

SOUTH AFRICAN NATIONAL SURVEY OF RESEARCH AND EXPERIMENTAL DEVELOPMENT

KEY SECTOR RESULTS AND TRENDS

BUSINESS SECTOR R&D AT A GLANCE 2020/21



Business in South Africa is a core driver of the economy and an important partner in achieving the country's development goals. Business enterprise expenditure on R&D (BERD) is the gross domestic expenditure on R&D (GERD) incurred by enterprises. This fact sheet shows that BERD decreased every year from 2017/18. The business sector devoted the largest share of its R&D expenditure to the natural sciences, technology, and engineering fields (94.9%). A higher proportion of business R&D spend was devoted to applied research in comparison to basic and experimental research. Experimental research is considered most likely to lead to innovative products.

FACT SHEET NO. 43



Science and Innovation
Statistics South Africa



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THE BIG PICTURE

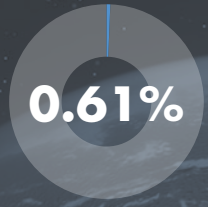


South Africa's **GDP** for **2020/21** was **R 5 521.075 BILLION**



Gross domestic expenditure on R&D (GERD) in **2020/21** was **R 33.541 BILLION**

Therefore **0.61%** of **GDP was spent on R&D** in **2020/21**, one basis point lower than 2019/20

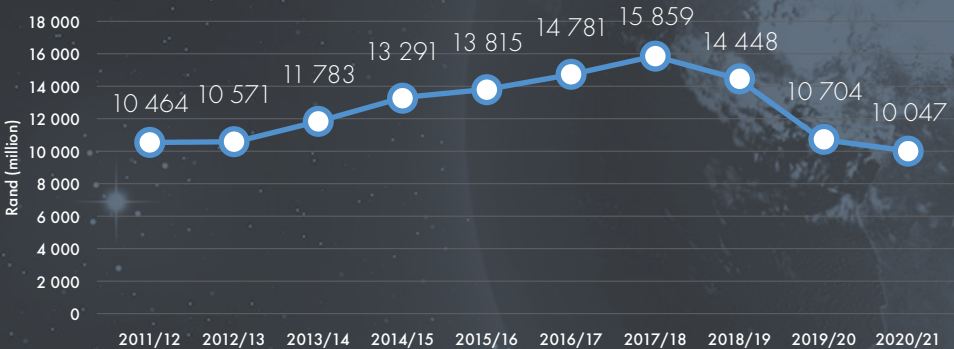


BUSINESS ENTERPRISE EXPENDITURE ON R&D



Business expenditure on R&D grew steadily from 2011/12 to 2017/18, but decreased each year since then.

Business expenditure on R&D (2011/12 to 2020/21)



FOREIGN-FUNDED R&D IN THE BUSINESS SECTOR



Business sector R&D funded from foreign sources experienced a large decline in 2017/18 and 2018/19, returned to similar levels to 2016/17 but then dipped to R978 million in 2020/21.

Foreign-funded R&D in the Business sector (2016/17 to 2020/21)

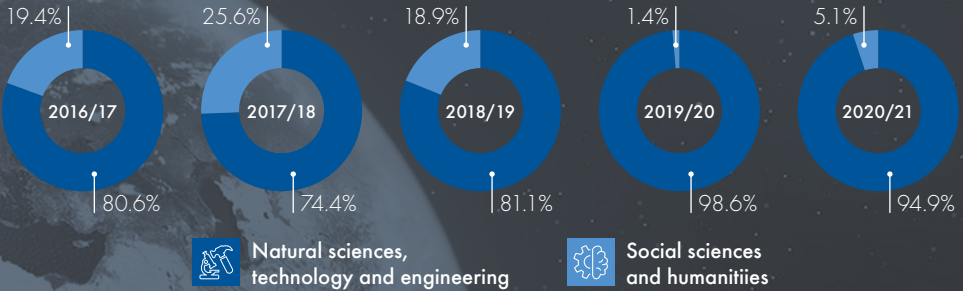


R&D EXPENDITURE BY RESEARCH FIELD



Most business sector R&D expenditure is in the natural sciences, technology and engineering. Expenditure on social sciences and humanities has decreased substantially over the last five years from 19.4% in 2016/17 to 5.1% in 2020/21.

% R&D expenditure by research field (2016/17 to 2020/21)



R&D PERSONNEL



R&D personnel headcounts by type and gender (2011/12 to 2020/21)

Year	Total	Researchers	Technicians	Other R&D Personnel	Male R&D Personnel	Female R&D Personnel
2011/12	15 288	6 192	5 095	4 001	10 329	4 959
2012/13	17 155	6 191	6 394	4 570	10 939	6 216
2013/14	17 599	6 182	6 397	5 020	11 192	6 407
2014/15	18 743	6 261	6 912	5 570	12 089	6 654
2015/16	17 245	6 128	6 090	5 027	11 407	5 838
2016/17	17 998	6 463	6 156	5 379	11 512	6 486
2017/18	17 554	7 142	5 655	4 757	11 247	6 307
2018/19	16 876	6 942	5 286	4 648	10 654	6 222
2019/20	12 748	4 641	4 989	3 118	7 531	5 217
2020/21	14 177	4 510	4 796	4 871	7 877	6 300

The business sector **shed 4 128 R&D personnel in 2019/20**, of which **2 301 were researchers**, and **1 530 were other R&D personnel**.

The number of **research personnel grew by 11.2% in 2020/21**, but still remained lower than the peak reached in 2014/15. The representation of **female R&D personnel improved significantly** over the ten-year period.



BEHIND THE NUMBERS

The annual South African National Survey of Research and Experimental Development (R&D Survey) is conducted by the Centre for Science, Technology and Innovation Indicators (CeSTII) at the Human Sciences Research Council (HSRC), on behalf of the Department of Science and Innovation (DSI). R&D statistics are collected in terms of the Statistics Act No. 6 of 1999, and are quality assured by Statistics South Africa. Data collected through the Survey, and its historic data series, helps to inform decision-makers on investment planning, policy-making, advocacy, and research in South Africa. Data also adds to benchmarking and performance comparisons with our international counterparts.

Access previous survey reports:

<https://hsrc.ac.za/divisions/centre-for-science-technology-and-innovation-indicators/>

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