

TURKEY

Economic growth has picked up in recent years, but the income gap with other OECD countries remains large. As a catching-up and open economy, Turkey's main economic sectors – agriculture, textiles and clothing, machinery, steel, lumber, paper, and transport equipment – are under pressure from lower-wage competitors vying for market share. Raising productivity and innovation in these sectors will be crucial for maintaining competitiveness and attracting the foreign direct investment (FDI) needed to continue the modernisation process.

In 2006, Turkey spent 0.76% of GDP on R&D. Business R&D accounted for only 0.28% of GDP, although the share of gross domestic expenditure on R&D performed by business has increased over time, to 37% in 2006. Turkey receives little FDI, including for R&D, which limits its ability to harness foreign technology and ideas.

Although its performance in primary and secondary education is below average, Turkey has a history of producing a small, but high-quality population of S&E graduates and researchers, most of whom work in the higher education sector. In 2006, the number of researchers was 90 000 (head-count), up from 58 000 in 1999, but still below the EU average in relative terms. Science and engineering graduates represented over 20% of tertiary graduates in 2005. Turkey trains few PhDs, partly because many students go abroad for advanced training.

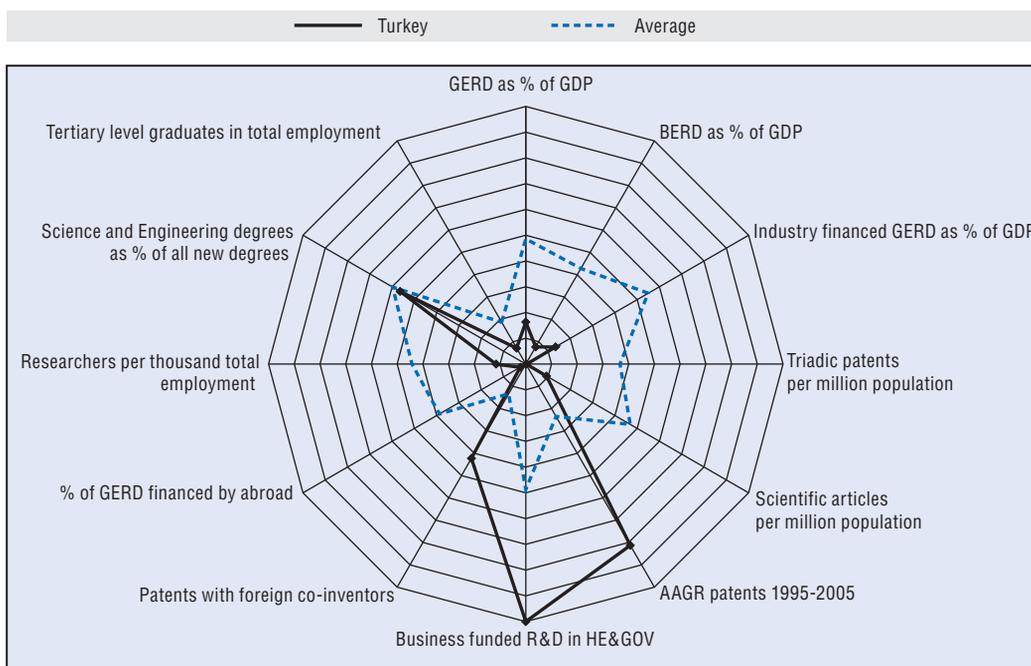
Turkey is a net importer of technology, and most patent applications filed in Turkey are those of foreign agents or

involve co-inventors; domestic firms file around one-tenth of the total. Turkey's share of triadic patent families per million population is very low, at 0.4 per million population in 2005, although this represents a strong increase since 1995.

The government's Ninth Development Plan aims to encourage R&D spending, improve the infrastructure for research and foster industry-science relations, including via clusters (technology development zones). The National Science, Technology and Innovation Strategy has set two major targets for 2013: to increase research intensity to 2% and the number of full-time equivalent researchers to 150 000. The role of the Science and Technology Policy Action Plan (2005-10) is to achieve the main objectives and targets of the national science, technology and innovation system. The SME Strategy and Action Plan (2007-09) includes measures such as training and incubators to boost SMEs' capacity to access knowledge from global suppliers and to stimulate collaboration with Turkish universities.

National technology platforms have also been established in order to increase the R&D and innovation capacity of industry. Five platforms were established in the sectors with the highest shares of exports (electrics/electronics, metal, textiles, marine sciences and automotives) and two in those with the highest share of imports (energy and pharmaceuticals). The platforms help define long-term research targets, prepare strategic research plans and build pathways for carrying out the plans.

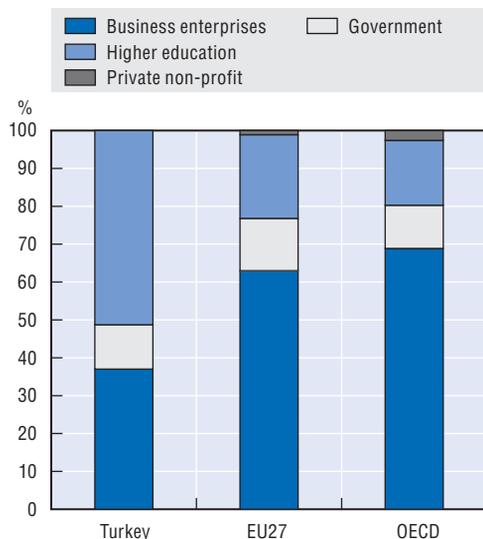
Science and innovation profile of Turkey



StatLink <http://dx.doi.org/10.1787/454056278336>

R&D by sector of performance, 2006

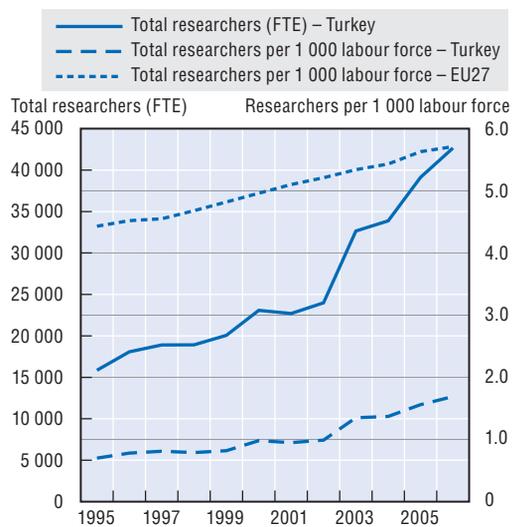
As a percentage of total R&D



StatLink <http://dx.doi.org/10.1787/454085566486>

Researchers

1995-2006



StatLink <http://dx.doi.org/10.1787/454110280071>