

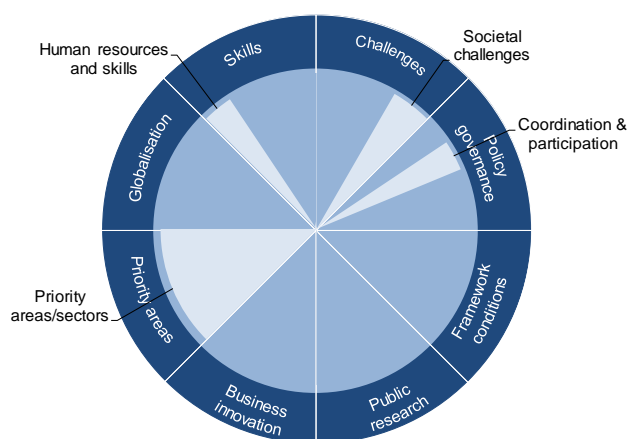
ARGENTINA

The Argentine government recognises that innovation is a key source of growth and currently concentrates its efforts in several areas.

Table 1. Gross domestic expenditure on R&D (GERD)

	ARG	OECD
GERD		
USD million PPP, 2014	5 701	1 181 495
As a % of total OECD, 2014	0.5	100
GERD intensity and growth		
As a % of GDP, 2014	0.61	2.38
(annual growth rate, 2009-14)	(+9.5)	(+2.3)
GERD publicly financed		
As a % of GDP, 2013	0.46	0.61
(annual growth rate, 2008-13)	(+15.4)	(+2.5)

Figure 1. Major STI policy priorities, 2016



Hot issues

Innovating to address societal challenges (including inclusiveness)

Argentina is focusing on resolving the challenge of social exclusion. The Ministry of Science, Technology and Productive Innovation (MINCYT) has made addressing social challenges a priority in its guidelines for the development of the country's innovation system. In 2009, the MINCYT set up the Argentinean Sectoral Fund (FONARSEC), a fund mainly financed by grants from the World Bank and the Inter-American Development Bank, which also supports innovation initiatives that foster social inclusion.



Improving co-ordination of and participation in governance

Many public bodies are involved in Argentina's STI system. The MINCYT, which had a budget of USD 1 386 million PPP (4 994 million Argentine pesos, ARD) in 2013, has a central role in managing innovation investments and R&D institutions. Argentina spent 0.61% of its GDP on R&D in 2014, considerably below the OECD median. The government finances the majority of GERD (0.46% of GDP), and its contribution grew by 15.44% a year over 2008-13, faster than the overall annual growth of GERD (9.5%) over the same period. Agencies such as the National Research Council (CONICET) and the National Agency for the Promotion of Science and Technology (ANPCYT) distribute government grants for research. The Evaluation and Quality Assurance Unit (UEAC) of the ANPCYT, and the National Directorate of Programmes and Projects of the Undersecretary of Institutional Evaluation conduct evaluations with a view to quality assurance. To improve co-ordination, MINCYT's allocation of resources has been progressively aligned over the last five years with policies from other ministries and agencies through the Scientific and Technological Cabinet (GACTEC), an inter-ministerial body in charge of formulating S&T policy. The Federal Council on Science and Technology (COFECYT) acts as an advisory board for maintaining policy coherence among federal, provincial and local governments, and for safeguarding regional interests in the MINCYT's allocation of resources. In March 2013, the MINCYT presented its national STI strategic plan, Argentina Innovadora 2020, which seeks to optimise and articulate the country's public and private STI efforts.

Targeting priority areas/sectors

Sectoral funds constitute the backbone of Argentina's S&T policy. Most of ANPCYT's budget focuses on the strategic knowledge areas and business sectors identified in the Argentina Innovadora 2020 plan. FONSOFT is a trust fund to support ICT, in which Argentina hopes to develop a comparative advantage. The FONARSEC fund supports the development of target technologies (e.g. bio- and nano-technology) and sectors (e.g. energy, health and agro-industry).

Increasing overall human resources, skills and capacity building

Argentina spent 1.12% of its GDP on tertiary education in 2012, a level close to the OECD median (4⁵). However, the performance of the country's 15-year-olds in science is well below the OECD median (4⁶) and points to shortcomings in the quality of education. The share of doctoral graduates in S&E is also well below the OECD median (figure 4⁷). To improve the supply of human resources for STI, two programmes, Becas Bicentenario and Becas TICs, provide up to 30 000 scholarships a year for tertiary education for low-income students.

CONICET funds domestic doctoral programmes and post-doctoral training and provides grants to support knowledge transfer between universities and the private sector. The government also has programmes targeting Argentina's diaspora. Between the inception of the RAICES programme in 2004 and 2013, more than 1 000 scientists returned to Argentina. These efforts have led to an increased supply of younger researchers, with the share of researchers under age 40 rising from 41% in 2003 to nearly 48% in 2011. Furthermore, to improve the performance of Argentina's researchers, ANPCYT's PITEC and PAE programmes support public-private partnerships in research projects aimed at increasing the contribution of research to Argentina's economy, including by addressing pressing socio-economic challenges.



Some key STI performance indicators

Figure 2. Environmental performance

Green productivity, GDP per unit of CO₂ emitted, index 2005=100

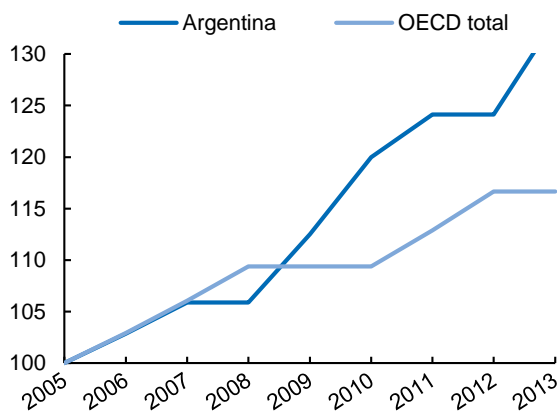
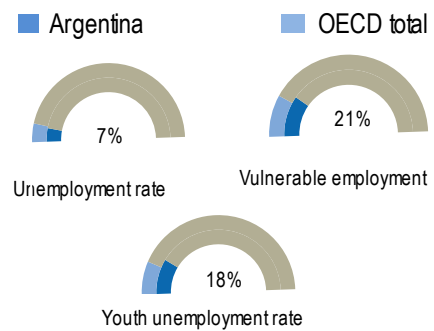


Figure 3. Unemployment

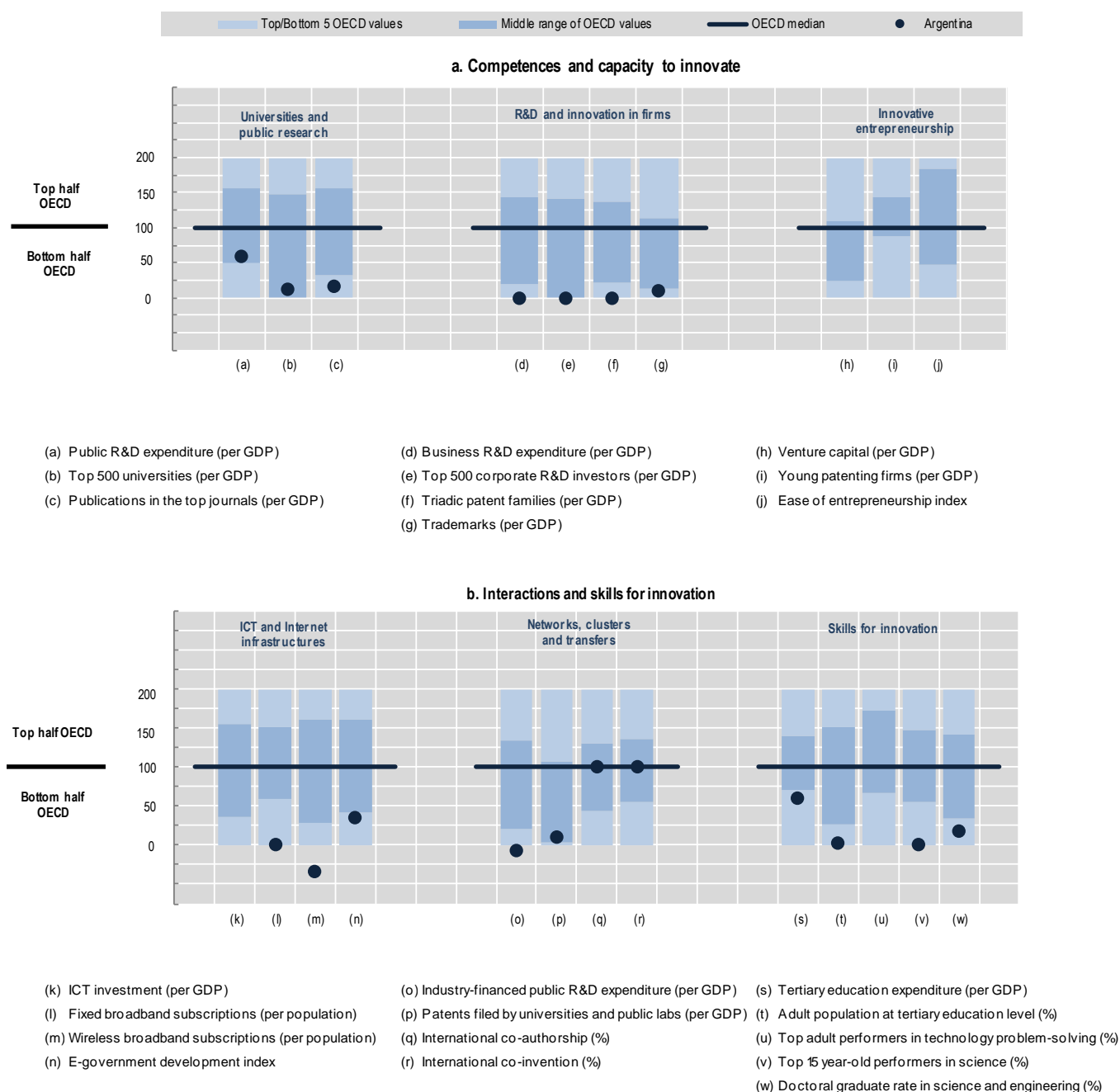
2015 or latest year available



Benchmarking national STI systems

Figure 4. Science and Innovation in Argentina

Comparative performance of national science and innovation systems, 2016



Note: Normalised index of performance relative to the median values in the OECD area (Index median=100). Please note that for Argentina, 2012 values were used for the indicator Wireless broadband subscriptions (per population). It is compared to values of December 2015 for OECD countries.



Highlights of the Argentine STI system

Universities and public research

While low compared to the OECD median, Argentina's public R&D spending at 0.48% of GDP (figure 4^a) is higher than that of Chile (0.18%) and Mexico (0.25%). In addition to efforts to improve the skills base described above, the MINCYT has invested in the country's R&D infrastructure needs. In 2013, as part of its Work Plan for Science and Technology, four new buildings with a total 11 122 square metres of R&D infrastructure, including a new headquarters for the national DNA databank and nanotechnology offices and laboratories, were completed. This represents a 17% increase in R&D surface compared to 2007.

Innovation in firms

With BERD of 0.12% of GDP in 2014, well below the OECD median (figure 4^d), Argentina lags far behind the OECD in innovation performance, triadic patents (figure 4ⁱ) and trademark registrations (figure 4^g). To improve innovation performance, government programmes target key knowledge areas and sectors to improve both the quality of human capital for research and innovation and the articulation between public research and industry. The MINCYT is currently evaluating the means of measuring private R&D; preliminary results indicate that BERD may have been somewhat underestimated.

ICT and Internet infrastructures

Argentina's Internet infrastructure and use is below OECD levels (figure 4^{l,m}). In 2012, some 10.9% of Argentinians had a fixed broadband subscription, a higher share than in Brazil (9.2%) but below that of Chile (12.4%). Argentina's e-government development index is still low with respect to the OECD median.

Clusters and regional policy

The government aims to reduce the regional gap in STI capacity by increasing the share of GERD performed by the 19 least R&D-intensive provinces from 28% in 2011 to 37% in 2020. The COFECYT disbursed USD 37 million PPP (ARS 113 million) in 2012 in this effort.

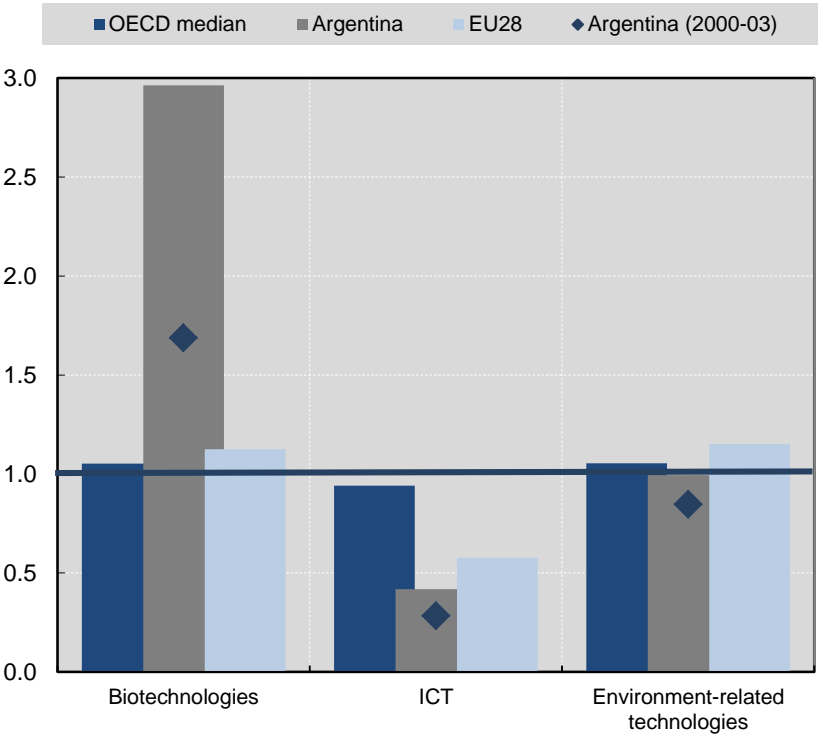
Globalisation

The government is seeking to foster international co-operation in S&T. To this end, it has established partnerships and recently increased the number of co-operative projects and programmes with Brazil, Chile, Mexico, the United States and Canada as well as with France, Belgium, the United Kingdom, Germany, the Netherlands and Italy.



Structural aspects and specialisation

Figure 5. Revealed technology advantage in selected fields, 2011-13
Index based on IP5 patent families applications



National STI policy mix

Figure 6. Allocation of public funds to R&D, 2014 or latest year available
By sector, type of R&D and mode of funding



(1). Balance as a share of both higher education (HERD) and government (GOVERD) R&D expenditure.

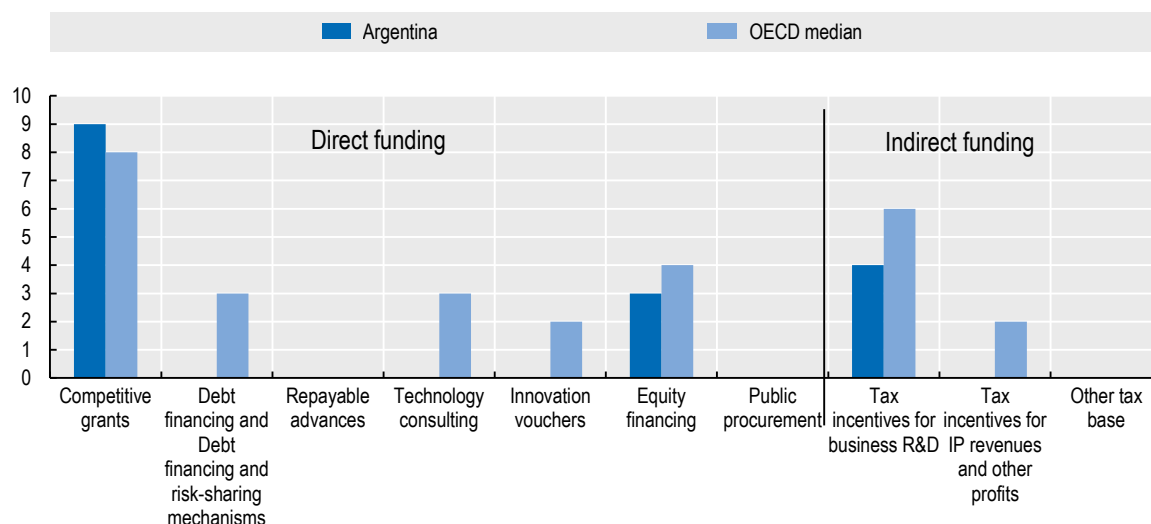
(2). Balance as a share of total government budget appropriations and outlays for R&D (GBAORD).

(3). Balance as a share of total funding to national performers.

(4). Balance as a share of both indirect funding (through R&D tax incentives) and direct funding (through grants, procurement, loans, etc.).

(5). Balance as a share of publicly-funded HERD and GOVERD and components of (4).

Figure 7. Most relevant policy instruments of funding for business R&D, 2016
Country self-assessment, index (9 = high and increasing relevance to 0 = not used)



Note: Policy information comes from country responses to the *OECD STI Outlook* policy questionnaires 2016 and 2014. Argentina's responses are available in the EC/OECD STI Policy Database, edition 2016 at http://qdd.oecd.org/DATA/STIPSurvey/ARG...STIO_2016.

Source: See the reader's guide and methodological annex.

StatLink <http://dx.doi.org/10.1787/888933433663>

References

General references

- Dernis H., Dosso M., Hervás F., Millot V., Squicciarini M. and Vezzani A. (2015), *World Corporate Top R&D Investors: Innovation and IP bundles*, A JRC and OECD common report, Luxembourg, Publications Office of the European Union.
- EC (European Commission) (2015), *EU R&D Scoreboard: The 2015 EU Industrial R&D Investment Scoreboard*, European Commission, Luxembourg, <http://iri.jrc.ec.europa.eu/scoreboard.html>, accessed 4 October 2016.
- Flanagan, K., E. Uyarra and M. Laranja (2010), "The policy mix for innovation: rethinking innovation policy in a multilevel, multi-actor context", *Munich Personal RePEc Archive (MPRA)* No. 23567, July.
- IEA (2015), *CO2 Emissions from Fuel Combustion 2015*, OECD Publishing, Paris, DOI: http://dx.doi.org/10.1787/co2_fuel-2015-en
- Kergroach, S. (2010), "Monitoring innovation and policies: developing indicators for analysing the innovation policy mix", internal working document of the Directorate for Science, Technology and Industry (DSTI), OECD, Paris.



- Kergroach, S., J. Chicot, C. Petroli, J. Pruess, C. van Ooijen, N. Ono, I. Perianez-Forte, T. Watanabe, S. Fraccola and B. Serve, (forthcoming-a), "Mapping the policy mix for innovation: the OECD STI Outlook and the EC/OECD International STIP Database", *OECD Science, Technology and Industry Working Papers*.
- Kergroach, S., J. Pruess, S. Fraccola and B. Serve, (forthcoming-b), "Measuring some aspects of the policy mix: exploring the EC/OECD International STI Policy Database for policy indicators", *OECD Science, Technology and Industry Working Papers*.
- OECD (Organisation for Economic Co-operation and Development) (2016), Education at a Glance 2016: OECD Indicators, OECD Publishing, Paris, <http://dx.doi.org/10.1787/eag-2016-en>.
- OECD (2016), OECD Economic Outlook, Volume 2016 Issue 1, OECD Publishing, Paris, http://dx.doi.org/10.1787/eco_outlook-v2016-1-en.
- OECD (2016), OECD Country Reviews of Innovation Policy, www.oecd.org/sti/inno/oecdreviewsofinnovationpolicy.htm.
- OECD (2015), Pensions at a Glance 2015: OECD and G20 indicators, OECD Publishing, Paris, http://dx.doi.org/10.1787/pension_glance-2015-en.
- OECD (2015), OECD Skills Outlook 2015: Youth, Skills and Employability, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264234178-en>.
- OECD (2015), OECD Science, Technology and Industry Scoreboard 2015: Innovation for growth and society, OECD Publishing, Paris, http://dx.doi.org/10.1787/sti_scoreboard-2015-en.
- OECD (2015), OECD Digital Economy Outlook 2015, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264232440-en>.
- OECD (2015), Entrepreneurship at a Glance 2015, OECD Publishing, Paris, http://dx.doi.org/10.1787/entrepreneur_aag-2015-en.
- OECD (2015), National Accounts at a Glance 2015, OECD Publishing, Paris, http://dx.doi.org/10.1787/na_glance-2015-en.
- OECD (2015), The Innovation Imperative: Contributing to Productivity, Growth and Well-Being, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264239814-en>.
- OECD (2014), Measuring the Digital Economy: A New Perspective, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264221796-en>.
- OECD (2014), OECD Science, Technology and Industry Outlook 2014, OECD Publishing, Paris, http://dx.doi.org/10.1787/sti_outlook-2014-en.
- OECD (2011), Towards Green Growth: Monitoring Progress: OECD Indicators, OECD Green Growth Studies, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264111356-en>.
- OECD (2010), "The Innovation Policy Mix", in OECD Science, Technology and Industry Outlook 2010, OECD Publishing, Paris, http://dx.doi.org/10.1787/sti_outlook-2010-48-en.
- OECD (2010), Measuring Innovation: A New Perspective, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264059474-en>.
- OECD and SCImago Research Group (CSIC), (2014), Compendium of Bibliometric Science Indicators 2014, <http://oe.cd/scientometrics>.
- Van Steen, J. (2012), "Modes of public funding of R&D: Towards internationally comparable indicators", OECD Science, Technology and Industry Working Papers, No. 2012/4, OECD Publishing, Paris, <http://dx.doi.org/10.1787/5k98ssns1qzs-en>.





Databases and data sources

- Academic Ranking of World Universities (2016), “Shanghai ranking academic ranking of World universities”, www.shanghairanking.com, accessed 4 October 2016.
- Bureau Van Dijk (2011), ORBIS Database, Bureau Van Dijk Electronic Publishing.
- EC/OECD (forthcoming), International Database on Science, Technology and Innovation Policies (STIP), edition 2016, www.innovationpolicyplatform.org/ecoecd-stip-database.
- Elsevier B.V. (2014), Elsevier Research Intelligence, www.elsevier.com/online-tools/research-intelligence/products-and-services/scival, accessed 4 October 2016.
- Eurostat (2016), Education and Training Databases, June, <http://ec.europa.eu/eurostat/web/education-and-training/data/database>, accessed 4 October 2016.
- Eurostat (2016), Total intramural R&D expenditure (GERD) by sectors of performance and source of funds, April, http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=rd_e_gerdfund&lang=en, accessed 4 October 2016.
- Graham, S., G. Hancock, A. Marco and A. Myers (2013), “The USPTO Trademark Case Files Dataset: Descriptions, Lessons, and Insights”, SSRN Working Paper, <http://ssrn.com/abstract=2188621>.
- IEA (International Energy Agency) (2015), CO2 Emissions from Fuel Combustion Database, [/www.iea.org/publications/freepublications/publication/name_43840.en.html](http://www.iea.org/publications/freepublications/publication/name_43840.en.html).
- ILO (International Labour Organization) (2016), Key Indicators of the Labour Market database, www.ilo.org/global/statistics-and-databases/research-and-databases/kilm/lang--en/index.htm, accessed 4 October 2016.
- IMF (International Monetary Fund) (2016), World Economic Outlook (WEO) Databases, July, www.imf.org/external/pubs/ft/weo/2016/01/weodata/index.aspx, accessed 4 October 2016.
- ITU (International Telecommunication Union) (2016), World Telecommunication/ICT Indicators 2016, www.itu.int/en/ITU-D/Statistics/Pages/stat/default.aspx, accessed 4 October 2016.
- OECD (2016), Activity of Multinational Enterprises (AMNE) Database, August, www.oecd.org/industry/ind/amne.htm.
- OECD (2016), ANBERD Database, July, www.oecd.org/sti/anberd.
- OECD (2016), OECD Annual Labour Force Statistics Database, July, www.oecd.org/employment/labour-stats/.
- OECD (2016), Broadband Portal, August, www.oecd.org/sti/broadband/oecdbroadbandportal.htm.
- OECD (2016), OECD Education Databases, September, <http://gpseducation.oecd.org/>
- OECD (2016), Entrepreneurship Financing Database.
- OECD (2016), Educational Attainment and Labour Force Status Database, <https://data.oecd.org/education.htm>.
- OECD (2016), OECD Income Distribution Database, www.oecd.org/social/income-distribution-database.htm.
- OECD (2016), Main Science and Technology Indicators (MSTI) Database, June, www.oecd.org/sti/msti.
- OECD (2016), OECD National Accounts Databases, September, www.oecd.org/std/na/.
- OECD (2016), OECD/NESTI data collection on R&D tax incentives, July, www.oecd.org/sti/rd-tax-stats.htm.
- OECD (2016), Patent Database, June, www.oecd.org/sti/inno/oecdpatentdatabases.htm.
- OECD (2016), Productivity Database, September, www.oecd.org/std/productivity-stats.
- OECD (2016), Programme of International Students Assessment (PISA) Database, OECD Education Statistics, June, www.pisa.oecd.org.





- OECD (2016) Programme for the International Assessment of Adult Competencies (PIAAC) Database, OECD Education Statistics, June www.oecd.org/skills/piaac/surveyofadultskills.htm.
- OECD (2016), Research and Development Statistics (RDS) Database, April, www.oecd.org/sti/rds.
- OECD (2016), STI Micro-data Lab: Intellectual Property Database, June, <http://oe.cd/ipstats>.
- OECD (2014), Product Market Regulation (PMR) Database, March, www.oecd.org/economy/pmr.
- OECD (2013), “Modes of public funding of R&D: Interim results from the second round of data collection on GBAORD”, internal working document of the Working Party of National Experts on Science and Technology Indicators (NESTI), OECD, Paris.
- UIS (UNESCO Institute for Statistics) (2016), Education Database, June, http://data.uis.unesco.org/Index.aspx?DataSetCode=EDULIT_DS, accessed 4 October 2016.
- UIS (2016), Science, Technology and Innovation Database, July, http://data.uis.unesco.org/Index.aspx?DataSetCode=SCN_DS, accessed 4 October 2016.
- UN (United Nations) (2016), UN e-Government Survey, United Nations, NY. <https://publicadministration.un.org/egovkb/en-us/Reports/UN-E-Government-Survey-2016> (accessed 4 October 2016).
- World Bank (2016), World Development Indicators (WDI) Databank, <http://wdi.worldbank.org>





From:

OECD Science, Technology and Innovation Outlook 2016

Access the complete publication at:

https://doi.org/10.1787/sti_in_outlook-2016-en

Please cite this chapter as:

OECD (2016), "Argentina", in *OECD Science, Technology and Innovation Outlook 2016*, OECD Publishing, Paris.

DOI: https://doi.org/10.1787/sti_in_outlook-2016-45-en

This work is published under the responsibility of the Secretary-General of the OECD. The opinions expressed and arguments employed herein do not necessarily reflect the official views of OECD member countries.

This document 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.

You can copy, download or print OECD content for your own use, and you can include excerpts from OECD publications, databases and multimedia products in your own documents, presentations, blogs, websites and teaching materials, provided that suitable acknowledgment of OECD as source and copyright owner is given. All requests for public or commercial use and translation rights should be submitted to rights@oecd.org. Requests for permission to photocopy portions of this material for public or commercial use shall be addressed directly to the Copyright Clearance Center (CCC) at info@copyright.com or the Centre français d'exploitation du droit de copie (CFC) at contact@cfcopies.com.