

Research is increasingly internationalised. In the search for new technological competences, better adaptation to local markets, and lower research and development (R&D) costs, companies are moving their research activities abroad. This internationalisation of research activities is an important driver of innovative firms' and countries' competitiveness.

The share of foreign affiliates in industrial R&D varies widely, ranging from 5% in Japan to over 60% in the Slovak Republic and Ireland. At over 40%, the share of R&D conducted by foreign affiliates is also high in the Czech Republic, Belgium, Portugal and Sweden. In most countries, foreign affiliates have a higher share of total R&D than of total turnover, which suggests that research is now more internationalised than production.

The share of foreign affiliates in R&D also reflects the size of their R&D effort relative to that of domestic firms. In 2006, foreign affiliates carried out more R&D than national firms in many countries. The intensity of R&D (as a share of turnover) by foreign affiliates was notably higher than that of domestic companies in Sweden, Belgium and Portugal. In Japan, where domestic companies' average R&D intensity was equal to 0.8% of turnover, it was superior to 2.7% for affiliates under foreign control. This is attributable in great part to the fact that Japanese foreign affiliates are concentrated in the motor vehicle industry (the alliance between Renault and Nissan). This sector has considerably increased its R&D spending, in contrast to firms under domestic control, which operate in all sectors of activity.

#### Defining foreign affiliates

The term "foreign affiliate" is restricted to affiliates under foreign control. Accordingly, the geographical origin of a foreign affiliate is the country of residence of the ultimate controller. An investor (company or individual) is considered to be the investor of ultimate control if it is at the head of a chain of companies and controls directly or indirectly all the enterprises in the chain without itself being controlled by any other company or individual.

The notion of control implies the ability to appoint a majority of administrators empowered to direct an enterprise, to guide its activities and determine its strategy. In most cases, this ability can be exercised by a single investor holding more than 50% of the shares with voting rights.

Not all activities related to R&D are recorded in company transactions. There are intra-company transfers (e.g. intra-company mobility of researchers) with no monetary counterparts which lead to R&D efforts that do not appear in the statistics as R&D spending by foreign affiliates.

#### Source

OECD, AFA Database, May 2009.

#### Going further

OECD (2005), *Measuring Globalisation: OECD Handbook on Economic Globalisation Indicators*, OECD, Paris.

OECD (2008), *The Internationalisation of Business R&D: Evidence, Impacts and Implications*, OECD, Paris.

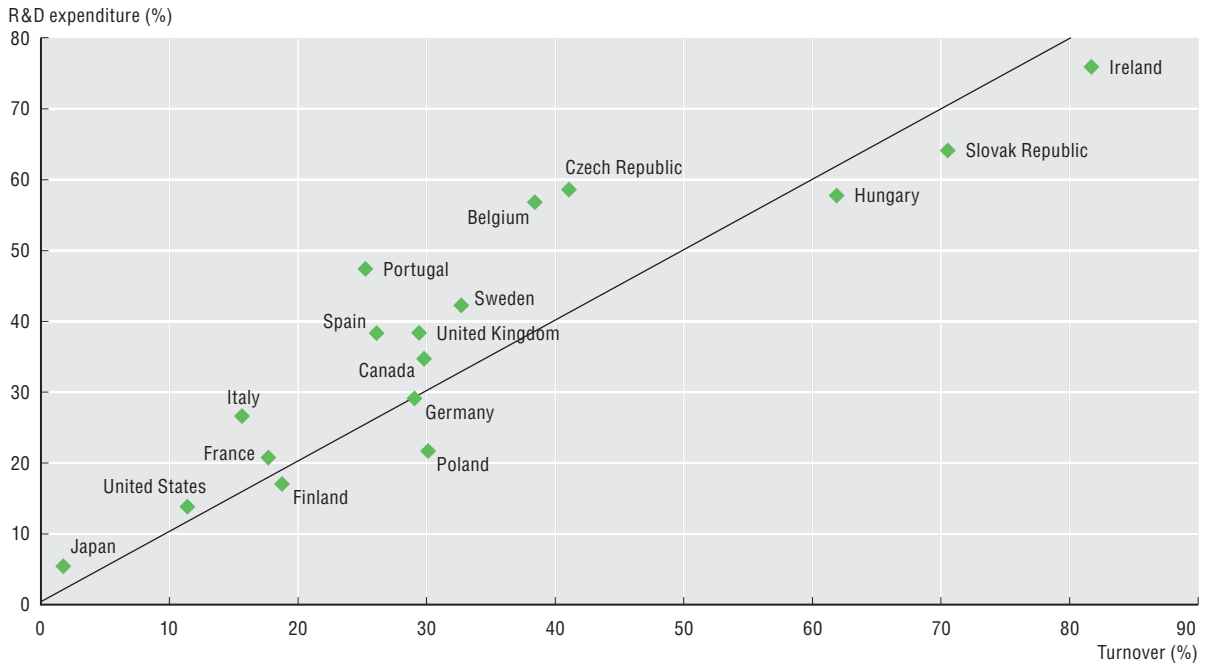
#### Figure notes

Data for 2005 for Belgium, Germany, Ireland, Portugal, Spain and Sweden. Data for Germany, Hungary, Ireland, Portugal, the Slovak Republic and Spain, manufacturing sector only.

R&D intensity is defined as R&D expenditure as a percentage of turnover.

**R&D and turnover of affiliates under foreign control, 2006**

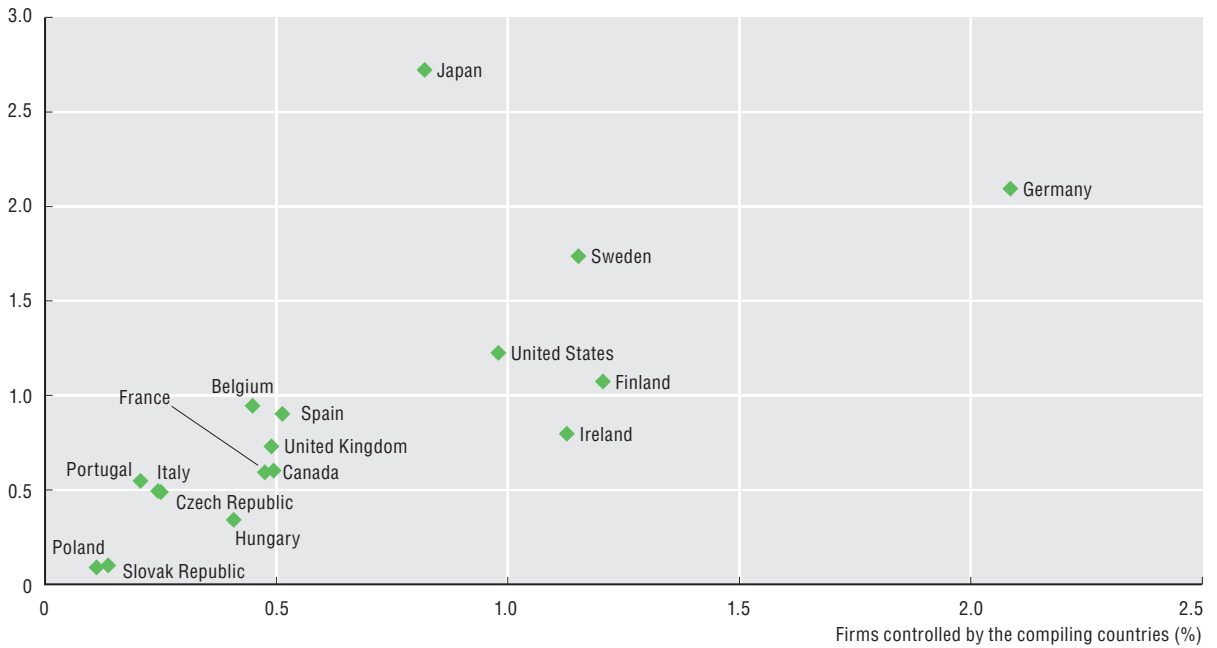
As a percentage of total



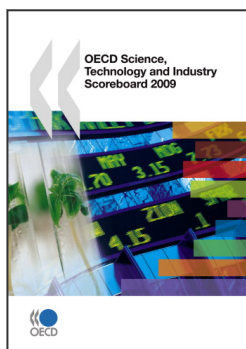
StatLink <http://dx.doi.org/10.1787/746183421062>

**R&D intensity of foreign affiliates and of firms controlled by compiling countries, 2006**

Affiliates under foreign control (%)



StatLink <http://dx.doi.org/10.1787/746227683061>



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