

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

Science, innovation and the digital revolution

- **Estonia** has particularly high mobile broadband penetration - approximately 1.2 subscriptions per inhabitant in 2016 [[Scoreboard fig. 1.2 - see below](#)].
- Machine-to-machine (M2M) communication is part of the underlying infrastructure of the Internet of Things; in 2017, **Estonia** had a high M2M penetration (number of M2M SIM cards per inhabitant) of 16.9% - greater than the EU28 (16.3%) and OECD (15.5%) averages [[fig. 1.3](#)].
- Venture capital investments in 2016 were strongly concentrated (74%) in the ICT sector in **Estonia** [[fig. 1.73](#)]; from 2011 to 2016, equity funding of start-ups in the apps and data & analytics industries accounted for almost 80% of all equity funding in the digital-related sectors in **Estonia** [[fig. 1.76](#)].

Growth, jobs and the digital transformation

- ICT equipment and knowledge-based capital are estimated to have contributed about 7.4% of labour productivity growth in **Estonia** from 2000-2014 [[fig. 1.50](#)].
- In 2015, labour productivity in the information industries in **Estonia** was about 30% higher than in the rest of the business sector – markedly below the average difference in the OECD (60%) [[fig. 1.45](#)].
- The financial rewards for roles with higher ICT task intensity are greater in **Estonia** than in many other OECD countries and are much greater for women than men [[fig. 1.42 – see below](#)].
- Women in **Estonia** earn about 32% less than men, and about 28% less when skill differences are also taken into account [[fig. 1.41](#)].
- **Estonia** has high levels of firm-based training; 63% of workers received some training from their employers in 2012 [[fig. 1.40](#)].
- In 2014, 54% of jobs in **Estonia**'s business sector were sustained by foreign final demand, slightly lower than in 2004 (48%); high skilled and medium skilled workers account for about 18% and 21% of those jobs respectively [[fig. 1.38](#)].

Innovation today - Taking action

- Around 44% of researchers in **Estonia** are women, 7% of whom work in the business sector [[fig. 2.4.3](#)].
- **Estonia** is above the OECD average for women tertiary graduates in natural sciences and engineering (NSE) and ICTs, with women accounting for 35% of NSE graduates and 5.5% of ICT graduates in 2015 [[fig. 1.59 - see below](#)].
- In 2015, 10.3% of scientific documents from **Estonia** were in the world's top-10% most cited publications, up from 7.5% in 2005 [[figure 3.1.1](#)].

- Experimental indicators on the international mobility of scientific authors, based on bibliometric data, for 2002 - 2016 show that **Estonia** consistently attracted more authors than it lost; over the past 15 years to 2016, about 150 more scientific authors moved to **Estonia** than left [\[fig. 1.69 – see below\]](#).

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 1.42 Labour market returns to ICT tasks by gender, 2012 or 2015

Percentage change in hourly wages for 10% increase in ICT task intensity (at the country mean, by gender)

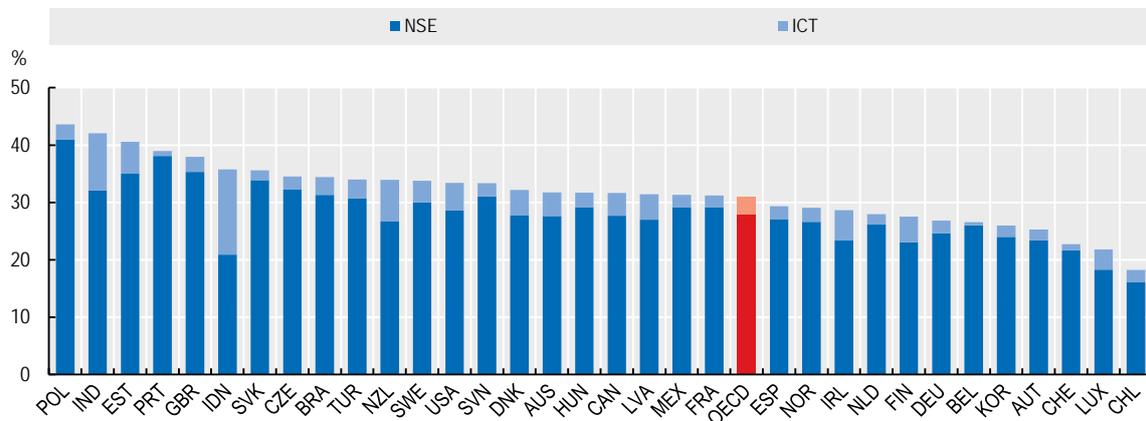


StatLink <http://dx.doi.org/10.1787/888933617643>

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 1.59 Women tertiary graduates in natural sciences, engineering and ICTs (NSE & ICT), 2015

As a percentage of all tertiary graduates in NSE & ICT

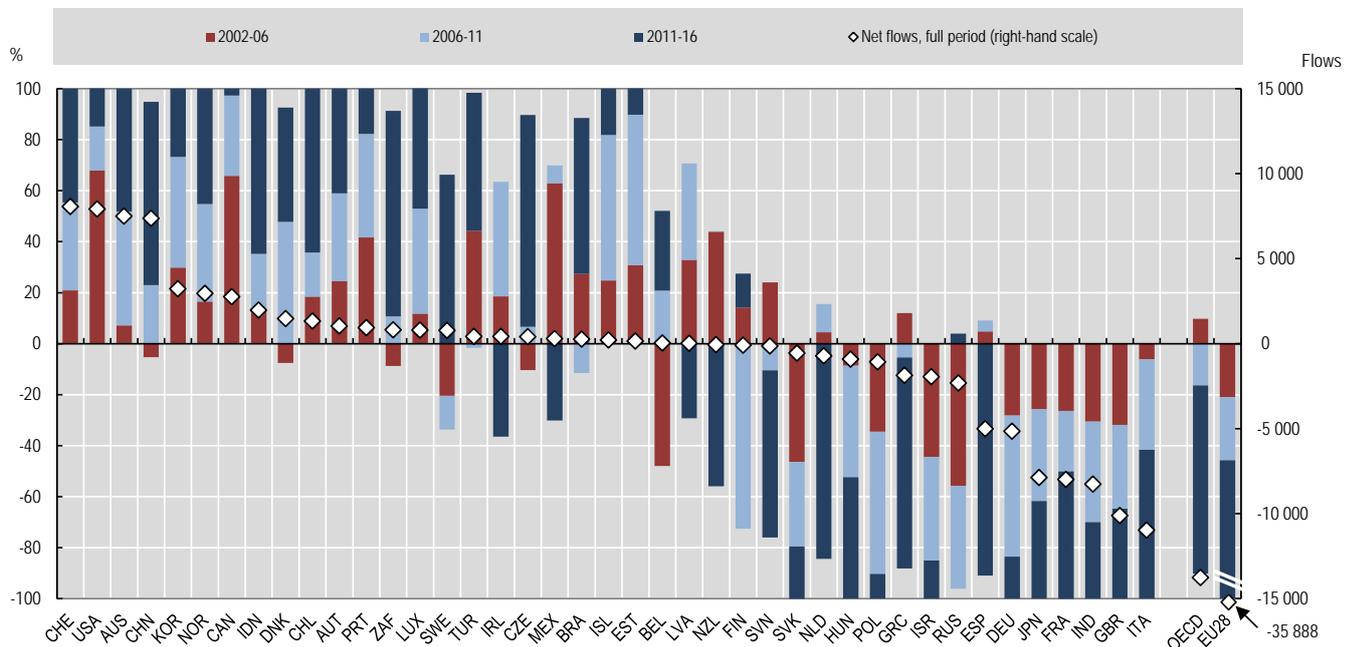


StatLink <http://dx.doi.org/10.1787/888933617966>

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

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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

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