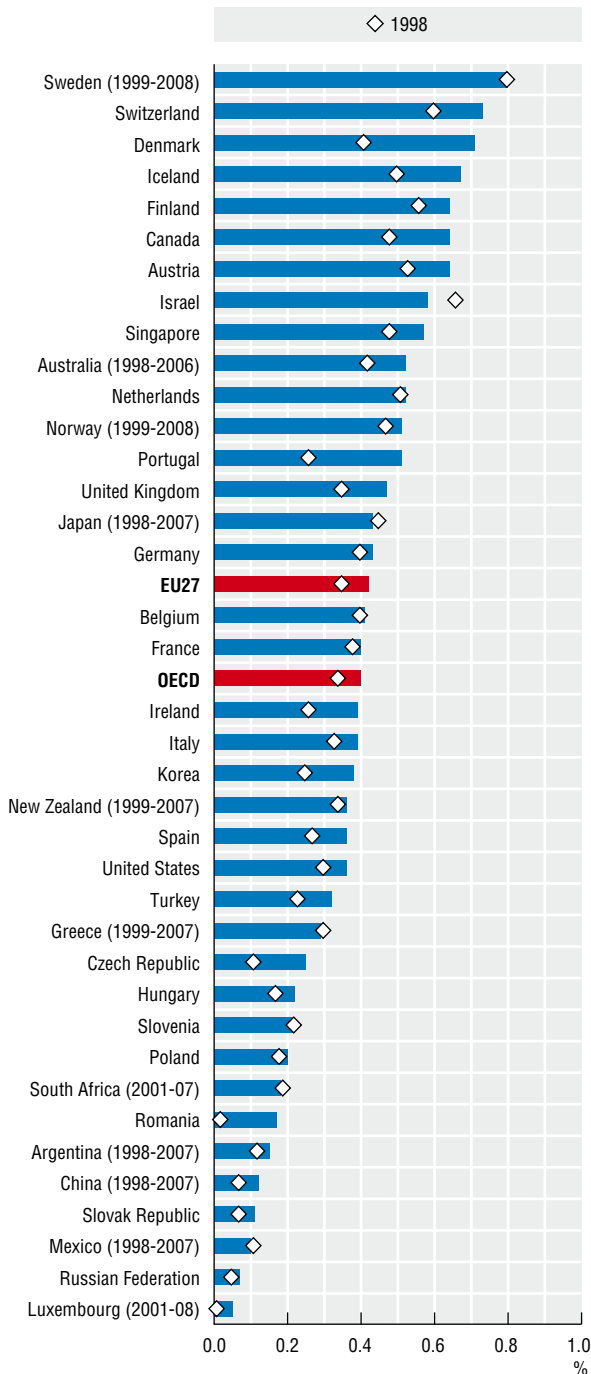


Most basic research is performed in universities and in public research organisations. Public support for such research remains crucial. It is essential for developing new scientific and technological knowledge and the human capital that can lead to innovation to benefit the economy and society.

Higher education expenditure on R&D, 2008

As a percentage of GDP



Source: OECD, Main Science and Technology Indicators Database, March 2010. See chapter notes.

StatLink <http://dx.doi.org/10.1787/836005248761>

DID YOU KNOW?

On average, more than three-quarters of all basic research in the OECD is performed by governments and universities.

(OECD, Research & Development Database, 2009.)

University spending on R&D accounts for 0.40% of GDP in the OECD area, a share that has increased in most countries over the last decade. This shows the growing importance of universities as providers of useful new knowledge and as trainers of the researchers and other highly skilled workers on which knowledge-based economies rely. In most countries, university basic research accounts for 40% to 70% of all basic research performed in the country.

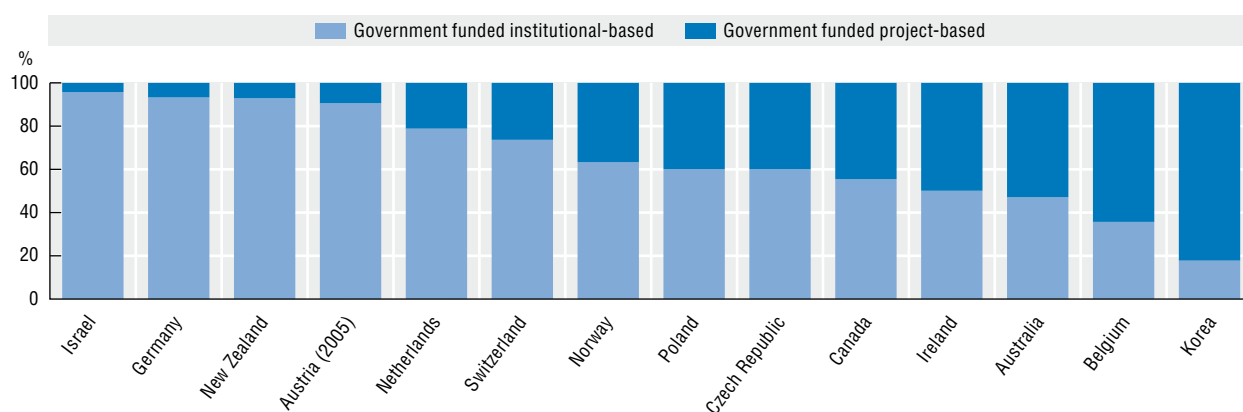
Governments rely on two main modes of direct R&D funding: institutional and project-based. Institutional funding can help ensure stable long-run funding of research, while project-based funding can promote competition within the research system and target strategic areas.

A new indicator has been developed on modes of public funding to the higher education sector (see right-hand page). Government R&D funding modes vary widely and reflect the institutional settings of countries' research systems. In Germany, Israel and New Zealand, institutional funding is the principal mode, while Belgium and Korea rely mainly on project funding. The mix of funding modes can only be changed over the longer run through reforms of the research system.

Definitions

Project funding is defined as funding attributed on the basis of a project submission to a group or individuals for an R&D activity that is limited in scope, budget and time. *Institutional funding* is defined as the general funding of institutions with no direct selection of R&D projects or programmes. *Basic research* is experimental or theoretical work undertaken primarily to acquire new knowledge of the underlying foundation of phenomena and observable facts, without any particular application or use in view. The *public sector* comprises the government and higher-education sectors.

Government funded R&D in higher education, by type of funding, 2008



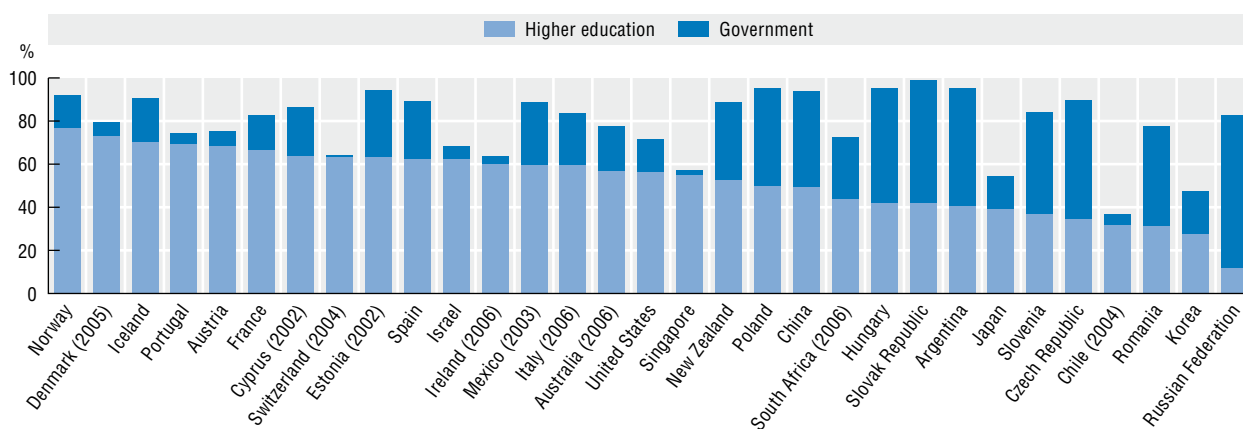
Note: This is an experimental indicator. International comparability is currently limited.

Source: OECD, based on preliminary data from the Microdata project on public R&D funding, 2009. See chapter notes.

StatLink <http://dx.doi.org/10.1787/836005248761>

Basic research performed in the public sector, 2007

As a percentage of national basic research



Source: OECD, Research & Development Database, December 2009. See chapter notes.

StatLink <http://dx.doi.org/10.1787/836005248761>

Measurability

Data on R&D in higher education can be broken down by field of science (natural sciences, engineering, medical sciences, agricultural sciences, social sciences and humanities), by type of costs (current expenditures, capital expenditures), and by source of funds (business enterprise, government, higher education, private non-profit and funds from abroad). Measures of R&D performance in the higher education sector are often estimates by national authorities and evaluation methods are periodically revised. It is necessary to review the design and conduct of higher education R&D surveys to improve the comparability of these indicators.

Project-based funding to higher education includes R&D national contracts from line ministries or government contributions to national funding agencies (e.g. research councils). Institution-based funding to higher education includes general university funds (GUF) and other institutional funds. The OECD project on modes of public funding of R&D is developing new indicators by exploiting existing budget data. The project demonstrates the feasibility of collecting these experimental indicators. NESTI (OECD Working Party on National Experts in Science and Technology Indicators) is working to develop methodological guidelines for refining and institutionalising their collection.