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

Science, innovation and the digital revolution

- **Switzerland** had the second-highest level of spending on higher education R&D (HERD) in 2015, at 0.91% of GDP, behind Denmark, but ahead of Sweden and Austria [Scoreboard fig. 2.2.1].
- **Switzerland** has the largest share of domestic scientific documents with a high citation impact in the OECD, closely followed by the Netherlands. 15.3% of its scientific publications were amongst the world's top-10 cited publications [fig. 3.1.1].
- In 2015, together with Luxembourg, Iceland and Belgium, **Switzerland** was among the OECD countries with the largest propensity to collaborate internationally [fig. 3.2.2 - see below].

Growth, jobs and the digital transformation

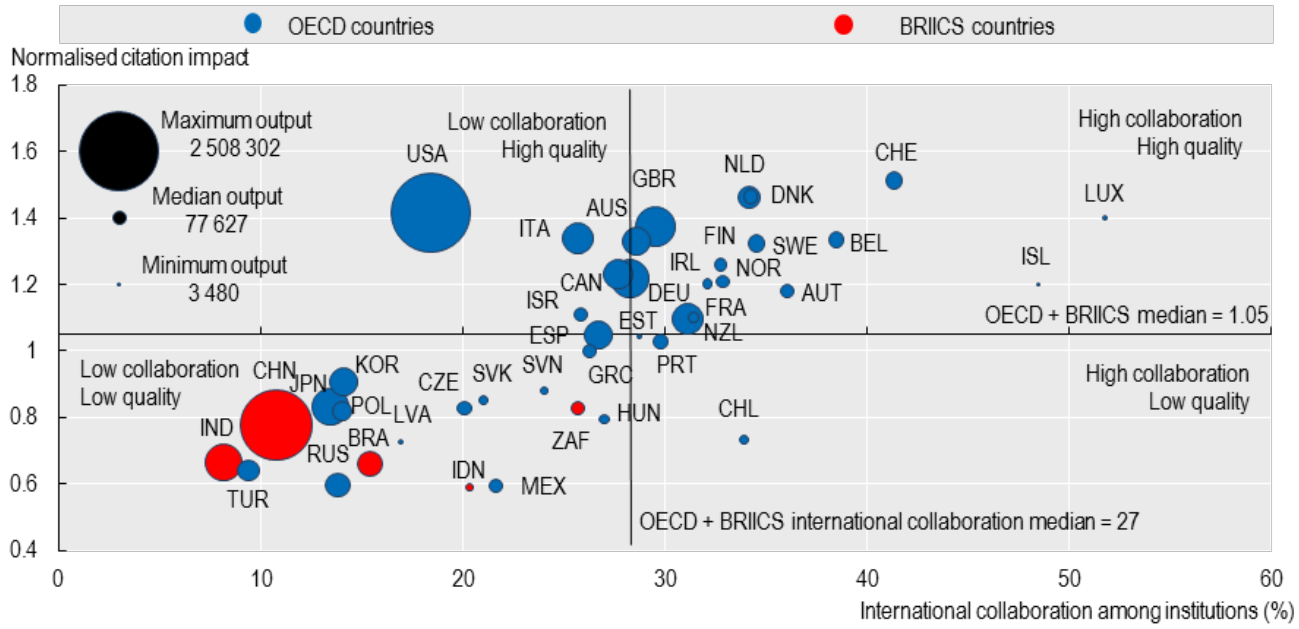
- **Switzerland** has the largest share of doctorates among the working-age population, at almost 30 doctorates per thousand 25-64 year olds in the population, due in part to a relatively large proportion of foreign doctoral graduates [fig. 2.3.3 - see below]. Women account for over one-third of all doctorates.
- **Switzerland** has a relatively high share of international students in natural sciences and mathematics, reflecting its perceived strengths in this area [fig. 3.3.1]. At the doctorate level, international students in **Switzerland**, as in Canada and the United States, are more attracted to the natural sciences, engineering and ICT than their domestic counterparts [fig. 3.3.2].
- In 2014, 49.2% of jobs in **Switzerland's** business sector were sustained by foreign demand, up from 42.6 in 2004 [fig. 1.38].
- In 2014, domestic services accounted for more than half the value-added content of total exports in **Switzerland**, the second-highest in the OECD after Greece, and ahead of the United Kingdom and France [fig. 5.6.3].
- Almost 90% of individuals in **Switzerland** used the Internet in 2014, up from 80% in 2006 [fig. 1.57]. 99.7% of 16-24 year olds used the Internet in 2014, and 72.4% of 55-74 year olds [fig. 1.58].

Innovation today - Taking action

- **Switzerland** had the fourth highest ratio of business expenditure on R&D to GDP in the OECD in 2015, at just under 2.5%, behind Japan, Korea and Israel. It provided amongst the lowest levels of government support for business R&D, at 0.03% of GDP [fig. 1.71 - see below].
- Data on the international mobility of scientific authors for 2002 to 2016 shows that **Switzerland** has attracted more authors than it has lost [fig. 1.69 - see below]. Over the past 15 years, more than 8 000 more scientific authors entered **Switzerland** than left, making the country the most attractive for scientists, ahead of the United States, Australia and China. In 2016, authors based in Switzerland experienced the highest mobility rates within the OECD and the majority of researchers with an international mobility record represented new inflows.

Figure 3.2.2 The citation impact of scientific production and the extent of international collaboration, 2012-16

As an index and percentage of all citable documents, based on fractional counts

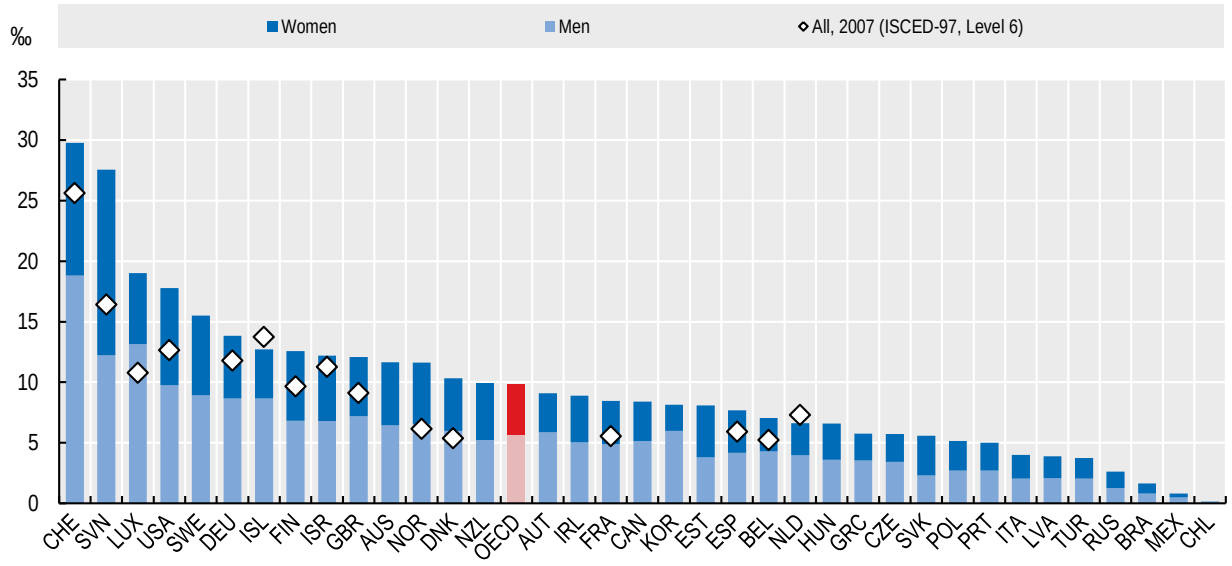


StatLink : http://dx.doi.org/10.1787/888933618802

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 2.3.3 Doctorate holders in the working age population, 2016

Per thousand population aged 25-64

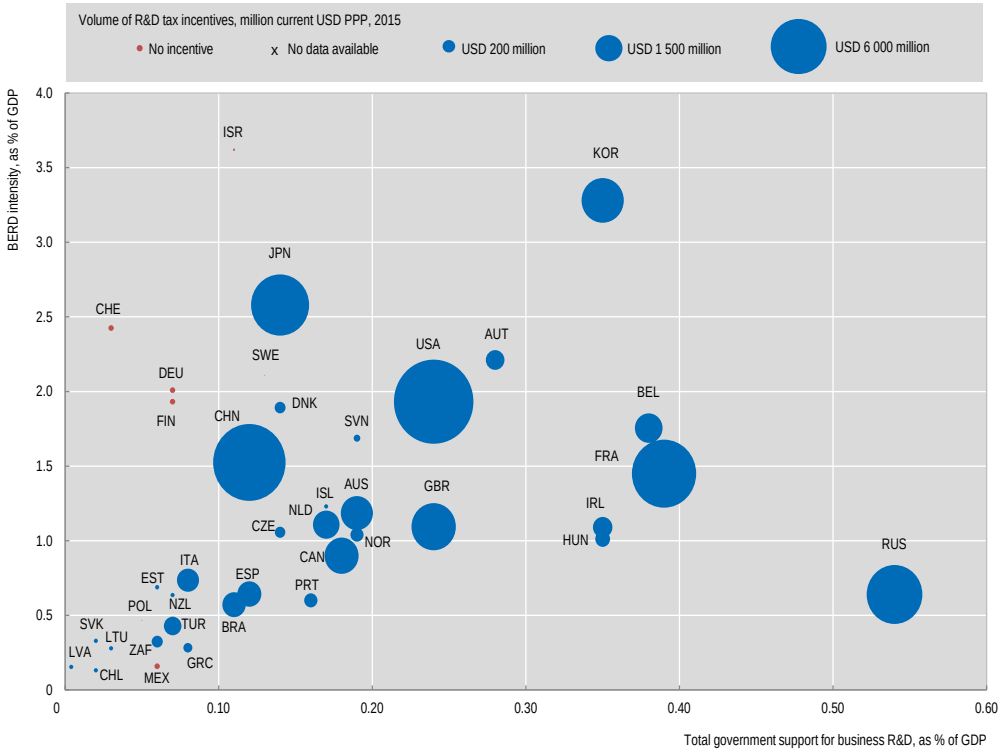


StatLink : http://dx.doi.org/10.1787/888933618498

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

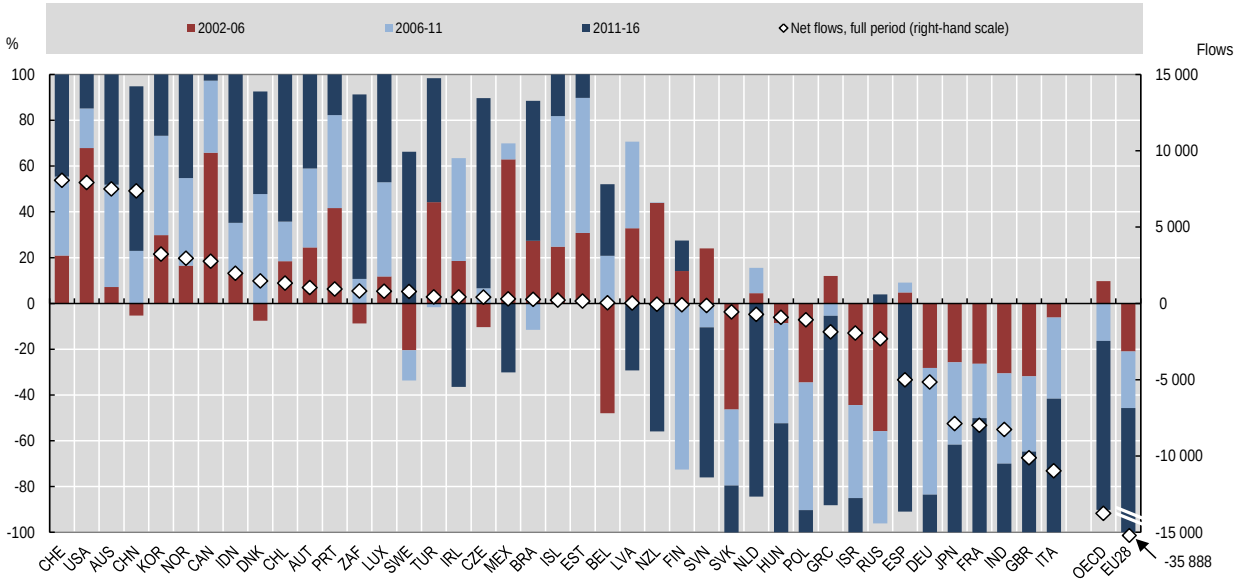


StatLink : http://dx.doi.org/10.1787/888933618194

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

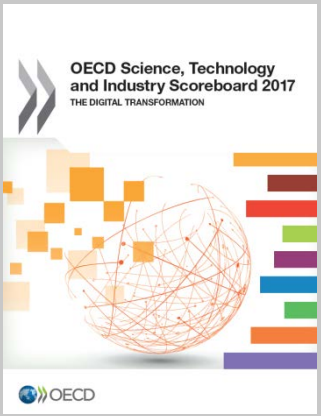
Difference between annual fractional inflows and outflows, as a percentage of total flows



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