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

Science, innovation and the digital revolution

- **Sweden** has particularly high mobile broadband penetration - approximately 1.2 subscriptions per inhabitant in 2016 [Scoreboard fig. 1.2 - see below].
- With 14 researchers per thousand in employment, **Sweden** has one of the highest shares, only behind Israel (17) and Denmark and Finland (both 15) [fig. 1.10 - see below].
- A few European countries, namely **Sweden**, Germany and France, feature among the top five players in certain emerging information and communication technologies – as measured by sharp increases, or "bursts", in patenting activity [fig. 1.5].

Growth, jobs and the digital transformation

- ICT equipment and knowledge-based capital are estimated to have contributed 14% of labour productivity growth in **Sweden** during the period 2000-2014 [fig. 1.50].
- Manufacturing jobs in **Sweden** are among the most ICT-intensive in OECD countries and, with around 10.5 robots per thousand workers in 2012, the "robot intensity" of its manufacturing sector is above the OECD average (6.2). In Europe only Germany has a higher rate [fig. 1.29].
- The financial rewards for roles with higher ICT task intensity are lower in **Sweden** than in many other OECD countries, with women and men having similar labour market returns to ICT [fig. 1.42].
- **Sweden** has very high levels of firm-based training, with 72% of workers receiving some form of training from their employers in 2012 [fig. 1.40]. Around 40% of those are high skilled workers.
- In 2014, 44% of jobs in **Sweden's** business sector were sustained by foreign final demand, slightly lower than in 2004 (48%). Nearly 50% of those jobs are those of high skilled workers [fig. 1.38].
- In common with other EU countries, **Sweden** experienced a markedly lower average multifactor productivity growth between 2009 and 2015 (1.1%) compared to the pre-crisis periods of 2001-07 and 1995-2001 which saw average MFP growth rates of 1.95% and 1.5% respectively [fig. 1.46].

Innovation today - Taking action

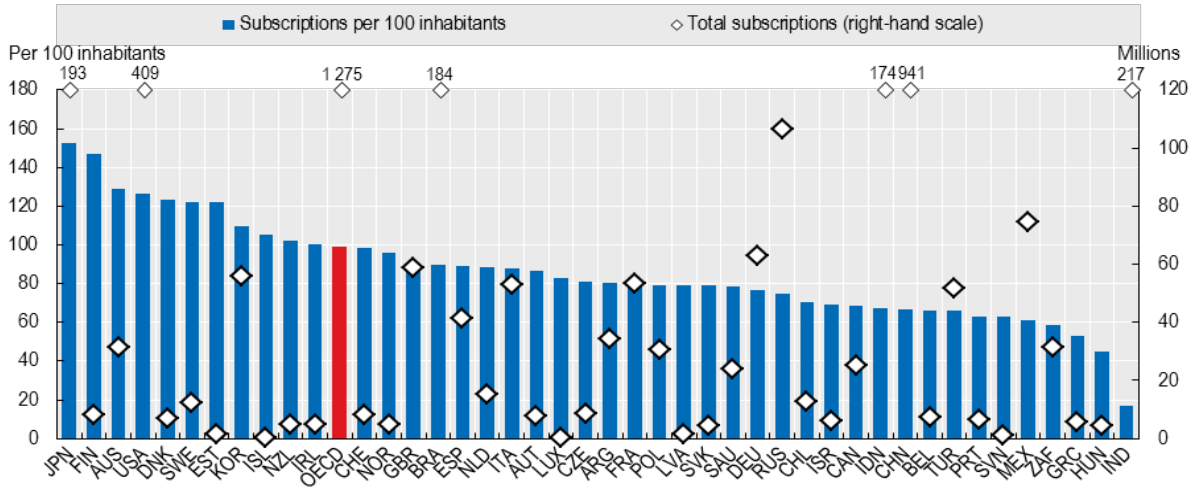
- Experimental indicators of international mobility of scientific authors (based on bibliometric data), reveal that during the period 2011-2016, **Sweden** benefitted from a net inflow of scientific authors, reversing the trend of the previous decade during which there was a net outflow [fig. 1.69 - see below].
- **Sweden's** government R&D budget has increased steadily since 2008 while the budgets of many other OECD countries have fallen or only registered modest gains [fig. 1.62].
- **Sweden** introduced R&D tax incentives for the first time in 2014. By international comparison, **Sweden** offers one of the least generous tax incentives in 2017 [fig. 4.6.3 - see below].

© OECD 2017

- In 2015, the level of labour productivity in **Sweden's** information industries was about 70% higher than in the rest of the business sector – above the average difference in the OECD (60%) [fig. 1.45].

Figure 1.2 Mobile broadband penetration, OECD, G20 and BRIICS, 2016

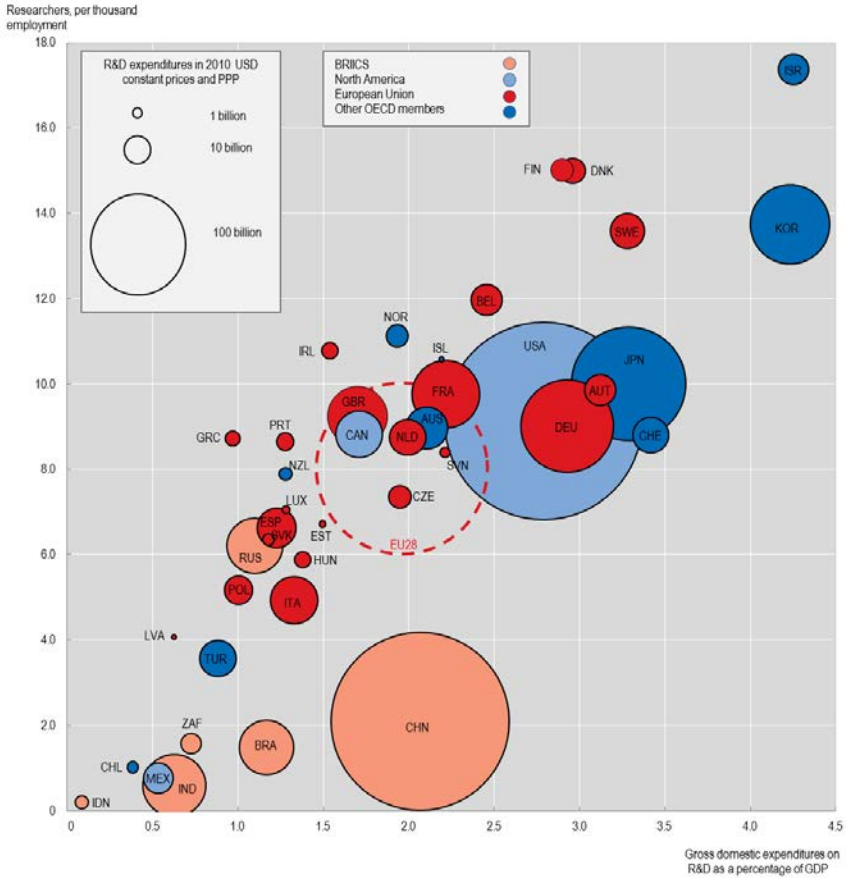
Total subscriptions and per 100 inhabitants



StatLink : http://dx.doi.org/10.1787/888933616883

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 1.10 R&D in OECD and key partner countries, 2015

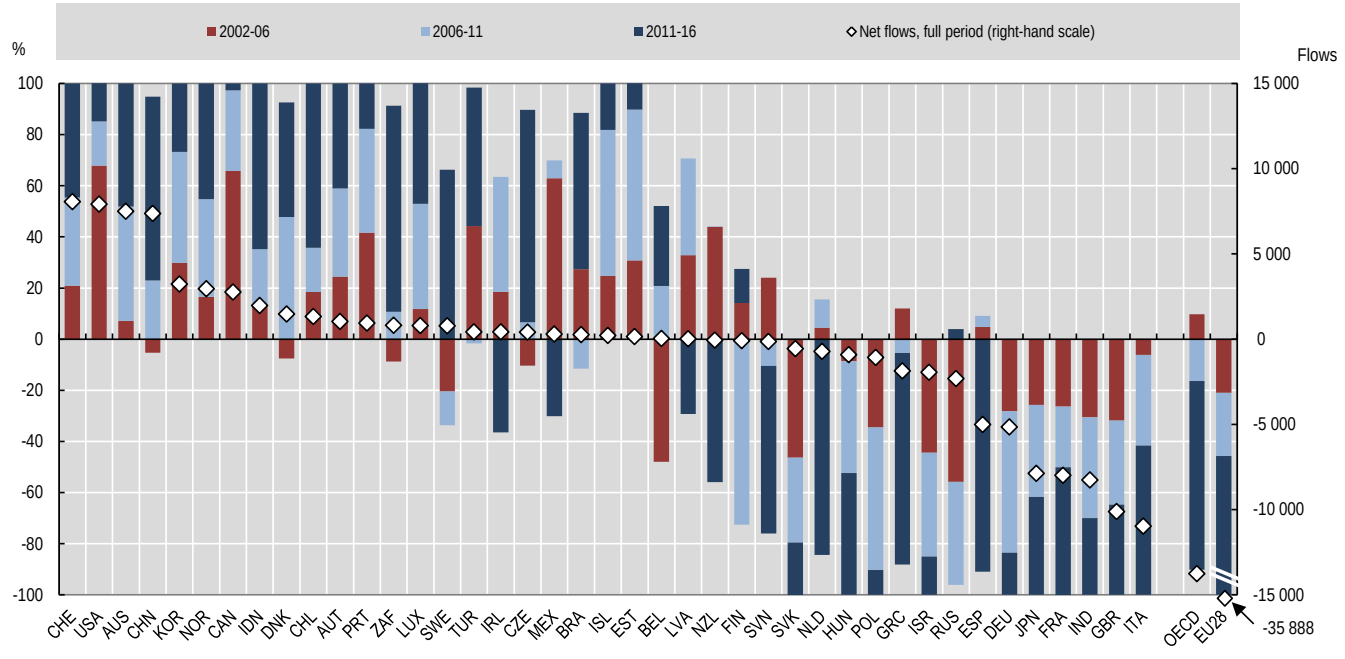


StatLink : http://dx.doi.org/10.1787/888933617035

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

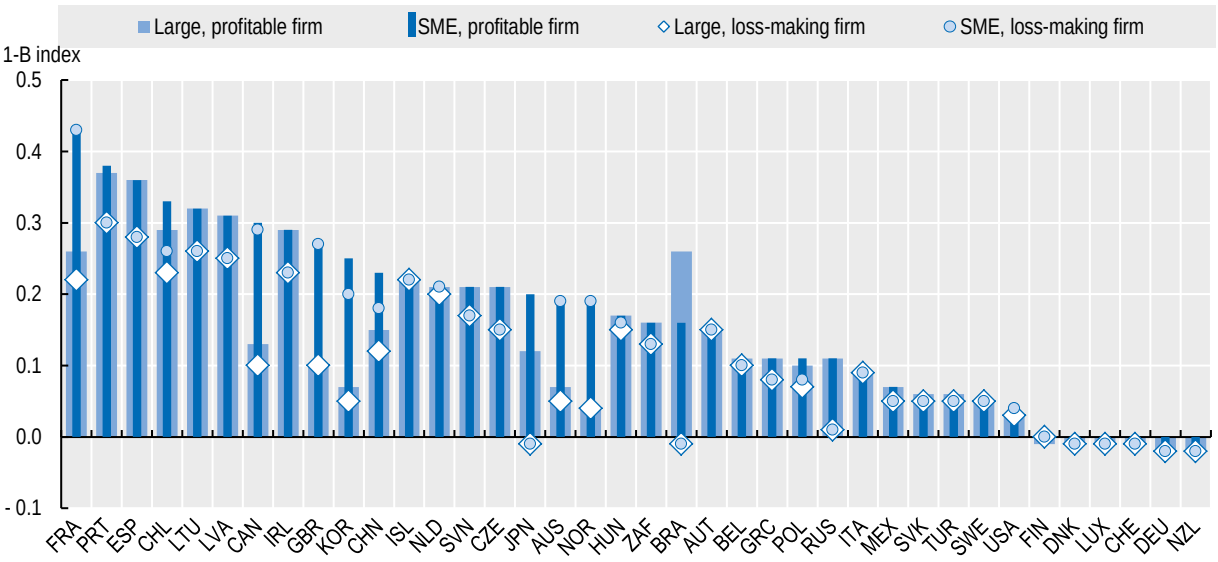


StatLink : http://dx.doi.org/10.1787/888933618156

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

Figure 4.6.3 Tax subsidy rates on R&D expenditures, 2017

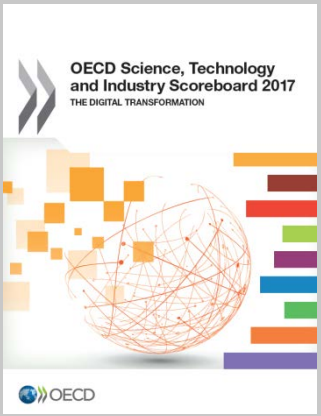
1-B-index, by firm size and profit scenario



StatLink : http://dx.doi.org/10.1787/888933619448

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

This document, as well as any data and any map included herein, are without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries and to the name of any territory, city or area.