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

Science, innovation and the digital revolution

- **Australia** had the third-highest rate of mobile penetration in the OECD in 2016, with 128.8 subscriptions per 100 inhabitants, behind Japan and Finland [Scoreboard fig. 1.2 - see below].
- **Australia** accounted for just over 3% of the world's top 10% of most-cited scientific publications in 2016, just behind Canada, Japan and France [fig. 1.11].
- **Australia** is the eighth largest producer of most-cited scientific documents on machine learning after the United States, China, India, the United Kingdom, Italy, Canada and Germany [fig. 1.27].

Growth, jobs and the digital transformation

- From 2010 to 2016, **Australia** experienced large net employment gains, of almost 1 million jobs. Large net gains were recorded in wholesale and retail trade, business services and particular in public services, and small net losses in manufacturing and agriculture [fig. 1.34].
- In 2014, 20.7% of jobs in the business sector in **Australia** were sustained by foreign demand, up from 18.9% in 2004 [fig. 1.38]. This is the lowest percentage in the OECD apart from Japan and the United States.
- **Australia** was among a limited number of countries (also including Ireland, Israel, Italy, Poland and Spain) that experienced modest gains in labour productivity from the period 2001-2007 to the period 2009-2015 [fig. 1.44].
- Women in **Australia** earn about 13% less than men, even after individual and job-related characteristics are taken into consideration, and about 11% less when skills differences are also taken into account [fig. 1.41].
- In **Australia,** women represented about 32% of all tertiary graduates in natural sciences, engineering and ICT fields in 2015. This share was mainly driven by graduates in science and engineering (27.6%) rather than ICT (4.1%) [fig. 1.59].
- Just over 88% of individuals in **Australia** used the Internet in 2016, up from 73% in 2006 [fig. 1.57]. 97.7% of 16-24 year olds used the Internet in 2016, compared to 72.8% of 55-74 year olds [fig. 1.58].
- In **Australia**, the share of the working-age population educated at tertiary level is higher among the foreign-born population, at 48%, than among the native-born, at 30% [fig 3.3.3 - see below].
- **Australia** experienced a significant increase in the share of domestic value added embodied in its partners' exports (the so-called forward linkages in GVCs) between 1995 and 2014, reflecting growing demand for mineral products in global value chains [fig 5.6.2].

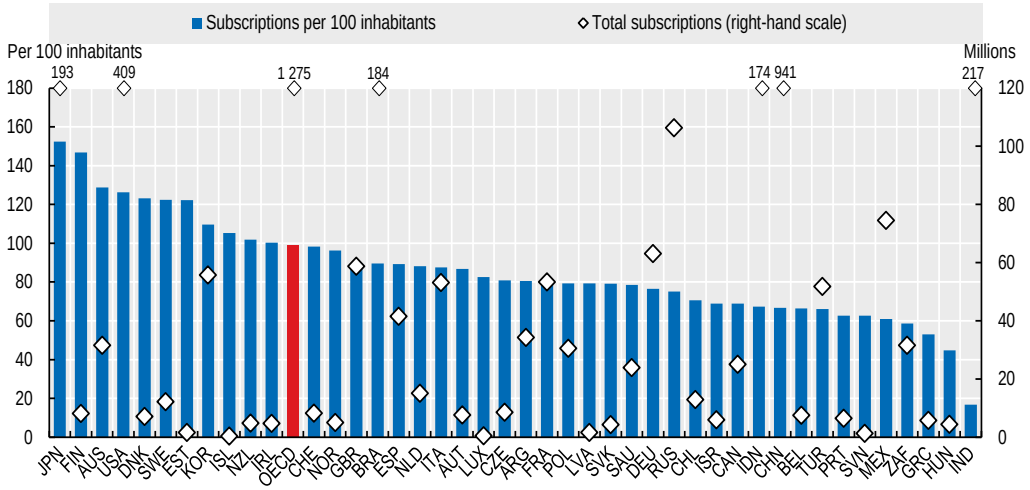
Innovation today - Taking action

- **Australia** is among the OECD countries where government budgets for R&D have increased since 2008, growing some 9% from 2008 to 2016. This reflects strong growth from 2008 and 2009 and a slight decline since [fig. 1.62].

- In 2012-15, in **Australia**, 8.9% of patents were invented by women, compared to 10% in the United States and 7% in the EU [fig. 1.61].
- Data on the international mobility of scientific authors for 2002 to 2016 shows that **Australia** has attracted more authors than it has lost. Over the past 15 years, almost 7 500 more scientific authors entered **Australia** than left, making the country among the most attractive for scientists, behind Switzerland and the United States and just ahead of China [fig. 1.69 - see below].
- **Australia** has the second highest share of tax support for business R&D in the OECD in 2015, at almost 87% of total support, behind the Netherlands. In 2006, R&D tax incentives accounted for about 65% of overall support for business R&D [fig. 4.6.2 - see below].

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

Total subscriptions and per 100 inhabitants

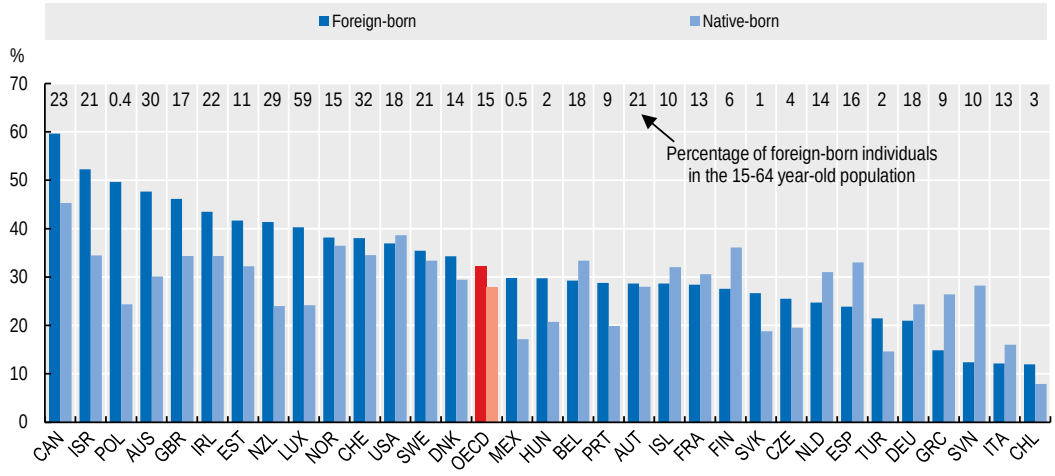


StatLink http://dx.doi.org/10.1787/888933616883

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 3.3.3 Highly educated individuals in the working-age population, by place of birth, 2015

As a percentage of relevant group, 15-64 year-old population



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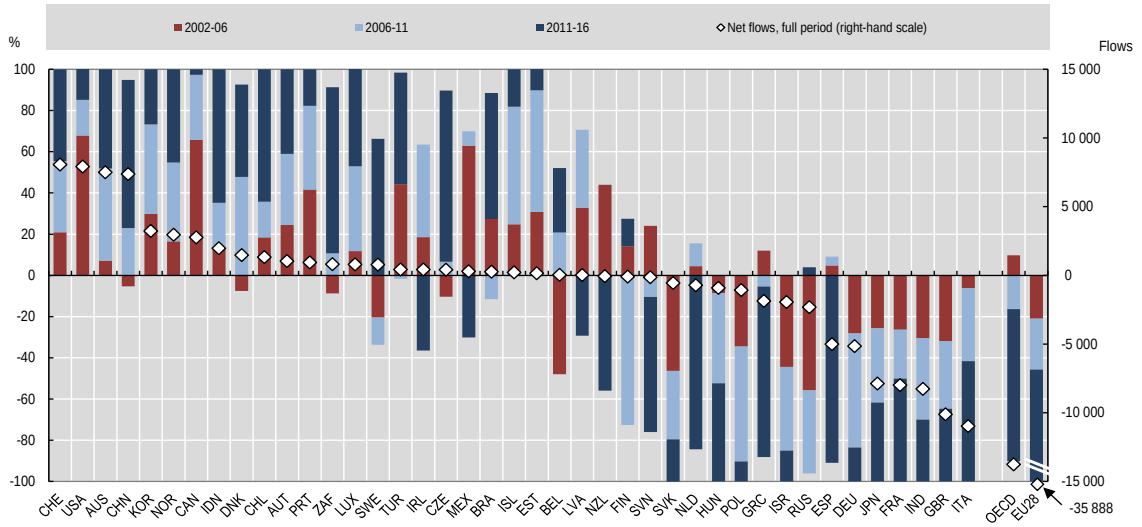
Source: OECD Science, Technology and Industry Scoreboard 2017: The Digital Transformation, OECD Publishing, Paris, http://dx.doi.org/10.1787/sti_scoreboard-2017-en.

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

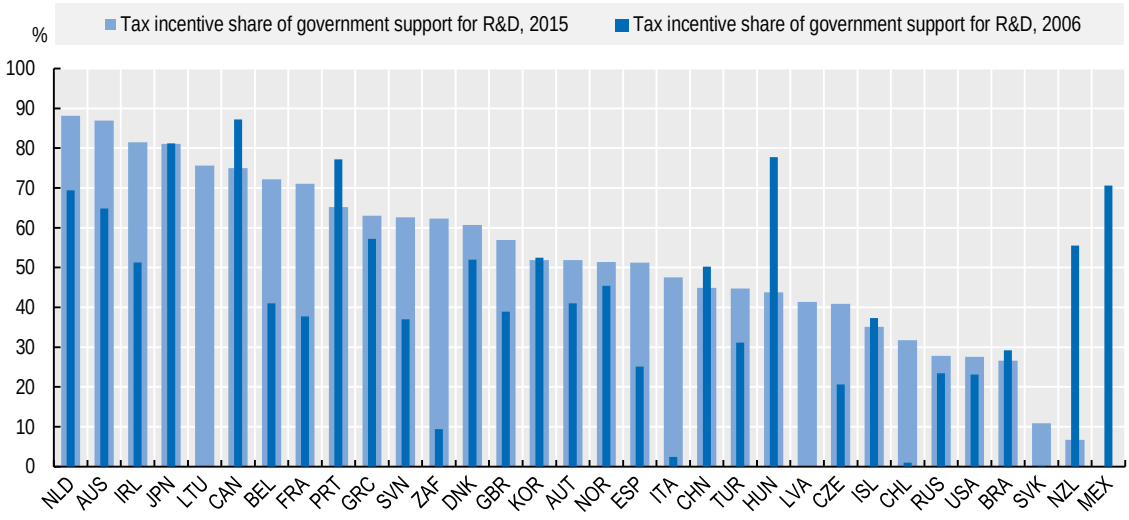


StatLink http://dx.doi.org/10.1787/888933618156

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 4.6.2 Change in government support for business R&D through direct funding and tax incentives

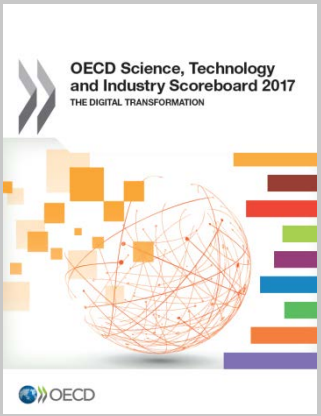
As a percentage of total support, 2006 and 2015



StatLink http://dx.doi.org/10.1787/888933619429

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