Science, Technology and Patents Statistics

Analytical Business Enterprise Research and Development

Purpose

To provide a consistent and comparable data set across countries and over time on industrial R&D expenditures broken down by industry.

Objectives and outputs

The ANBERD (Analytical Business Enterprise Research and Development) database is continually revised to enhance the international comparability of time series on business enterprise R&D expenditure (BERD) by industry.

Non-member countries involved in the activity:

China, Chinese Taipei, Romania, Russian Federation, Singapore, South Africa.

Biotechnology

Purpose

To establish international standards for the collection of biotechnology data across OECD member countries.

Objectives and outputs

Under the auspices of the National Experts of Science and Technology Indicators (NESTI) group and with regular interaction with the Working Party on Biotechnology, Nanotechnology and Converging Technologies (BNCT) data are collected and published online as the Key Biotechnology Indicators, http://oe.cd/kbi. These are updated annually.

Non-member countries involved in the activity:

Brazil, China, India, Indonesia, Russian Federation, South Africa, Thailand.

Innovation Policy Platform (IPP.Stat)

Purpose

The Innovation Policy Platform (IPP) is a web-based interactive space that provides easy access to knowledge, learning resources, indicators and communities of practice on the design, implementation, and evaluation of innovation policies.

The Platform helps users learn how innovation systems operate, identify good practices across different countries, conduct statistical benchmarking and devise and apply effective policy solutions. More broadly, it facilitates knowledge exchange and collaboration across countries and regions.

The IPP includes a data visualisation tool containing the main available indicators relevant to a country's innovation performance. Indicators are sourced primarily from the OECD and the World Bank, as well as from other sources of comparable quality.

The tool provides the ability to customise the selection of comparator countries and time periods, to draw various types of attractive tables, charts and maps, and to export the data in a variety of formats.

Live charts (automatically updated as the back office is updated) are also embed across the IPP.
https://www.innovationpolicyplatform.org/

Objectives and outputs

Main developments in 2017 have focused on maintaining and expanding the statistical coverage of the IPP.Stat, especially beyond R&D indicators, and on improving data and metadata management processes.

Non-member countries involved in the activity:

Albania, Argentina, Armenia, Asia, Azerbaijan, Bahamas, Barbados, Belarus, Belize, Bolivia, Bosnia and Herzegovina, Brazil, Bulgaria, China, Chinese Taipei, Colombia, Costa Rica, Croatia, Cuba, Cyprus, Dominican Republic, Ecuador, Egypt, El Salvador, Europe, G20, Georgia, Guatemala, Honduras, Hong Kong, India, Indonesia, Jamaica, Kazakhstan, Kuwait, Kyrgyzstan, Liechtenstein, Lithuania, Macedonia, Malaysia, Malta, Moldova, Mongolia, Morocco, Nicaragua, Other, Panama, Paraguay, Peru, Philippines, Republic of Montenegro, Republic of Serbia, Romania, Russian Federation, Saudi Arabia, Serbia and Montenegro, Singapore, Slovenia Former, South Africa, Tajikistan, Thailand, Trinidad and Tobago, Tunisia, Turkmenistan, Ukraine, United Emirates, Uruguay, Uzbekistan, Venezuela, World.

Main Developments for 2018

General aspects:

Introducing new indicators and complementing statistical coverage by unit.
Further automation of calculations and data management process, and quality checks.

Innovation survey indicators

Purpose

Collect, harmonise and disseminate a selection of indicators coming from national innovation surveys - Maintenance of 2017 edition.

Objectives and outputs

Provide a set of harmonised innovation survey indicators comparable across countries.

Non-member countries involved in the activity:

Brazil, China, Colombia, Costa Rica, Cyprus, India, Lithuania, Romania, Russian Federation, South Africa.

Main Developments for 2018

General aspects:

Maintain the indicators, facilitate access and deal with queries. No additional collection.

International Survey of Scientific Authors

Purpose

Collect information at the global level directly from scientific authors about their publishing activities. The 2018 collection will focus on the use of digital tools and their impact on different scientific activities.

This activity will allow developing a flexible and complementary statistical infrastructure to fill the gaps left by available data sources.

Objectives and outputs

Survey carried out collecting information directly from scientific authors. The activities include survey design, sampling, survey administration through a web survey tool, data collection and analysis. Data and report are disseminated through the dedicated web-site.

Non-member countries involved in the activity:

Albania, Argentina, Armenia, Asia, Azerbaijan, Bahamas, Barbados, Belarus, Belize, Bolivia, Bosnia and Herzegovina, Brazil, Bulgaria, China, Chinese Taipei, Colombia, Costa Rica, Croatia, Cuba, Cyprus, Dominican Republic, Ecuador, Egypt, El Salvador, Europe, G20, Georgia, Guatemala, Honduras, Hong Kong, India, Indonesia, Jamaica, Kazakhstan, Kyrgyzstan, Liechtenstein, Lithuania, Macedonia, Malaysia, Malta, Moldova, Mongolia, Morocco, Nicaragua, Other, Panama, Paraguay, Peru, Philippines, Republic of Montenegro, Republic of Serbia, Romania, Russian Federation, Saudi Arabia, Serbia and Montenegro, Singapore, Slovenia Former, South Africa, Tajikistan, Thailand, Trinidad and Tobago, Tunisia, Turkmenistan, Ukraine, Uruguay, Uzbekistan, Venezuela, World.

Main Developments for 2018

General aspects:

Survey launch and analysis.

Main Science and Technology Indicators

Purpose

To publish biannually the most commonly used indicators on science and technology on an internationally comparable basis. The database and publication are regularly updated with 72 (paper publication) to 130 (electronic publication) data series presenting resources devoted to R&D, measures of output and the impact of S&T activities.

Objectives and outputs

This biannual publication provides a set of indicators that reflect the level and structure of the efforts undertaken by OECD member countries and 7 non-member economies in the field of science and technology. These data include final and provisional results as well as forecasts established by government authorities. The indicators cover the resources devoted to research and development, patent families, technology balance of payments and international trade in highly R&D intensive industries. Also presented are the underlying economic series used to calculate these indicators. Series are presented for a reference year and the last six years for which data are available (paper publication) and beginning 1981 (electronic editions).

Non-member countries involved in the activity:

Argentina, China, Chinese Taipei, Romania, Russian Federation, Singapore, South Africa.

Main Developments for 2018

General aspects:

MSTI Quality Review to be completed in 2017.

Nanotechnology

Purpose

To establish international standards for the collection of nanotechnology data across OECD member countries.

Objectives and outputs

Under the auspices of the National Experts of Science and Technology Indicators (NESTI) group and with regular interaction with the Working Party on Biotechnology, Nanotechnology and Converging Technologies (BNCT) data are collected and published online as the Key Nanotechnology Indicators, http://oe.cd/kbi. These are updated annually.

Non-member countries involved in the activity:

Brazil.

Oslo Manual revision

Purpose

Revise joint OECD-Eurostat statistical guidelines for measuring innovation.

Objectives and outputs

Revise joint OECD-Eurostat statistical guidelines for measuring innovation.

Main Developments for 2018

General aspects:

Final editing, declassification and publication of the revised manual.

Patent Statistics

Purpose

The OECD activity on patent statistics consists of an international statistical infrastructure that encompasses databases with micro-data records, methodological developments and aggregated statistics. The infrastructure provides the conditions for improving the quality and international comparability of patent indicators. It serves as a basis for policy relevant studies carried out within and outside OECD.

Objectives and outputs

The patent databases are suitable for calculating indicators to respond to S&T/entrepreneurship policy purposes, covering patent filings to national and regional patent offices across the world, by specific technology areas, as well as measures of international co-operation. To date, patent data covers patents mainly filed at the European Patent Office (EPO), at the US Patent and Trademark Office (USPTO) and patent applications filed under the Patent Co-operation Treaty (PCT). Additional data compilations encompass the development of "triadic" patent families and IP5 patent families, curated patent citations, as well as new measures assessing the technological and economical value of patents. Patent records are being matched internally to company level data (e.g. to the list of headquarters and subsidiaries of the top 2000 R&D performers jointly with the JRC of the EC). Finally, the EPO and PCT data are being disaggregated to the lowest regional level (NUTS3/TL3) for OECD countries and selected economies.

Patent statistics are published on the OECD Statistics Portal and in various publications, of which the Main Science and Technology Indicators; OECD Science, Technology and Industry Scoreboard; OECD Science, Technology and Industry Outlook.

The OECD Patent Statistics Manual 2009 provides further guidelines for analysing and building patent statistics in the framework of S&T indicators.

Similar work is also conducted for other intellectual property assets such as Trademarks and Design (http://www.oecd.org/sti/intellectual-property-statistics-and-analysis.htm).

Regular conferences on "IP statistics for decision makers" are jointly organised by the IP Statistics Task Force led by the OECD (http://www.oecd.org/site/stipatents/).

Non-member countries involved in the activity:

Albania, Argentina, Armenia, Asia, Azerbaijan, Belarus, Bolivia, Bosnia and Herzegovina, Brazil, Bulgaria, China, Chinese Taipei, Colombia, Costa Rica, Croatia, Cyprus, Dominican Republic, Ecuador, Egypt, El Salvador, Europe, G20, Georgia, Guatemala, Hong Kong, India, Indonesia, Kazakhstan, Kyrgyzstan, Liechtenstein, Lithuania, Macedonia, Malaysia, Malta, Moldova, Mongolia, Morocco, Other, Panama, Paraguay, Peru, Republic of Montenegro, Republic of Serbia, Romania, Russian Federation, Saudi Arabia, Serbia and Montenegro, Singapore, Slovenia Former, South Africa, Tajikistan, Thailand, Turkmenistan, Ukraine, Uruguay, Uzbekistan, Venezuela, World.

Main Developments for 2018

General aspects:

Updating the existing patent database; expanding the data coverage (i.e. to include information from more national patent offices); development of additional patent indicators (e.g. generality of patents, citation based indicators, patents by industry...).

R&D Tax Incentive Statistics and Indicators

Purpose

Collect information and produce indicators and reports on the design and cost of R&D tax incentive schemes across OECD and partner economies.

Objectives and outputs

Collect information and produce indicators and reports on the design and cost of R&D tax incentive schemes across OECD and partner economies.

Main Developments for 2018

General aspects:

Collect information and produce indicators and reports on the design and cost of R&D tax incentive schemes across OECD and partner economies for 2018. Intended publication of non-disclosive analysis resulting from the distributed micro data work stream of the project (microBeRD project: http://www.oecd.org/sti/microberd.htm).

Research and Development (R&D) Statistics

Purpose

Provide internal and external users with statistics on R&D expenditures and personnel and ensure, through appropriate methodological work, their international comparability.

Objectives and outputs

Collect and process internationally comparable statistics on the resources devoted to R&D in member countries and seven non-member economies based on the OECD internationally agreed methodology for R&D surveys, the "Frascati Manual". Disseminate these statistics and the corresponding metadata via the annual "R&D Statistics" and the biannual "Main S&T Indicators" publications and the on-line "R&D Sources and Methods database". The OECD S&T databases and publications include comparable S&T indicators and statistics for seven non-member economies, i.e. Argentina, China, Romania, Russia, Singapore, South Africa and Chinese Taipei.

Non-member countries involved in the activity:

Argentina, China, Chinese Taipei, Romania, Russian Federation, Singapore, South Africa.

Main Developments for 2018

General aspects:

Implementation of the Frascati Manual 2015 - involving new collection methods. The RDS Quality Review recommendations will also be implemented (most notably a move to rolling-updates).

Scientometric indicators

Purpose

Provide relevant information on OECD work on scientometrics and bibliometrics. This field has evolved over time from the study of indices for improving information retrieval from peer-reviewed scientific publications (commonly described as the "bibliometric" analysis of science) to cover other types of documents and information sources relating to science and technology. These sources can include data sets, web pages and social media. Scientometric indicators complement and contribute to OECD efforts to standardise, collect, report and analyse a wide range of science, technology and innovation activities by providing evidence on a selected set of S&T outcomes.

Objectives and outputs

Contribute to OECD efforts to standardise, collect, report and analyse a wide range of science, technology and innovation activities by providing evidence on a selected set of S&T outcomes.

Sources and Methods for Research and Development (R&D) Statistics

Purpose

To meet demand for country-specific and item-specific methodology, this database relates principally to R&D as reported by the units performing the R&D in line with the standard methodology for R&D statistics recommended by OECD in the Proposed Standard Practice for Surveys of Research and Experimental Development - Frascati Manual (OECD).

Objectives and outputs

The database provides detail on methods used in the member countries and seven non-member economies when compiling the R&D data reported to OECD in the framework of the International Survey of the Resources devoted to R&D by OECD countries, underlining both current and historical national specificities of the data stored in the OECD STI/EAS R&D database. The sources and methods are regularly updated as part of the International Survey of the Resources devoted to R&D by OECD countries. The Secretariat has made this database available on line (http://webnet.oecd.org/rd_gbaord_metadata/default.aspx) where delegates and the public are able to consult.

Selected metadata are regularly published in "Research and Development Statistics" (annual electronic publication) as well as in "Main Science and Technology Indicators" (paper and electronic publication appearing twice yearly). This information was also used as input to the revision of the "Frascati Manual", the international standard methodology for the measurement of resources devoted to R&D.

Non-member countries involved in the activity:

Argentina, China, Chinese Taipei, Romania, Russian Federation, Singapore, South Africa.

Main Developments for 2018

General aspects:

Implementing the recommendations from the RDS Quality Review, looking at possible new platforms to enable improvements.

Trademark Statistics

Purpose

To develop a statistical infrastructure for trademarks (including databases and methodologies), used as a basis to calculate trademark-based policy-relevant indicators and conduct various analytical studies, regarding e.g. innovations with no or low technological content, firms'' target markets, or firm diversification strategies.

Objectives and outputs

Built within the EAS Microdata Lab, the main objective of this statistical work is to build a multi-country trademark data repository; to devise and compile a number of indicators related to the trademark activities of firms, industries and countries; and to conduct analytical work. This work is based on administrative micro-datasets related to trademark applications at Intellectual Property Offices (IPO) worldwide.

Currently, the following administrative trademark-related data have been received from IPOs and processed on a regular basis from: EU IPO (European Union Intellectual Property Office), USPTO (US Patent and Trademark Office), CIPO (Canadian Intellectual Property Office), IP Australia and Japan Patent Office (JPO).

Various indicators derived from those datasets are calculated regularly: trademark applications by country, by class of products and by year.

Trademark statistics are published in the OECD Science, Technology and Industry Scoreboard, in the OECD Science, Technology and Industry, and in the Digital Economic Outlook.

An experimental exercise has been performed to match trademarks data at the micro-level with the headquarters and subsidiaries of the top 2000 R&D performers.

Non-member countries involved in the activity:

Albania, Argentina, Armenia, Asia, Azerbaijan, Barbados, Belarus, Bolivia, Bosnia and Herzegovina, Brazil, Bulgaria, China, Chinese Taipei, Colombia, Costa Rica, Croatia, Cyprus, Dominican Republic, Ecuador, Egypt, El Salvador, Europe, G20, Georgia, Guatemala, Honduras, Hong Kong, India, Indonesia, Jamaica, Kazakhstan, Kyrgyzstan, Liechtenstein, Lithuania, Macedonia, Malaysia, Malta, Moldova, Mongolia, Morocco, Nicaragua, Other, Panama, Paraguay, Peru, Philippines, Republic of Montenegro, Republic of Serbia, Romania, Russian Federation, Saudi Arabia, Serbia and Montenegro, Singapore, Slovenia Former, South Africa, Tajikistan, Thailand, Turkmenistan, Ukraine, Uruguay, Uzbekistan, Venezuela, World.

Main Developments for 2018

General aspects:

Updating the existing trademark database and extending the data coverage (i.e. to include information from more national trademark offices); harmonising trademark applicant's names and matching with firm-level databases; development of further trademark indicators (trademarks by industry, diversification indicators); development of further analytical applications of trademark data.