new technologies for "Made in Italy" products, new technologies for life, and innovative technologies for cultural heritage. An independent agency is being set up to evaluate universities and research in order to improve the governance of the research and innovation system. Italy also obtains EU Structural Funds which help to finance regional projects.

The key policy challenges for the immediate future concern human capital and innovation by firms. More university-educated people able to supply the knowledge base for high-technology production and diffuse new technologies throughout the economy will be needed. An expected "bulge" in retirement of senior academics in the next ten years will create both opportunities for change in the higher education sector and recruitment challenges. Further structural reforms, such as reducing public ownership and controls on enterprises, would also help spur innovation.

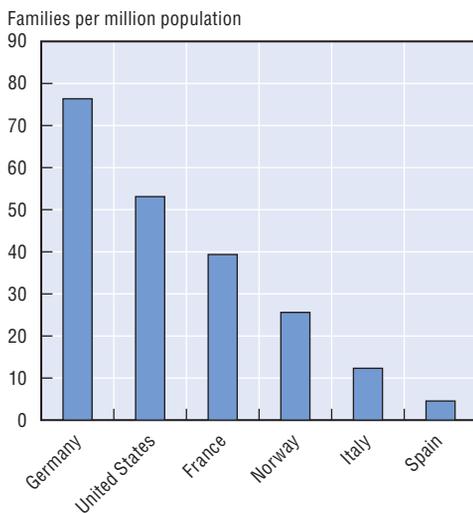
Science and innovation profile of Italy



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Triadic patent families per million population

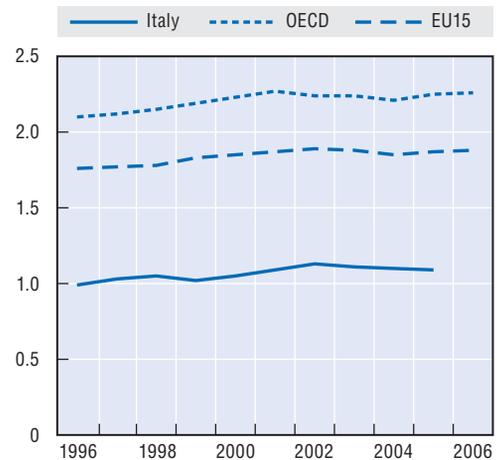
2005



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R&D intensity, 1996-2006

As a percentage of GDP



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