

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

## Science, innovation and the digital revolution

- In 2015, Gross Expenditure on R&D represented 1.3% of GDP in **Luxembourg**, just over half of the OECD average (2.4%), and down from 1.6% in 2005 [[Scoreboard fig. 2.1.2](#)].
- Business R&D made up 51% of Gross Expenditure on R&D in **Luxembourg** in 2015, down from 86% in 2005 [[fig. 4.1.1](#)], while higher education sector R&D expenditure increased ten-fold over the same period [[fig. 2.2.1](#)].
- At 19%, Luxembourg has one of the highest shares of doctorate holders in the working age population, behind only Switzerland (30%) and Slovenia (28%) [[fig. 2.3.3 - see below](#)].

## Growth, jobs and the digital transformation

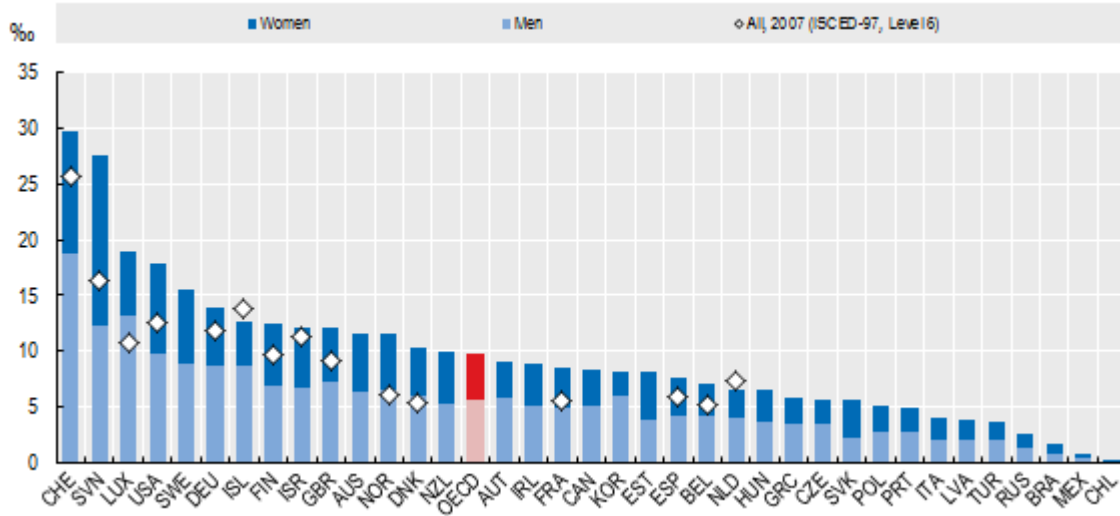
- From 2010 to 2016, Luxembourg experienced a net gain of some 59 000 jobs; the biggest gains were in the public administration sector, followed by professional and business services [[fig. 1.34](#)].
- In 2014, 59% of the value added of **Luxembourg's** Gross Exports originated from abroad (up from 41% in 1995), the highest in the OECD [[fig. 5.6.1](#)].
- In **Luxembourg**, 81% of business sector jobs were sustained by foreign final demand, the highest share in the OECD; of these over half were high-skilled jobs [[fig. 1.38 - see below](#)].

## Innovation today - Taking action

- In **Luxembourg**, almost 98% of people aged 16-74 years were Internet users in 2016, up from 71% in 2006 [[fig. 1.57](#)]; practically all persons aged 16-24 use the internet, while 93% of 55-74 year olds use the internet – one of the smallest generational gaps in Internet use of any OECD country [[fig. 1.58](#)].
- Women made up 27% of researchers in **Luxembourg** in 2015, a significant increase from around 18% in 2005 [[fig. 2.4.3 - see below](#)].
- Around 53% of scientific publications with authors affiliated to institutions in **Luxembourg** also feature a co-author from another country (up from 43.0% in 2005), the highest rate of international collaboration in the OECD [[fig. 3.2.1 - see below](#)].
- In 2016, **Luxembourg** had the highest rate of scientific author mobility in the OECD, with inflows of 16.6% and outflows of 13.5% of scientific authors [[fig. 3.4.2](#)].
- **Luxembourg** is a hub for international e-commerce: 65.4% of firms have undertaken e-commerce sales to other European countries, the highest share among European countries [[fig. 6.5.1](#)].

**Figure 2.3.3 Doctorate holders in the working age population, 2016**

Per thousand population aged 25-64

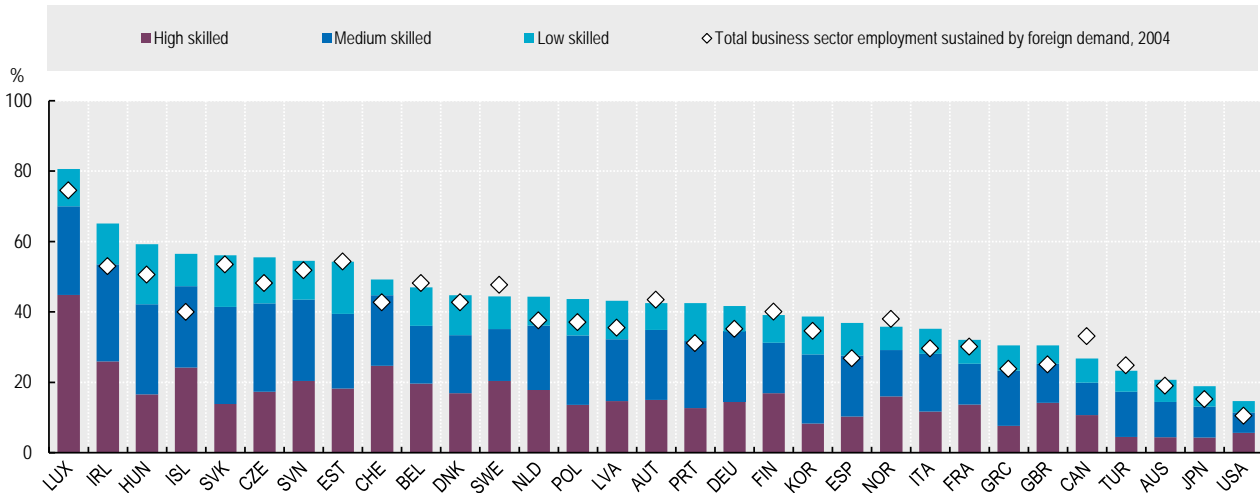


StatLink <http://dx.doi.org/10.1787/888933618498>

Source: OECD Science, Technology and Industry Scoreboard 2017: The Digital Transformation, OECD Publishing, Paris, [http://dx.doi.org/10.1787/sti\\_scoreboard-2017-en](http://dx.doi.org/10.1787/sti_scoreboard-2017-en).

**Figure 1.38 Business sector jobs sustained by foreign final demand, by skill intensity, 2014**

As a percentage of total business sector employment

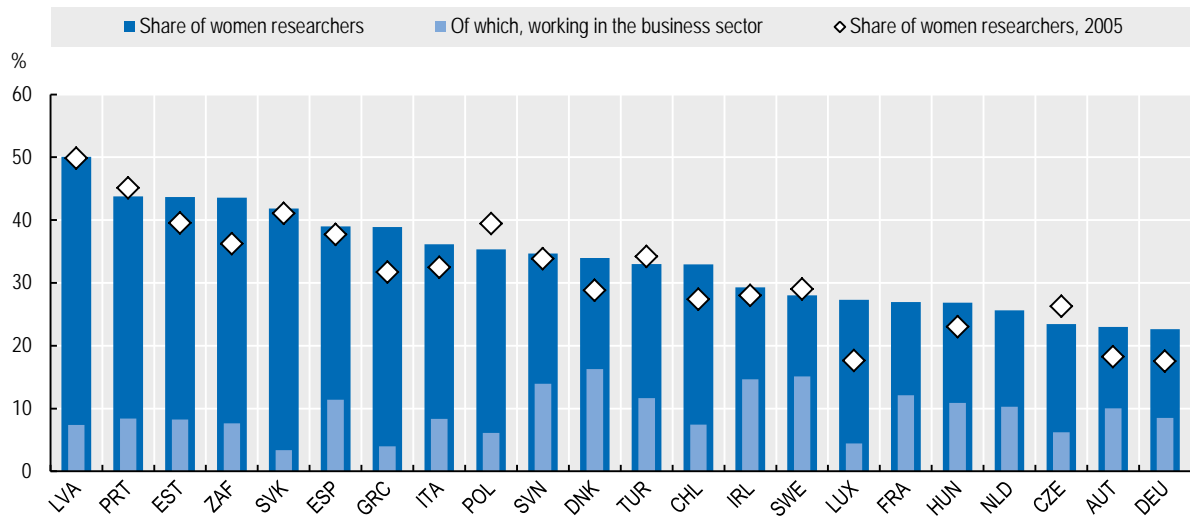


StatLink <http://dx.doi.org/10.1787/888933617567>

Source: OECD Science, Technology and Industry Scoreboard 2017: The Digital Transformation, OECD Publishing, Paris, [http://dx.doi.org/10.1787/sti\\_scoreboard-2017-en](http://dx.doi.org/10.1787/sti_scoreboard-2017-en).

**Figure 2.4.3 Women researchers, 2015**

As a percentage of total researchers, full-time equivalents

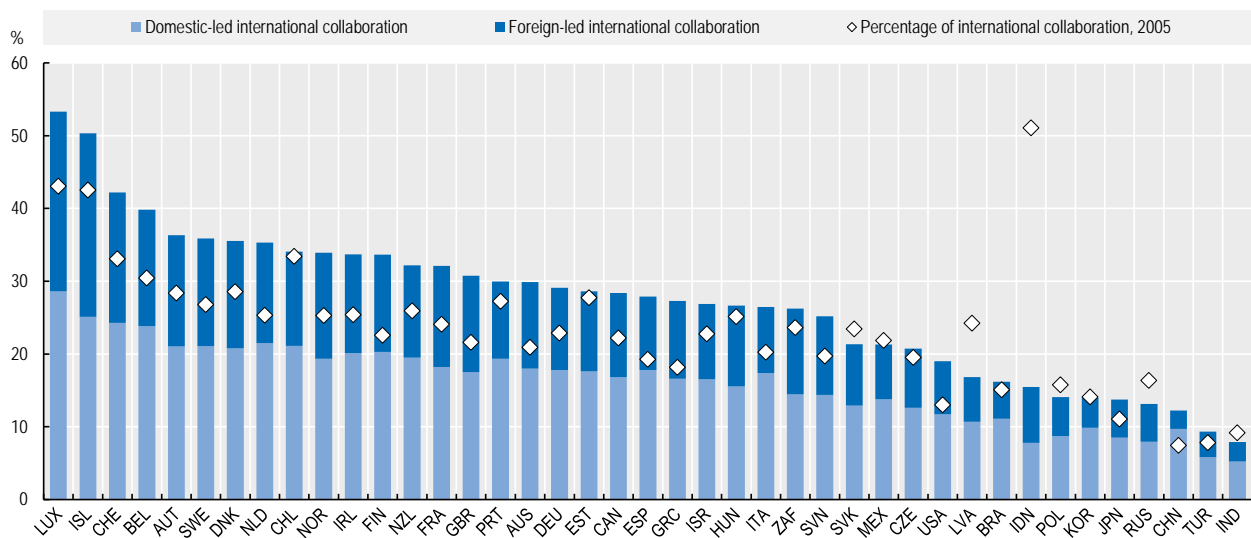


StatLink <http://dx.doi.org/10.1787/888933618555>

Source: OECD Science, Technology and Industry Scoreboard 2017: The Digital Transformation, OECD Publishing, Paris, [http://dx.doi.org/10.1787/sti\\_scoreboard-2017-en](http://dx.doi.org/10.1787/sti_scoreboard-2017-en).

**Figure 3.2.1 International scientific collaboration, 2015**

As a percentage of domestically authored documents, fractional counts



StatLink <http://dx.doi.org/10.1787/888933618783>

Source: OECD, Science, Technology and Industry Scoreboard 2017; The Digital Transformation, OECD Publishing, Paris, <http://dx.doi.org/10.1787/888933618783>.

## 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](http://www.oecd.org/sti) and the OECD's Going Digital project at [www.oecd.org/going-digital](http://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](http://dx.doi.org/10.1787/sti_in_outlook-2016-en)

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