Review

Walking to school: Learners at risk of sexual assault

PAGES 4–7

Underage drinking: Losing a generation

PAGES 8–11

Attitudes on climate change: A stubborn minority in denial

PAGE 20

A book on race and racism in post-apartheid SA

PAGE 32

science & innovation
Department:
Science and Innovation
REPUBLIC OF SOUTH AFRICA

HSRC
Human Sciences
Research Council

THIS | ISSUE

Cover photo: *Abolova, Unsplash*

EDITOR'S NOTE

We are pleased to introduce our readers to Dr Lucky Ditaunyane, who joined the HSRC in August as our new director of communication and engagement. With his vast experience in the field of corporate communications, we look forward to working with him on communicating HSRC research to the public and our stakeholders. He can be reached at lditaunyane@hsrc.ac.za.

With science, laws and good governance we can tackle our most pressing societal challenges, such as infectious diseases, climate change, poverty, inequality and crime. But for these interventions to work, people need to trust the relevant sources, understand different contexts and accept scientific evidence above dubious founts of information.

This is where social scientists step in. We hope that the articles in this edition of the *HSRC Review* shed light on human factors in our understanding of South Africa's societal challenges.

Interventions to halt climate change, such as saving electricity and embracing renewable energy, rely on acceptance at the household level. We dive into data from the HSRC's South African Social Attitudes Survey led by Dr Ben Roberts, that show that climate change awareness and concern is on the rise. We also discuss opportunities to expand renewable energy financing by comparing South Africa's experiences with those of BRICS members India and China.

Hardly two weeks after celebrating National Youth Day on 16 June, we saw yet another tavern tragedy taking the lives of teenagers. We look at HSRC research and highlight the need for more knowledge about the scourge of underage drinking. We also explore another issue putting the country's young people at risk: lack of school transport in areas where sexual violence is commonplace.

Celebrating Women's Month in August, we were reminded of the work still needed to ensure gender equality in South Africa. An HSRC study found that women informal food traders experienced the worst of the economic effects of the COVID-19 pandemic, yet received the least assistance. In a summary of a recent policy brief, we feature the HSRC's ongoing research conducted with transgender women in South Africa, focusing on the structural, social and cultural factors contributing to their disproportionate health and social burdens.

A health feature unpacks an HSRC study finding that people living with HIV who are on antiretroviral treatment take fewer sexual health risks, compared with those not taking treatment.

In July, the HSRC's Centre for Science, Technology and Innovation Indicators was shortlisted for the 2022 NSTF-South32 Awards for its national survey of research and development (R&D). The HSRC's Dr Nazeem Mustapha spoke to us about the decadal decline in business R&D and other trends revealed by the survey.

Other articles look at novel ways of visualising patterns in unauthorised municipal expenditure, and how municipal planning and building regulations keep emerging developers out of the market.

Finally, read more about our recent book projects: *Paradise Lost: Race and Racism in Post-apartheid South Africa* explores why race remains so salient and racism so pervasive after almost three decades of democratic rule, while another project supported South Africa's military veterans to document their untold stories from the apartheid struggle.

The HSRC Review Team

'Do not walk alone'

Learners face daily risk of sexual assault

Although the National Learner Transport Policy (2015) makes provision for subsidised transport for children who walk long distances to school, implementation has been slow.
Photo: Children Nature Network, Nappy

Adolescents in South Africa experience among the highest rates of sexual violence in the world. More than a quarter of adolescents (26.3%) have experienced some form of sexual violence, according to a 2018 nationally representative household study. In that study, when data were collected at schools – where participants might have felt safer to answer honestly – this figure rose to one in three (35.4%).

Much research has been conducted on sexual assault in schools. However, participatory research by the University of KwaZulu-Natal and the HSRC highlights that school children feel particularly vulnerable as they walk to school. A group of teenagers from a KwaZulu-Natal township was invited to create short films of their experiences of vulnerability to sexual violence, using their cellphones. The resulting cellphilms provided a window into the lives of adolescents in this setting, and the sociocultural norms and patriarchal contexts that put them at risk of sexual assault.

By *Andrea Teagle*

Teens in townships are particularly vulnerable. To better understand adolescents' experiences and fears around sexual violence, a group of researchers invited adolescents from a KwaZulu-Natal township to create films about 'an aspect of vulnerability to sexual violence that matters most' to them. Led by the University of KwaZulu-Natal's Dr Ndumiso Daluxolo Ngidi, the research team equipped the adolescents to be able to create cellphone films – or 'cellphilms'. The films were not intended to be documentaries, but rather portrayals of the teenagers' experiences or perceptions of vulnerability. Scripts and settings were left to the participants to decide upon.

All five groups chose to depict scenes of abduction and rape on the way to and from school – something that the participants said happened 'all the time' in their community.

Ever-looming danger

The study was conducted in the Inanda, Ntuzuma, and KwaMashu (INK) township precinct, outside Durban. KwaZulu-Natal is predominantly poor and rural. More than two-thirds of school children (2 million of approximately 2.8 million) walk to school – putting them at risk of assault as they navigate sometimes treacherous terrain. Although the province has recorded an increase in reported cases of sexual assault on adolescents, Ngidi and colleagues note that research on the dangers of school journeys specifically lags behind media reports of this phenomenon.

The research team – which also included Prof Relebohile Moletsane from the University of KwaZulu-Natal, and Dr Zaynab Essack from the HSRC – used a method called availability sampling to recruit the participants: 10 girls and 9 boys between the ages of 14 and 17 years. All were dependent on social grants and lived in informal settlements or government housing projects. During the study, they received cellphones and training on how to create cellphilms.

A sense of ever-looming danger is present across all of the film scripts, Ngidi and his colleagues write. The 'present and persistent' threat of sexual victimisation creates 'a sense of fear and helplessness'. In four of the five stories, an adolescent girl is abducted and raped – in one of them, she is also killed. In the fifth, a boy is abducted. In this last film, the perpetrators are caught and killed by angry community members.

"We wanted to show how serious this issue is," one participant, Richard (16), explained. A boy in another group, Alsina (14), stated: "The [sexual] abuse of girls by boys and men in our community is common. My message is do not walk alone because these criminals will assault you if you are a girl."

The teenagers related the stories directly to their own fears, and reports of assaults on teenagers in their communities. Sthandwa (14) stated, "It makes me feel very sad because it means that I have to live constantly under threat of what might happen to me. I might be raped." Another girl, 16-year-old Kimberly, expressed a similar sentiment: "I don't feel safe … because rapists are found everywhere in our community."

The films also indicated that the participants considered girls to be facing the greatest danger, but that adolescent boys are not exempt from assault.

Unexpected perpetrators
Ngidi and his colleagues chose this participatory research method to allow participants 'to tell personal stories or to describe their lived experiences of issues important to them'. According to Essack, participatory visual methods are particularly useful for engaging adolescents.

"The participants become protagonists, actively relating their lived experiences and perceptions. These approaches are invaluable, especially for sensitive research topics," she told the *Review.*

The films shed light on some of the sociocultural norms that facilitate violence against adolescents. One of the films depicts a respected older man abducting and raping a teenage girl, indicating that – contrary to what is sometimes thought – perpetrators of violence are not always young men (as was common in the late 1980s) or unknown to the victim. The researchers note that in their discussions about older rapists in their communities, the adolescents consistently referred to these perpetrators as 'uncles'. The continued use of this term of respect points to how the expectation of deference to elders may put adolescents at greater risk.

'Since adolescents occupy a low social status in comparison to older men, as do females to males, they are expected to show respect [Ukuhlonipha] and reverence for adults generally, and men specifically,' Ngidi and his colleagues write, adding that *Ukuhlonipha* requires that adolescents do not challenge or question their elders.

These sociocultural dynamics intersect with a context of widespread normalised violence. As scholar and activist Helen Moffett has argued, authorities legitimated the use of violence as a means of control during the apartheid era. Today, write Ngidi and his colleagues, 'practices of abduction for rape perpetuate and widen patriarchal power imbalances and the social control of women and girls through sexual violence.'

The impacts of vulnerability to sexual assault are far-reaching for learners. In addition to the obvious immediate threat to their lives and wellbeing, the associated stress affects young peoples' learning capacity and places them at higher risk for long-term mental health issues.

National Learner Transport Policy
The study findings point to a need for safe scholar transport and visible policing in the community, the authors write. The 2015 National Learner Transport Policy was hailed as an important step for ensuring that scholars have safe passage to school. The policy makes provision for subsidised transport for learners in areas where they cannot access public transport and those who walk long distances (more than 5km) to school. However, implementation has been hindered by the lack of clarity on the respective roles of the Departments of Education and the Department of Transport. Also, some argue that the policy is too narrow, excluding children whose walks are short but nonetheless dangerous.

In July 2021, the KwaZulu-Natal Learner Transport Policy came into effect, driven by advocacy by Equal Education (EE) and the Equal Education Law Centre. The provincial policy fills some of the gaps in the national policy – for example, clarifying departmental roles in implementation for KwaZulu-Natal. However, EE notes that the policy makes no plan for overcoming critical financial constraints to implementation. For this reason, Essack and Ngidi have also piloted and evaluated a 'Walking School Bus' intervention – adult-chaperoned walks to and from school – to explore alternative learner safety interventions.

National provision of transport also remains hindered by a critical lack of data, according to the HSRC's Dr Peter Jacobs. In 2018, Jacobs conducted a briefing that recommended a thorough investigation of learner transport at district level to identify who qualifies for public transport; however, provincial department support to enable this research has yet to materialise.

Meanwhile, the cellphilm study suggests that adolescents continue to fear sexual assault on their school journeys. When asked why they continued to go, one participant responded: "Because we have no choice. We are forced to come to school, but it is not safe."

Author: Andrea Teagle, a science writer in the HSRC's Impact Centre
ateagle@hsrc.ac.za

Researchers:
Dr Ndumiso Daluxolo Ngidi, a senior lecturer at the School of Education, University of KwaZulu-Natal

Dr Zaynab Essack, a chief research specialist in the Centre for Community-based Research at the HSRC's Human and Social Development Programme
zessack@hsrc.ac.za

Underage drinking:

The allure of 'lit vibes' and little control?

The tragic deaths of 21 teenagers at Enyobeni Tavern in the Eastern Cape in the early hours of 26 June again highlighted the scourge of underage drinking in South Africa. In the aftermath, parents, law enforcement structures and owners of liquor outlets are typically blamed. But what is the extent of underage drinking in the country, what are the real drivers and what should be done? *Antoinette Oosthuizen* looked at some findings from HSRC research and spoke to researcher *Candice Groenewald.*

Participants told researchers that liquor sales and access to establishments should be better controlled to prevent underage drinking.
Photo: Maurício Mascaro, Pexels

L ured by a digital invitation promising free entry with 'lit vibes', hookah and alcohol, scores of young people made their way to Enyobeni Tavern in Scenery Park, East London, on 25 June. Hours later, 21 revellers were dead. The youngest was reportedly 13 years old and among several underage drinkers there that night. The cause of the tragedy was still being investigated at the time of writing.

Delivering the eulogy at the mass funeral for the teenage victims, President Cyril Ramaphosa emphasised that it wasn't the first such tragedy in a place where young people gather.

In June 2015, eight women died at Osi'Place in Khayelitsha in the Western Cape when a metal railing attached to a staircase collapsed. The youngest was 15 years old. A few months later, a liquor licensing tribunal revoked the tavern's liquor licence, banning the owner from reapplying for another five years.

In March 2000, the detonation of a tear gas canister in Throb nightclub in Durban led to a stampede that caused the death of 13 teenagers, the youngest of whom was aged 11. The owner of a rival club had ordered the gas attack. In December 2000, he and two co-accused were convicted and received prison sentences on counts of culpable homicide, common assault and the illegal possession of tear gas.

"What is common to all of these is that they were selling and serving alcohol to underage patrons in violation of the law," Ramaphosa said. This also puts young people at risk of alcohol-related violence, road accidents, crime and risky sexual behaviour. "We are losing our future generation to the scourge of underage drinking," he warned.

What do we know?
Data from the 2014 South African Social Attitudes Survey conducted by the HSRC showed that 30% of South Africans aged 16 and older consumed alcohol. However, 90% of these drinkers engaged in binge drinking, meaning they sometimes consumed four or more drinks in one sitting (Bhana & Groenewald, 2019). In most cases, the binge drinking occurred weekly or monthly. In approximately the same period, data from the 2014–2015 National Income Dynamics Study showed that 33.1% of South Africans reported drinking and 43% of those drinkers engaged in binge drinking of five or more standard drinks per average drinking day.

Many studies have looked into underage drinking in South Africa, but up-to-date statistics are limited, says Dr Candice Groenewald, a chief research specialist at the HSRC.

Learners were binge drinking a decade ago
Previously, such behavioural data were collected via the South African Youth Risk Behaviour Survey (SAYRBS) prepared by the HSRC and the Medical Research Council of South Africa; however, the latest SAYRBS report from 2011 is significantly outdated, says Groenewald. It highlighted the extent of underage drinking among 10 997 Grade 8–11 learners from public schools in all nine provinces. Almost a third had used alcohol on one or more days in the preceding month, and a quarter had engaged in binge drinking (in this study defined as drinking five or more drinks within a few hours on one or more days). Alarmingly, 17.2% of 13-year-olds and 18.4% of 14-year-olds had engaged in binge drinking, and 11.4% of learners reported having used alcohol on school grounds.

The 2011 findings on alcohol use showed no substantial difference from those of the previous 10 years. The report recommended a comprehensive prevention and treatment programme targeted at learners, educators, families and communities.

The South African Community Epidemiological Network on Drug Use (SACENDU) also monitors underage drinking patterns, by keeping track of the number of people admitted for treatment due to alcohol and substance abuse. "According to the latest SACENDU report, alcohol was the primary substance of abuse for 1–10% of people under the age of 20 admitted to treatment facilities between January and June 2021. However, these figures do not tell us the actual number of young people who consume alcohol across South Africa," says Groenewald.

Photo: Bomza, Wikimedia Commons

Some recent findings

In 2019, the HSRC conducted a mixed-methods study in low-resource townships across three provinces in South Africa, which provided further insights into adolescents' drinking behaviours. With a sample of 3518 adolescents aged between 11 and 18 years, the quantitative results found that 67% had consumed alcohol at least once in their lifetime, and most had their first drink at the age of 13 or 14 years. "Alarmingly, almost a quarter of males and 16% of females said they had their first drink at the age of 11 years," says Groenewald. Early initiation of alcohol use has been associated with increased risk of alcohol dependency later in life, she says.

The study also found that many young people had easy access to alcohol. Roughly one-quarter reported that they had gone to a tavern to socialise with friends, while 23% had been able to purchase alcohol at the tavern before. Concerningly, about one in five adolescents (21%) reported getting drunk at a tavern and more than one-third (39%) had entered a tavern without being stopped, despite their age. Similarly, one-quarter of the participants indicated that they are sometimes or often able to enter a tavern without being asked to present an ID.

A study in Mpumalanga

In 2019, the HSRC conducted household surveys and interviews to establish the impact of alcohol among 2850 adults in three districts in Mpumalanga: Ehlanzeni, Gert Sibande and Nkangala. Participants reported that people under the age of 18 years "drowned themselves in alcohol" and that underage drinking was a form of entertainment, facilitated by poor parental guidance and peer pressure. Children accessed alcohol at home, from adults or were given cash, which they used to buy alcohol.

Community members also blamed noncompliant alcohol outlet owners and reported underage drinking during school hours, often during lunch breaks when learners bought alcohol from food vendors.

When asked how they normally responded when becoming aware of a child drinking, almost a third (30%) of the respondents said that they did nothing. The rest would talk to the minor (46.6%), to the parents (18.4%) or to the minor's friends (4.3%), or contact school officials (0.7%).

On average, 5.2% knew of services available in their community to address underage drinking.

Several participants pointed out that many liquor outlet owners preferred to pay fines – which were considerably lower than the money they would lose if they complied with the rules. Some owners reportedly opted for bribery when confronted by officials.

The researchers recommend a zero-tolerance approach to underage drinking, enforced on consumers and by suppliers. The report noted that there were a significant number of liquor outlets within 500 metres of schools across the province, where law enforcement should be strengthened. Outlets' proximity to schools should also be confirmed during licence applications, for future stricter monitoring.

Need for targeted interventions

South Africa needs up-to-date statistics on underage drinking, and policy to ban alcohol packaging or marketing aimed at young people, says Groenewald. Places where alcohol is sold and consumed should have stricter monitoring systems.

"Another challenge is the availability of and investment in targeted interventions and programmes to prevent or interrupt underage drinking. Given that norms and attitudes are social constructs, interventions need to target families and communities if we want change in adolescents' behaviour," she says.

"Studies are also needed to identify or develop school-based programmes, while considering the role of alcohol in other risk behaviours, such as early sexual debut, unprotected sex, violence (including sexual violence) and school dropout."

Author:
Antoinette Oosthuizen, science writer in the HSRC's Impact Centre
aoosthuizen@hsrc.ac.za

Contact:
Dr Candice Groenewald, a chief research specialist in the HSRC's Human and Social Capabilities research division
cgroenewald@hsrc.ac.za

Learners in uniform in front of a shebeen
in Joe Slovo Park, Cape Town.
Photo: Discott, Wikimedia Commons

WOMEN informal food traders in South Africa during COVID-19:

More vulnerable, yet given least assistance

Conn_city6
Photo: Neo Nthime, Wikimedia Commons

Dominating the informal food sector in South Africa, women play an important role in the country's agri-food system. An HSRC study shows that women informal food traders experienced the worst of the economic effects of the COVID-19 pandemic, yet received the least assistance.

By *Sikhulumile Sinyolo, Peter Jacobs*, and *Matume Maila*

The COVID-19 pandemic and restrictive measures to reduce its spread disrupted the agri-food supply chains in South Africa and elevated the vulnerability of informal food traders to business failure. These are small, often owner-operated enterprises, such as street traders, hawkers, spaza shops, and bakkie traders involved in selling various food types. Informal food traders were unable to avoid compliance with COVID-19 containment measures that invariably hampered the ability to source supplies or sell foods to customers. Mandatory cuts in operating hours called for radical adjustments to volumes of food items sold and how traders procured their supplies, such as fresh produce with a limited shelf-life and ingredients for prepared foods.

Enterprise closures and job losses as a direct consequence of COVID-19 were not equally spread and felt across the informal and formal sectors, and between male and female traders. For example, a publication by the Women in Informal Employment: Globalizing and Organizing network estimated that 3.5 times more jobs were lost in the informal than in the formal sector, and reported that while 23% of men in the informal sector lost their jobs, 29% of women in this sector did so.
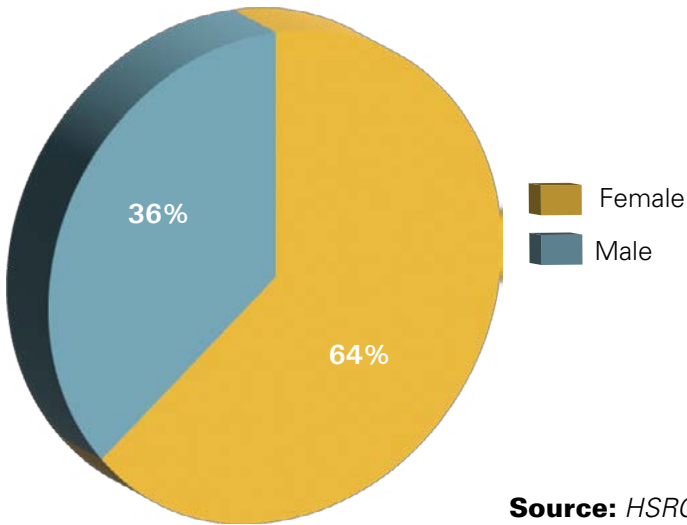
The plight of informal food traders was worsened by the government's apparent neglect. In a paper published by *Food Security* in the early months of COVID-19, Dr Marc Wegerif, a lecturer at the University of Pretoria, argued that the government had ignored the needs of informal food traders, showing limited knowledge of the sector's importance, as well as negative feelings towards it. Local authorities and policing agencies who enforce the bylaws and rules that govern the informal food trade in public spaces overzealously implemented restrictions that halted their trading activities. Wegerif called for a more nuanced appreciation of the informal food trade, arguing that these vendors are crucial in localising the consumer end of agri-food value chains.

Women make up a substantial proportion of informal food traders, but are more likely than men to suffer adverse outcomes, due to structural, social, institutional and administrative biases. These disparities were laid bare during the early phase of the pandemic. A recent paper by the HSRC sheds light on the experiences of women engaged in the informal food trade in South Africa during the early waves of the pandemic, drawing on a purposive survey of 804 informal food traders conducted in July – September 2020. This rapid exploratory assessment aimed at understanding the early impacts of the pandemic and measures implemented to control its spread.

Gendered informal food-trading activities

Three categories of informal food traders were targeted: fresh fruit and vegetable traders, cooked/prepared food sellers, and connecting (bakkie) traders. Most of those who were interviewed were female (Figure 1), providing further evidence that women dominate the informal food sector in South Africa.

Figure 1. Gender composition of informal food traders

- 36% Male
- 64% Female

Source: *HSRC*

Figure 2 presents characteristics of the informal food traders by gender. It shows that women were more likely than men to be involved in informal food-retailing activities (as stallholders or hawkers), by trading prepared, processed or cooked food, and operating in urban provinces (like Gauteng and the Western Cape, where more than 50% of the population resided in urban areas in 2019). In contrast, men were more likely than women to operate as informal distributors ('bakkie traders'), selling mostly fresh produce (e.g. fruit and vegetables), in rural provinces (like Limpopo, KwaZulu-Natal and the Eastern Cape, where less than 50% of the population resided in urban areas in 2019). More than half of the male traders (55%) employed hired labour, while only 37% of female traders did so.

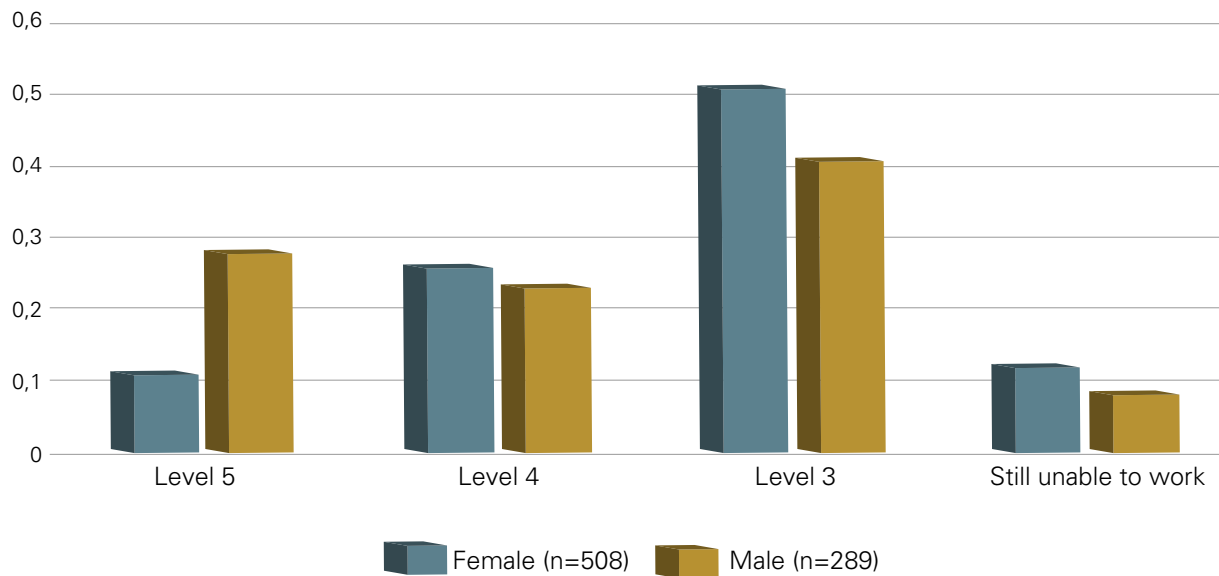**Figure 2.** Characteristics of informal food traders by gender

Female (n=508)   Male (n=289)

Source: *HSRC*

Gendered COVID-19 and lockdown impacts

Figure 3 shows that despite the food sector being considered essential, many informal food traders were unable to operate during lockdown levels 4 and 5, with most only able to operate since level 3. It shows that lockdown measures affected female- and male-owned enterprises differently: during the level 5 hard lockdown, only 11% of the female-owned enterprises were able to operate, while 28% of male-owned enterprises did so. While this gender disparity was smaller during level 4, it was only during level 3 that female-owned enterprises were able to catch up with their male counterparts.
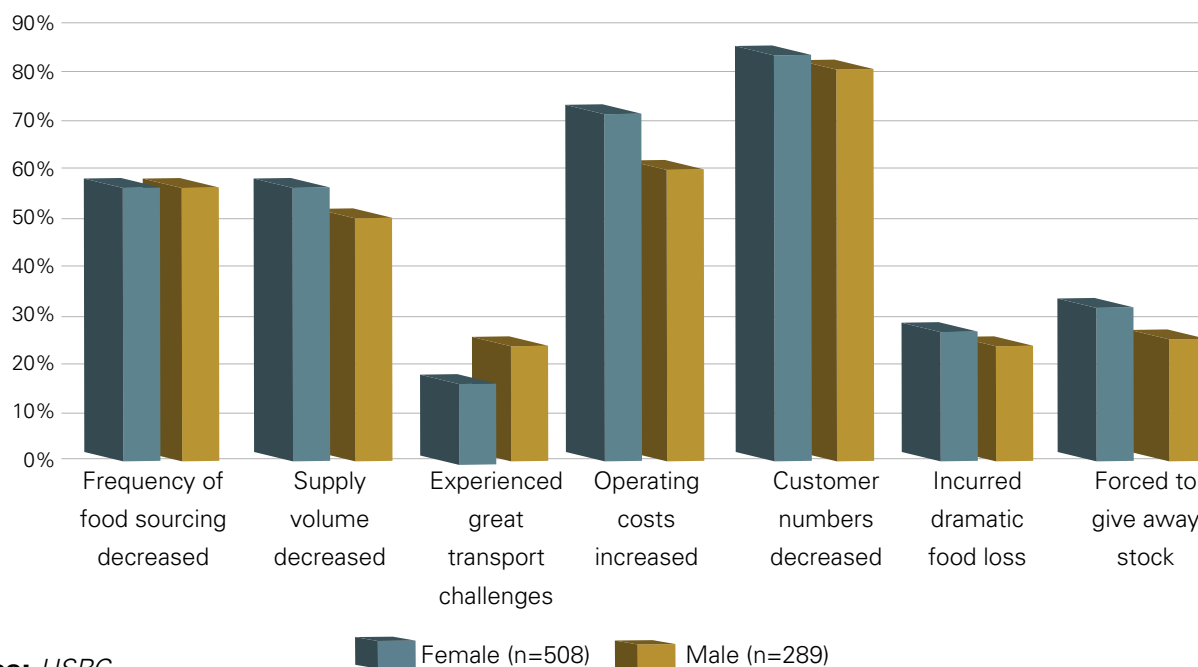
Figure 3. Lockdown level when informal food traders were able to operate, according to gender

Source: *HSRC*

Figure 4 shows that informal food traders experienced challenges with regard to supply logistics, operating costs, customers, and food loss; these differed between male and female traders, with the latter showing higher vulnerability across most of the dimensions. More female traders were negatively affected and experienced decreased supply than male traders; also, a marginally higher proportion of females than males experienced decreasing customer numbers, a statistically significant difference. As numbers of customers declined, especially during lockdown levels 4 and 5, some traders reported losing their stock or giving it away, with more female than male traders experiencing dramatic food loss due to limited demand. Changes in customer purchasing patterns, major employment losses, and reduced wages may be reasons behind this decrease in products purchased. Figure 4 demonstrates that female-owned enterprises, which rely mainly on localised food sources, fared better than males when it came to transport and cost challenges.

Figure 4. Gendered COVID-19 and lockdown impacts on supply, transport, costs, customers and food loss
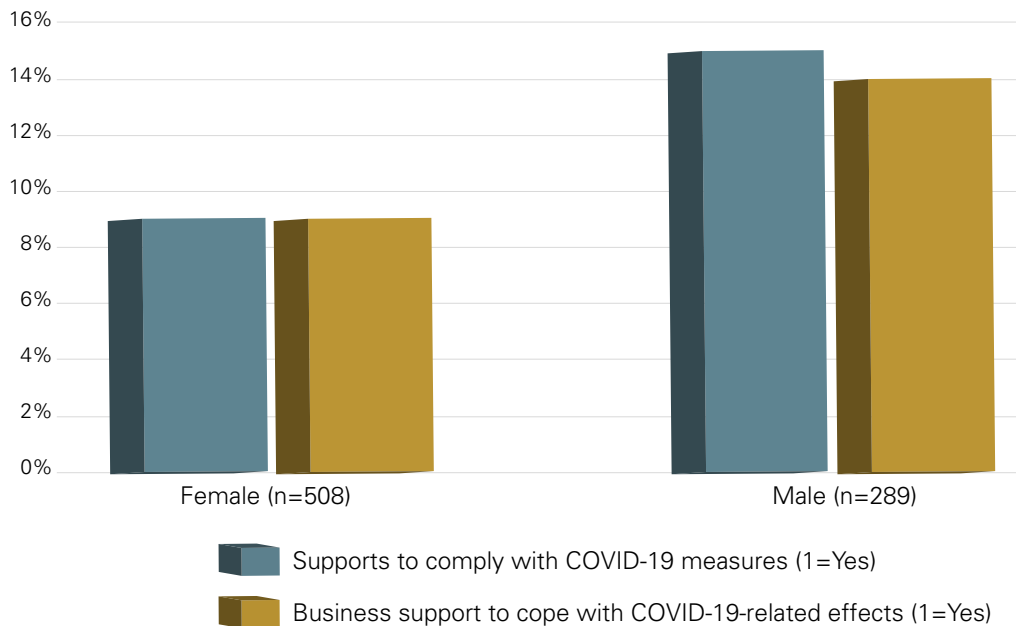

Source: *HSRC*

Informal food traders' gendered access to support

Figure 5 shows that a very small proportion of informal food traders (11% of respondents) received any COVID-19-related support, with most receiving no assistance. The situation was worse among females; for example, while 15% of male-owned enterprises received support to comply with COVID-19 requirements, only 9% of female-owned enterprises received such support. A similar pattern ensues in terms of business support to address the effects of the pandemic; however, during the COVID-19 lockdown, women informal food traders who did not receive business support implemented measures to keep their businesses afloat. Some traders reported changing how products were traded, reducing employees, and switching suppliers, while others stated that they took loans or had to switch to different products.

Figure 5. Gendered access to support

Supports to comply with COVID-19 measures (1=Yes)

Business support to cope with COVID-19-related effects (1=Yes)

Source: *HSRC*

Implications for agri-food system transformation

This study indicates that women experienced the worst economic effects of the pandemic, and yet received the least assistance. Improving the gender sensitivity of interventions in the agri-food system requires that the role of informal food traders and women in the country's food system be acknowledged and harnessed to produce inclusive outcomes.

Female-owned informal enterprises have an important role to play in agri-food system transformations, given their importance in the localised agri-food chains. There is a need for targeted support for informal food traders: reviving those that are no longer operational and increasing capacity for those operating below their normal levels. This requires the establishment of an updated information management system that not only includes informal food traders, but also has a specific focus on identifying those enterprises operated by marginalised actors, such as women.

Authors:

Dr Sikhulumile Sinyolo, a senior research specialist in the HSRC's Human and Social Capabilities research division
ssinyolo@hsrc.ac.za

Dr Peter Jacobs, a strategic lead in the HSRC's Inclusive Economic Development research division
pjacobs@hsrc.ac.za

Matume Maila, a PHD intern in the HSRC's Inclusive Economic Development research division
mmaila@hsrc.ac.za

Policy guidance:
Improving access to gender-affirming healthcare for transgender women

Transgender women in South Africa have actively participated in HSRC studies to explain structural, social and cultural factors contributing to their disproportionate health and social burdens. Some of this and other research has been synthesised into a policy brief to inform better healthcare and other services for this marginalised group. The findings and recommendations of this policy brief by *Dr Allanise Cloete* are summarised by *Antoinette Oosthuizen*.

Transgender women face healthcare and socioeconomic challenges due to stigma, discrimination, exclusion, gender-based violence and restricted access to services and resources. Using a participatory research approach HSRC researchers have worked with this community in studies aimed at understanding and improving their lives. Focusing on healthcare, some of this work has informed a briefing document that aims to guide policies towards improving services and support for transgender women.

Gender nonconformity and the need for better policy

Transgender women are individuals who were assigned male sex at birth but socially identify as women. The issue is complex, as some individuals also identify as gender-fluid or prefer not to conform to traditional gender labels. They may also be straight, gay or bisexual or find conventional sexuality labels inapplicable.

The policy brief on improving transgender women's access to gender-affirming healthcare dedicates a section to describing current policy and highlighting gaps. For example, the South African Constitution prohibits discrimination based on sexual orientation and gender, and the Alteration of Sex Description and Sex Status Act, 2003 (Act No. 49 of 2003) makes provision for transgender people to align their legal status with their lived gender identity. However, this Act is 'inherently medicalised' and excludes the majority of trans and gender-diverse persons from accessing legal gender recognition, since it requires a medical diagnosis and intervention. But many working class, peri-urban or rural transgender persons can't afford the medical and surgical care needed for transition, which is limited to private and academic hospitals located in major city centres. The Act also only recognises the selection of one of two genders, and not fluid or non-conforming identities.

HIV and TB prevalence

In 2015, the population size for transgender women was estimated at 72,156 after an HSRC mapping study commissioned by the Global Fund through the South African National AIDS Council. In 2018 and 2019, the HSRC conducted the *Botshelo Ba Trans* Study, the first ever bio-behavioural survey among transgender women in South Africa, with 888 participants from the metropolitan areas of Cape Town, Johannesburg and Buffalo City.

The findings showed that HIV disproportionately affected transgender women, with an HIV prevalence among participants of 63.3% in Johannesburg, 46.1% in Buffalo City and 45.6% in Cape Town. This reflected estimates among transgender women in Lesotho (50%), Mumbai, India (63%) and in a study conducted by the US Centers for Disease Control and Prevention among 'black' African American transgender women (51%).

Despite tuberculosis (TB) being one of the most serious HIV-related health conditions, and despite transgender women already being prioritised as a key population for HIV, they have not been included as a key population for TB interventions in South Africa's National Strategic Plan for HIV, TB and STIs (2017–2022). No formal prevalence studies of TB among transgender women in South Africa exist, nor do gender-disaggregated data from routine surveillance statistics. In South Africa, organisations representing transgender women have reported a high burden of TB among their members, driven by poverty, poor living conditions, high HIV prevalence and stigma. Poverty, unemployment and homelessness are also key predictors of HIV risk and low retention in HIV care.

Unemployment

Unemployment rates among transgender women in the *Botshelo Ba Trans* Study ranged from 30% to 60%, with the majority having no income. Some end up being homeless or living in extreme poverty. Their employment pathways are disrupted early on, often through education exclusion due to school-based victimisation and social rejection. Many don't have family support and experience workplace discrimination if they do find employment. In the South African context, intersections between race, class and gender further compound the socioeconomic vulnerability experienced by 'black' and 'coloured' transgender women.

Stigma and social marginalisation

In the qualitative component of the *Botshelo Ba Trans* Study, transgender women spoke of the fear and vulnerability experienced when they first realised their gender. Expressing their identity resulted in rejection by family, schools, churches, community structures and previous friendship circles. This rejection of identity was seen as deeply entrenched and highly sensitive. The researchers emphasised that the impact of stigma and social exclusion should not be seen as a single event or a series of individual events, but as a continuous process, which renders them vulnerable to poverty and ill health.

Recommendations in the policy brief

The researchers and transgender participants made several recommendations in the policy brief.

Addressing legal changes included advocating for policy reform to ensure equitable access to gender-affirming care, including hormone therapy. They recommend that gender recognition law be demedicalised and allow for broader inclusion beyond the gender binary.

Furthermore, the Prevention and Combating of Hate Crimes and Hate Speech Bill needs to be passed into law to combat hate speech and transphobically motivated hate crimes. The National Strategic Plan on Gender-based Violence and Femicide should also be refined and implemented to combat trans-misogyny, transphobia, and gender-based violence and femicide directed at this community.

The policy brief recommends various changes to the health system, including decentralisation of hormone therapy initiation and continuity of care from tertiary healthcare to the primary healthcare level. For example, the requirement for an endocrinologist to monitor gender-affirming hormonal care management is a major barrier to access for transgender persons, given that so few such professionals exist in South Africa. By decentralising gender-affirming hormonal care to primary healthcare providers, these services can be brought closer to where people live, including in rural areas.

This requires that training in the provision of gender-affirming healthcare to transgender women should form part of the primary healthcare training curriculum. Peer educators can help recruit and retain transgender women in care, and the National Department of Health should invest in established trans-led civil society organisations that provide transgender-friendly psychosocial services.

The brief recommends that hormone therapy be included in the essential medicines list and distributed via the government's Central Chronic Medicines Dispensing and Distribution programme, which provides access to medications via community-based pick-up points instead of health facilities. Another suggestion was to use smartphone platforms to engage and retain transgender women in care.

The researchers also highlight sexual and reproductive healthcare as an area with a narrow focus on the provision of maternal and other reproductive healthcare services to heterosexual cisgender women. They recommend that holistic, tailor-made packages of care be developed for transgender persons to address issues such as fertility.

The researchers also advocate for medical aid scheme policy amendments to remove the exclusion of trans-affirming care from prescribed minimum benefits, in line with equity and social justice goals underpinning the reforms towards a National Health Insurance health system.

The transgender women and their organisations involved in the writing of this policy document have requested further involvement in the design, implementation and monitoring of the new systems.

Ongoing research

HSRC researchers are currently busy with a study analysing transgender and gender-diverse students' experiences, needs, challenges, policies and best practices at nine South African universities. According to Dr Allanise Cloete, a chief research specialist in the HSRC's Human and Social Capabilities research division, the findings of this work may help us to understand institutional factors that are likely to shape the experiences of trans and gender-diverse students in higher education institutions in different parts of South Africa.

Researchers are also planning a study to look at safety and social justice for transgender and gender-diverse persons in Southern Africa: "The main aim of this research will be to explore how violence affects their lives. We will look at structural violence such as policies and laws that are inherently discriminatory towards trans and gender-diverse persons, systemic violence, which includes social stigma, and personal violence, including physical violence and hate-motivated crimes against trans and gender-diverse persons."

Photo: <ins>Baran Lotfollahi</ins>, <ins>Unsplash</ins>

Young people protest for action against climate change outside the parliament in Cape Town, South Africa in March 2019.
Photo: Ashraf Hendricks, GroundUp (CC BY-ND 4.0)

Climate change knowledge in South Africa on the rise

In February 2022, South Africa introduced the Climate Change Bill in parliament. If the bill becomes law, it will be the first legal framework in South Africa to respond to the climate crisis. But for climate policy to take effect, the public needs to be on board. A recent HSRC survey led by Dr Ben Roberts asked a series of interrelated questions to gauge the scope of South Africans' knowledge of and attitudes towards climate change. By *Andrea Teagle*

The interior of Southern Africa is warming at around twice the global average. A report by climate change expert Prof Nicholas King focusing on the Western Cape, Limpopo and Mpumalanga predicts that in the coming decades the country will almost certainly experience extreme heat and weather events. South Africa can expect economic collapse, social conflict and displacement following coastal damage, food insecurity, water stress and disease outbreaks.

Such findings clearly point to the need for decisive action in all spheres of society to mitigate the climate crisis, particularly through reducing the use of fossil fuels. Yet, until recently, little was known about the attitudes and behaviours of South Africans in relation to the issue. Now, a report led by the HSRC's Dr Ben Roberts has found that awareness of the climate crisis increased between 2007 and 2017, with the proportion of people who had never heard of the term 'climate change' dropping from 27% to just 8%.
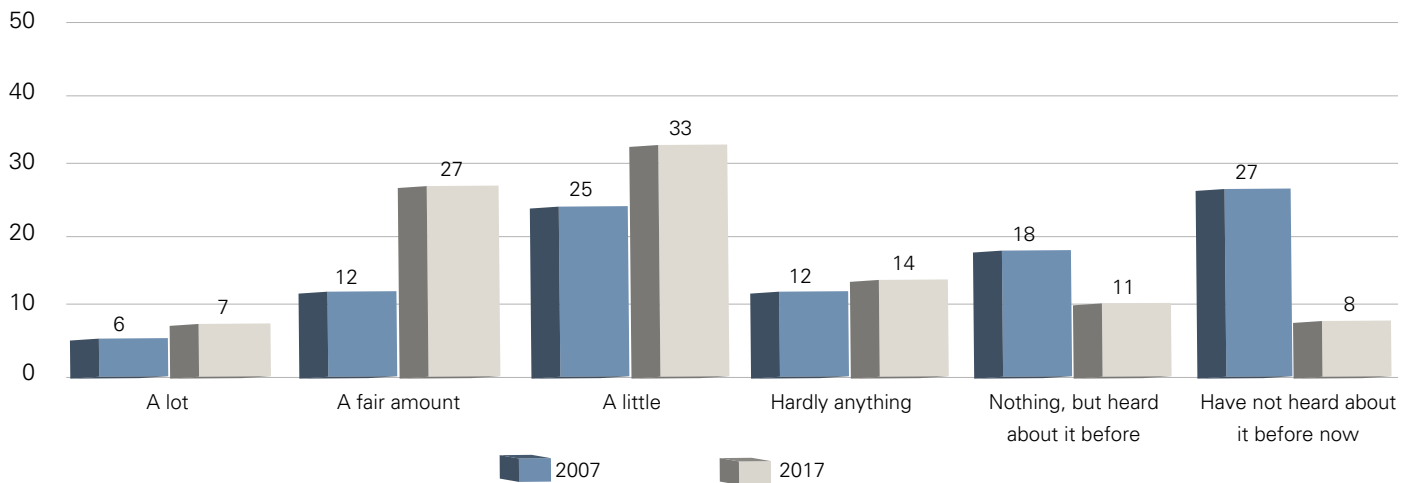
"This positive shift [to more awareness] is likely to have been precipitated partly by increasing climatic shocks and

media attention to the climate crisis," Roberts observes. The study was commissioned by the Department of Science and Innovation (DSI) and National Research Foundation (NRF) and was included as a series of questions in the 2017 round of the HSRC's South African Social Attitudes Survey (SASAS). It involved, in part, a replication of cross-national surveying undertaken by the European Social Survey (ESS) on this topic.

The findings show that while awareness of climate change had increased, most people still had only a shallow understanding of the issue: just a third of South Africans know at least a fair amount about climate change. (Figure 1.) The study also revealed a stubborn, significant minority of one in three who did not believe in the reality of climate change. In comparison, among European countries that took part in the parallel ESS survey at the same time, fewer than one in 10 participants held this view.

"We need to think about how best to tackle this scepticism," Roberts says, adding that it matters because it affects pro-environmental norms and behaviour change.

Figure 1. Changes in self-rated climate change knowledge between 2007 and 2017 (%). Note: Item non-responses excluded from analysis

Source: HSRC SASAS 2017, DSI/NRF climate change and energy module
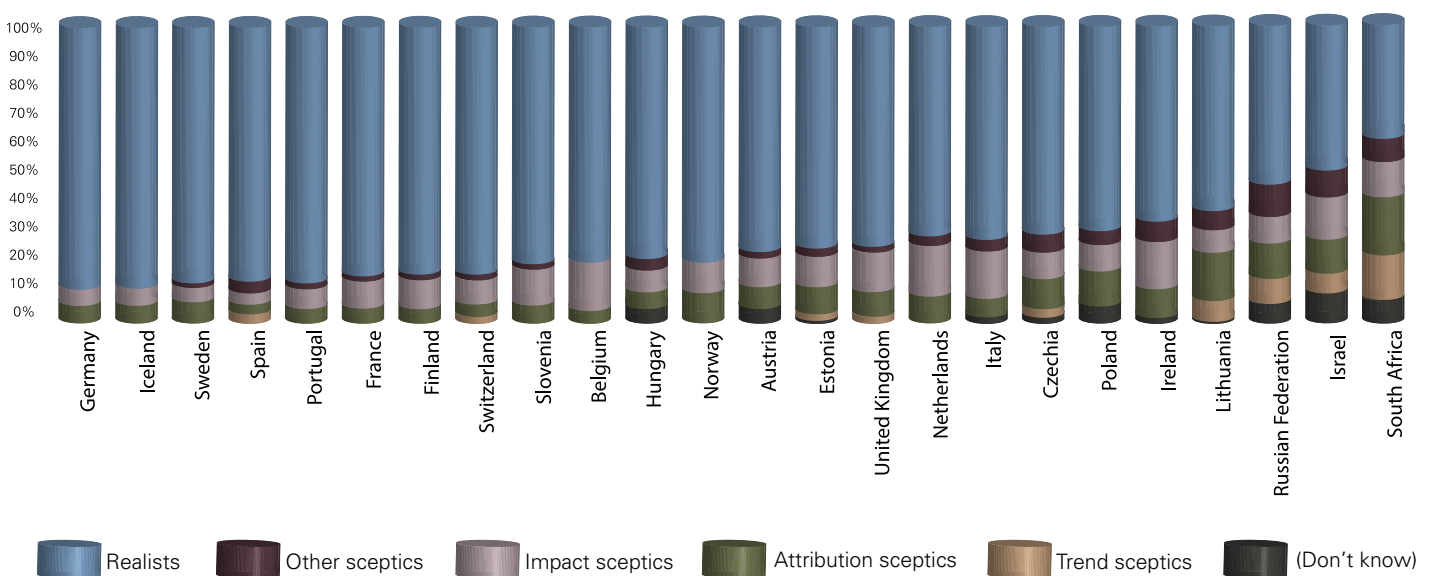
Urgent need for climate campaigns

The study makes use of Stern's model of environmental behaviours, which traces links between what people believe and how they act. Specifically, it suggests that people will be more likely to act in environmentally friendly ways, firstly, if they believe in climate change, and secondly, if they believe that climate change poses a threat to things they value – clean air, wildlife, food and water security, for example. Finally, they must also believe that their actions can help to reduce the threat.

The study team identifies three types of climate sceptics: trend sceptics, attribution sceptics, and impact sceptics. Trend sceptics do not believe that the climate is changing; attribution sceptics dispute that people are to blame; and impact sceptics doubt the severity of the impact. 'A majority

of the South African population exhibited some form of scepticism on the issue of climate change. We found that only 39% of the adult population could be described as realists on the issue,' they write. (Figure 2.) Similarly, a study led by Dr Nicholas Simpson that sought to measure climate change literacy across Africa, where literacy was defined as awareness of climate change and its anthropogenic causes, found average rates of 23% to 66% across 33 countries.

Roberts notes that greater knowledge about climate change does tend to reduce scepticism: "One of the silver lining messages from the study is that knowledge is not leading to greater ambivalence." He recommends that South Africa rolls out robust climate crisis campaigns via different media and in different languages to sway hearts and minds in the green space.

Figure 2. Percentages of persons who are realists or exhibit some degree of scepticism on climate change
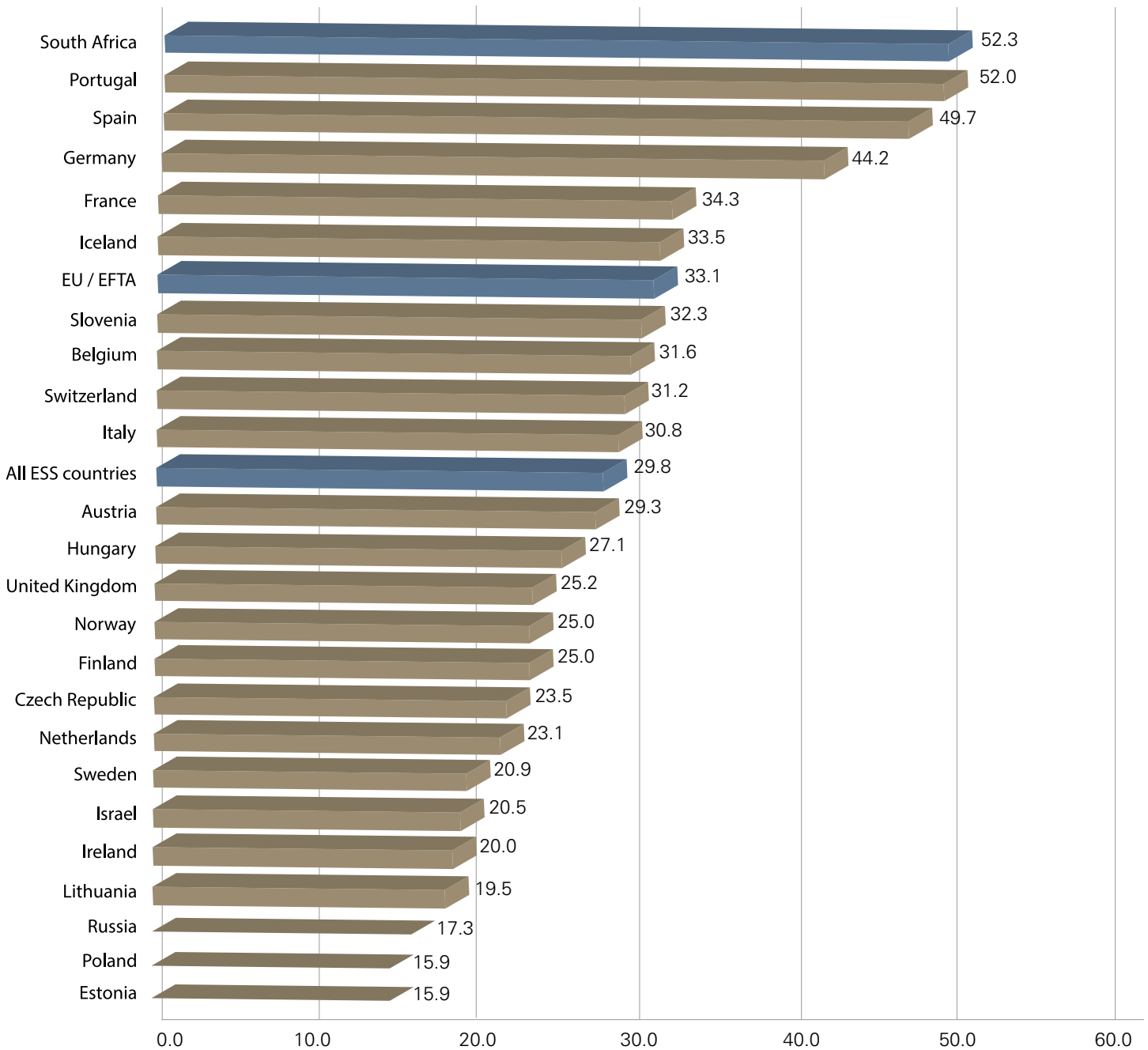

Source: HSRC SASAS 2017–DST/NRF climate change and energy module; ESS R8: European Social Survey Round 8, 2016–2017

Comparatively high concern

The second link in the model of pro-environmental behaviour is the belief in the impacts of climate change that you care about. The study suggests that among those who believe in the reality of climate change, concern is high (57%). In fact, South Africa's levels of concern are higher than any country in Europe that undertook similar surveys. (Figure 3.)

The increase in concern corresponds with an upsurge in awareness of climate change, particularly among the black African majority. "Uncertainty has been replaced primarily with recognition of the far-reaching effects that climate change is going to have," the authors write.

Figure 3. Concern about climate change in South Africa compared to Europe, ranked high to low based on the % that are very or extremely worried about it (2017). Note: Excludes non-responses as well as those saying that the climate is 'definitely not changing'.

Country	%
South Africa	52.3
Portugal	52.0
Spain	49.7
Germany	44.2
France	34.3
Iceland	33.5
EU / EFTA	33.1
Slovenia	32.3
Belgium	31.6
Switzerland	31.2
Italy	30.8
All ESS countries	29.8
Austria	29.3
Hungary	27.1
United Kingdom	25.2
Norway	25.0
Finland	25.0
Czech Republic	23.5
Netherlands	23.1
Sweden	20.9
Israel	20.5
Ireland	20.0
Lithuania	19.5
Russia	17.3
Poland	15.9
Estonia	15.9

Source: *HSRC SASAS 2017–DST/NRF climate change and energy module; ESS R8: European Social Survey Round 8, 2016–2017.*

In a multivariate analysis, the study further confirmed that concern was linked to a higher probability of pro-environmental behaviour. This suggests that this worry can be built upon and leveraged to encourage behaviour changes such as lowering energy consumption.

Individual actions and systemic changes

The survey found that a substantial proportion of the South African public do believe they can reduce their energy consumption, but are less convinced that their actions will make a difference, or that enough people will change their behaviour to have any real impact. They are, however, more convinced of this than their European counterparts. Participants were asked to rate, on a scale of 0 ('Not at all likely') to 10 ('Extremely likely'), how likely it was that limiting their energy would help reduce climate change, and the average South African score was 5.6. In comparison, of the 23 European countries that implemented the survey, all but Austria (with a mean score of 5) scored below 5, with Estonians (3.2) expressing the least confidence in personal efficacy.

Are those who believe that their actions can help to reduce the climate crisis right in thinking so? This question is often at the heart of discussions around how to respond to climate change.

Some activists worry that focusing on individual responsibility detracts from the larger, systemic issues driving the climate crisis, offloading responsibility from governments and industries. But individuals can play a role in holding the government and corporations to account, and pressuring them to follow through on climate commitments. According to Ben Roberts, the South African government has demonstrated the political will to shift towards a greener economy – for instance, by introducing the landmark Climate Change Bill.

Behaviour change at individual and household levels (lowering energy and water consumption, shifting to a plant-based diet, etc.) can help to reduce overall emissions, particularly among higher-income households, which are also better equipped to make lifestyle changes. As residents of the Western Cape demonstrated during the 2019 drought, when given the right information, people can come together to make pro-environmental choices. Aligning our actions with our values gives us a sense of agency and hope – both of which are critical to tackling the crisis.

Green energy transition

Recently, civil society groups wrote to the president demanding that the minister sign off on the construction of new renewable energy sources in response to the energy crisis. However, Roberts notes that a large share of the public is still supportive of coal-based energy supply. "Because of the level of poverty in South Africa, and the level of economic strain in recent years, people primarily want a reliable source of energy and one that's relatively affordable – whether it's coal or renewable energy," he says. Gaining a better understanding of public sentiment is important to inform a just transition to a low-carbon, climate-resilient and sustainable society. Monitoring the public's views on environmental issues is the focus of a new partnership with the Department of Forestry, Fisheries and the Environment, DSI, NRF, CSIR and the HSRC, he says.

Author: Andrea Teagle, a science writer in the HSRC's Impact Centre
ateagle@hsrc.ac.za

Researcher: Dr Ben Roberts is an acting strategic lead, research director and SASAS coordinator in the HSRC's Developmental, Capable and Ethical State (DCES) research division.
broberts@hsrc.ac.za

Photo: Ashraf Hendricks, GroundUp (CC BY-ND 4.0)

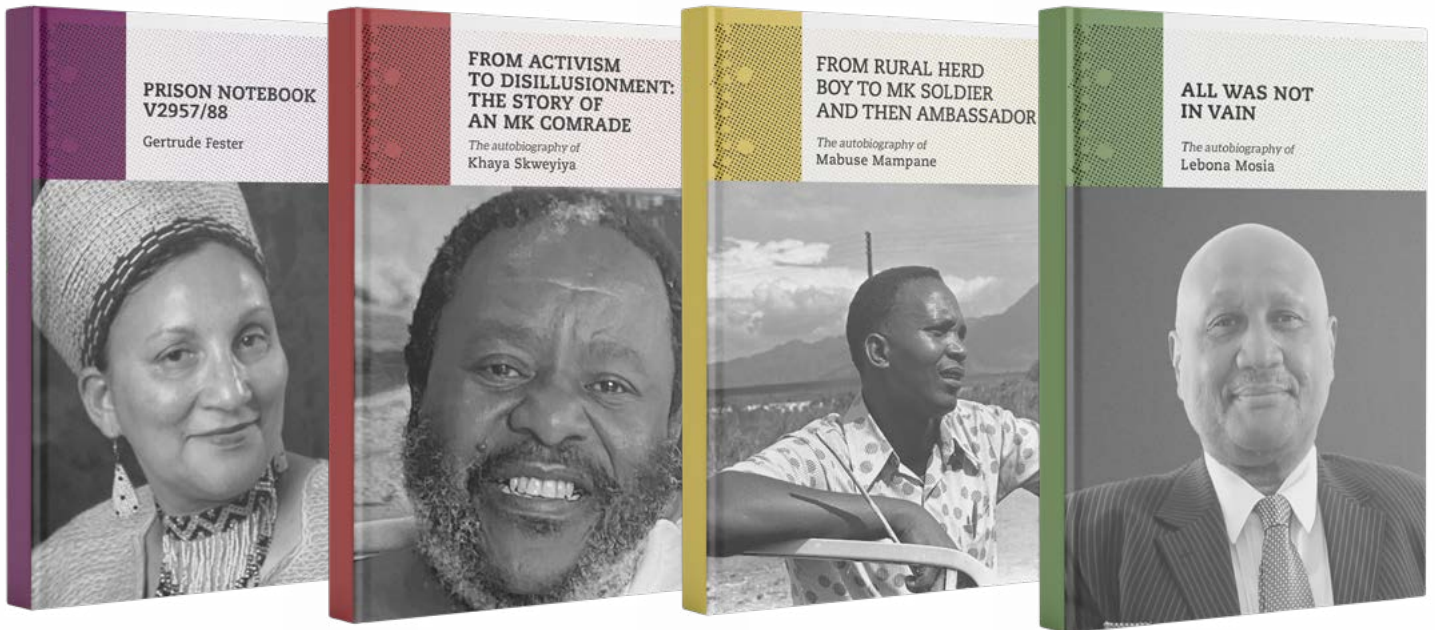# Giving voice to the struggles and experiences of military veterans

Many of South Africa's military veterans have felt somewhat excluded from the grand apartheid struggle narrative, and that they have not received recognition for their role in the country's liberation. This has motivated a number of them to document their stories, a project supported by the HSRC and the Department of Military Veterans.

Cyril Adonis, *Gregory Houston* and *Yul Derek Davids* share the details and benefits of this collaboration.

After the 1960 Sharpeville Massacre and the banning of political organisations, military veterans were a cornerstone of the fight for liberation. Over three decades of armed struggle, they faced harassment by the security forces, detention without trial, torture, imprisonment, separation from families, departure for exile and worse. They undertook military training abroad, lived in military camps, participated in underground political and military operations inside South Africa, and combatted rebel forces in Angola. Many experienced injuries or lost their lives in the struggle.

One of the main aims of the Military Veterans Act (Act No. 18 of 2011) is to recognise and honour military veterans in life and remember them in death for their sacrifices on behalf of the nation. The Act is implemented by the Department of Military Veterans (DMV), which was established following the integration of the armed wings of the liberation movement – i.e. Umkhonto we Sizwe, the Azanian People's Liberation Army, and the Azanian National Liberation Army – as well as the former South African, Transkei, Bophuthatswana, Venda and Ciskei defence forces, into the South African National Defence Force of today. DMV is responsible for facilitating activities to restore dignity to veterans and recognise their contribution to our freedom and nation building.

The Military Veterans Act places an obligation on the state to roll out the following services and benefits to military veterans and their dependents: military pensions; housing; free access to military health services; free or subsidised access to public transport; skills acquisition and education support; job placement; burial support; entrepreneurial support services; and counselling.

Documenting life stories

Up until now, military veterans, especially those from the former non-statutory military forces, have not felt adequately recognised. Many feel that they are excluded from the grand narrative of the anti-apartheid struggle; however, with few exceptions, they lack the financial resources to write and publicise personal memoirs.

To remedy this, the DMV has prioritised the publication of manuscripts produced by military veterans, giving voice to their experiences both as combatants and as veterans in post-apartheid South Africa. The department is keenly aware of the urgency of focusing particularly on unpublished or incomplete manuscripts produced by veterans who are elderly and/or in ill health, in order to ensure that their stories are told.

This process was started with the assistance of the HSRC and resulted in the enhancement, editing and publication of several manuscripts, including those of Phillip Kgosana, Dan Mdluli, Eddie Funde, Themba Dlamini, and Teboho Molotsi. Phillip Kgosana's published memoir *Lest we forget* was enhanced and edited by a team of HSRC researchers with funding from the then CEO of the HSRC, Professor Crain Soudien. The research team edited and published the remaining manuscripts under a five-year Memorandum of Understanding (MOU) between the DMV and the HSRC that ended on 31 March 2020.

Given the success of the relationship between the two parties, and the DMV's mandate to recognise and honour military veterans, a second five-year MOU was concluded in October 2020, with the publication of more memoirs identified as a primary area of collaboration.

With the HSRC's assistance, memoirs belonging to Gertrude Fester, Khaya Skweyiya, Lebona Mosia, Morena Motaung, Mabuse Mampane, and Muntu Nxumalo were published and launched on 31 March 2022. The DMV has also contracted the HSRC to complete the biography of late Ambassador John Kgoana Nkadimeng. On the recommendation of the DMV and the Nkadimeng family, writing the biography of John Nkadimeng was undertaken by Professor Peter Delius of the University of the Witwatersrand and this manuscript is currently in the publication process.

Engagements between the DMV and HSRC are already under way for the publication of additional military veterans' manuscripts during the 2022–2023 financial year. Given the fact that the DMV is inundated with requests for assistance from military veterans to have their life stories published, this is likely to be prioritised for the remainder of the MOU that will end in October 2025. The collaboration is also prioritising the publication and launching of the Nkadimeng biography this financial year.

The impact

In addition to honouring the heroes and heroines of the liberation struggle, these records are invaluable sources of knowledge, insight and inspiration for the current generation of change makers in South Africa, and for future generations. The personal stories of these extraordinary individuals provide a lens through which to understand the particular historical period and events better. They also provide fuller portraits of the human beings beyond the deeds, ideals, glory and greatness that are distilled and sometimes mythicised in historical narratives of struggle heroes.

The collaboration between the DMV and HSRC aims to contribute to a broader social reconstruction project. The HSRC, with its knowledge-brokering and impact assessment capabilities, proposes a public engagement strategy after the publication of the manuscripts, in order to exploit their potential for contributing to social cohesion. This strategy could be centred on knowledge-brokering activities and intergenerational dialogues. Including other relevant stakeholders such as the Department of Basic Education and the Government Communication Information System would also be critical and contribute to ensuring that the partnership between the HSRC and DMV has maximum impact.

Contact:
Dr Cyril Adonis, a senior research specialist, Dr Greg Houston, a chief research specialist, and Dr Yul Derek Davids, a research director in the HSRC's Developmental, Capable and Ethical State research division
cadonis@hsrc.ac.za; ghouston@hsrc.ac.za; ydavids@hsrc.ac.za

Watch: The eNCA's Faith Mangope speaks to Irene Mpolweni, the director general of the Department of Military Veterans.

Unauthorised municipal expenditure in South Africa:

A spatial perspective

Over the last few years, municipal audits in South Africa have shown irregular expenditure amounting to billions of rands. A recent article by the Geospatial Analytics Unit at the HSRC demonstrated how spatial statistics techniques can be used to indicate hot spots and cold spots, which depict municipal patterns of unauthorised expenditure. This type of mapping and spatial analysis highlights trends and produces information that may inform future predictions or policy and interventions to curb unauthorised expenditure. The techniques could also be applied to other data in the public domain, to demonstrate how key issues affect the country.
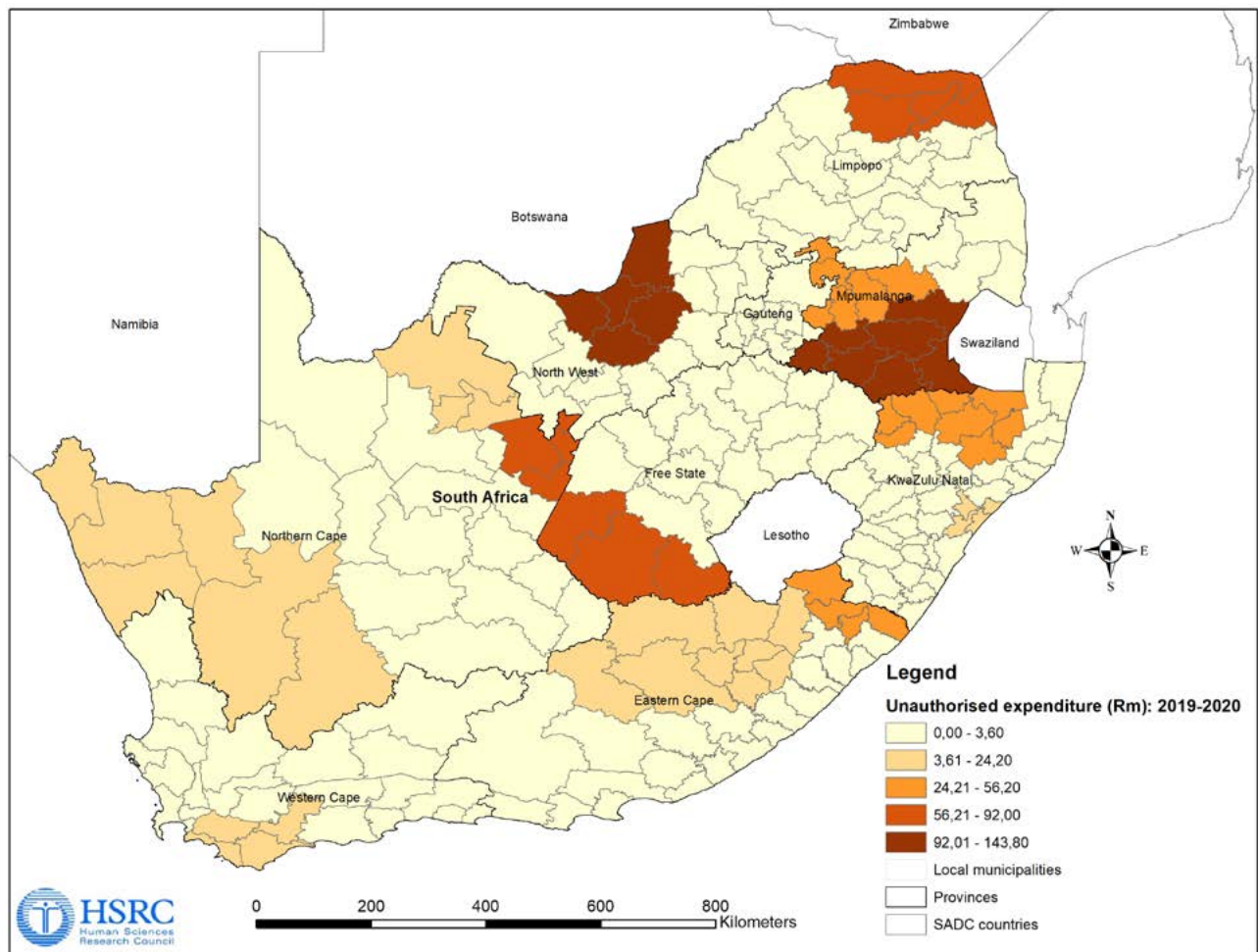
By *Simangele Dlamini* and *Gina Weir-Smith*

Photo: Freepik

I n the past decade, municipalities in South Africa have fallen short of using their budgets allocated by National Treasury expeditiously. In the 2018/19 financial year the then auditor-general, Kimi Makwetu, reported that municipal audit results showed an overall regression in auditing outcomes from the previous reporting period. He painted an undesirable picture of billions of rands allocated to municipalities being managed 'in ways that are contrary to the prescripts and recognised accounting disciplines'.

These administrative and governance lapses, the auditor-general cautioned, made for ease of abuse of the public purse by government officials, which the country can ill afford. The trend continued in the 2020/21 financial year, when levels of unauthorised expenditure remained high, either because municipalities had no plans for some of their developmental projects, or because the estimates made at the beginning of the projects were much lower than actual expenditure incurred. As a result, irregular expenditure increased to R32.06 billion from the R25.2 billion reported in the previous financial year, according to a report by SANews.

Figure 1 illustrates the location of municipalities with the highest unauthorised expenditure in the 2019–2020 Medium-term Expenditure Framework audit period. Overall, 30% of municipalities ended the year with a deficit during this audit period.

Figure 1. Unauthorised expenditure, 2019–2020

Source: *Auditor-general, 2020; adjusted by the HSRC*

What is unauthorised expenditure?

Unauthorised expenditure refers to expenditure incurred by departments that was not spent in accordance with the approved budget. Section 1 of the Public Finance Management Act, 1999 (Act No. 1 of 1999) defines it as 'overspending of a vote or a main division within a vote' or expenditure that is made 'not in accordance with the purpose of a vote'.

A 'vote' is the total amount that is usually appropriated per department for use within a certain period, and is approved by the parliament or provincial legislature. Unauthorised expenditure is an indication of noncompliance that needs to be investigated by management to determine whether it was an unintended error, negligence, or done with the intention of working against the requirements of legislation.
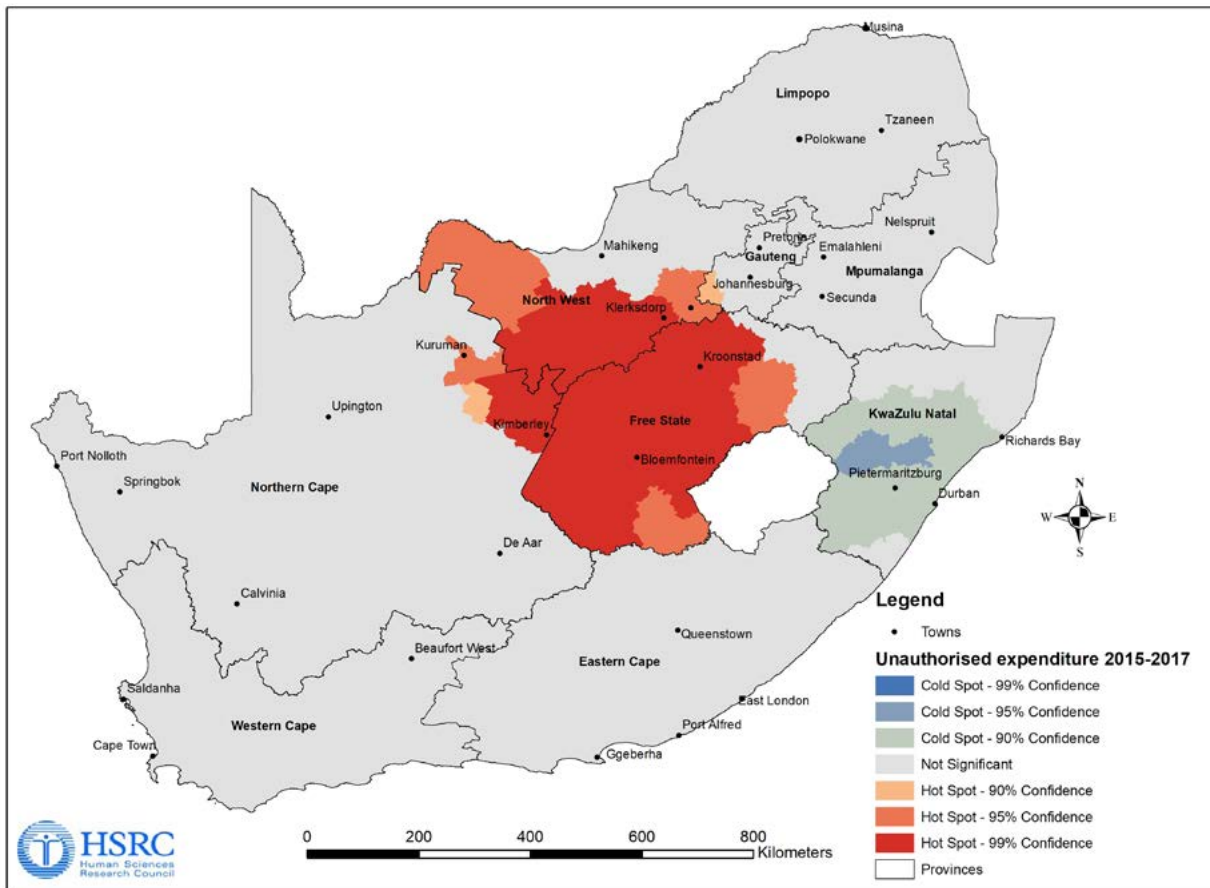
Mapping unauthorised expenditure in South Africa

The Geospatial Analytics Unit at the HSRC's eResearch Knowledge Centre recently published a brief article aiming to illustrate the use of maps in depicting municipal unauthorised expenditure in South Africa. This is against the dire picture presented by the Institute for Security Studies in its 2020 report, *Dangerous Elites: Protest, Conflict and the Future of South Africa,* which drew a link between the incidence of unauthorised expenditure in municipalities and service delivery protests, a situation exacerbated by high levels of mass unemployment, poverty, and inequality.

Through the use of these maps, specific patterns were identified where there is a concentration of unauthorised expenditure. This pattern analysis uses what is referred to as 'hot spots' and 'cold spots' analysis. Hot spots are spatial clusters of high values, while cold spots refer to spatial clusters of low values.

The maps showed that between 2015 and 2017 municipal unauthorised expenditure was concentrated (hot spots) around most of the municipalities in the Free State, in the south of North West, and with a few in the north-eastern parts of the Northern Cape province. In total, 21 of the 213 audited municipalities were found to have high levels of unauthorised expenditure (hot spots), while the central parts of KwaZulu-Natal fared much better during this period (cold spots). For the remainder of the municipalities in the country, the audit findings were not adverse or were insignificant in terms of unauthorised expenditure (Figure 2).

Figure 2. Unauthorised expenditure, 2015–2017

Calculations: *Authors' own*

Between 2018 and 2019, high levels of municipal unauthorised expenditure (hot spots) were found around municipalities in the east of Limpopo and Mpumalanga, almost all the municipalities in North-West, some to the south and south-west of the Free State, and a few in north-eastern parts of the Northern Cape. Municipalities around the south of KwaZulu-Natal and some in the north-eastern parts of the Eastern Cape fared much better in financial management during this period (cold spots).

Between 2019 and 2020, high levels of unauthorised municipal expenditure were found around most municipalities in North-West and Mpumalanga, with a few in Gauteng. Cold spots (areas with little or no unauthorised expenditure) were found in most of the Western Cape, and in the central and southern parts of KwaZulu-Natal (Figure 3).

Figure 3. Unauthorised expenditure, 2019–2020

Calculations: *Authors' own*

The statistical analysis illustrates that municipalities with unauthorised expenditure tend to be concentrated in areas that have been identified in the past as needing administrative intervention in terms of managing their municipal finances, such as North-West, Free State, parts of Mpumalanga, and Limpopo. Incidentally, most of these municipalities are placed in the high-risk category according to the State of Local Government Barometer (2020). In total, 21 municipalities (out of the 213 audited) had statistically significant hot spots between 2015 and 2017. The figure increased to 33 between 2018 and 2019, and decreased to 23 between 2019 and 2020.

In contrast, statistical cold spot municipalities were mostly located in the Western Cape, Eastern Cape and southern parts of KwaZulu-Natal, and the concentration of unauthorised expenditure was not statistically significant in most of the municipalities in the country.

Irregular government expenditure understated, says auditor-general

Despite the irregular expenditure reported between 2015 and 2021, such expenditure remains understated by national and provincial authorities, according to the new auditor-general, Tsakani Maluleke. The reported unauthorised expenditure could be higher, because most of these entities usually do not complete their financial statements in time for audit by the auditor-general's office, with continued flouting of supply chain laws by departments. "For as long as there are those auditees who can't give us a confirmation as to the completeness of that number [irregular expenditure], what we must assume is that the number will be higher had they reported it in a way that is credible," Maluleke asserted. Maluleke added that irregular expenditure could be even higher, as 30% of auditees were qualified because the amount they disclosed was incomplete and/or they had incurred irregular expenditure but the full amount was not known.

The auditor-general noted that there has been an incremental increase in government departments and entities receiving clean audits as a result of improved oversight and leadership commitment to ensuring more efficient financial governance within municipalities.

Authors:
Dr Simangele Dlamini, principal geospatial analyst, and Dr Gina Weir-Smith, head of the Geospatial Analytics Unit in the HSRC's eResearch Knowledge Centre
sdlamini@hsrc.ac.za; gweir-smith@hsrc.ac.za

Financing renewable energy in South Africa:

Lessons from India and China

South Africa's energy security crisis is crippling the country's economic development. Recently, President Cyril Ramaphosa announced a suite of changes to add additional private generation capacity to the country's energy grid. In partnership with the South African BRICS Think Tank, the HSRC has studied opportunities to expand renewable energy financing by comparing South Africa's experiences with those of India and China. This article summarises the study's findings, informing some of the interventions proposed by the president.

By *Krish Chetty*, *Tahiya Moosa*, *Yul Derek Davids*, *Thanyani Madzivhandila* and *Lebogang Ndaba*

The South African energy policy framework has often been perceived by investors as uncoordinated and lacking coherence. This has led to market uncertainties, impeding the growth of independent power producers (IPPs). While Eskom and the National Department of Energy have had some success in rolling out the Renewable Energy Independent Power Producer Procurement Programme (REIPPPP), a lengthy pause in bidding windows between 2015 and 2021 damaged investor perceptions about the local renewable energy market.

Responding to the energy crisis after Stage 6 loadshedding in June, on 25 July President Cyril Ramaphosa announced a range of interventions to add capacity to the energy grid. This included expanding the REIPPPP with interventions to double the capacity of Bid Window 6 to procure renewable energy from the private sector.

Municipal challenges
Municipalities have previously had the capability to generate new energy or procure power from IPPs. However, policy uncertainties and challenges in securing licences from the National Energy Regulator of South Africa (NERSA) have led many to abandon their renewable energy generation efforts. Uncertainties have also constrained private power procurement.

In 2021, after a court case between the City of Cape Town, National Department of Energy and NERSA, the Electricity Regulation Act was amended, raising the threshold of power generation without a licence from 1 MW to 100 MW. Following the president's announcements on 25 July, this 100 MW limit has also been scrapped. However, securing local and international investment remains a significant challenge constraining new IPP development.

International investment
National Treasury calculated that globally there is US$ 12 trillion in circulation from sources such as the Green Climate Fund established by the United Nations and managed by the World Bank. Unfortunately, most of these funds are received by developed countries. Developing and emerging countries struggle to access these funds because of the perceived risk of projects or of investing in a developing country. Generally, public data describing the availability of wind or solar energy resources in developing countries are limited or not frequently published. The absence or shortage of quality trend data results in poorly calibrated financial risk models, resulting in inaccurate investment risk ratings.

South Africa has fair wind energy potential, particularly in the coastal areas of the Western and Eastern Cape, and in the Northern Cape. The country currently has 33 wind farms, 24 of which are in the Eastern Cape.
Photo: Anna Jiménez Calaf, Pexels

If a loan is extended to businesses with risky ratings, the bank's risk rating is also affected; hence, the financial sector avoids this. However, green banks and non-bank financial institutions tend to specialise in the 'green' sector and may have access to better-quality data and nuanced financial risk models, producing more accurate risk ratings. However, non-bank financial institutions struggle to access international climate finance from development finance institutions since they lack a formal banking licence.

Experiences in India and China

India's foremost challenge is its size and extensive intergovernmental system, which literally dwarf South Africa's intergovernmental coordination challenges. In contrast, despite China's size, its strength is policy consistency. In 2021, China launched its 14th five-year plan. China's central government has iteratively refined its policy planning procedures, integrating views from provinces, municipalities, other arms of government, academia and business. The five-year policy cycle allows China to revise its plans to transition from fossil fuels to renewable energy. China's transition balances its current economic demands with its long-term plans to attain carbon neutrality by 2060. This balancing act requires the country to increase generation capacity by investing in 'clean' coal and renewable energies while decommissioning coal power plants. In many respects, China's path to transition mirrors South Africa's, but on a much larger scale.

India has also had more success in accessing international climate finance than China and other developing and emerging countries. The reasons for this success are unclear, but some point to the country's plan to expand its capacity with ambitious wind and solar energy generation targets. While South Africa is attempting to add a further 18 GW (from 2019) of renewable energy generation capacity by 2030, India plans to add 343 GW from its 2022 capacity of 157 GW, requiring an investment of US$ 250 billion. To put this number into context, the BRICS New Development Bank only offered US$ 4 billion in funding for clean energy projects in BRICS countries between 2016 and 2021.

India and China both source international finance for renewable energy generation by offering their own-currency Green Bonds – known as Green Masala Bonds and Green Panda Bonds respectively – to the international market. The Green Panda Bond is issued by the BRICS New Development Bank, allowing China to raise foreign investment in its renminbi currency. Furthermore, businesses subscribed to the bond do not have to worry about currency depreciation and are shielded from US dollar exchange rate fluctuations. In South Africa, the USD to ZAR exchange rate volatility is a significant constraint affecting local IPPs, several of which have reported abandoning attempts to secure loans from international banks because of associated difficulties in predicting project profitability. The IPPs opted to source finance from the local commercial sector instead.

Subsidies in China have also helped to boost its local renewable energy generation projects and the manufacturing of components needed in these power plants. These subsidies have been particularly effective in a young market and supported vulnerable businesses in consolidating their business plans. Given China's manufacturing strength, India opted to impose importation duties on Chinese components needed for renewable energy generation. These import duties constrained their market growth while not necessarily boosting their local manufacturing capabilities.

South Africa has introduced a similar policy in the REIPPPP Bid Window 5 regulations, requiring IPPs to source 40% of their components from local manufacturers without boosting the capabilities of the local market. However, after the president's 25 July announcement, this requirement has been relaxed in favour of a more pragmatic regulatory approach. A key lesson from China and India is that subsidies are best suited for countries seeking to expand their generation and manufacturing capacities.

Lessons for South Africa from China and India

As learnt from China, promoting policy certainty is crucial to sourcing investment. South Africa's regulatory framework requiring black ownership is also comparatively unique, and foreign investors need support in navigating the local policy environment. Accurate data about local conditions are crucial, and there is a need to invest in data measurement equipment. These data must be shared with the financial sector and policymakers to help improve their risk models. South Africa's developers and manufacturers would benefit from subsidy programmes that allow these businesses to compete with their international counterparts. In addition, local projects struggle to source dollar-denominated loans. Following the Chinese and Indian examples, own-currency loans may assist the country's IPPs in sourcing international finance for their projects.

Authors:
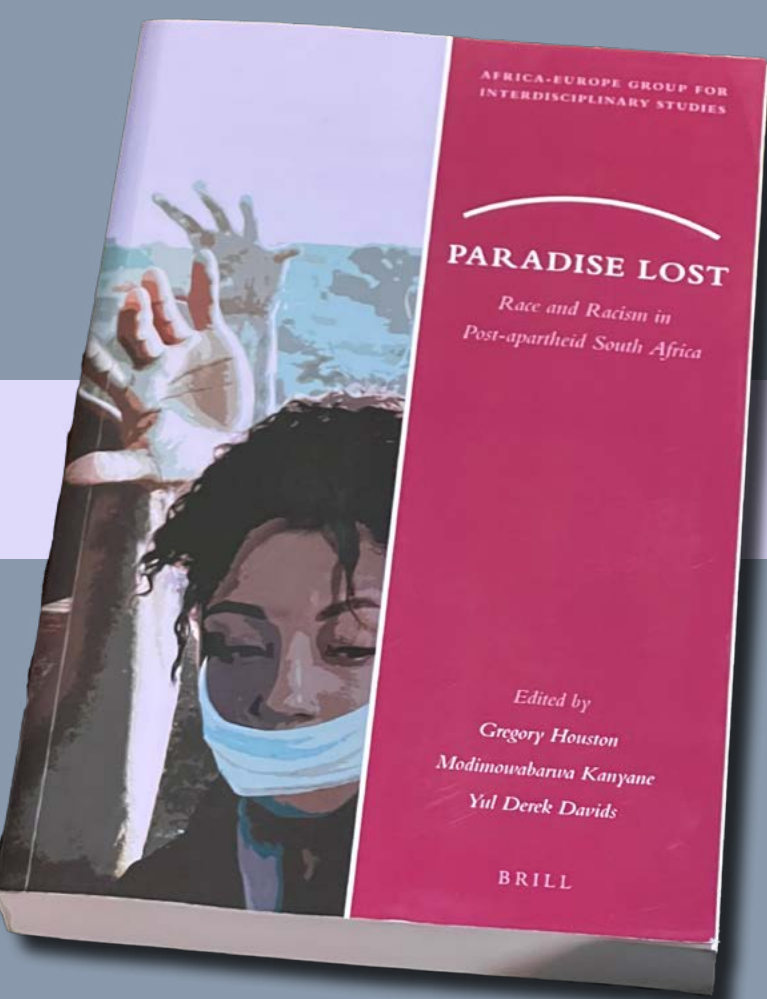Krish Chetty is a research manager, and Tahiya Moosa, a researcher in the HSRC's Inclusive Economic Development research division. Drs Yul Derek Davids and Thanyani Madzivhandila are research directors and Lebogang Ndaba, a master's research trainee in the HSRC's Developmental, Capable and Ethical State research division.

kchetty@hsrc.ac.za; ydavids@hsrc.ac.za; tmadzivhandila@hsrc.ac.za; tmoosa@hsrc.ac.za; lndaba@hsrc.ac.za

Paradise Lost:

A book on race and racism in post-apartheid South Africa

In June 2022, Brill Publishers released *Paradise Lost: Race and Racism in Post-apartheid South Africa*, co-edited by HSRC researchers Gregory Houston, Yul Derek Davids and former HSRC researcher Modimowabarwa Kanyane. This arose out of an HSRC project focusing on why race remains so salient and racism so pervasive after almost three decades of democratic rule. *Gregory Houston* and *Yul Derek Davids* outline the content of the book.

The central concept explored in the recently published book *Paradise Lost: Race and Racism in Post-apartheid South Africa* is that racism persists in the post-apartheid era because of the loss of privilege for some sectors of society, and the failure of the post-apartheid government to deal with issues of race and racism adequately. The chapters draw from the history of apartheid, theoretical debates on race, qualitative and quantitative accounts of experiences of racism, and quantitative studies of attitudes towards race to describe and explain this situation.

Race and racism

Two premises on race and racism are held in common by all of the authors. The first is that 'race' has no basis in biology, and that it has been scientifically proven that the genetic differences between people are too small to justify grouping humans into 'race groups' or tying these differences to inherent capabilities. The second premise is that the reality for most South Africans is that race is a lived experience, largely consequent to a lengthy process during which "the core function of institutions … was to produce identities of superiority and inferiority" (Soudien & Botsis 2011: 90) based on race.

Order of items and central concerns

In the foreword, Crain Soudien, former chief executive officer of the HSRC, highlights the lack of frameworks to describe the effects of racism on people as one of the problems which the volume attempts to resolve.

The other chapters in the volume are divided into the three thematic areas as outlined next.

White privilege and the racialised power structure

In Chapter 2, Gregory Houston tracks the evolution of white privilege and the creation of a racial hierarchy. He concludes that the history of South Africa is characterised by processes through which white dominance left a legacy of white privilege, and a racial hierarchy in which some race groups better enjoy society's benefits than others.

One attempt to change the racial power structure in the post-apartheid era was by introducing legislation and policies aimed at racial redress as well as racial discrimination. In Chapter 3, Alexis Habiyaremye locates one of these policies, black economic empowerment, at the centre of the process in which race is used to incorporate a black elite into the 'monopoly capitalist class', largely dominated by whites.

Catherine Ndinda and Tidings Ndhlovu also focus on policies to transform the economy in Chapter 4, in this case, affirmative action in employment. They draw on data from employment equity reports to illustrate the extent of gender and racial transformation in the South African workplace and conclude that only certain categories of women have benefitted from the transformation.

In Chapter 5, Neo Lekgotla *laga* Ramoupi examines racial exclusion from academic positions at universities as a consequence of government policies in the apartheid era and racial discrimination in the post-apartheid era. Case studies highlight significant incidents at South African universities where black academics have been individually targeted to prevent a challenge to white privilege in these institutions.

Konosoang Sobane, Pinky Makoe and Chanel Van der Merwe argue in Chapter 6 that the South African education system continues to maintain features of a racialised past, characterised by the institutionalisation of English and Afrikaans as languages of learning and teaching in higher education, to the exclusion of the other nine official languages. The authors draw on the experiences of students to demonstrate how university language policies affect them.

Manifestation of racism in post-apartheid South Africa

In Chapter 7, Thobeka Zondi, Samela Mtyingizane, Ngqapheli Mchunu, Steven Gordon, Benjamin Roberts and Jare Struwig use data from the HSRC's South African Social Attitudes Survey (SASAS) to look at how patterns of reported discrimination by race (population) group have changed over the period 2003–2018. They investigate both personal and collective experiences of racial discrimination, providing important insights into the practice of modern racism.

In the next chapter, Yul Derek Davids, Benjamin Roberts, Gregory Houston and Nazeem Mustapha use data from the 2012 SASAS survey to examine perceptions of the causes of poverty among the various race and class groups. Their study reveals the persistence of racial stereotypes in the understanding of causes of deprivation.

Chapter 9, written by Aswin Desai, seeks to uncover individual forms of racism in how Cricket South Africa has approached issues of racial representation in national cricket teams. Drawing from the recent report of an independent inquiry into the causes, nature and extent of racism in cricket, Desai illustrates how perceptions of ascribed racial capabilities in sport and of certain sports as white spaces, as well as political pressure to transform sport in post-apartheid South Africa, make racial discrimination a key feature in national sports in several ways.

In Chapter 10, Steven Gordon considers how cues from trusted elites inform popular attitudes on immigration. He dismisses the argument that these cues, as well as economic factors, are the main causes of xenophobia, and places race and racism in a racialised society at the centre of the issue. He argues that interracial conflict appears to have a significant impact on South Africans' attitudes towards foreigners, and goes a long way to explaining why some groups are less welcome than others.

Race and identity in South Africa

The third part of the book explores the significance given to racial identity in post-apartheid South Africa. In Chapter 11, Natasha van der Pol, Zaynab Essack, Melissa Viljoen and Heidi van Rooyen examine the internal conflict and discomfort faced by mixed Indian/white youths in having to decide which race they belong to in what is supposed to be a non-racial South Africa. When asked about their race, they have to decide whether to respond by saying they are white or Indian, pretending to be foreign, opting for a 'coloured' identity, or refusing to identify with a race.

Chapter 12 by Joleen Steyn Kotze draws from an empirical survey conducted among students at six South African universities to assess values and perceptions of whether their quality of life had improved since the first democratic elections in 1994. Steyn Kotze finds that racial identity is becoming stronger among young South Africans, and that there is increasing identification of individual opportunities and constraints with the race group to which individuals belong.

In Chapter 13, Luvuyo Dondolo explores the impact of colonial and apartheid monuments, such as the Paul Kruger Statue in the Church Square heritage precinct in Pretoria, on racial identity in post-apartheid South Africa. He argues that the Paul Kruger Statue symbolises the sociocultural, political and economic identities that paved the way for the formation of the Boer Republics, the apartheid ideology and the consolidation of racial segregation in South Africa.

In Chapter 14, Modimowabarwa Kanyane explores several developments since 1994 that are linked to racism in the post-apartheid era from the perspective of decoloniality. The author concludes that the only way to bring about the erasure of race is by decolonising the mind to deal with complex issues such as transformative justice robustly, as well as to promote national reconciliation and unity.

Target audience and availability

The book is intended for academics from a range of disciplines, including African studies, political science, economics, contemporary history, sociology, and education, and would also be useful for the general public from all walks of life who are interested in issues of race and racism, inequality, social justice, non-racialism and transformation in the South African context. It is available in paperback and electronic format. For more information or to purchase the book, click here.

Contact:
Dr Greg Houston is a chief research specialist in the HSRC's Developmental, Capable and Ethical State research division and a research fellow of the history department at the University of the Free State.
ghouston@hsrc.ac.za

Dr Yul Derek Davids is a research director in the HSRC's Developmental, Capable and Ethical State research division and an advisory member in the Department of Applied Legal Studies at the Cape Peninsula University of Technology.
ydavids@hsrc.ac.za

South Africa needs more R&D projects to be competitive

In July, the HSRC's Centre for Science, Technology and Innovation Indicators (CeSTII) was shortlisted for the 2022 NSTF-South32 Awards for its national survey of research and development (R&D) in South Africa. The survey points to a drop in business R&D over the past decade and, equally concerning, a decline in research personnel. The leader of the survey team, *Dr Nazeem Mustapha,* spoke to *The Review* about the importance of monitoring R&D, and how South Africa can improve its business R&D and build skills.

"To have economic development, you need to have a strong research and development component," says the HSRC's Dr Nazeem Mustapha. Research and experimental development (R&D) not only refer to the development of new products, but can also be about maintaining or improving existing products, processes or services – such as those supplied by state-owned enterprises like Eskom, for example. Each year Mustapha leads an HSRC team that, on behalf of the Department of Science and Innovation, surveys R&D expenditure and capabilities across five sectors: higher education, science councils, government, business, and not-for-profit organisations.

The annual National Survey of R&D has been informing government policies, investment planning, advocacy, and research for over 50 years. At that time, R&D was a political priority because of the sanctions that South Africa faced under apartheid. One of the state-owned enterprises of that era, Sasol, went on to become a global leader not only in energy, but in chemical by-products of the Fischer–Tropsch process, Mustapha says. In 2003 the HSRC team took responsibility for the survey, with Dr Mario Clayford and Natalie Vlotman in charge of operations. Today the survey statistics are a key source of information for the 2019 White Paper on Science, Technology and Innovation and the STI decadal plan, which aim to identify new sources of economic growth and to achieve inclusive, sustainable development.

The survey runs according to international standards, overseen by the intergovernmental Organisation for Economic Co-operation and Development for benchmarking and comparison. Locally, it must meet standards set by Statistics South Africa for the findings to be certified as national or official statistics, says Mustapha. "We achieved that even during the COVID-19 lockdown. This consistent high-quality performance is likely the reason we were shortlisted for the NSTF-South32 Awards. We've been doing this for almost 20 years, and essentially we get it right every time."

Three key trends of the past decade

According to Mustapha, the past decade of R&D patterns in South Africa paints a worrying picture in terms of economics, even as R&D in the public sector offers glimmers of hope.

Business R&D expenditure has taken a dive

The biggest trend is that R&D expenditure, especially in the business sector, has been declining for the past decade. In 2011/12, the proportion of R&D done by the business sector was greater than 50%. Since then, it has been consistently dipping below the halfway mark, with the 2019/20 figure at around 40%.

"This is significant, because one indicator that distinguishes developed from developing countries is the proportion of total R&D that the business sector does. If it's above 50%, you're almost certainly looking at a developed country; if it's below, it's probably a developing country."

How much R&D is performed by the business sector is linked to whether multinationals and foreign funders consider the country a good location for R&D. It's also about investment strategies in new technologies – whether local companies decide to invest in R&D or to license technologies from elsewhere.
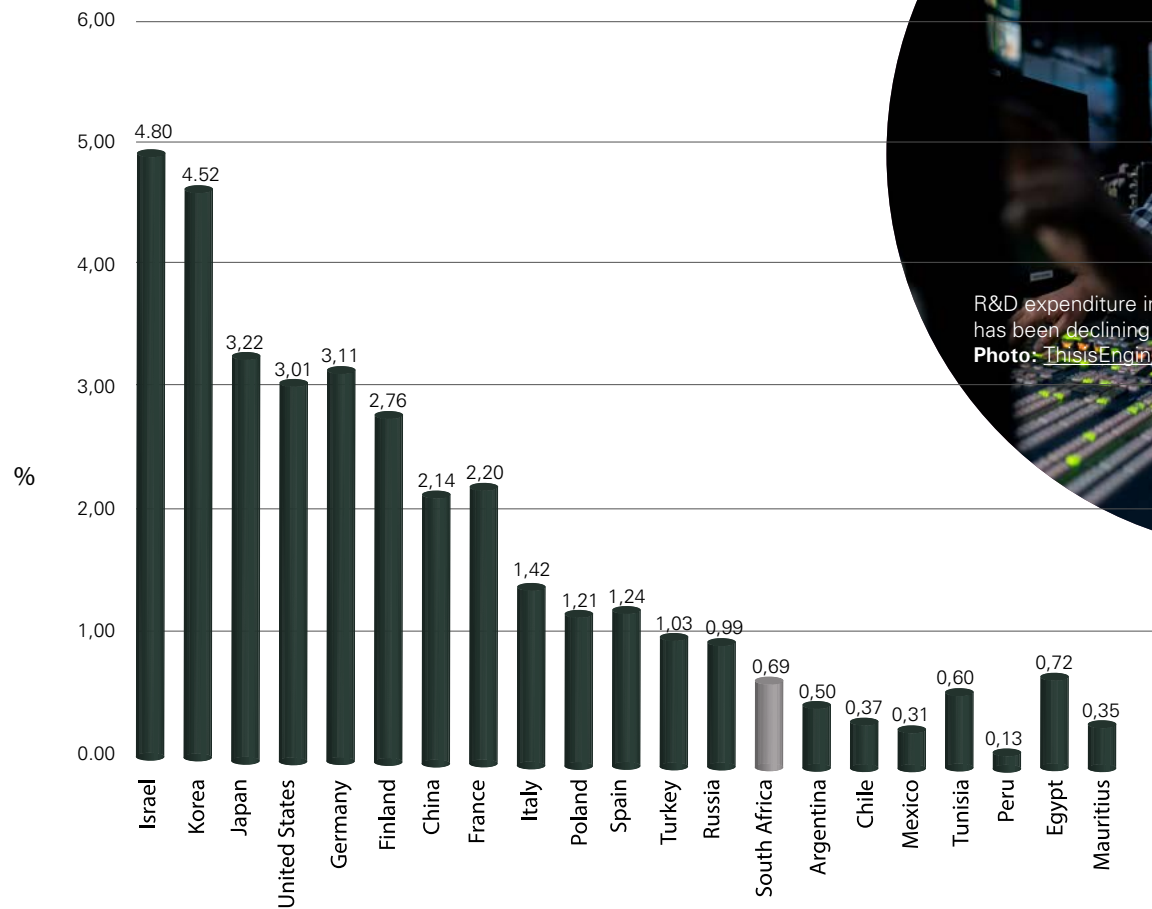
We've shed R&D personnel

The decline in performance abilities in R&D is far more critical than the loss of spending, according to Mustapha. "While you can switch expenditure on again, depending on economic circumstances, it's far more difficult to replace personnel. We need to rebuild all of that expertise, and building expertise means that you are actually a step further back."

South Africa shines in space science

Space science has emerged as the flagship science of South Africa. "We spend a lot on space science, and we also get cited a lot for the research we do, so that's probably the one standout area."
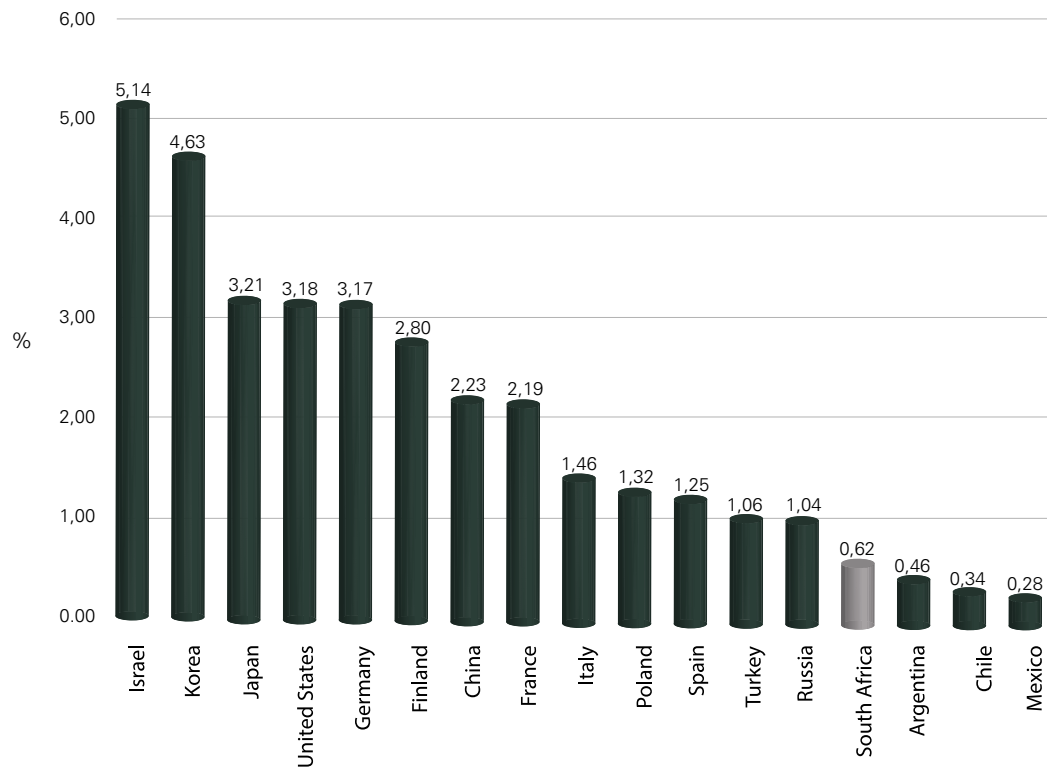
Other important areas for R&D are converging technologies like nanotechnology and biotechnology, and HIV/AIDS, malaria and TB. The 2019/20 survey results show that the greatest amount of R&D activity in research fields takes place in the medical and health sciences (21.5%), followed by the social sciences (16.9%).

R&D Intensity in Selected Countries (2018)

Chart values (%):
Israel 4.80, Korea 4.52, Japan 3.22, United States 3.01, Germany 3.11, Finland 2.76, China 2.14, France 2.20, Italy 1.42, Poland 1.21, Spain 1.24, Turkey 1.03, Russia 0.99, South Africa 0.69, Argentina 0.50, Chile 0.37, Mexico 0.31, Tunisia 0.60, Peru 0.13, Egypt 0.72, Mauritius 0.35

R&D expenditure in South Africa's business sector has been declining over the past ten years.
Photo: ThisisEngineering RAEng, Unsplash

R&D Intensity in Selected Countries (2019)

Chart values (%):
Israel 5,14, Korea 4,63, Japan 3,21, United States 3,18, Germany 3,17, Finland 2,80, China 2,23, France 2,19, Italy 1,46, Poland 1,32, Spain 1,25, Turkey 1,06, Russia 1,04, South Africa 0,62, Argentina 0,46, Chile 0,34, Mexico 0,28

Source: *HSRC, national R&D survey, 2018/2019*

OECD, Main Science and Technology Indicators (MSTII), 2020/21. UNESCO, UIS. United Nations Educational, Scientific and Cultural Organisation for Statistics Database, 2021.

Addressing the energy crisis is critical to creating an environment that multinational companies and international sources of funding consider conducive to R&D, Mustapha says.

To encourage scientific or technological R&D activities among local companies, the government has offered an R&D incentive since 2006. Companies that perform R&D according to a definition broadly consistent with the National Survey of R&D are eligible to receive that money back, plus 50%. This translates into a saving of 14c for every rand spent on R&D, at a corporate tax rate of 28%. According to a government report, large companies in the manufacturing sector are the primary beneficiaries of the incentive.

The incentive is due to lapse in September 2022, and discussion is underway to determine whether it will be extended and, if so, in what form. "Unfortunately, our survey does not count R&D projects," Mustapha says. "To assess the impact, we have to find out if the system as a whole is actually increasing the number of new R&D projects and whether it is impacting GDP."

Influence the decision makers

According to Mustapha, South Africa needs more R&D projects to attract and retain researchers and R&D personnel. "It starts with a commitment: the CEO of a particular company has to make a decision to perform R&D. So, the decision makers are the people you have to influence and incentivise to do R&D. If a company doesn't have the commitment to do new projects, it could still get the tax incentive, but the effect of that might just be to increase the cost of the researchers, ultimately."

The survey findings suggest that there is an opportunity to expand R&D expenditure in the manufacturing sector, rather than exporting our raw materials to be developed into products elsewhere. "The findings of the survey show that we are not performing R&D at the level of a developed country," Mustapha says. "The majority of innovations that we develop are not novel, they are based on the adaptation or imitation of technologies from overseas."

Did you know?

As a census survey, the National Survey of R&D collects data from every source of R&D in the country. "A very small percentage of South Africa's 500,000 or so formal businesses do R&D, the bulk of which is performed by large firms," Mustapha says, adding that the challenge for the survey team is to identify the smaller players and to keep abreast of new sources of R&D. The team is currently working on a new online interface to make the survey easier to complete, and to provide visual tools to make the findings more accessible and useful to organisations looking to compare themselves against sector averages.

The 2021/2022 survey is expected to be released in December 2022.

Edited by: Andrea Teagle, a science writer in the HSRC's Impact Centre

Contact: Dr Nazeem Mustapha, a chief research specialist, Dr Mario Clayford, a research specialist and Natalie Vlotman, a senior researcher in CeSTII, and leader of the National Survey of R&D team.

nmustapha@hsrc.ac.za; mclayford@hsrc.ac.za; nvlotman@hsrc.ac.za

The greatest amount of R&D activity in research fields in South Africa takes place in the medical and health sciences. **Photo:** RF._.studio, Pexels

South Africa's landmark MeerKat telescope is the biggest and most sensitive radio telescope in the southern hemisphere. This composite radio image shows thousands of galaxies in a square degree of sky near the south celestial pole.
Photo: <u>SARAO; NRAO/AUI/NSF</u>

Photo: HSRC

Research on small-scale rental housing gains traction with policymakers

An HSRC report found that for emerging developers to comply with municipal planning and building regulations it would more than double their development costs. This would render their projects unviable because they could not charge sufficient rent to cover these elevated costs.

By *Ivan Turok* and *Andreas Scheba*

After years of being ignored, the contribution of what is arquably the fastest growing and most responsive housing sector in the country has begun to be recognised by parts of the government. Small-scale rental housing is a grassroots phenomenon that is transforming township living conditions by providing decent accommodation at prices many people can afford. It is also creating many jobs, skills and livelihoods by unlocking the agency and resources of emerging entrepreneurs.

A new HSRC report written in conjunction with the Development Action Group shows that realising the full potential of small-scale rental housing requires more active support on the part of the government, rather than bureaucratic indifference or the enforcement of inappropriate regulations. This means a change in mindset from the traditional top-down controls and restrictions, towards a more positive and enabling approach.

Various forces have come together to shift prevailing ideas about urban housing and to embrace rather than punish informal initiatives. The COVID-19 pandemic has prompted greater urgency in some places to improve people's well-being and physical security. The fiscal squeeze has curtailed the government's mass housing programme and prompted a search for new solutions to the crisis that are more bottom-up and shaped by demand. In the economy, there is growing pressure to support small and informal enterprises by eliminating unnecessary hurdles. Meanwhile, soaring discontent in the townships has compelled decision makers to do more about people's suffering and squalid living circumstances.

The government's inability to meet the housing shortfall has prompted many township homeowners to erect makeshift structures in their backyards to rent out to those with no roof over their heads. This spontaneous process of converting under-used property assets has been replicated time and time again across cities and towns, revealing enormous pent-up demand for cheap rental accommodation.

Evidence suggests that "backyarding" has probably delivered more shelter than any other form of housing production over the last two decades. This is a remarkable achievement considering the absence of any government support.

More importantly, the phenomenon has evolved in significant ways in recent years. A range of small-scale entrepreneurs and township developers have come to the surface who recognise the demand for better quality rental units made of bricks and mortar. They can charge four or five times more for a decent solid unit than for renting out a shack or wendy house. They can also recover their initial investment within three or four years if they manage their budgets prudently and contain their costs. But because they lack official building approval, they cannot raise long-term loans to finance construction, and have to rely on more expensive ad hoc sources, savings and personal loans instead.

The study found that for emerging developers to comply with the gamut of municipal planning and building regulations would more than double their development costs. This would render their projects unviable because they could not charge sufficient rent to cover these elevated costs. The main costs of compliance are development charges, more expensive building materials, rezoning fees, professional services, administrative fees and procedural delays. These onerous obligations mean that most developers either don't bother to apply at all for permission to build, or they give up part way through the process out of frustration.

The surge in affordable rental housing units has been profitable for property owners and beneficial for occupiers, but it has also imposed a heavy burden on public services and basic infrastructure in many townships. When five or six times as many households occupy a precinct compared with the original planned population capacity, the risks get multiplied of blocked sewers, electricity breakdowns, taps running dry and refuse collection systems being overwhelmed by the sheer volume of waste produced.

This is the spectre facing many well-located townships in the main cities.

These hazards are compounded by physical encroachments onto the pavements, underground services and public servitudes as property owners and developers seek to maximise their own space by extending their building footprints beyond their boundaries. This opportunistic behaviour can obstruct vehicle circulation and make it impossible for the municipality to gain access to the main water and sewage pipes and pylons for regular repairs and maintenance, creating the likelihood of eventual breakdowns and failures.

Municipalities have struggled not knowing what to do about these wicked problems. It is difficult to enforce established planning rules and building standards when they are clearly unsuited to township conditions and in the face of widespread community disregard and refusal to comply. Officials often retreat into crisis management – only getting involved when fires break out, sewage spills onto the streets or electricity sub-stations collapse. The everyday invisibility of the government erodes public trust and creates a risky and volatile environment where anything goes and unaccountable gatekeepers in the community can take charge and enforce their own rules.

Selected parts of the government have begun to recognise the need for a fundamental change in thinking and approach. This requires working with, rather than against, the momentum behind small-scale housing. It also means strengthening relationships with the various NGOs and other stakeholders involved in supporting it – forming partnerships rather than going it alone. The report discusses three essential ingredients of a more positive and progressive policy response.

First, it is essential to simplify certain built environment regulations and to streamline corresponding administrative procedures to make applying for building permission easier and quicker. The enormous complexity and time-consuming nature of the land-use planning and development management system in municipalities is prohibitively expensive for small and emerging developers to abide by. There are several ways in which developers could be exempted from rezoning requirements and building approvals could be fast-tracked.

Second, municipalities need to raise awareness among developers of the importance of core building standards and setbacks for health and related reasons and provide hands-on support to enable them to apply for planning permission. Inexperienced developers need constructive guidance and capacity building to safeguard the structural integrity of their properties and the safety of their tenants. This includes ongoing maintenance of their buildings to protect their value and prevent deterioration.

Third, it is vital to invest in the wider physical and social environment of these areas. This means additional resources for public infrastructure, schools, clinics and other facilities to accommodate the enlarged population in dignified conditions. It also means new ways of managing the public realm and open spaces to prevent vandalism and fly-tipping, and to improve personal safety and security. In short, municipalities need to transform their relationships with poor communities to improve two-way communication and accountability, and to rebuild trust by clarifying roles and delivering on their statutory responsibilities.

The City of Cape Town has plans that go further than those of other metros to enable small-scale rental housing. An adjustment to the planning system is under consideration to exempt developers in certain areas of the city from having to apply for rezoning. A new bylaw is also being explored to simplify building norms and standards for affordable rental units. There are proposals to establish local support offices in selected areas, whereby micro-developers can get expert help to prepare their building designs and planning applications. The mayor and deputy mayor have pledged support for these initiatives and the new Integrated Development Plan promises institutional backing.

Full recognition of the role of small-scale rental housing will be a journey rather than a quick fix. There is further work to be done to address the need for additional land, title deeds for property owners and long-term development finance. Practical ways of protecting tenants and neighbours from unreasonable and overbearing developers are also important.

With the appropriate support systems in place, there are much better prospects of shifting township trajectories from the disaster-prone 'low road' of overcrowding, insecurity and instability, onto the more sustainable 'high road' of liveable and vibrant neighbourhoods. The gradual formalisation of rental properties should also render their inherent asset value more visible and transferrable. Municipalities should be entitled to claim a share of these enhanced property values through rates and taxes in return for promising to reinvest in additional local infrastructure capacity and services.

The HSRC is committed to further research in this field to improve understanding of the small-scale rental housing phenomenon and to assist different spheres and departments of government to respond most effectively, both to minimise unintended consequences and to unleash the positive possibilities.

Author: Professor Ivan Turok holds the SARChI Chair in City-Region Economies at the University of the Free State (UFS) and is a distinguished research specialist at the HSRC. Dr Andreas Scheba is a senior research specialist at the HSRC and a senior lecturer at the UFS. iturok@hsrc.ac.za and ascheba@hsrc.ac.za.

Photos: HSRC

People on HIV treatment less likely to have unsafe sex, SA study finds

The idea that people react to a decline in perceived risk by acting in riskier ways has a long, chequered history in social science. A recent study by a team of HSRC researchers found that people living with HIV in South Africa who are on treatment actually take fewer sexual health risks. By *Andrea Teagle*

A recent study based in South Africa found that people living with HIV (PLHIV) who are on antiretroviral treatment (ART) are less likely to engage in risky behaviours than those who are not on treatment. Also, HIV-negative people are more likely than PLHIV to take sexual risks.

Led by the HSRC's Dr Nompumelelo Zungu, a team of researchers used data from a 2017 nationally representative survey of participants older than 14 years. They measured risky sexual behaviour through three self-reported components: condom use at last sexual encounter, consistent condom use, and number of sexual partners in the past 12 months.

The study found that PLHIV on treatment were significantly less likely to have had multiple sexual partners than PLHIV not on treatment. Those on treatment were also more likely to have used a condom during their last sexual encounter than those not on treatment. However, PLHIV not on treatment were still more likely to have used a condom than HIV-negative participants who were aware of their status. The researchers found no statistically significant association between HIV status, being on treatment, and inconsistent condom use.

Risk compensation

The finding that people on treatment engage in less risky behaviour goes against the 'risk compensation hypothesis': the idea that people respond to a decline in perceived risk by acting in riskier ways. In public health the worry is that the availability of health interventions, especially biomedical ones, may encourage people to take greater personal health risks, thereby offsetting the effect of the interventions.

According to the risk compensation hypothesis, PLHIV who are on treatment will be more likely to engage in riskier sexual behaviour, knowing that they are protected by ART and that risk of transmission is lowered. If that were so, the decline in new infections due to greater availability of treatment would be lower than anticipated.

That the study found the opposite suggests that 'HIV counselling and support, associated with engagement with healthcare by people on treatment, help these individuals to limit their risk-taking,' the authors write. Other research on risk compensation among people on ART has yielded inconsistent results; however, the findings of the current study align with evidence from a meta-analysis of 14 studies of lower risk-taking among PLHIV in sub-Saharan Africa.

A dangerous assumption

Understanding how human behaviour affects public health interventions is clearly useful. The challenge with the risk compensation hypothesis is that it can be – and frequently has been – used to argue against any measure that protects people from harm. This is in spite of the fact that empirical evidence often fails to support the theory. In instances where some individuals do change their behaviour as charged by the hypothesis, the benefits of the intervention tend to far outweigh the negative effects.

Science journalist Tim Requarth argues in Slate that the risk compensation hypothesis is part of a set of 'perversity arguments' that keep coming up because they are useful for protecting the status quo.

'For free-marketeers, the risk compensation hypothesis (or the "Peltzman effect," as it was later dubbed) provides the perfect *a priori* argument to shut down discussion. If any safety measure, by definition, is offset by risk compensation, then why consider safety regulations at all,' he writes.

Consider these familiar arguments against social protection – both of which have been disproved: 'If we offer child support grants, teenage girls will get pregnant just to take advantage of them', and 'If people have access to a basic income grant, they won't bother to work'. Since the intended beneficiaries of an intervention are going to act against their own best interests (it is implied), then not only is it pointless to intervene, but they also don't *deserve* to be helped.

Even where the argument is applied with good intentions – not to object to interventions, but to make sure that they are effective – it can backfire. During the COVID-19 pandemic, health experts in the US hesitated to advise the public to wear masks, assuming that people would take this as a free pass for reckless behaviour. The flip-flopping on messaging damaged public trust in science communication, undermining the pandemic response.

Clear communication

Where risk compensation might be one of the factors at play in a particular health outcome, often a more useful response is ensuring that people have enough information to recalibrate their behavioural responses. For example, in the case of ART treatment, ensuring that people know that viral suppression means that they cannot transmit the virus, but that they could still contract other strains of HIV and sexually transmitted infections through unsafe sex, or transmit HIV if they are not virally suppressed.

It's worth noting that many factors affect ART adherence and sexual risk behaviour, including stigma, mental health issues, and gendered power dynamics. In the current study, women were less likely to engage in safe sex, a finding that likely points to the reality that women are not always able to insist on condom use. The study also found that older age groups were more likely to report no consistent condom use. Interestingly, no consistent condom use was less likely among hazardous drinkers and participants with tertiary education.

Because the current study is cross-sectional, it cannot conclusively say that people changed their behaviour after going on ART; it is possible, for example, that people on ART were already more likely to engage in safer sex for other reasons. Nonetheless, the findings indicate that how human behaviour influences intervention outcomes is complex.

In another similar public health example, health experts have long debated whether the benefits of voluntary medical male circumcision – up to 60% reduction in female-to-male HIV transmission risk – might be offset by riskier sexual behaviour. Several recent large studies, including in Kenya, Zimbabwe and KwaZulu-Natal, have found on balance no evidence of this effect.

Similarly, a 2012 South African study conducted by the HSRC found no difference in condom use between men who had been circumcised and their uncircumcised counterparts. However, the study did find that those who had received the intervention were more likely to report having more than two sexual partners. The authors attribute this to 'possible shortcomings in the HIV risk reduction counselling interventions that are provided as part of voluntary medical male circumcision in the clinical setting'.

Ensuring accurate and culturally sensitive messaging was a core part of the national rollout of circumcision for HIV prevention in Eswatini. Treating individuals as agents capable of responding to information puts the onus on healthcare professionals to communicate risk accurately, and to support individuals to make smart health decisions for themselves.
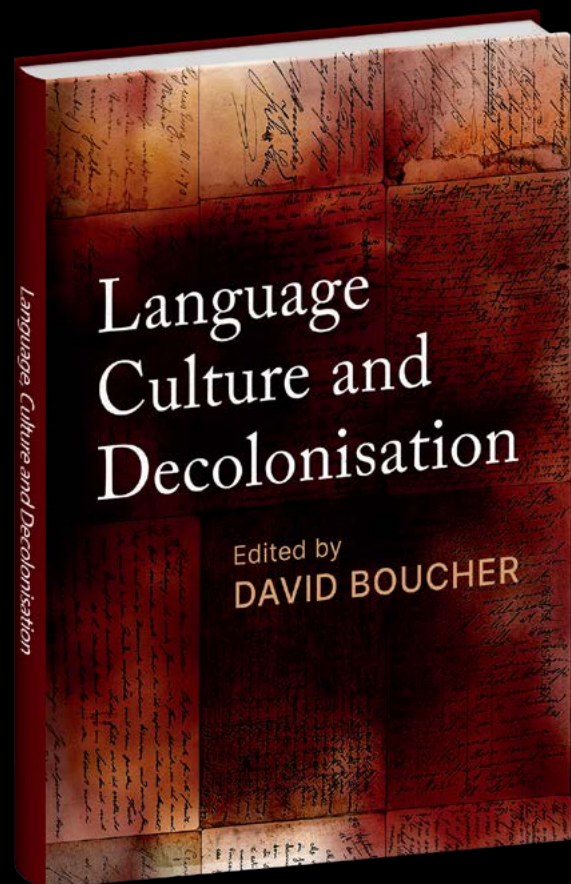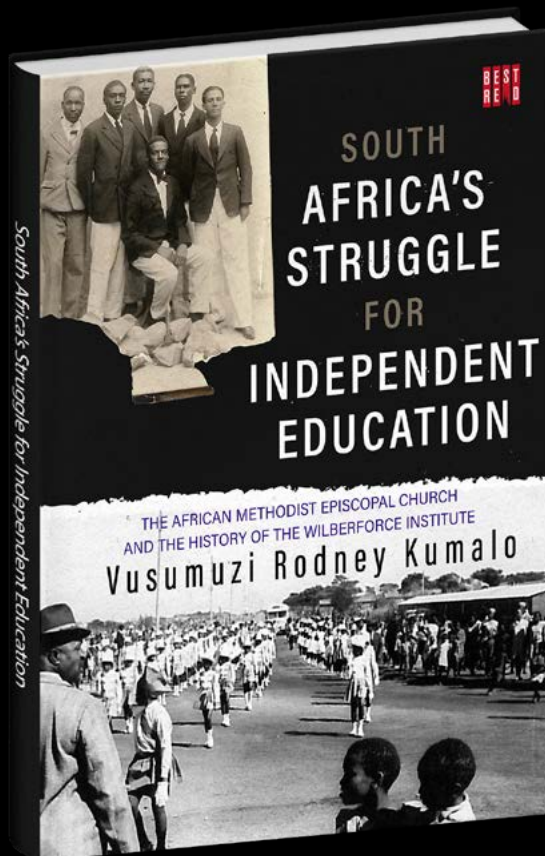
Author:
Andrea Teagle, a science writer in the HSRC's Impact Centre

Research contacts: Dr Nompumelelo (Mpumi) Zungu, a research director, and Shandir Ramlagan, a senior research specialist in the HSRC's Human and Social Capabilities division
mzungu@hsrc.ac.za; sramlagan@hsrc.ac.za

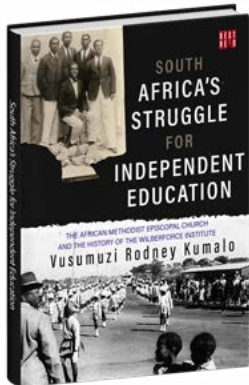**Photo:** Laura James, Pexels

South Africa's Struggle for Independent Education
The African Methodist Episcopal Church and the History of the Wilberforce Institute

Author:	Vusumuzi Rodney Kumalo
Publication date:	December 2022
ISBN (soft cover):	978-1-928246-49-7
Format:	235 x 168 mm
Extent:	256 pp

Price R299

ABOUT THE BOOK

South Africa's Struggle for Independent Education focuses on the Wilberforce Institute, one of the first major independent African schools in segregationist South Africa. It became the epicentre of the independent school movement in the Transvaal in the early twentieth century, demonstrating how despite profound linguistic differences and regional backgrounds, newly urbanised, mission-educated African people shared far-reaching educational aspirations in the rapidly growing cosmopolitan, gold-driven Johannesburg after the South African War (1899–1902).

The book examines how their common histories of oppression, segregation, displacement and dispossession, as well as despair and disillusionment with the mainstream missionary education, incited the new urban dwellers to wage the struggle for African independent education, and tells the story of how their determination led to the formation of the Wilberforce Institute.
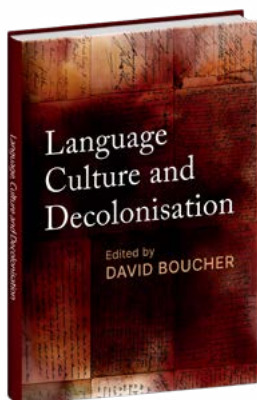
CONTACT:

skhan@hsrc.ac.za

HSRC PRESS

Taking African research to the world

Language, Culture and Decolonisation

Editor:	David Boucher
Publication date:	September 2022
ISBN (soft cover):	978-0-7969-2612-8
Format:	240 x 168 mm
Extent:	248 pp

Price R380

ABOUT THE BOOK

Language, Culture and Decolonisation discusses the importance of language in decoloniality from a global perspective, and the decolonisation process from the disciplinary vantage points of history, politics, philosophy, and literary studies.

The book makes original contributions to our understanding of how, in Fanon's words, colonialism gets under the skin of the colonised by taking control of a people's history, language and culture, and denigrating all three. This edited volume examines classic and contemporary arguments that make the case for the importance of indigenous languages, including creole, in the cultural formation and expression of one's identity. It also looks at arguments that make the case for the appropriation of the language of the coloniser as a method of subversion. French and English, for example, became the lingua franca of an elite pan-African intelligentsia.

This insightful book also shows how the coloniser, in promoting indigenous cultures and languages, may defuse and control potential political resistance, as we see in the case of the South African government and the Zulu nation.

CONTACT:

skhan@hsrc.ac.za