

2. TARGETING NEW GROWTH AREAS

2.12. Government R&D budgets

Public policy can play an important role in orienting innovation efforts towards the solution of global challenges. Government R&D budgets (GBAORD) provide an indication of the relative importance of various socioeconomic objectives, such as defence, health and the environment, in public R&D spending.

Government R&D budgets as a share of gross domestic product (GDP) are the largest in Spain, Portugal and the United States. In the United States defence accounts for 57% of total government R&D budget in 2008. France comes second with almost 30%, followed by the United Kingdom with 24%. Sweden and Spain also have significant defence R&D budgets (more than 10% of GBAORD), although their relative share has declined slightly in recent years.

Together with Portugal and Spain, Finland, Denmark and Iceland have the largest government R&D budgets for civil programmes as a share of GDP in 2008.

In many countries, GBAORD has not increased in line with GDP. In the OECD area Spain is currently the leader in terms of GBAORD as a share of GDP, at 1.08% in 2007. The United States and Portugal are the only other OECD countries where the share exceeds 1%. Iceland has seen a significant drop in the ratio of GBAORD to GDP in the last few years (from 1.4% in 2005 to 0.9% in 2008), mainly owing to strong growth in GDP.

In the OECD area between 2000 and 2006, government R&D budgets grew on average by 3.8% a year (in real terms). In Luxembourg the R&D budget grew by more than 20% a year between 2000 and 2007. Spain and Ireland have both had growth rates exceeding 10% a year since 1998. France is the only OECD country whose government R&D budget decreased in real terms in the last decade, by around 0.4% a year. Growth of GBAORD has been modest in the EU27 region, averaging 2.4% a year since 1998, compared to 2.9% in Japan and 4.2% in the United States.

GBAORD

GBAORD (government budget appropriations or outlays for R&D) measures the funds committed by the federal/central government for R&D to be carried out in one of the four sectors of performance – business enterprise, government, higher education, private non-profit – at home or abroad (including by international organisations). The data are usually based on budgetary sources and reflect the views of the funding agencies. They are generally considered less internationally comparable than the performer-reported data used in other tables and graphs but have the advantage of

being more timely and reflecting current government priorities, as expressed in the breakdown by socioeconomic objectives.

A first distinction can be made between defence programmes, which are concentrated in a small number of countries, and civil programmes, which can be broken down as follows:

- Economic development: agriculture, fishery, forestry; industry; energy; and infrastructure and general planning of land use.
- Health and environment: protection and improvement of human health, control and care of the environment, exploration and exploitation of the Earth.
- Education and society: education; culture, recreation, religion and mass media; and political and social systems, structure and processes.
- Exploration and exploitation of space.
- Non-oriented research.
- Research financed from general university funds (GUF): the estimated R&D content of block grants to universities.

It should be noted that the series for Japan excludes the R&D content of military procurement. In the United States, general support for universities is the responsibility of state governments and therefore GUF is not included in total GBAORD.

Sources

OECD, Main Science and Technology Indicators Database, June 2009.

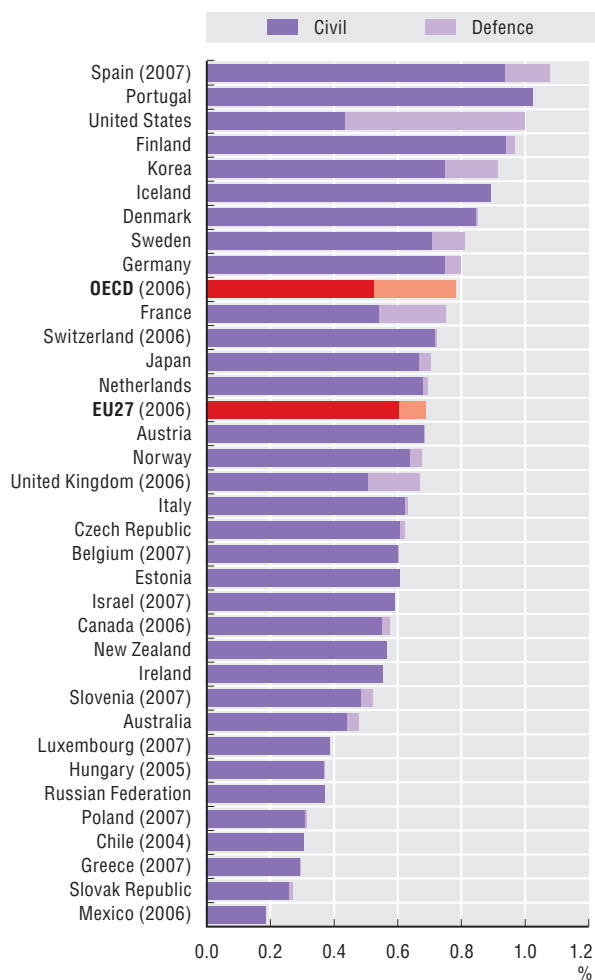
OECD, R&D Database, June 2009.

Going further

OECD (2002), *Frascati Manual: Proposed Standard Practice for Surveys on Research and Experimental Development*, OECD, Paris, www.oecd.org/sti/frascaticmanual.

Defence and civil R&D budgets, 2008

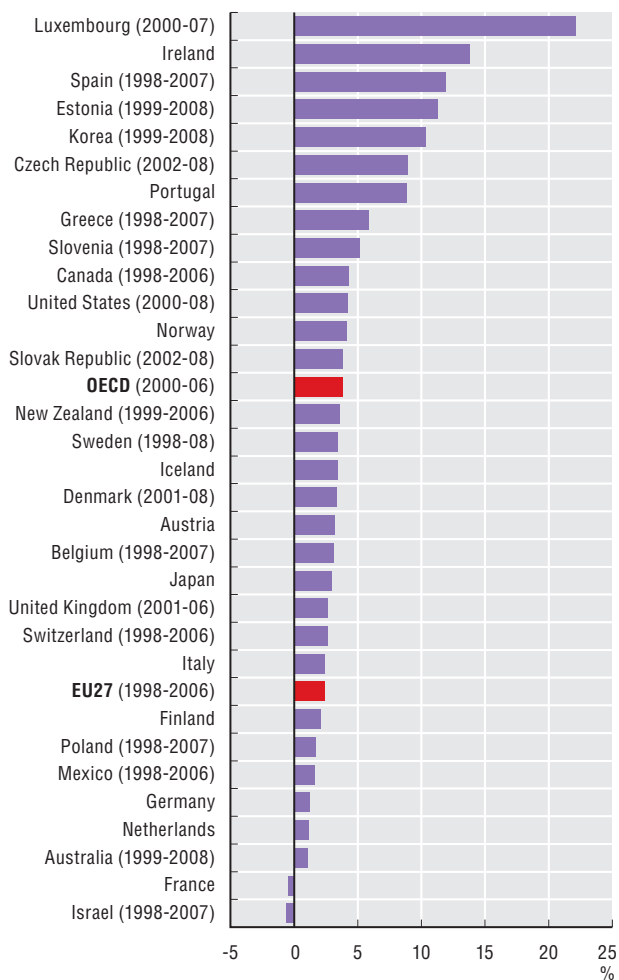
GBAORD as a percentage of GDP



StatLink <http://dx.doi.org/10.1787/744138547871>

Change in government R&D budgets, 1998-2008

Average annual real growth rate



StatLink <http://dx.doi.org/10.1787/744138670205>



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