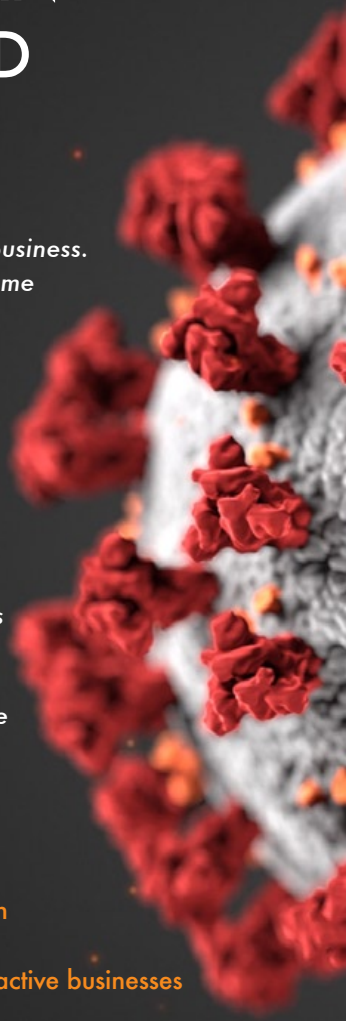
COVID-19 IMPACTS ON SOUTH AFRICAN BUSINESS R&D AND INNOVATION



R&D spend is one indicator of the health and resilience of a business. Despite the unprecedented challenge posed by COVID-19, some businesses in South Africa continued to invest in research and development while making tough choices. Equally, businesses with innovation activity—including R&D but also other types of activity—quickly adapted to the challenging context of the global coronavirus pandemic with new coping and survival strategies. A Statistics South Africa business impact survey in 2020 highlighted key trends which remain significant as the country confronts the challenges of COVID-19's second wave.

For government policy makers, business leaders, and business support groups concerned to promote R&D and innovation, this fact sheet points to the necessity of national and sector support mechanisms for R&D-performing and innovation-active businesses whose turnover, and very survival, under stringent lockdown conditions are threatened.

IN THIS FACT SHEET:

- How R&D expenditure was affected by the level 4 lockdown
- How R&D performers survived the impact of COVID-19
- Different approaches by big and small R&D and innovation-active businesses
- Surviving without turnover: a matter of months or days?
- Snapshot of South Africa's R&D performers, by province

FACT SHEET NO. 25

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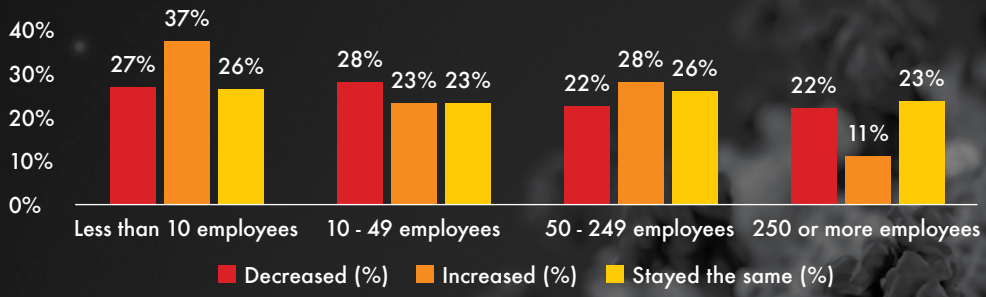
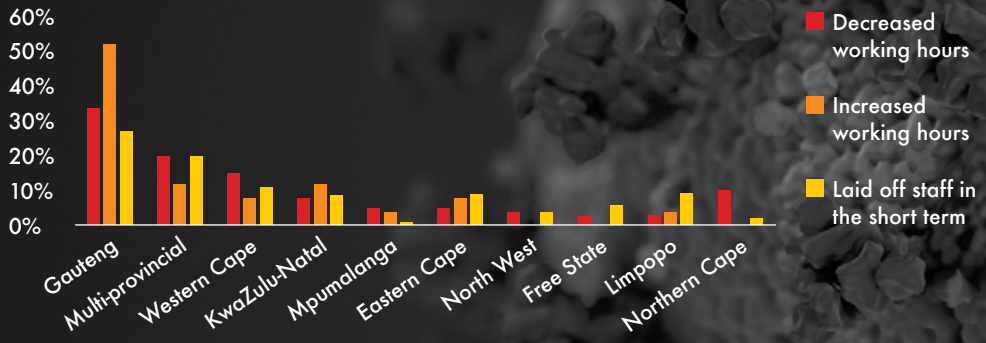
Small businesses (< 10 employees) **increased** their **expenditure on R&D** when compared with larger businesses. Across all business size classes, **less than 27% reported that in-house R&D expenditure "stayed the same"**.



Most R&D performers **reduced staff** and **reduced working hours**. In **Gauteng**, about **50%** of R&D performers **increased** working hours (**national average: 11%**).



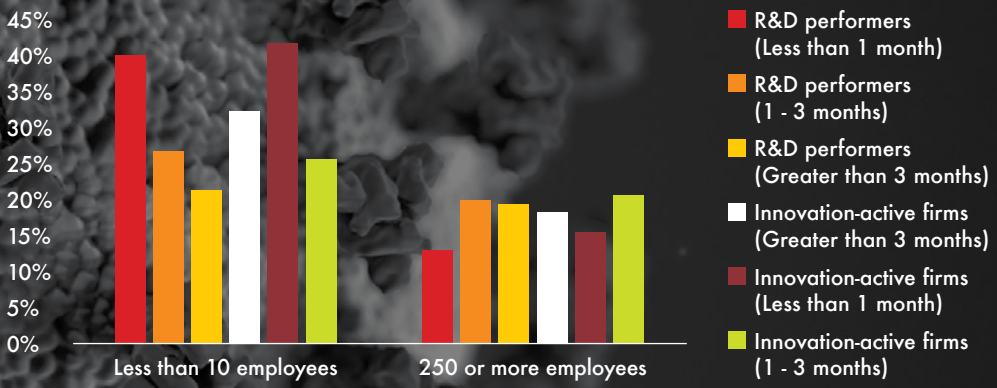
Industry sectors tackled the challenges in different ways. For example, **businesses with innovation activity in real estate** and **other business services increased staff working hours**. By contrast, **33% of innovation-active firms in the manufacturing sector reduced working hours**.

Industries	Decreased working hours	Increased working hours	Laid off staff in the short term
Agriculture, hunting, forestry & fishing	7%	9%	25%
Mining & quarrying	3%	0%	2%
Manufacturing	33%	20%	21%
Construction	5%	3%	9%
Electricity, gas & water supply	1%	0%	1%
Trade	20%	9%	17%
Transport, storage & communication	11%	20%	10%
Real estate & other business services	10%	26%	6%
Community, social & personal services	10%	14%	9%
Other	2%	0%	3%

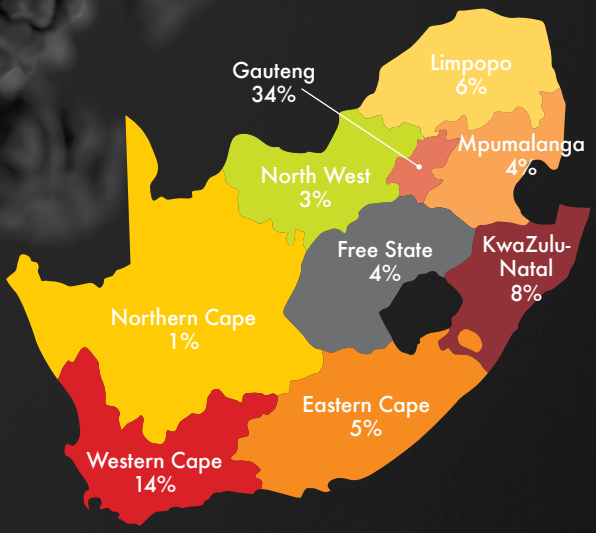
To cope, the **smallest R&D-performing** and **innovation-active firms increased the working hours** of staff while **big firms reduced staff working hours**. Less resilient small businesses were also forced to make tough choices laying off more staff than their counterparts in big business.

Size Class	Decreased working hours	Increased working hours	Laid off staff in the short term
Less than 10 employees	46%	22%	37%
10 - 49 employees	14%	27%	27%
50 - 249 employees	23%	28%	22%
250 or more employees	17%	23%	14%

Businesses both large and small have **very limited abilities to survive without turnover**. **Smaller firms** (both R&D performers and businesses with innovation activity) **can survive without turnover for less than a month**. **Big firms can survive between 1-3 months**.



The **largest share** of companies that **perform in-house R&D** are located in **Gauteng** (34%), followed by 14% in the **Western Cape**, and 8% in **KwaZulu-Natal**. The **lowest proportion** of **R&D performers** are based in the **Northern Cape** (1%).



Province	Proportion (%)
Multiple provinces	17%
Not specified	4%

BEHIND THE NUMBERS

Level 4 restrictions in terms of South Africa's Disaster Management Act were in place from 1 to 31 May 2020. These included robust precautions to limit community transmission and outbreaks, while allowing some business activities to resume after the preceding hard Level 5 lockdown that had severely restricted business activities. In June 2020, Statistics South Africa carried out a dedicated South African business impact survey of the COVID-19 pandemic in South Africa. Researchers from Centre for Science, Technology and Innovation Indicators (CeSTII) contributed to the survey instrument design, to incorporate questions on R&D and innovation. Data were analysed from a total of 1,079 businesses across all nine provinces, industries, and size classes ranging from 1–10 employees to more than 250 employees. Many of these businesses (n=740) reported conducting innovation activity during this period as defined by the OECD's Oslo Manual. In this period, a total of 440 reported conducting R&D as defined according to the OECD Frascati Manual.

The annual South African National Survey of Research and Experimental Development and Business Innovation Survey is conducted by 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 (Stats SA).

Access previous R&D and innovation survey reports:
http://www.hsrc.ac.za/en/departments/CeSTii/reports-cestii
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