C 4 FUNDING OF RESEARCH AND INNOVATION

With regard to public funding of research and development (R&D) in the private sector, a distinction is made between direct R&D funding (project funding) and funding through R&D tax credits.[485] Figure C 4 – 1 shows the share of direct and tax-related R&D funding in gross domestic product in selected countries. The bulk of resources allocated to project funding goes into application-oriented research, where project funding is often directed at specialised programmes that aim to promote specific technologies. However, when it comes to funding programmes that are not specific to individual technologies, the government does not exert 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 cost of performing R&D activities. While this instrument is available to businesses in most of the OECD countries, Germany does not make use of this form of funding yet. In many of the OECD countries, the share of R&D funding via tax credits already exceeds the share of direct public 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 only little or no revenue. The borrowing of outside capital in the form of bank loans is an issue as it is difficult for banks to assess the company's prospects of success. 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.

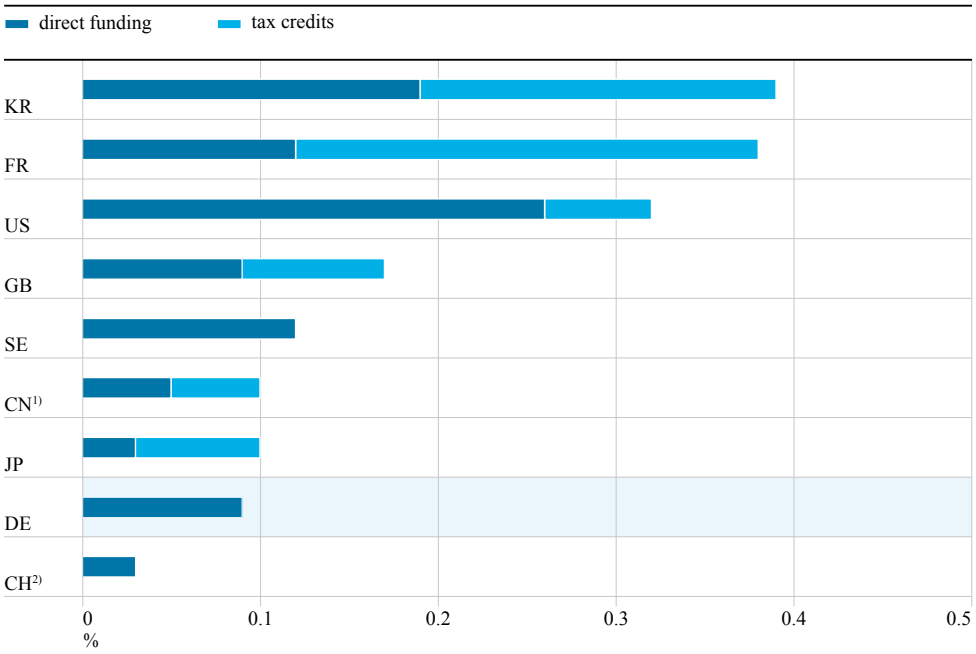
Figure C 4 – 2 provides an overview of the share of venture capital investment in national gross domestic product of selected countries. The figure shows that this share continues to be relatively low in Germany. In other European countries such as Sweden, Finland, Great Britain and Switzerland, venture capital investment relative to gross domestic product is significantly higher. The development of venture capital investment in Germany in recent years suggests that the situation has not improved. Ever since the severe slump in the crisis year of 2009, venture capital investment has not only stagnated, but even declined in 2012 (C 4 – 3).

Share of the business sector's R&D expenditure directly and indirectly funded by the public sector, as a share of GDP, 2011 (figures in percent)

C 4 – 1

In most of the countries, tax credits for R&D – in addition to direct R&D funding (i.e. project funding) – play an important role in the public financing of R&D in the business sector.

DATA DOWNLOAD



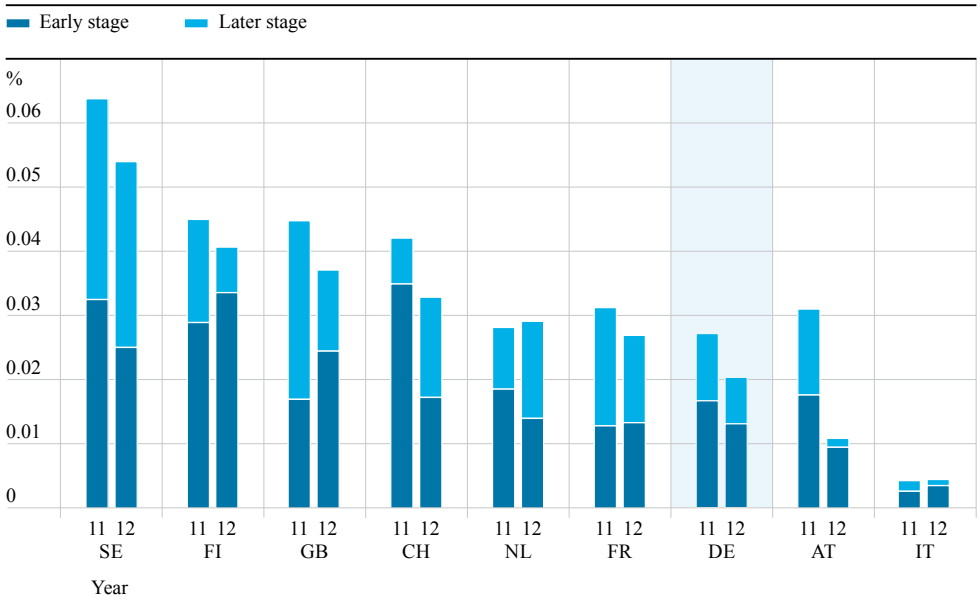
1)2009; 2)2008
Source: own depiction based on OECD Science, Technology and Industry Scoreboard 2013.

Venture capital investments as a share of national GDP
(investments according to registered office of the portfolio companies; figures in percent)

C 4 – 2

Between 2011 and 2012, the share of venture capital investments of national GDP has decreased in nearly all of the countries surveyed.

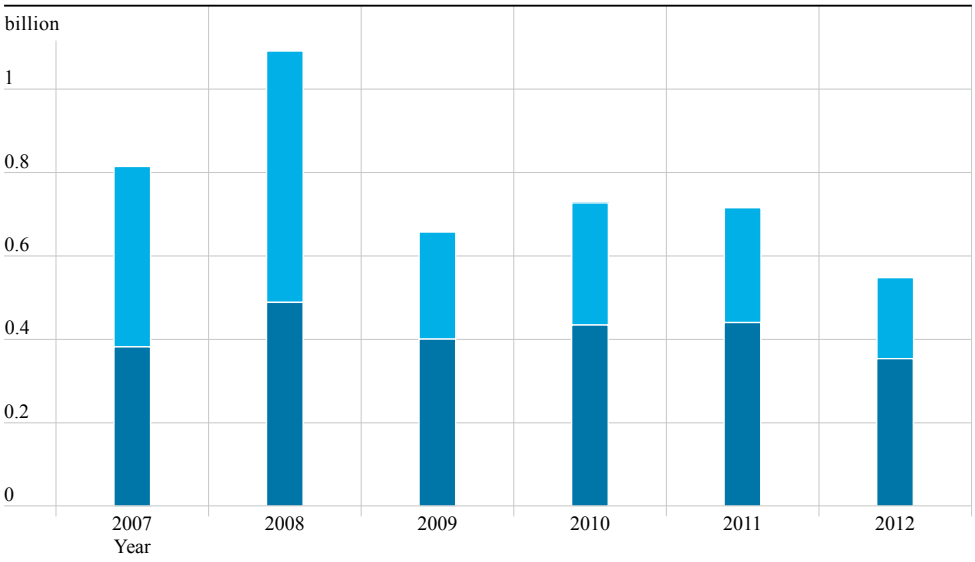
DATA DOWNLOAD



Early stage comprises the seed phase and the start-up phase.
Source: EVCA (2013), Eurostat. Own calculations.

C 4–3 **Development of venture capital investments in Germany**
(investments according to registered office of the portfolio companies)

DATA DOWNLOAD



Early stage comprises the seed phase and the start-up phase.

The development of venture capital investments in Germany is stagnating at a low level.