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

Science, innovation and the digital revolution

- **Ireland** has relatively high mobile broadband penetration, with 1 subscription for every inhabitant, slightly above the OECD average [Scoreboard fig. 1.2].
- Researchers make up a relatively high share of the workforce in **Ireland**: in every 1 000 people in employment in 2015, 11 were researchers [fig. 1.10].

Growth, jobs and the digital transformation

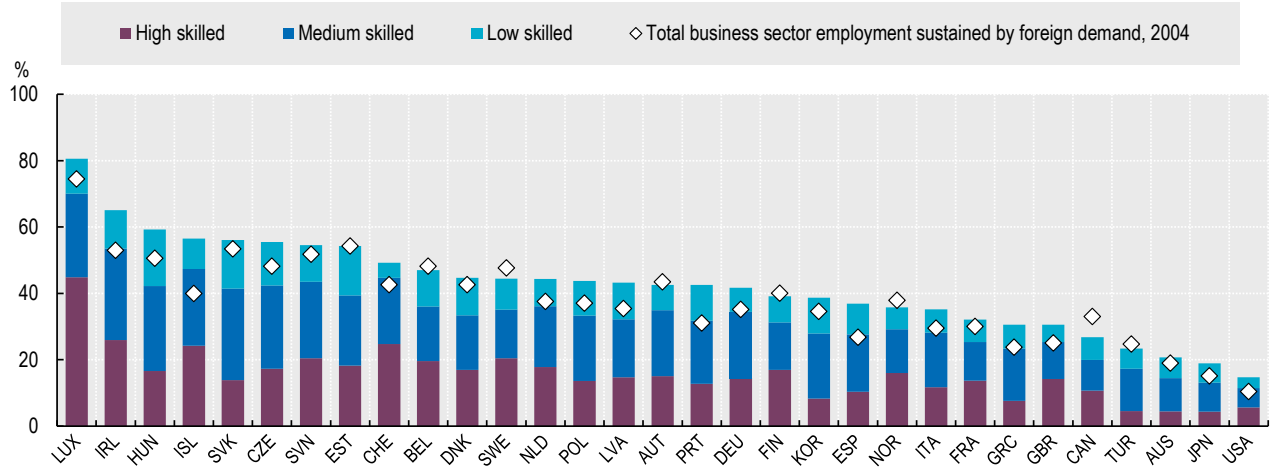
- **Ireland** is the OECD country with the highest ICT-related domestic value added - around 14% of GDP was ICT-related in 2011 [fig. 1.48].
- The Information and Communication sector is one of only a few to have lost jobs over the period 2010-2016 in **Ireland** (others were Manufacturing, and Mining and Utilities) [fig. 1.34]; however, the sector made a strong contribution to labour productivity growth from 2009-2015 [fig. 1.44] and contributes to **Ireland** having the highest relative labour productivity levels in information industries of any OECD country [fig. 1.45].
- **Ireland** emerged as a global IT hub between 1995 and 2011; IT services industries in **Ireland**, India, the United States and several other economies have become increasingly central to global production [fig. 1.55].
- Many Business sector jobs in **Ireland** are sustained by foreign demand (65%), only Luxembourg has a higher share; most of these are high and medium skilled jobs [fig. 1.38 - see below].
- The gender wage gap is relatively low in **Ireland**, though men still earned 6.4% more than women in 2012 [fig. 1.41].
- Women in **Ireland** receive the greatest financial rewards of those in any OECD country from doing more ICT-intensive work; a 10% increase in ICT task intensity increases wages by 4.2% on average in **Ireland** [fig. 1.42 - see below].
- Both the market and non-market sectors in **Ireland** invest strongly in knowledge-based capital, more than other countries for which data are available [fig. 1.52].
- **Ireland** has high levels of firm-based training, 64% of workers received some training from their employers in 2012 [fig. 1.40].
- The manufacturing sector in **Ireland** has a very low "robot intensity", with around 1 robot per thousand workers – compared to an OECD average of 6 [fig. 1.29].

Innovation today - Taking action

- In **Ireland**, 82% of people aged 16-74 were internet users in 2016, lower than the OECD average of 84% [fig. 1.57]. The difference between internet use by those aged 55-74 (56%) and those aged 16-24 (97%) is also greater than the average [fig. 1.58].
- During the period 2012-15, 7.7% of patents listed women inventors resident in **Ireland**, compared to 10% listing women in the United States and 7.1% in the EU [fig. 1.61].
- Although in the past **Ireland** has attracted scientific authors from other countries, recent years (2011-2016) have seen a reversal of this trend [fig. 1.69 - see below].
- In **Ireland**, government support for business R&D has strongly increased over the period 2006-2015 - only Belgium has seen a greater rate of increase [fig. 1.72 - see below].

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

As a percentage of total business sector employment

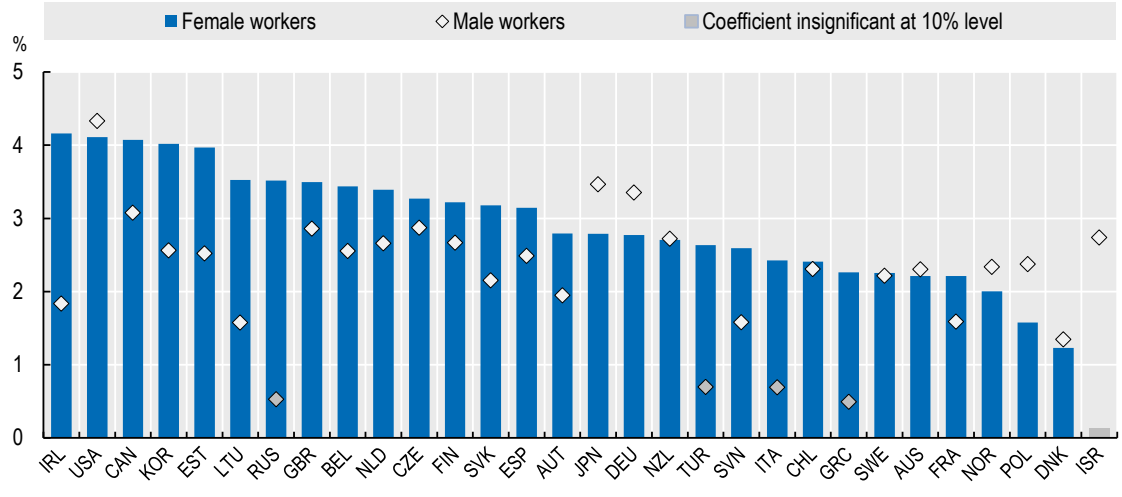


StatLink http://dx.doi.org/10.1787/888933617567

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

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)

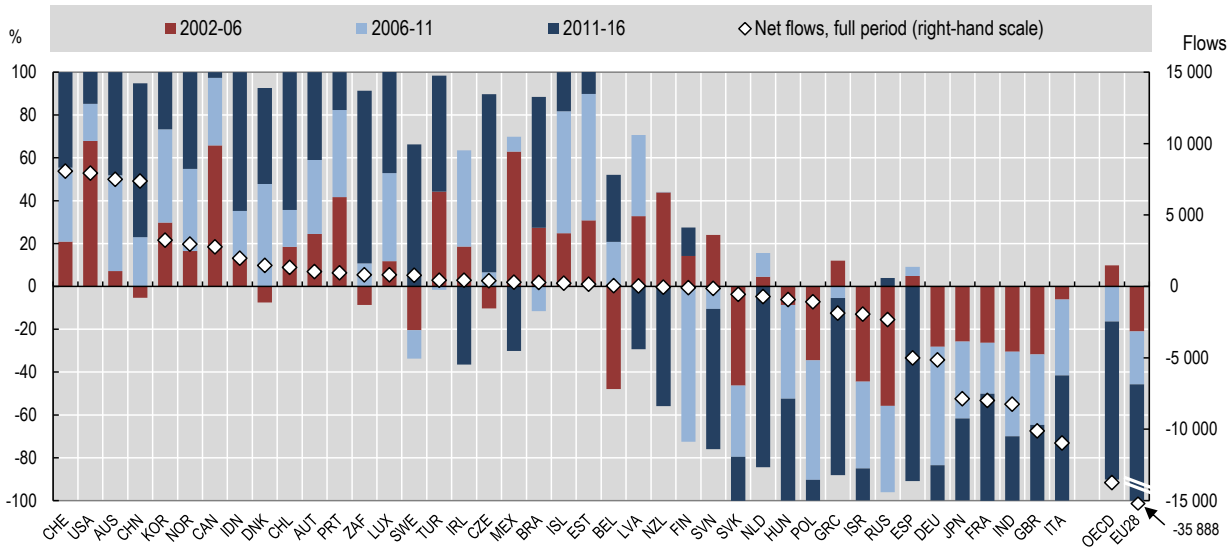


StatLink http://dx.doi.org/10.1787/888933617643

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

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

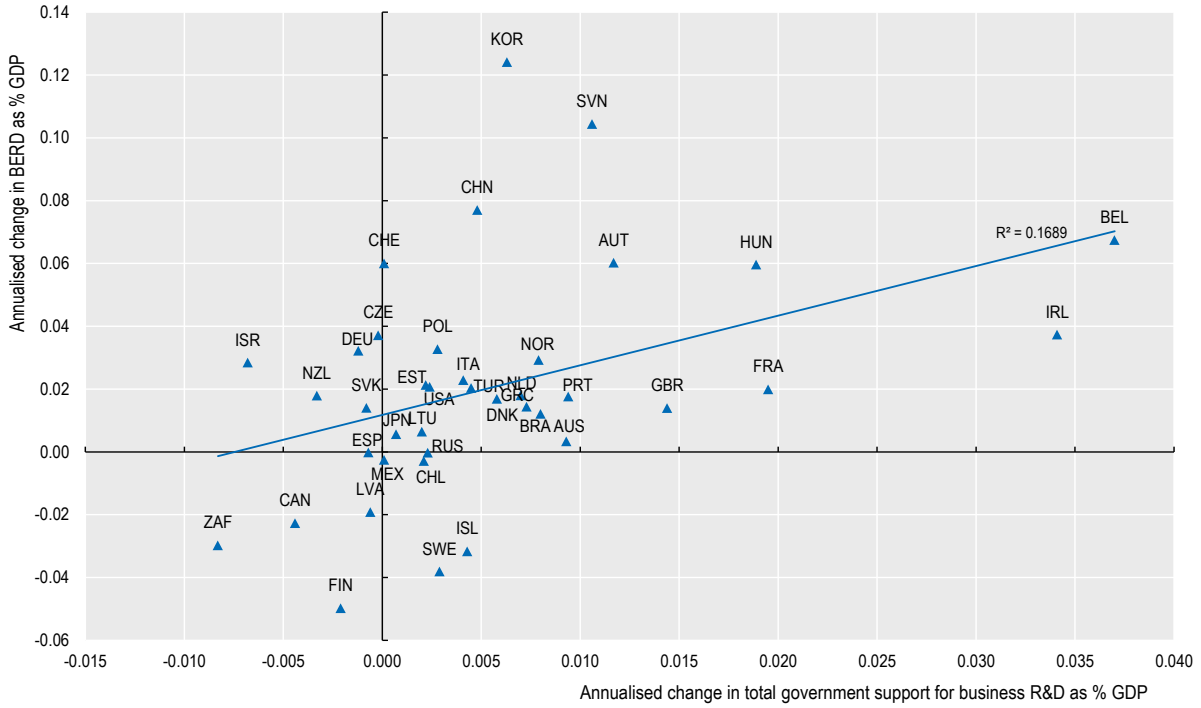


StatLink http://dx.doi.org/10.1787/888933618156

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 1.72 Changes in government support to business R&D and total business expenditures on R&D, 2006-15

Annualised absolute changes of figures as a percentage of GDP



StatLink http://dx.doi.org/10.1787/888933618213

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