Data set metadata record

Data set ID
RnD 2012-13 Aggregated - Retracted

Data set title
National Research and Experimental Development Survey (R&D) 2012-13: All provinces in South Africa - Aggregated

Citation

Data set description
This data set contains the aggregated data for 2012-13 on the R&D expenditure per province by Business, Government, Higher Education, Not-for-Profit Organisations and Science Councils. R&D expenditure is aggregated by five survey sectors across nine provinces in South Africa.

Data set abstract
The National Research and Experimental Development Survey (R&D) collects data on the R&D expenditure by five survey sectors across nine provinces in South Africa.

The 2012-13 survey collected primary data from five survey sectors:

- Business sector, made up of companies, business associations and state owned enterprises.
- Government sector, made up of national and provincial departments, research institutes and museums.
- Higher Education Institutions sector, made up of universities, universities of technology, technikons and private higher education institutions. Some limited supplementary data from HEMIS was used in this sector.
- Not-for-Profit Organisations (NPO) sector.
- Science Councils sector.

Some general organisational information was collected. The survey however focused on Human Resources and Financial data relating to in-house R&D conducted on the national territory of South Africa.

In-house R&D personnel categories included:

- Researchers
- Technicians directly supporting R&D
- Other personnel directly supporting R&D
- Qualifications, gender and race
- Full-time-equivalents (FTE) on R&D
In-house R&D expenditure categories included:

- Capital expenditure, labour costs and other current expenditure.
- Type of R&D (basic research, strategic basic research, applied research, and experimental development)
- Provincial location
- Sources of funds
- Research fields (fields of science)
- Socio-Economic Objective
- Industry of R&D (Business sector only)

**Time method**
Longitudinal: Trend/Repeated cross section

**Time period**
01 JAN 2012 - 28 FEB 2013

**Origin**
Combination of primary and secondary data

**Granularity**
Aggregate (macro) level

**Type of data**
Quantitative

**Kind of data**
Single tabular (Component of related data sets)

**Source**

Missing data was mostly retained as such, but in some instances replaced with data obtained from secondary data sources where such data is available. The Higher Education Management Information System (HEMIS) database was used to obtain the headcounts and full-time equivalents (FTEs) of R&D personnel for the Higher Education sector. Annual report statistics were used for missing R&D expenditure and personnel headcounts and FTEs for the other sectors covered by the R&D Survey. In the latter case confirmation and sign-off by the data provider were obtained.

**Production date**
2013

**Version**
1.0

**Countries**
South Africa

**Geographic coverage**
National territory of South Africa.
Geographic unit
Province

Unit of analysis

- Business Sector: 438 R&D performing Business enterprise units, made up of companies, business associations and state owned enterprises.
- Government Sector: 92 Government R&D performing Entities made up of national and provincial departments, research institutes and museums.
- Higher Education Sector: Higher Education made up of 15 Universities, 8 Universities of Science & Technology, 3 private higher education institution, ultimately comprising 47 individual R&D performing units including faculties, departments and administrative areas etc.
- Not-for-Profit Organisations (NPO) Sector: 64 NPOs.
- Science Councils Sector: 8 Science Councils made up of 13 individual R&D performing units.

Note.: The numbers of units refer to non-nil responses (i.e., entities with in-house R&D performed)

Universe - Included

The National R&D Survey 2012/13 collected primary data from five survey sectors:

- Business enterprises (BUS): The business sector of large, medium and small enterprises, including state-owned companies.
- Government (GOV): All government departments with an R&D component, government research institutes and museums.
- Higher education institutions (HEI): Higher education institutions, namely the 21 universities (and academic hospitals) and 15 technikons.
- Not-for-profit (NPO): Non-governmental and other organisations formally registered as not-for-profit institutions.
- Science councils (SCI): the eight science research councils, plus the Africa Institute of South Africa, as established through their individual Acts of Parliament.

Universe - Excluded

Entities in the above mentioned sectors which do not have in-house R&D performed.

Date of collection
01 SEP 2013 - 30 APR 2014

Mode of data collection
Email survey
Face-to-face interview
Postal survey
Telephone interview

A postal survey was administered with some face-to-face and telephonic interviews conducted. Email survey questionnaires were also used. For all sectors some partially complete questionnaires were accepted as long as core essential data was provided. Also an embedded User Guide was used in all sector questionnaires.

Sampling procedure
The sampling methods of the various sectors are briefly outlined below:

Business Sector: a purposive sampling procedure was employed whereby all known and likely R&D performers were targeted.

Government Sector: was surveyed using a census approach. All national and provincial government departments, research institutions and museums performing R&D were included.

Higher Education Sector: institutions, namely universities, universities of technology and technikons were included through a census survey.

Not-for-Profit Organisations (NPO) Sector: a purposive sampling procedure was employed whereby all known and likely R&D performers were targeted.

Science Councils Sector: were surveyed using a census approach.

Response rate = 100 x \[\text{Responses}/(\text{Responses} + \text{Non-responses} - \text{Out-of-scopes})\], where non-responses include refusals and out-of-scopes include closed down, non-R&D performer, return to sender, untraceable, etc.

Business sector response rate = 100 x \[324/(324 + 143 - 36)\] = 75.2%
Not-for-profit sector response rate = 100 x \[45/(45 + 45 - 21)\] = 65.2%
Government sector response rate = 100 x \[80/(80 + 84 - 19)\] = 55.2%
Science Councils sector response rate = 100 x \[13/(13 + 0 - 0)\] = 100.0%
Higher Education sector response rate = 100 x \[21/(21 + 15 - 2)\] = 61.8%

Overall survey response rate = 100 x \[483/(483 + 287 - 78)\] = 69.8%

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Keyword(s)
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