C 3 Innovation behaviour in the private sector

The Europe-wide Community Innovation Surveys (CISs) are conducted every two years and provide the underlying data for the international comparison of the private sector's innovation behaviour (C 3-1).[523] Coordinated by Eurostat and based on a harmonized methodology, the CISs are conducted in all EU member states and a number of other European countries. The CISs are based on a largely uniform questionnaire and directed at businesses with ten or more employees in the manufacturing industry and selected services sectors. The current analysis relates to 2016 (CIS 2016). In that year, the innovation intensity of the research-intensive industries in Germany amounted to 7.4 percent. It was therefore higher than the levels in most reference countries. However, Sweden and Denmark recorded considerably higher innovation intensity at 8.2 and 7.8 percent in their respective research-intensive industries.

The data on innovation behaviour in the German private sector, as shown in charts C 3-2 and C 3-3, is based on the Mannheim Innovation Panel (MIP),[524] an annual innovation survey that has been conducted by the Centre for European Economic Research (ZEW) since 1993. Data from the MIP constitutes the German contribution to the CISs. In addition to the data to be reported to Eurostat, the MIP also includes data on businesses with five to nine employees.

In recent years, only minor fluctuations in innovation intensity (C 3-2) have been recorded in all observed sectors of the industry and business-oriented services. The highest rates in the entire study period were in R&D-intensive industry and knowledge-intensive services (excluding financial services). These sectors recorded innovation intensity of 8.7 and 5.3 percent respectively in 2017. At 0.8 and 0.7 percent respectively, the innovation intensities in financial services and other services were significantly lower.

In 2017, the percentage of turnover generated by new products (C 3-3) rose significantly in the fields of knowledge-intensive services (from 11 to 15.4 percent) and other industry (from 6.7 to 8.3 percent) compared to the previous year. Over the same period, R&D-intensive industry recorded a slight increase in this regard (from 34.2 to 34.5 percent), while other services recorded a slight decline (from 6.4 to 6.2 percent).

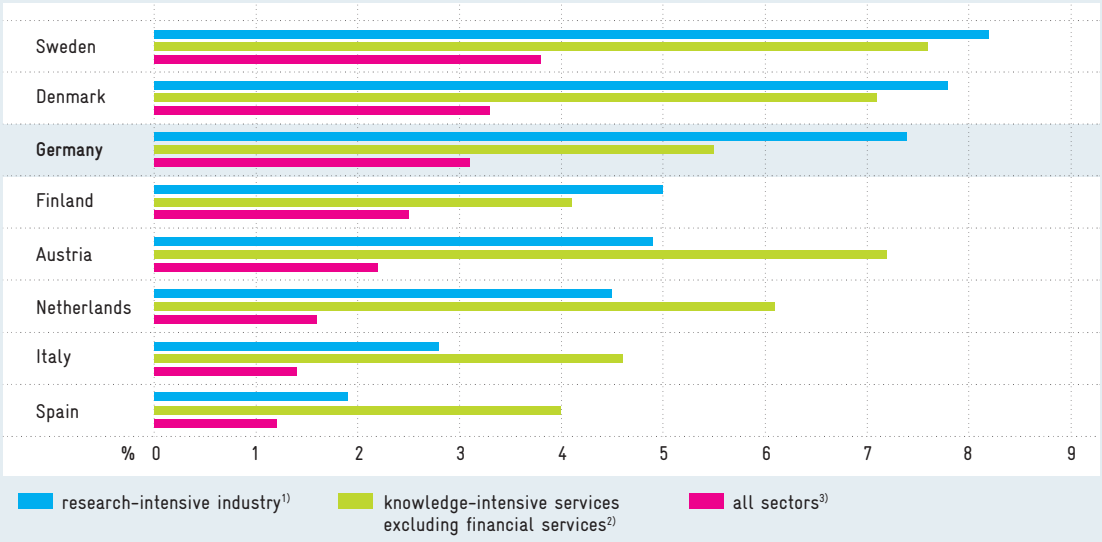
Standardization is an important factor in the commercialization of innovative technologies. At the international level, standards are developed by the committees of the International Organization for Standardization (ISO). By participating in these committees, a country can make a significant impact on global technical infrastructures (C 3-4).[525] In 2018, German companies were involved in the work of the ISO considerably more frequently than representatives of other countries.526 From 2008 to 2018, China, Japan and South Korea significantly increased the number of ISO secretariats run by their representatives

Fig. C 3-1

Innovation intensity by European comparison in 2016 as percentages

Download data

Innovation intensity: innovation expenditure by companies as a percentage of their total turnover.



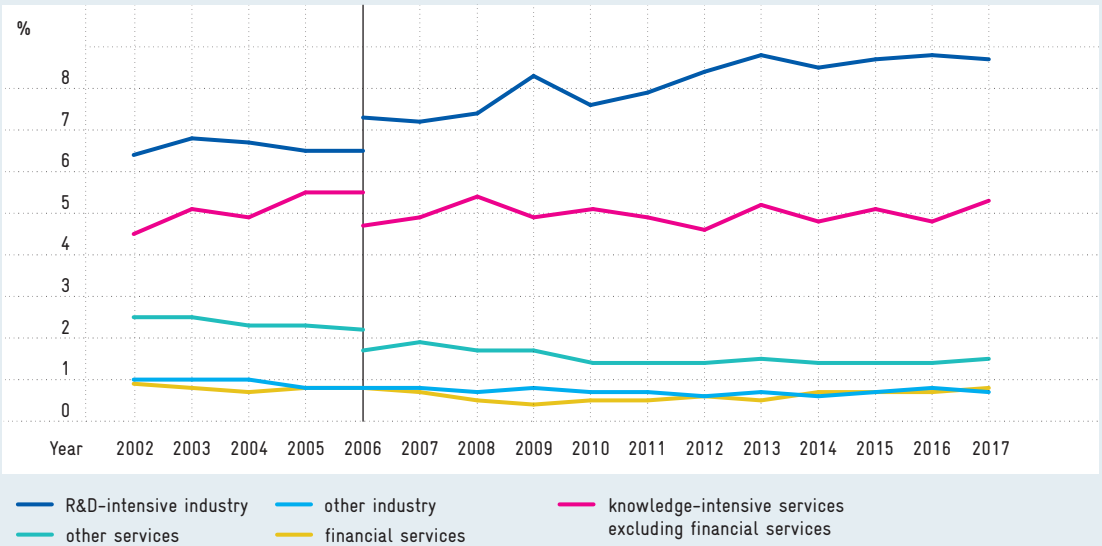
1) Research-intensive industry: divisions 19–22, 25–30 of WZ classification. Since data is not available for all sectors in all countries, the definition of research-intensive industries used in the European comparison differs from the definition normally used by the EFI.
2) Knowledge-intensive services: divisions 58–66, 71–73 of WZ classification. Since data is not available for all sectors in all countries, vthe definition of knowledge-intensive services used in the European comparison differs from the definition normally used by the EFI.
3) All sectors divisions 5–39, 46, 49–53, 58–66, 71–73 of WZ classification.
Source: Eurostat, Community Innovation Surveys 2016. Calculations by ZEW (Centre for European Economic Research).

Fig. C 3-2

Innovation intensity in industry and business-oriented services in Germany as percentages

Download data

Innovation intensity: innovation expenditure by businesses as a percentage of their total turnover.

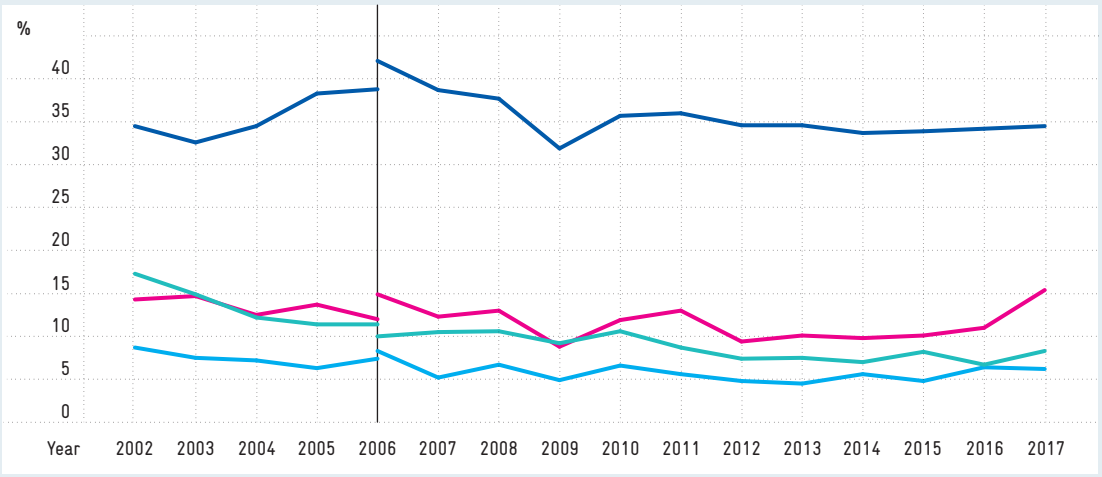


2006: break in time series. Figures for 2017 are provisional.
Source: Mannheim Innovation Panel. Calculations by ZEW (Centre for European Economic Research).

Fig. C 3-3

Download data

Percentage of turnover generated by new products in industry and business-oriented services

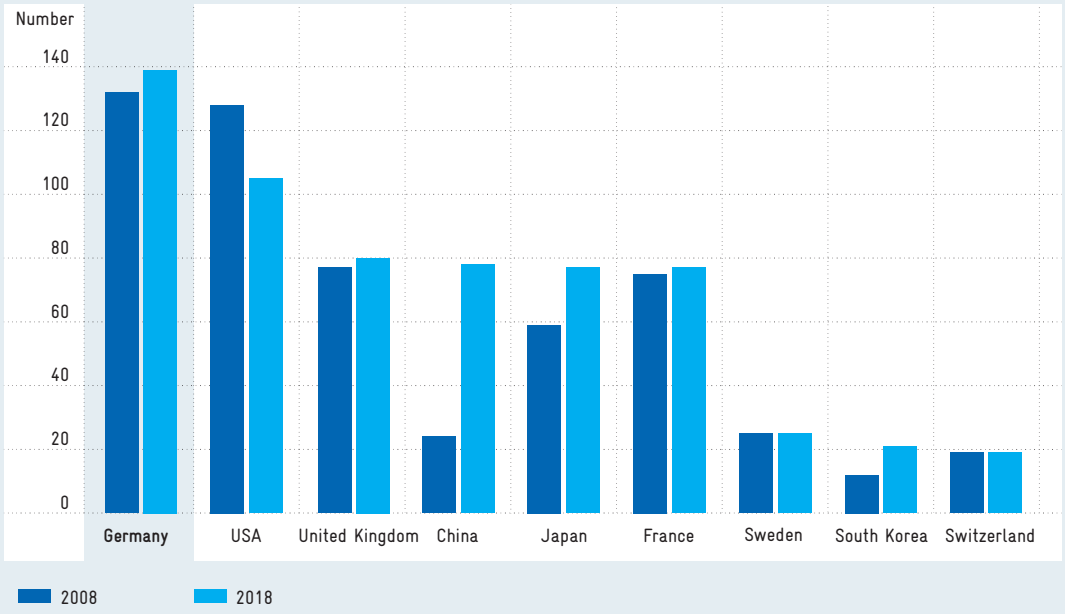


2006: break in time series. Figures for 2017 are provisional.
Source: Mannheim Innovation Panel. Calculations by ZEW (Centre for European Economic Research).

Fig. C 3-4

Download data

Number of secretariats listed by the technical committees and subcommittees of the International Organization for Standardization (ISO)



Source: own diagram based on ISO (2009: 23) and http://www.iso.org/members.html (last accessed on 17 December 2018).