

# R&D SPENDING IN THE MINING SECTOR at a glance, 2018/19



South Africa is one of the world's leading mining and mineral-processing countries with a long-standing, highly developed mining sector. In 2019, export earnings contributed more than 60% of total mining sales, supplementing an added value of approximately R226 billion to GDP. Mining, metal processing and other mining-related companies engage in considerable research to develop sophisticated technologies, products, and processes.

FACT SHEET NO. 41

# R&D EXPENDITURE PATTERNS



Total business R&D spend in 2018/19 was:

**R14.448  
BILLION**



Mining of minerals and mining-related activities contributed:

**R1.209  
BILLION**



Mining of minerals accounts for **more than half** of R&D spent whilst mining-related R&D activities (excluding the extraction of minerals) is **less than fifty percent**.



## MINING SECTOR R&D EXPENDITURE, 2018/19



Mining of gold and uranium ore accounts for the largest share of R&D in mining of minerals while the extraction of oil, gas and mining and quarrying accounts for the largest share in mining-related activities.

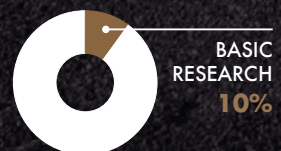
Mining sector R&D expenditure by Standard Industrial Classification code (2018/19)

Main SIC codes	Mining of minerals %	Mining-related activities %
Extraction of oil, gas and other mining and quarrying	1.0	79.0
Manufacture of non-metallic minerals products, basic metals, fabricated metal products, machinery, and equipment and of office, accounting and computing machinery, and purification of water	1.6	1.2
Mining of coal and lignite	16.7	0.0
Mining of gold and uranium ore	65.4	0.0
Mining of metal ores, except gold and uranium ores	15.3	0.0
Research and development	0.0	19.1
Service activities incidental to mining of minerals	0.0	0.7
<b>Total</b>	<b>100.0</b>	<b>100.0</b>

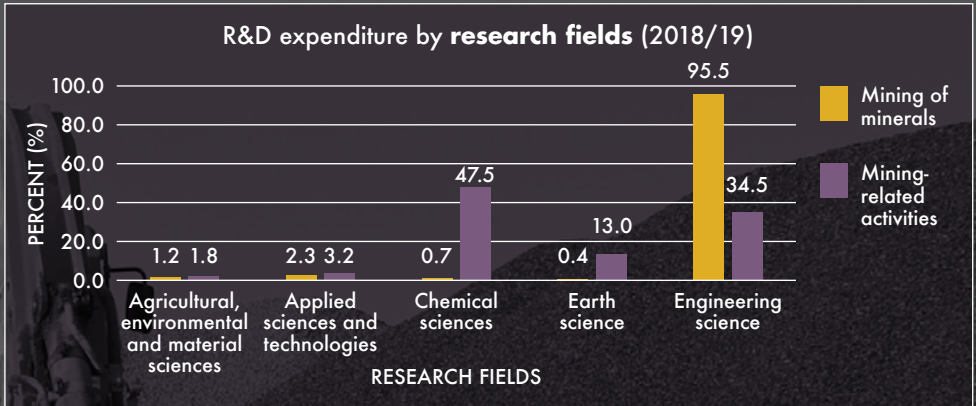
## R&D IN THE MINING SECTOR BY TYPE OF RESEARCH



R&D spend in mining research (2018/19)



# RESEARCH FIELDS IN THE MINING SECTOR



# SPATIAL DIMENSIONS OF MINING ACTIVITY



**Most R&D activity** in South Africa's mining sector in 2018/19 occurred in **Gauteng** with about **88.4%** of **mining of minerals** and **75.2%** of **mining-related activities**, excluding extraction of minerals. **Mining of minerals** in **Free State** comprised **7.8%** of R&D expenditure.

Mining sector R&D expenditure by province (2018/19)



Mining of minerals

Gauteng	<b>88.4%</b>
Free State	<b>7.8%</b>
North West	<b>3.4%</b>
Western Cape	<b>0.4%</b>
KwaZulu-Natal	<b>0%</b>
Limpopo	<b>0%</b>
Mpumalanga	<b>0%</b>
Northern Cape	<b>0%</b>
Eastern Cape	<b>0%</b>



Mining-related activities

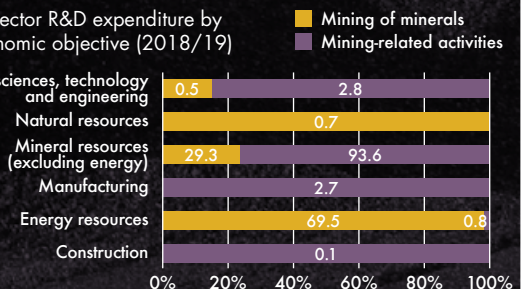
Gauteng	<b>75.2%</b>
Free State	<b>0%</b>
North West	<b>19.4%</b>
Western Cape	<b>4.6%</b>
KwaZulu-Natal	<b>0%</b>
Limpopo	<b>0.7%</b>
Mpumalanga	<b>0.1%</b>
Northern Cape	<b>0%</b>
Eastern Cape	<b>0%</b>

# AREAS OF THE ECONOMY THAT BENEFIT FROM MINING



R&D spend in the mining of minerals benefits the **energy resources industry 69.5%** (R461 million). Similarly, mining-related activities primarily benefit the **mineral resources industry by 93.6%** (R510 million).

Mining sector R&D expenditure by socio-economic objective (2018/19)



# BEHIND THE NUMBERS

The annual South African National Survey of Research and Experimental Development and the Business Innovation Survey are 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 and innovation 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 surveys, and their historic data series, inform decision-makers on investment planning, policy, advocacy, and research in South Africa. Data streams also contribute to benchmarking and performance comparisons with our international counterparts.

Access previous R&D and Innovation Survey reports:  
<http://www.hsrc.ac.za/en/departments/CeSTii/reports-cestii>

Data for this publication was prepared by Atoko Kasongo in November 2021.

## CONTACT US

Luthando Zondi | *Junior Researcher*

✉ [lzondi@hsrc.ac.za](mailto:lzondi@hsrc.ac.za)

Dr Kgabo Ramoroka | *Research Specialist*

✉ [khramoroka@hsrc.ac.za](mailto:khramoroka@hsrc.ac.za)

Dr Mario Clayford | *Research Specialist*

✉ [mclayford@hsrc.ac.za](mailto:mclayford@hsrc.ac.za)

## CONNECT WITH US

 ENGAGE WITH US ON TWITTER @HSRC\_CeSTII

 FIND US ON FACEBOOK

 FIND US ON LINKEDIN

 SEE US ON INSTAGRAM