C 4 Funding of research and innovation

The public funding of research and development (R&D) in the private sector makes a distinction between direct R&D funding (project funding) and funding through R&D tax credits.[325] Figure C 4-1 shows direct and tax-related R&D funding as a percentage of gross domestic product in selected countries. The bulk of resources allocated to project funding goes into application-oriented research. Project funding directed at specialised programmes usually promotes specific technologies. However, when it comes to funding programmes that are not specific to individual technologies, the government does not exert any influence on the nature or contents of the technologies funded. R&D tax credits represent an indirect form of R&D funding. This means that companies receive tax credits in proportion to the amount of their R&D expenditure. From an economic point of view, this lowers the marginal costs of carrying out R&D. While this instrument is available to businesses in most OECD countries, Germany does not yet make use of this form of funding.

Financing constitutes a major challenge for many innovative companies – not only in the start-up phase, but also in the growth phase. Internal financing of investments and current expenditure is rarely an option, as these companies initially generate little or no revenue. Borrowing outside capital in the form of bank loans is also difficult, as it is not easy for banks to assess the companies' success prospects. Therefore, young, innovative enterprises can often only establish themselves on the market with the help of private investors who provide venture capital during the start-up and growth phases.

Figure C 4-2 provides an overview of venture-capital investment as a percentage of the national gross domestic product of selected European countries. It shows that in Germany this share remains relatively low by European comparison. Although venture-capital investment in Germany rose between 2012 and 2013 (C 4-3), there were also increases in most other countries, so that Germany was not able to improve its relative position. The biggest increase took place in Finland, which raised venture-capital investment from 0.04 to 0.07 percent of gross domestic product, overtaking Sweden at the top of the table. By contrast, venture-capital investment in Sweden, hitherto European leader, stagnated between 2012 and 2013.

C 4-1
Data
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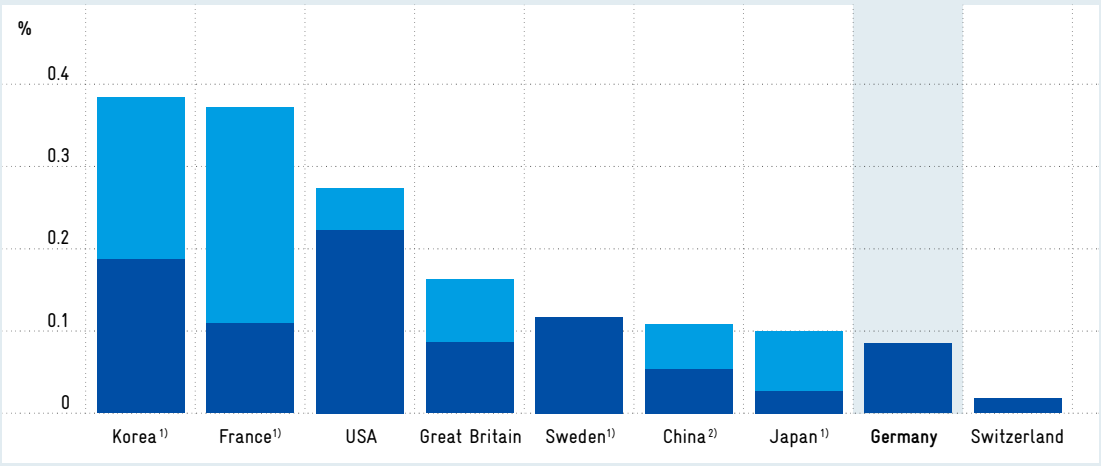
R&D spending in the business sector directly and indirectly funded by the public sector in 2012 as a percentage of national GDP

In the public funding of business-sector R&D there is a distinction between direct R&D funding (project funding) and indirect funding (through R&D tax credits).



1) 2011, 2) 2009
Source: OECD 2014b.

C 4-2
Data
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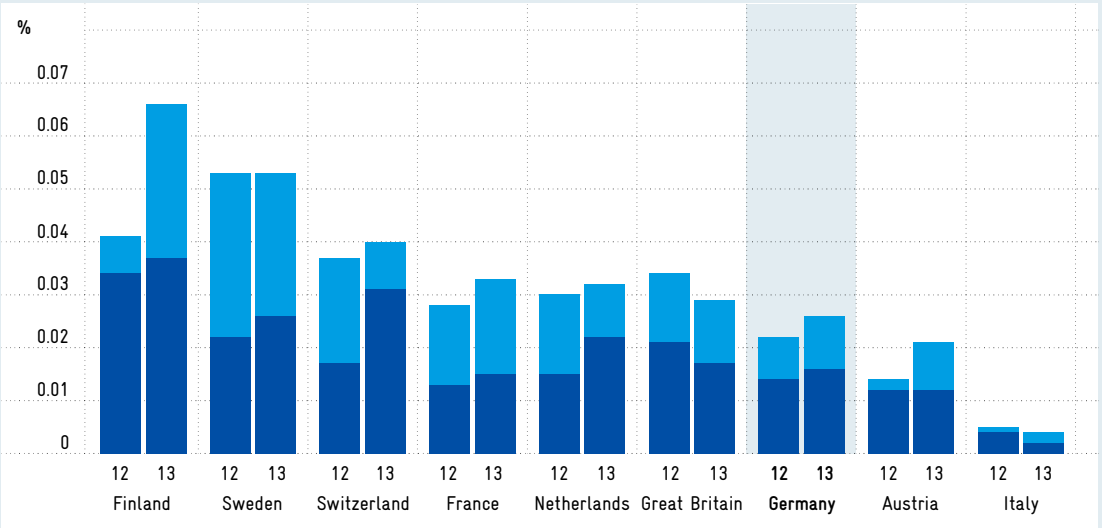
Venture-capital investment as a percentage of national GDP in 2012 and 2013

Venture capital refers to temporary equity investments in young, innovative, non-listed companies.



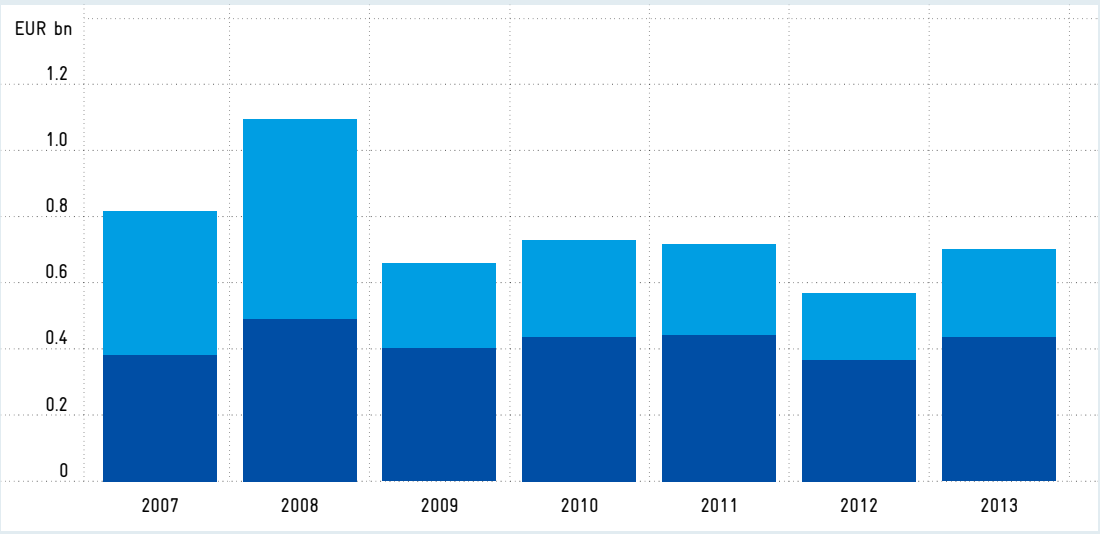
Investments according to registered office of the portfolio companies. Early stage includes the seed phase and the start-up phase.
Source: EVCA (2014), Eurostat. Own calculations.

C 4-3

Data
Download

Development of venture-capital investment in Germany in billions of euros 2007 to 2013

Venture capital refers to temporary equity investments in young, innovative, non-listed companies.



Investments according to registered office of the portfolio companies. Early stage includes the seed phase and the start-up phase.
Source: EVCA (2014).

C