Highlights from the OECD Science, Technology and Industry Scoreboard 2017 - The Digital Transformation: Austria

Science, innovation and the digital revolution:

- **Austria** has a strong knowledge base, with spending in higher education and vocational programmes (2.4%) [Scoreboard fig. 2.1.1], in R&D (over 3%) [fig. 2.1.2] and investment in ICT (over 3%) [fig. 2.1.3] as a share of GDP above the OECD average. **Austria** also has the 4th highest share of higher education expenditure in R&D in OECD at almost 0.8% of GDP [fig. 2.2.1]. When adding investment in organisational capital and training to the knowledge-based capital (KBC) assets already accounted for in national accounts (R&D and software), Austria's investment in KBC assets exceeds investment in machinery and equipment [fig. 2.7.2].
- In 2015, **Austria** had the 4th highest rate of graduates at tertiary level in the natural sciences, engineering, and information and communication technologies within the OECD, at over 29%, but one of the lowest rates of women graduates in these fields (25%) [fig. 2.3.1].
- In 2015, **Austria** had a rate of international scientific collaboration of about 36%, the fifth largest rate in the OECD area [fig. 3.2.1]. Its scientific production exhibits above average specialisation in the area of computer science [fig. 3.1.2 - see below]. It has, however, a lower than EU average specialisation in ICT technologies, as measured by patents filed at the 5 top IP offices (IP5) [fig. 5.5.1].
- R&D is a highly concentrated activity: within countries a small number of firms are responsible for a large proportion of total business R&D. The 100 largest domestic R&D performers in **Austria** represent about 5% of overall performers and account for about 66% of total R&D [fig. 1.17].
- The development of Artificial Intelligence technologies is also fairly concentrated. The top 2 000 R&D global corporations and their affiliates own 75% of IP5 patent families related to AI. R&D corporations headquartered in **Austria** accounted for 0.2% of all AI-related inventions in 2012-14 [fig. 1.25] .

Growth, jobs and the digital transformation:

- In 2014, about 43% of jobs in **Austria**'s business sector were sustained by final foreign demand [fig. 1.38].
- In **Austria**, women earn about 15% less than men, even after individual and job-related characteristics are taken into consideration, and about 13% less when skills differences are also taken into account [fig. 1.41]. **Austria** has one of the lowest shares of IP5 patents invented by women in the OECD area at less than 4% [fig. 1.61]. Fewer than 25% of researchers are women [fig. 2.4.3].
- About 84% of individuals aged 16-74 years old in **Austria** used the Internet in 2016, up from around 60% in 2006. 72% are daily users and 65% access the Internet via a mobile device [fig. 6.3.1].
- Within Europe, **Austria** has one of the highest proportions of cross-border sellers to other European countries at 62%, just below Luxembourg [fig. 6.5.1]. It also has one of the largest shares of individuals purchasing online from other European markets.
- Compared to other countries for which data are available, **Austria** has low business entry rates, including in the ICT sector [fig. 5.4.1].

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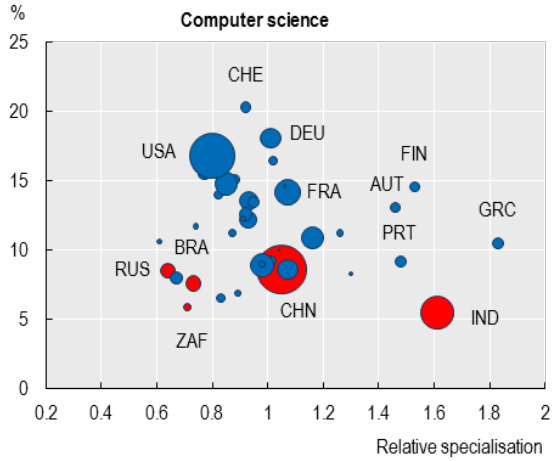
- **Austria** is among the countries that experienced higher average growth in levels of public support for business R&D and also experienced an increase in business R&D intensity. This has placed it among the group of countries with high levels of public support and R&D intensity [fig. 1.71 - see below and 1.72].
- **Austria's** level of R&D intensity in the business sector is above average and would be one of the largest in the OECD area if comparisons accounted for differences in industrial structure to reflect the OECD average [fig. 5.1.1 - see below].
- Experimental indicators on the international mobility of scientific authors for 2002 to 2016, based on bibliometric data, show that **Austria** has attracted about 1 000 more authors than it has lost [fig. 1.6.9 - see below], exhibiting a positive balance for most years.

Figure 3.1.2 Specialisation and citation impact in science, computer science, 2015

Percentage of documents in the top 10% ranked documents and relative specialisation, by field, fractional counts

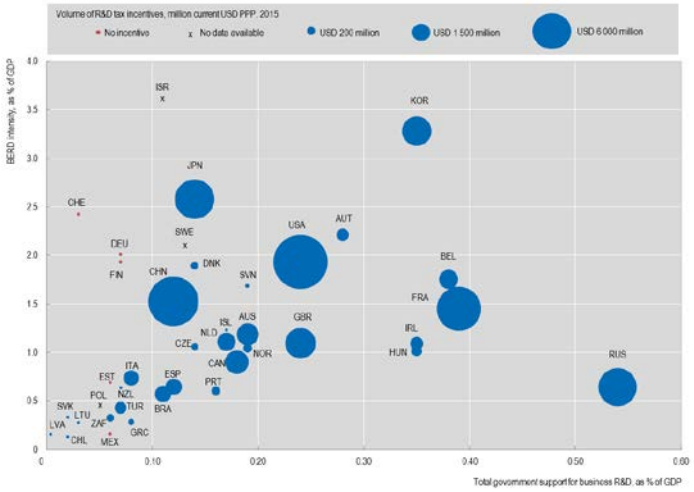


StatLink : http://dx.doi.org/10.1787/888933618764

Source: OECD Science, Technology and Industry Scoreboard 2017: The Digital Transformation, OECD Publishing, Paris, http://dx.doi.org/10.1787/sti_scoreboard-2017-en.

Figure 1.71 Business R&D intensity and government support to business R&D, 2015

As a percentage of GDP

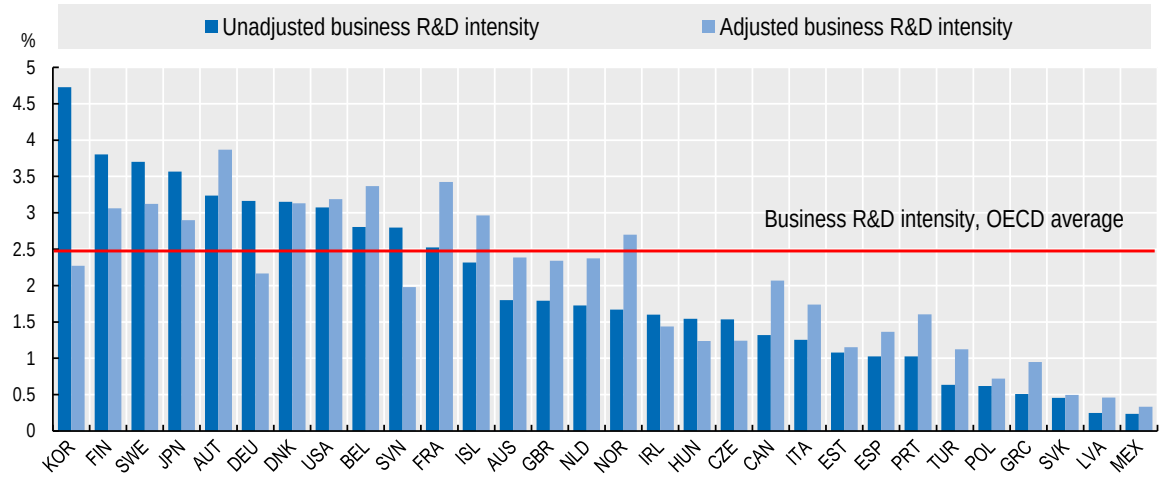


StatLink : http://dx.doi.org/10.1787/888933618194

Source: OECD Science, Technology and Industry Scoreboard 2017: The Digital Transformation, OECD Publishing, Paris, http://dx.doi.org/10.1787/sti_scoreboard-2017-en.

Figure 5.1.1 Business R&D intensity adjusted for industrial structure, 2015

As a percentage of value added in industry

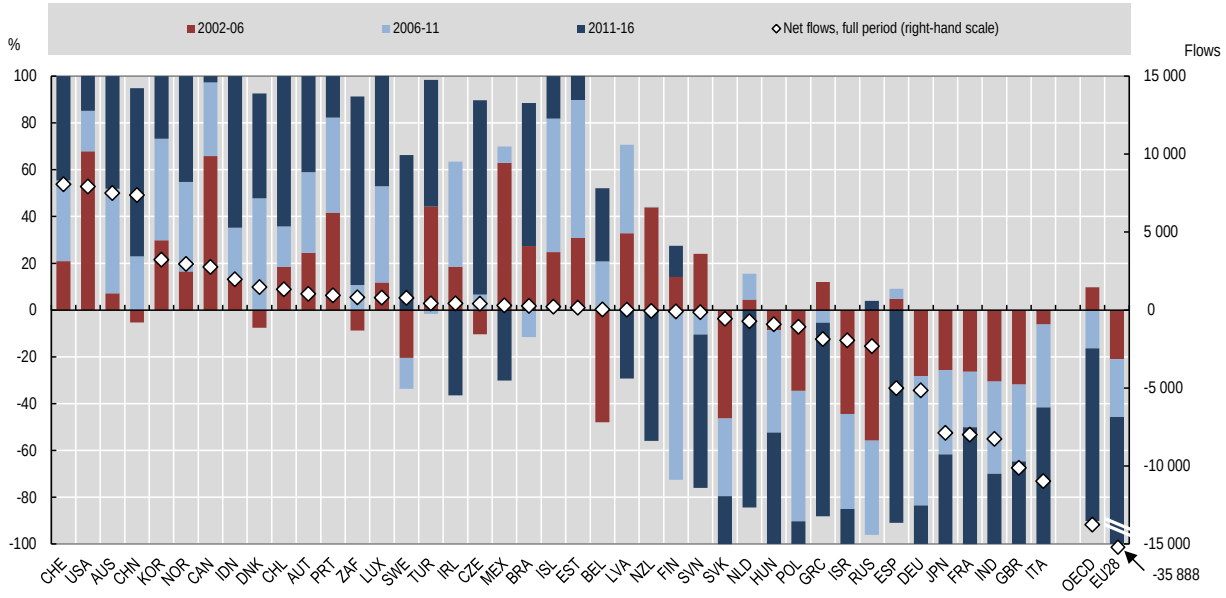


StatLink : http://dx.doi.org/10.1787/888933619524

Source: OECD Science, Technology and Industry Scoreboard 2017: The Digital Transformation, OECD Publishing, Paris, http://dx.doi.org/10.1787/sti_scoreboard-2017-en.

Figure 1.69 International net flows of scientific authors, selected economies, 2002-16

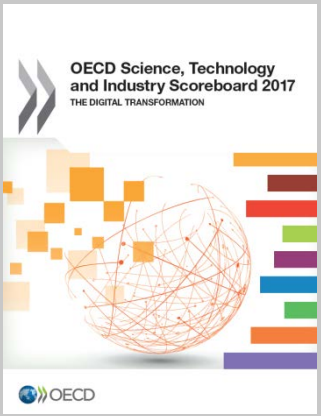
Difference between annual fractional inflows and outflows, as a percentage of total flows



StatLink : http://dx.doi.org/10.1787/888933618156

Source: OECD Science, Technology and Industry Scoreboard 2017: The Digital Transformation, OECD Publishing, Paris, http://dx.doi.org/10.1787/sti_scoreboard-2017-en.

The OECD Science, Technology and Industry Scoreboard 2017: The Digital Transformation



The 2017 edition of the Scoreboard contains over 200 indicators showing how the digital transformation affects science, innovation, the economy, and the way people work and live.

The aim of the STI Scoreboard is not to "rank" countries or develop composite indicators. Instead, its objective is to provide policy makers and analysts with the means to compare economies with others of a similar size or with a similar structure, and monitor progress towards desired national or supranational policy goals.

It draws on OECD efforts to build data infrastructure to link actors, outcomes and impacts, and highlights the potential and limits of certain metrics, as well as indicating directions for further work.

The charts and underlying data in the STI Scoreboard 2017 are available for download and selected indicators contain additional data expanding the time and country coverage of the print edition. For more resources, including online tools to visualise indicators, see the OECD STI Scoreboard webpage (http://www.oecd.org/sti/scoreboard.htm).

The OECD Directorate for Science, Technology and Innovation

It is part of the DNA of the Directorate for Science, Technology and Innovation (DSTI) to constantly look for ways of better understanding where our economies and societies are today, and where they are going tomorrow. We pride ourselves on tackling topics at the boundaries of our scientific and technological understanding, such as using biotechnology and nanotechnology to alter modes of production, and how digital shifts like "big data," earth observation and digital platforms are changing our world.

Discover DSTI at www.oecd.org/sti and the OECD's Going Digital project at www.oecd.org/going-digital.

Further reading

OECD (2017), *OECD Digital Economy Outlook 2017*, OECD Publishing, Paris. http://dx.doi.org/10.1787/9789264276284-en

OECD (2016), *OECD Science, Technology and Innovation Outlook 2016*, OECD Publishing, Paris. http://dx.doi.org/10.1787/sti_in_outlook-2016-en