

# C3 Innovation Behaviour in the Business Sector

The Europe-wide Community Innovation Survey (CIS), conducted every two years and coordinated by Eurostat, forms the data basis for the international comparison of the innovation behaviour of companies (C 3-1).<sup>461</sup> It is aimed at companies with ten or more employees in manufacturing industry and in selected service sectors. In 2018, the innovation intensity, i. e. innovation expenditure in relation to total turnover, of research-intensive industry in Germany was 7.4 percent and thus above the rates of the comparative countries. In knowledge-intensive services, Sweden and Finland recorded the highest innovation intensities of the comparative countries, at 5.6 and 4.3 percent, respectively. In Germany, the rate was 3.2 percent.

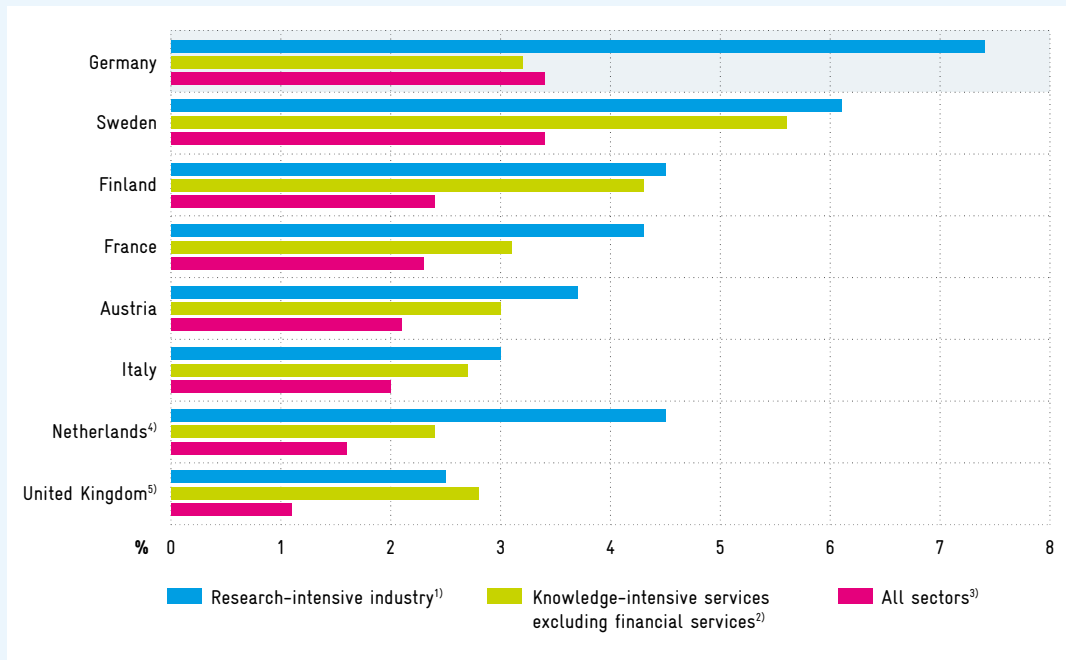
The data on the innovation behaviour of the German economy in the period 2010 to 2020 presented in figures C 3-2 and C 3-3 are based on the innovation survey conducted annually since 1993 by the ZEW – Leibniz Centre for European Economic Research, the Mannheim Innovation Panel (MIP).<sup>462</sup> Data from the MIP represents the German contribution to the CIS survey. However, in addition to the data to be reported to Eurostat, the MIP also includes data for enterprises with five to nine employees.

Innovation intensity (C 3-2) increased slightly in 2020 compared to the previous year in both R&D-intensive industry (from 8.9 to 9.3 percent) and knowledge-intensive services (from 6.1 to 6.3 percent) in a year marked by the COVID-19 crisis. In other industry (1.4 percent), other services (0.6 percent) and financial services (0.9 percent) it remained at the respective previous year's level.

The percentage of turnover from new products (C 3-3), as a measure of the innovation success of companies, declined slightly in R&D-intensive industry in 2020 compared to the previous year (from 31.2 to 30.6 percent), continuing the slightly declining trend of previous years. An increase compared to the previous year was recorded in other industry (from 7.0 to 7.4 percent), knowledge-intensive services (from 13.6 to 14.7 percent) and other services (from 6.4 to 6.8 percent).

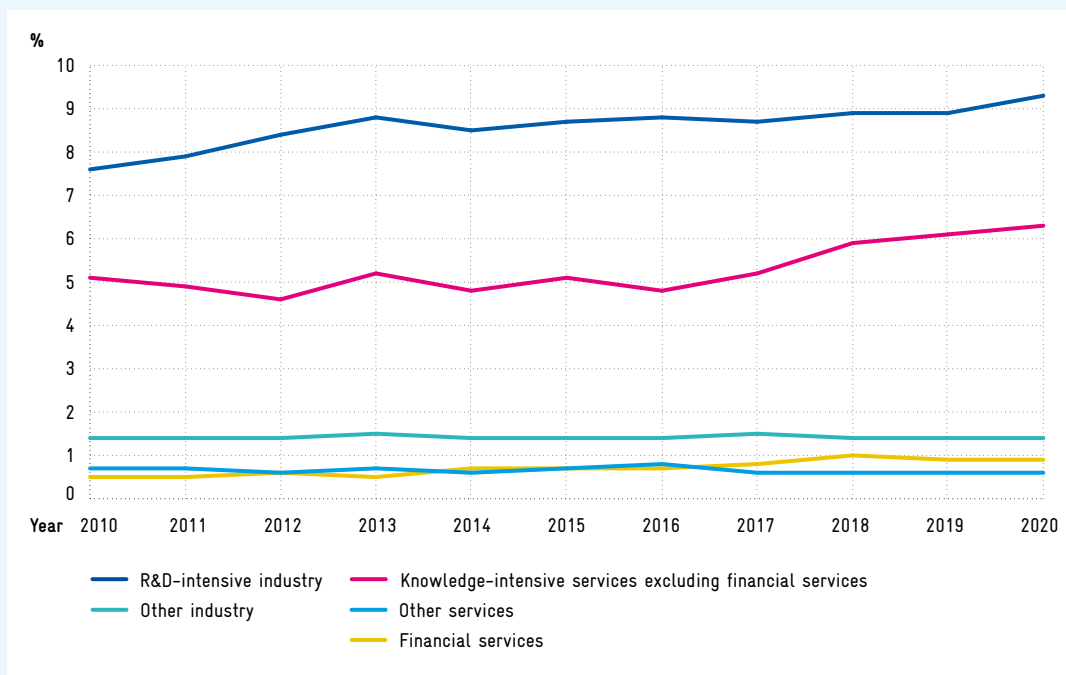
An important aspect in the commercialization of innovative technologies is standardization. At the international level, norms and standards are developed in the committees of the International Organization for Standardization (ISO). Through its involvement in these committees, a country can have a significant influence on global technical infrastructures (C 3-4).<sup>463</sup> In 2021, German companies were involved in the work of the ISO significantly more often than representatives of other countries but have hardly changed their involvement compared to 2011.<sup>464</sup> In the ten-year period from 2011 to 2021, China and Japan in particular have significantly increased their participation in the ISO.

**Fig. C3-1 Innovation intensity in European comparison in 2018 in percent**



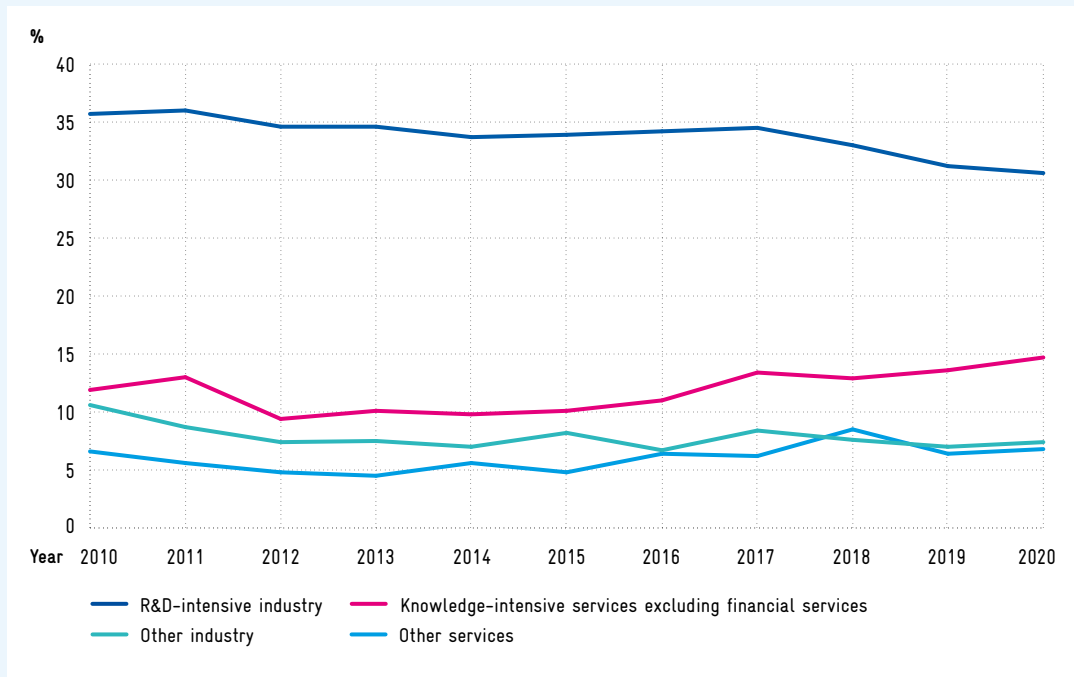
Innovation intensity: innovation expenditure by companies as a percentage of their total turnover.  
<sup>1)</sup> Research-intensive industry: divisions 19-22, 25-30 of WZ classification. Since data for all economic sectors are not available for all countries, the definition of research-intensive industry in the European comparison differs from the definition otherwise used by the EFI.  
<sup>2)</sup> Knowledge-intensive services excluding financial services: divisions 58-63, 71-73 of WZ classification. Since data for all economic sectors are not available for all countries, the definition of knowledge-intensive services in the European comparison differs from the definition otherwise used by the EFI.  
<sup>3)</sup> All sectors: divisions 5-39, 46, 49-53, 58-66, 71-73 of the WZ.  
<sup>4)</sup> Reference year 2016. Research-intensive industry only divisions 25-30 of the WZ  
<sup>5)</sup> Reference year 2016.  
 Source: Eurostat, Community Innovation Surveys 2018 and 2016. Calculations by ZEW.  
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**Fig. C3-2 Innovation intensity in industry and business-oriented services in Germany 2010–2020 in percent**



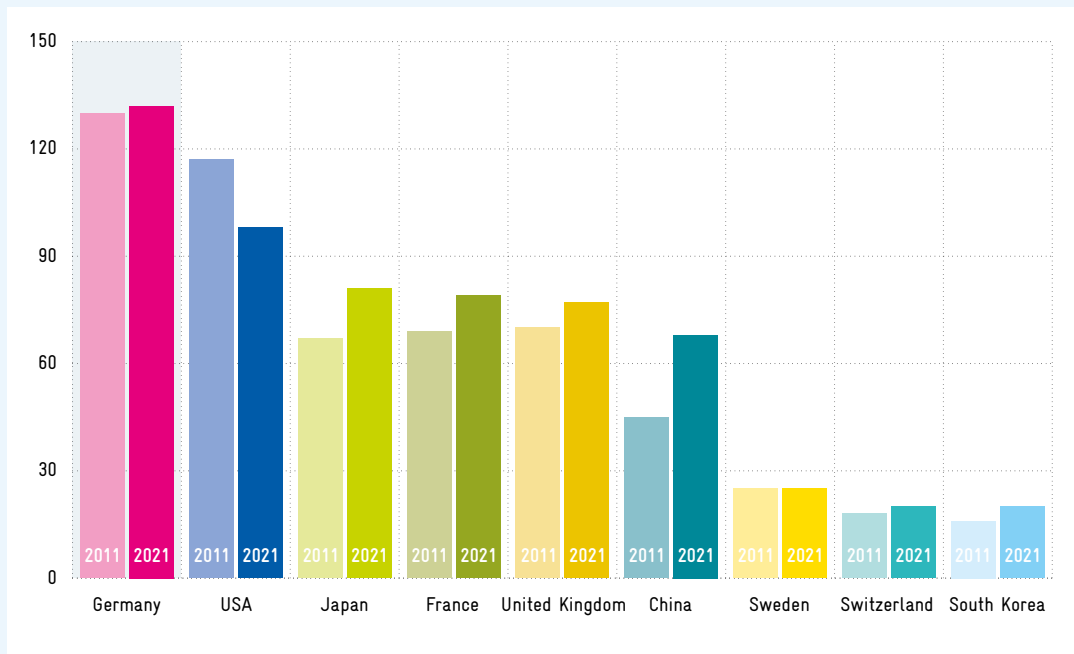
Innovation intensity: innovation expenditure by companies as a percentage of their total turnover.  
 Source: Mannheim Innovation Panel. Calculations by ZEW.  
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**Fig. C3-3** Percentage of turnover generated by new products in industry and business-oriented services in Germany 2010–2020 in percent



Source: Mannheim Innovation Panel. Calculations by ZEW.  
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**Fig. C3-4** Number of secretariats listed by the technical committees and subcommittees of the International Organization for Standardization (ISO) in 2011 and 2021



Source: Own representation based on ISO (2012) and <https://www.iso.org/members.html> (accessed on 23 December 2021).  
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