

## 1. RESPONDING TO THE ECONOMIC CRISIS

### 1.7. Business R&D by firm size

Small and medium-sized firms (SMEs) play an important role in innovation. They are a constant source of technological change and competitive pressure for large firms, which are compelled to innovate to maintain their technological edge. The credit crunch created by the current crisis is likely to affect SMEs severely, owing to their typically limited access to finance.

The effects of the recession on business research and development (R&D) expenditure are also likely to be stronger in smaller OECD economies, where the share of R&D performed by SMEs (defined here as firms with fewer than 250 employees) is generally greater than in larger economies. In 2007, SMEs accounted for a large share of business R&D in New Zealand (73%), Greece (60%), the Slovak Republic (57%), Norway (50%), Spain (49%), and Ireland (46%). In the larger EU countries, their share is less than 20%, and in the United States it is around 15%. Japan has one of the lowest shares among OECD countries, with only 6.4%.

Small firms (those with fewer than 50 employees) account for a significant share of business R&D (over 20%) in Greece, Ireland, and Spain, and more than 45% in New Zealand.

The impact of the crisis on the innovative activities of SMEs also depends on the government financing of business R&D, which differs greatly among OECD countries. In Hungary, Portugal, the Slovak Republic and Slovenia, SMEs receive 75% or more of government-financed R&D. In Belgium, Hungary, Slovenia and Switzerland, more than 40% of government-financed R&D goes to firms with fewer than 50 employees. The United Kingdom, France and the United States are the countries in which the greatest share of government-financed business R&D is directed to large firms.

#### Classification by size

The classification of firms by size follows the recommendations of the 2002 *Frascati Manual* (para. 183). Small firms are defined as those with “fewer than 50 employees” and medium-sized firms as those with “50 to 249 employees”. This definition is consistent with the size classification adopted by the European Commission for SMEs.

#### Source

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

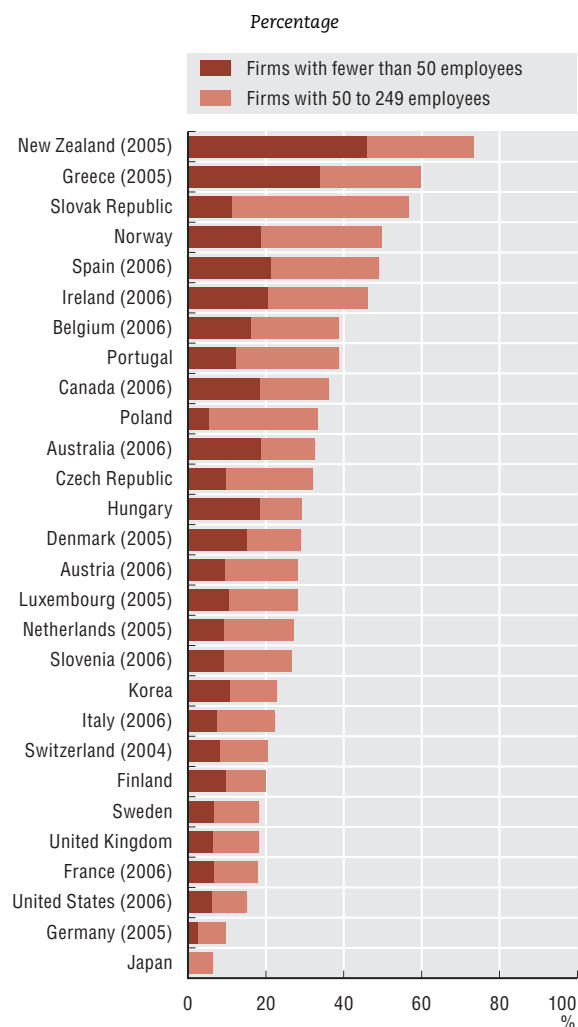
#### Going further

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

#### Figure notes

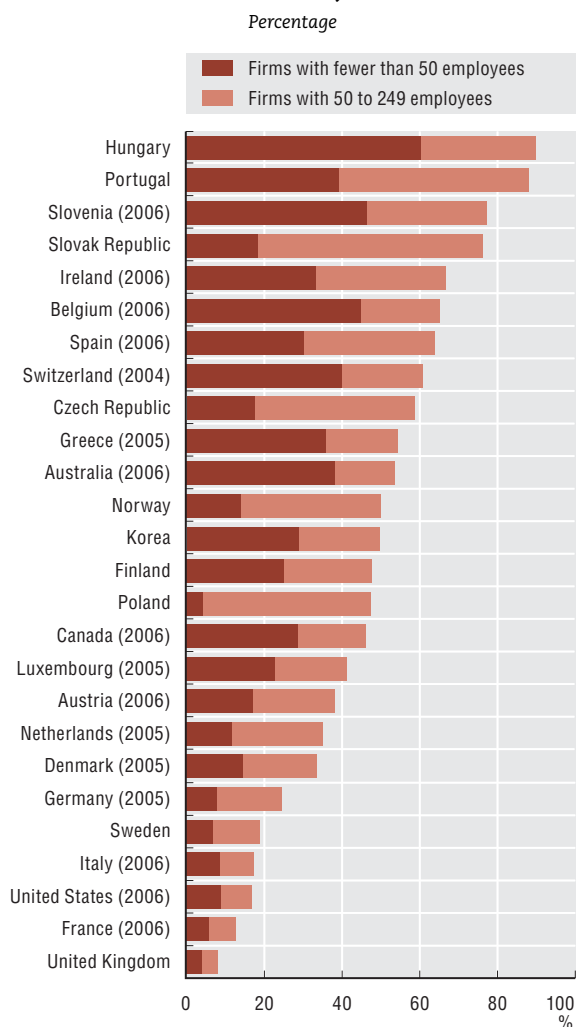
Small firms (fewer than 50 employees): for the United States, 5-49 employees; for Luxembourg, the Netherlands and Sweden, 10-49 employees. Medium-sized firms (50-249 employees): for Japan, fewer than 299 employees.

Share of business R&D by size class of firms, 2007



StatLink <http://dx.doi.org/10.1787/742335760410>

Share of government-financed business R&D by size class of firms, 2007



StatLink <http://dx.doi.org/10.1787/742376005261>



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