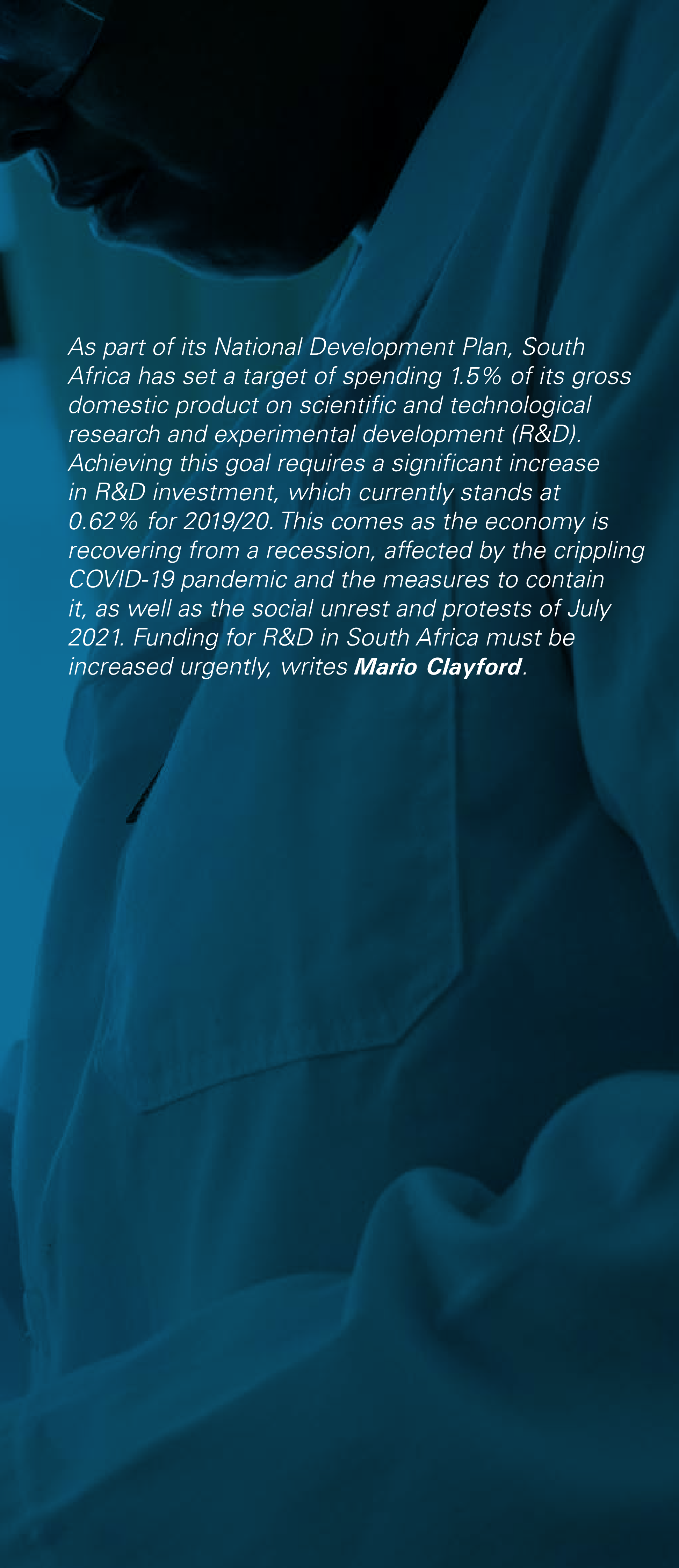


As part of its National Development Plan, South Africa has set a target of spending 1.5% of its gross domestic product on scientific and technological research and experimental development (R&D). Achieving this goal requires a significant increase in R&D investment, which currently stands at 0.62% for 2019/20. This comes as the economy is recovering from a recession, affected by the crippling COVID-19 pandemic and the measures to contain it, as well as the social unrest and protests of July 2021. Funding for R&D in South Africa must be increased urgently, writes ***Mario Clayford****.*

Increasing investment in research and experimental development (R&D) in South Africa requires a collaborative approach between the government, private enterprises and other stakeholders. The HSRC's Centre for Science, Technology and Innovation Indicators (CeSTII) conducts an annual survey on R&D indicators, which forms part of the country's national statistics system. This survey collects inputs on expenditure invested in R&D activities, including personnel, qualifications, research fields, foreign investment into R&D, R&D collaboration, and special priority research areas.

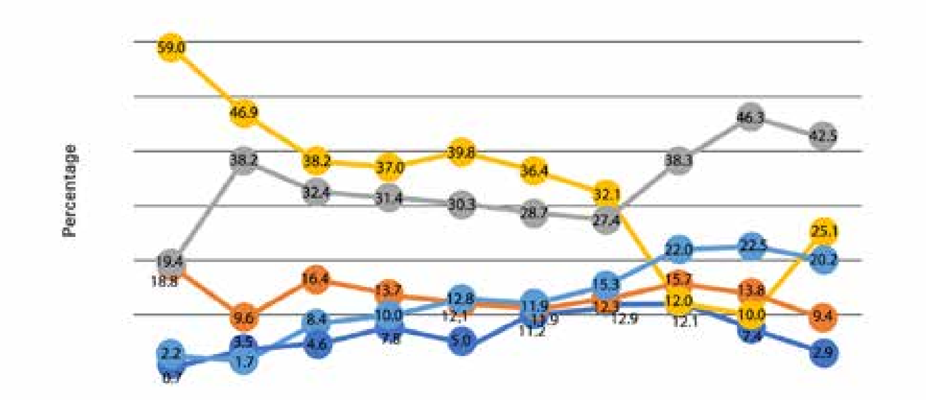
In the recently published results of the 2019/20 R&D Survey, national expenditure on R&D decreased from R38.725 billion in 2018/19 to R36.784 billion in 2019/20. Government funding, which includes support to science councils and universities, accounted for 56.3% of all R&D funding in South Africa, followed by funding from the business sector (27.1%). Businesses fund 91.3% of their own R&D, while most of the government R&D funding goes to the higher education and science council sectors.

R&D investment by the business sector decreased by R5.175 billion or 12.4% from 2018/19, representing a significant decline. The decrease in R&D investment by the business sector since 2017 points to a concerning trend. The COVID-19 pandemic has negatively affected businesses and many did not recover from the containment measures implemented to contain the virus. As the business sector recovers, the government needs to look at more viable ways of increasing R&D investment. One such way is attracting more foreign funding.

Foreign funding of R&D in South Africa

In 2019/20, foreign investment in R&D in South Africa reached R4.662 billion, an increase of R664 million over the previous financial year. A decade ago, the business sector was the largest recipient of foreign R&D funding, but currently, the higher education sector receives the bulk of funding, at 42.5% (see Figure 1). In 2019/20, the share of foreign funding for the business sector increased significantly (by 15.1%) to R1.169 billion. If this upward pattern continues, it could show a trend in foreign investment in business enterprises.

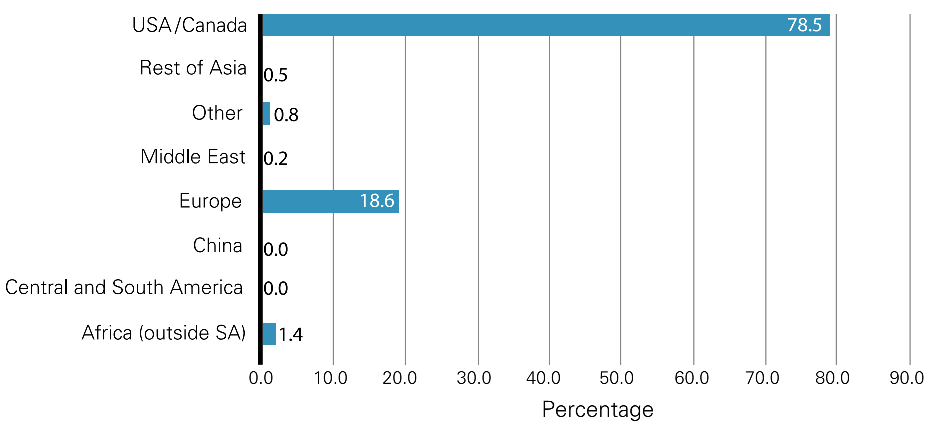
Figure 1: Proportion of foreign funding by sector, 2010/11–2019/20



	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20
Government	0.7	3.5	4.6	7.8	5.0	11.9	12.3	12.0	7.4	2.9
Science councils	18.8	9.6	16.4	13.7	12.1	11.2	12.9	15.7	13.8	9.4
Higher education	19.4	38.2	32.4	31.4	30.3	28.7	27.4	38.3	46.3	42.5
Business	59.0	46.9	38.2	37.0	39.8	36.4	32.1	12.1	10.0	25.1
Not-for-profit	2.2	1.7	8.4	10.0	12.8	11.9	15.3	22.0	22.5	20.2

The largest proportion of foreign funding by country (Figure 2) originates from the USA/Canada (78.5%), followed by Europe (18.6%) and Africa (1.4%). Funding from the USA/Canada is directed largely towards the government (41.8%), foundations (20.3%) and private non-profit organisations (9.5%). Funding from Europe is directed more evenly across the different economic sectors, whereas the business sector received the most funds from Africa.

Figure 2: Proportion of foreign funding by country, 2019/20



Increasing foreign investment in R&D

One way to attract more foreign investment is by streamlining practical mechanisms to encourage opportunities for foreign venture capital and private equity companies. One of these is the tax incentive for investors who fund small-to-medium-sized enterprises and junior mining companies. As explained in Thomson Reuters's *Practical Law: Venture capital investment in South Africa guide*, the goal of this incentive is to attract financing, which allows persons who invest in shares through a venture capital company to claim an upfront tax deduction.

A drawback of this incentive is the exchange control regime in South Africa that applies to the transfer of intellectual property and cross-border licensing. This regime has a negative and limiting effect on South African technology companies and their capability to raise investment internationally and to commercialise their property.

A recent proposal by the Minister of Finance was set to replace the exchange control system with a new capital flow management system. The major benefit of this new system is expected to permit transactions instead of relying on a burdensome and unnecessary system of approvals and dispensations within an overall prohibition. Further benefits of this system are a more transparent, modern and risk-managed approvals framework, and strengthened capabilities to deter illegitimate financial cross-border flows and tax evasion.

Photo: Artem Podrez from Pexels

Another option is to promote foreign direct investment in research and development that can facilitate knowledge and technology transfer. Such investment can boost South Africa's economy through the sharing of specialised skills and enabling an increase in exports to accelerate trade in the global market.

Requirements for foreign direct investment are balanced against the costs to the South African economy such as the need to protect jobs, retain competitiveness, and promote the localisation of small businesses or firms controlled by historically disadvantaged persons. The procedure of the proposal application process is an additional concern. Investment regulations can sometimes be cumbersome due to red tape and can affect business collaboration between local and international entrepreneurs.

Offering additional support to government agencies and role players that promote foreign investment could also boost such funding. The Department of Trade, Industry and Competition established its Trade Investment South Africa division (TISA) to promote investments in South Africa and promote exports of South African products into global markets.

TISA is also mandated to change the perceptions of foreign investors regarding South Africa's investment climate. This can be an arduous task. Laws, political environments, tax policies, political and economic stability, and governance issues such as corruption influence investment climates. These can all negatively affect foreign investment.

Conclusion

Promoting the growth of foreign funding is a viable option for South Africa to increase its R&D investment to bolster government policy efforts and fiscal changes to promote and support internal investment in R&D. The government should increase its efforts to market South Africa as a destination with attractive R&D investment opportunities.

The upcoming results of the 2020/21 R&D survey will provide further insight into foreign investment and how the COVID-19 pandemic and the resulting national lockdown have affected R&D activity in the country, particularly in the corporate sector.

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