



# South Africa

## South Africa: Scenarios

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Last updated 16 November 2024 using IFs v8.26

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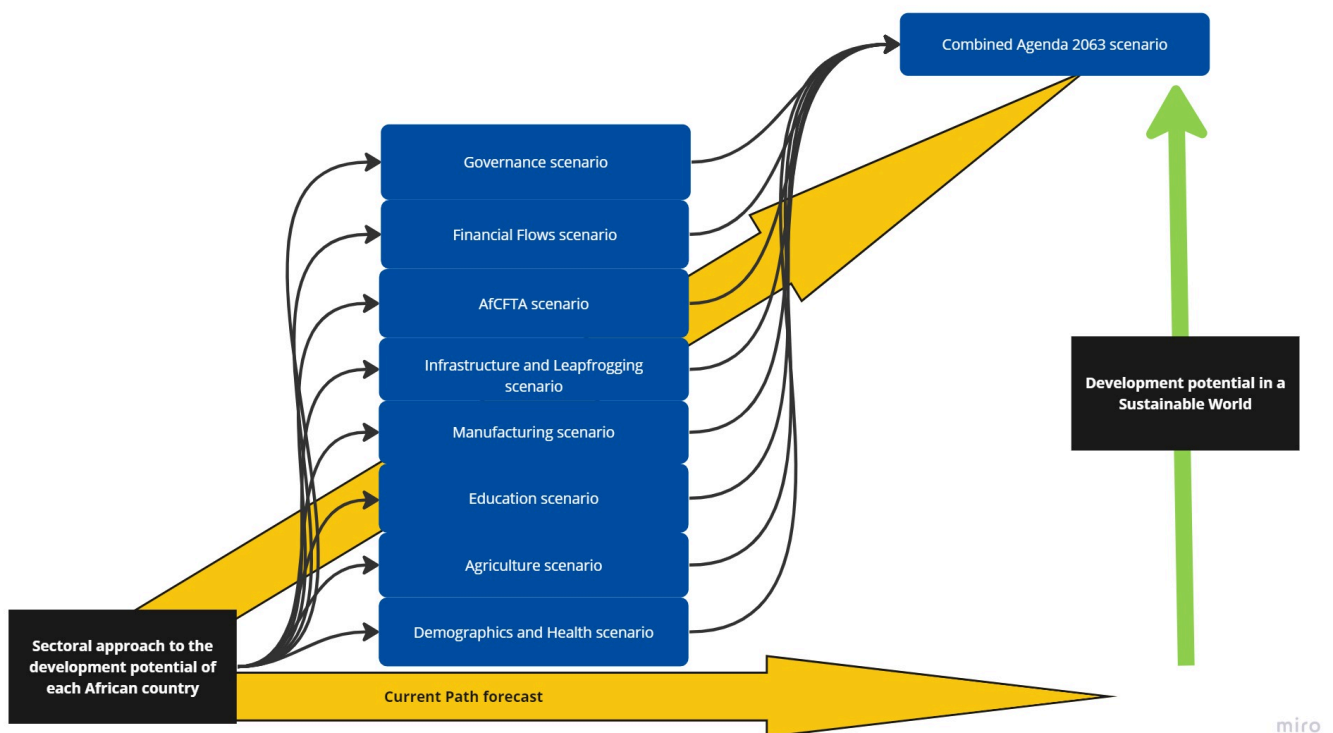
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## South Africa: Scenarios

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### About

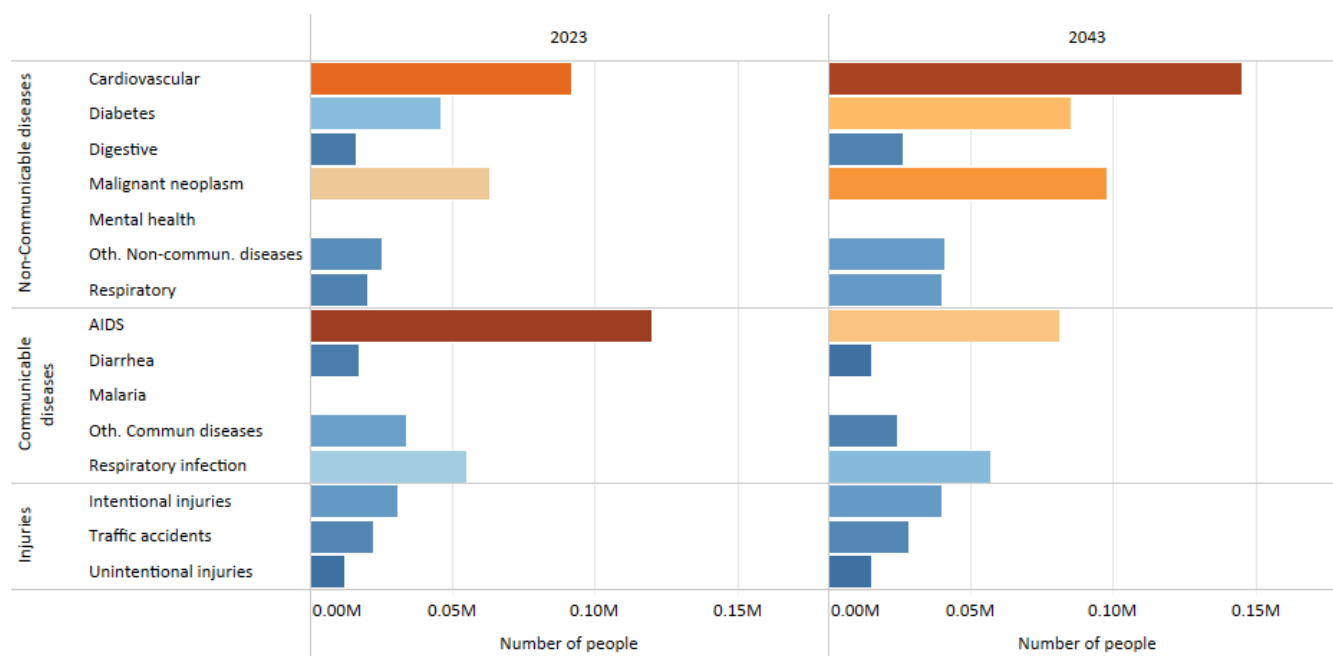
Chart 10: Relationship between Current Path and scenarios



The [About](#) page explains the eight sectoral scenarios and their relationship to the Current Path and the Combined scenario. Chart 10 summarises the approach.

## Demographics and Health scenario

Chart 11: Mortality distribution in the Current Path, 2023-2043



Source: IFs 8.26 initialising from IHME data

Chart 11 presents the mortality distribution in the Current Path for 2023 and 2043.

The Demographics and Health scenario for South Africa includes interventions to reduce the infection rate for HIV, reduce AIDS death rates as % of HIV infection rate, reduce the incidence of cardiovascular disease as well as for diarrhoea, diabetes, malignant neoplasm, respiratory infections, child mortality from infectious disease, maternal mortality rates, and increases the provision of improved sanitation and safe water. It also reduces malnutrition, obesity, smoking by men, the stunting rate for children under five and injuries from vehicle accidents.

The high levels of severe and acute malnutrition combined with high levels of inequality, poor health and high disease burden constitute a long-term driver of low human productivity. As a result, South Africa's poor human capital endowment is the most significant drag on multifactor productivity, followed by social capital. In summary, the drag that human capital has on productivity in South Africa reflects low levels of government efficiency since the country's expenditure on health (8.3% of GDP) is above the average for upper-middle-income countries (UMICs) globally, including those in Africa. Its spending on education, also a large contributor to human capital, is at 6.6% of GDP and similarly above the global average for UMICs (4.7%) but below the average for Africa's UMICs (5.3% of GDP, including South Africa).

Compared to non-African UMICs, Africa's eight UMICs have much younger populations and some, South Africa, Namibia and Botswana, have been severely affected by HIV/AIDS. South Africa, for example, had a 2023 median age of 28.8 years compared to a global average for UMICs at 36.1 years and has the largest HIV epidemic globally. Communicable diseases typically dominate in younger populations, and, as a result, South Africa (and other UMICs in Africa) underwent their [epidemiological transition](#), when deaths from non-communicable diseases exceed those from infectious diseases, shortly before 1990, much later compared to other countries at similar levels of development. The transition was reversed shortly after that as a result of HIV/AIDS and its significant spike in deaths from infectious diseases until 2019, when effective

treatment saw AIDS deaths decline to the extent that the country again went through its epidemiological transition. This unique pattern is also visible in neighbouring Botswana and Namibia. Had it not been for that, South Africa's mortality rates would have followed international trends, meaning deaths from non-communicable diseases would rapidly outpace those from infectious diseases as the population ages and the disease burden shifts.

The effect of HIV/AIDS in South Africa is still significant several years after the disease peaked. Average life expectancy, for example, at over 64 years in 1990, plummeted to 52 years by 2005, and by 2023, had only modestly recovered to 66 years, while the average life expectancy for UMICs globally has increased from 68.6 years to 77.1 years in that time. Resistance from President Thabo Mbeki during his presidency between 1999 and 2006 would delay the effective roll-out of **antiretroviral** treatment for several years. Eventually, during his second term, popular pressure would see antiretroviral therapy scale up, and its subsequent free rollout would cause substantial health improvement.

Discoveries of cheap, long-lasting drugs to avoid infection and the available treatments for prevention and treatment provide a positive future. The most exciting is a twice-yearly injection with a potentially affordable drug, **lenacapavir** that fully protects against HIV infection. For that reason, the interventions for reductions in HIV infections and AIDS mortality in the Demographics and Health scenario are aggressive, with 39 000 fewer South Africans dying as a result of AIDS in 2030 than in the Current Path, and 51 000 less in 2043.

Still, similar to many other UMICs, South Africa faces a **double burden of disease** with a steady rise in more expensive non-communicable diseases in the presence of significant, long-standing infectious disease prevalence.

For many years, the government has sought to **address** the many challenges that are faced in the health sector by, for example, committing to the Sustainable Development Goals (2015) and Universal Health Care (UHC) (2019), setting three main objectives for the health system (and the reform process): (i) to ensure equity in access to health services irrespective of ability to pay; (ii) the quality of health services should be good enough to improve the health of those receiving services; and that (iii) the cost of using healthcare services should not put people at risk of financial harm. The momentum has, however, stalled in recent years with a singular focus on developing a single health system financing model, the National Health Insurance (NHI).

Because of poverty and other factors, many South Africans generally do not pursue a healthy lifestyle. Despite being a food-producing nation, a significant portion of South Africa's population struggles with malnutrition in various forms, including undernutrition (resulting in stunting and wasting) and overnutrition (resulting in obesity). Males also **smoke** in larger portions than in other comparable countries. Sixty-eight per cent of women of reproductive age are **overweight or obese**, and 31% of men. Obesity is linked to non-communicable diseases, such as diabetes mellitus, coronary heart disease and hypertension, which are among the top 10 causes of death in South Africa. The problem is particularly severe among mothers and children. Thus, 27% of children under five are stunted, and 61% of children are iron-deficient. Undernutrition increases the risk of infectious diseases. The 2018-2023 National Food and Nutrition Security Plan was developed to respond to the high malnutrition rates comprehensively, but with disappointing **results**.

The Demographics and Health scenario models the impact of a comprehensive approach that emulates the impact of reforms that provide for competent management, administration and clinical oversight and governance; establishment of a national health information system; and steps to improve decision-making across private and public sector.

In 2023, infectious disease death rates per thousand people were 3.7, non-communicable death rates 4.3 and injuries 1.1. On the Current Path, the 2043 rates will be 2.4 from infectious disease deaths, 5.9 from non-communicable diseases and above 1.1 from injuries. In the Demographics and Health scenario, the rates will be 1.3 and 5.6 (lower by 47% and 9% respectively). Deaths from injuries also decline, though modestly so.

Chart 12: Infant mortality rate in the Current Path and Demographics and Health scenario, 2019-2043

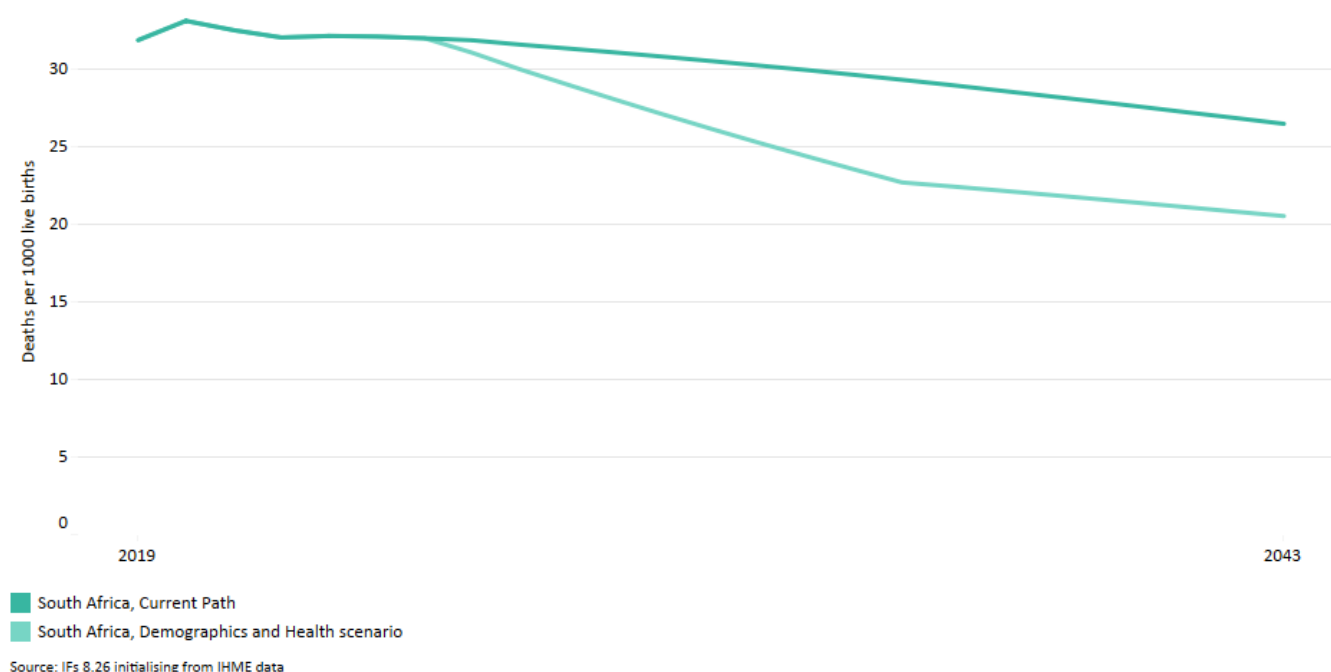


Chart 12 presents the infant mortality rate in the Current Path and the Demographics and Health scenario, from 2019 to 2043.

The infant mortality rate is the probability of a child born in a specific year dying before reaching the age of one. It measures the child-born survival rate and reflects the social, economic and environmental conditions in which children live, including their health care. It is calculated as the number of infant deaths per 1 000 live births and is an essential marker of the overall quality of the health system in a country.

In 2023, infant deaths per 1 000 live births in South Africa were almost three times above the average of UMICs globally (32.2 vs 11.6), primarily due to HIV infections and a high burden of **influenza-associated** mortality rates. Between 7 000 and 12 000 seasonal influenza-related deaths are estimated to occur annually in South Africa, of which half are in the elderly and about 30% in HIV-infected people. And, while the average for upper-middle-income countries (UMICs) globally can expect a near halving of infant mortality rates by 2043 (to 7.4), the Current Path for South Africa in 2043 is still an extraordinarily high 26.5 deaths per 1 000 live births. At that point, infant mortality rates in South Africa will even be above the rates for low- and lower-middle-income countries (LMICs) globally, mainly due to the lingering impact of HIV/AIDS. In the Demographics and Health scenario, which includes aggressive interventions on reducing HIV/AIDS, South Africa's rates will decline to 20.3 in 2043, a reduction of 31% on the Current Path.

South African expenditure on health has been constant at roughly 8% of GDP since 2012, slightly higher during the 2019-2020 COVID-19 pandemic. Compared with other UMICs, South African expenditure on its health sector as a portion of government expenditure is high, but more is needed given the burden of disease discussed previously. However, the country has a large and well-funded private healthcare system that serves around 27% of the population paid through individual contributions to health insurance or medical insurance plans. The private healthcare system is sophisticated but characterised by over-servicing and inflated costs, while the public healthcare system, responsible for 71% of the population, has steadily deteriorated over time. Evidence of the failures to address or strengthen stewardship, governance, leadership and management in this sector is now overwhelming, with corruption and irregular expenditure

endemic at all levels. According to [senior medical experts](#) writing in the South African Medical Journal in 2024, many parts of the health system are no longer able to deliver their assigned services, or an acceptable quality of care. As a result, the [gap](#) between the private and public healthcare systems is significant. For example, the amount spent on health care for each person with a medical aid scheme in South Africa is five times the amount spent on each person who relies entirely on public health facilities. The distribution of health professionals between the private and public sectors and urban and rural areas is also large.

In response, the government published a [National Health Insurance \(NHI\) Green Paper](#), followed by NHI pilot projects in 2012. The [NHI white paper in 2015](#) proposed the achievement of universal health coverage. The NHI is a centralised, national insurance fund from which the government will buy healthcare services from healthcare providers in both the public and private sectors. In May 2024, President Ramaphosa signed the NHI Bill, to be phased in by 2028. There is broad support for the plan, but concerns remain about various aspects, including the funding model, the extent of corruption and maladministration in the Department of Health and the implications for the private healthcare system.

In 2024, shortly after the elections that saw the formation of a Government of National Unity, a seven-member multidisciplinary panel of experts appointed by the Academy of Science of South Africa published its [report](#) that reflected on the widespread problems in the country's public healthcare system, including a large number of managers in acting positions, frequent changes in senior leadership, worse health outcomes than similarly resourced countries, and overall deterioration of morale and trust. The panel recommended eight steps to address key governance issues:

1. Define and communicate a clear public value mission and mandate for each level of the health service and each governance actor.
2. Update legislation and governance structures to insulate them from vested interests and give them executive rather than merely advisory functions.
3. Delegate authority appropriately to each level and within levels of the health system.
4. Get the right people – ethical people with the appropriate competencies – into leadership and management positions within the health system.
5. Surround managers and leaders with functional, fit-for-purpose systems so that they can do their work.
6. Support managers at every level with the resources, understanding and ability to build teams and attend to the relationships that make complex systems work.
7. Harness the authentic potential of community participation to ensure appropriate, respectful and responsive health services and monitor health service outcomes and processes.
8. Act on dereliction of duty and acts of corruption and protect whistle-blowers.

The extent to which South Africa can feed, educate and create employment opportunities for its large working-age population will partly be determined by its ability to improve its health.

Chart 13: Demographic dividend in the Current Path and the Demographics and Health scenario, 2019-2043

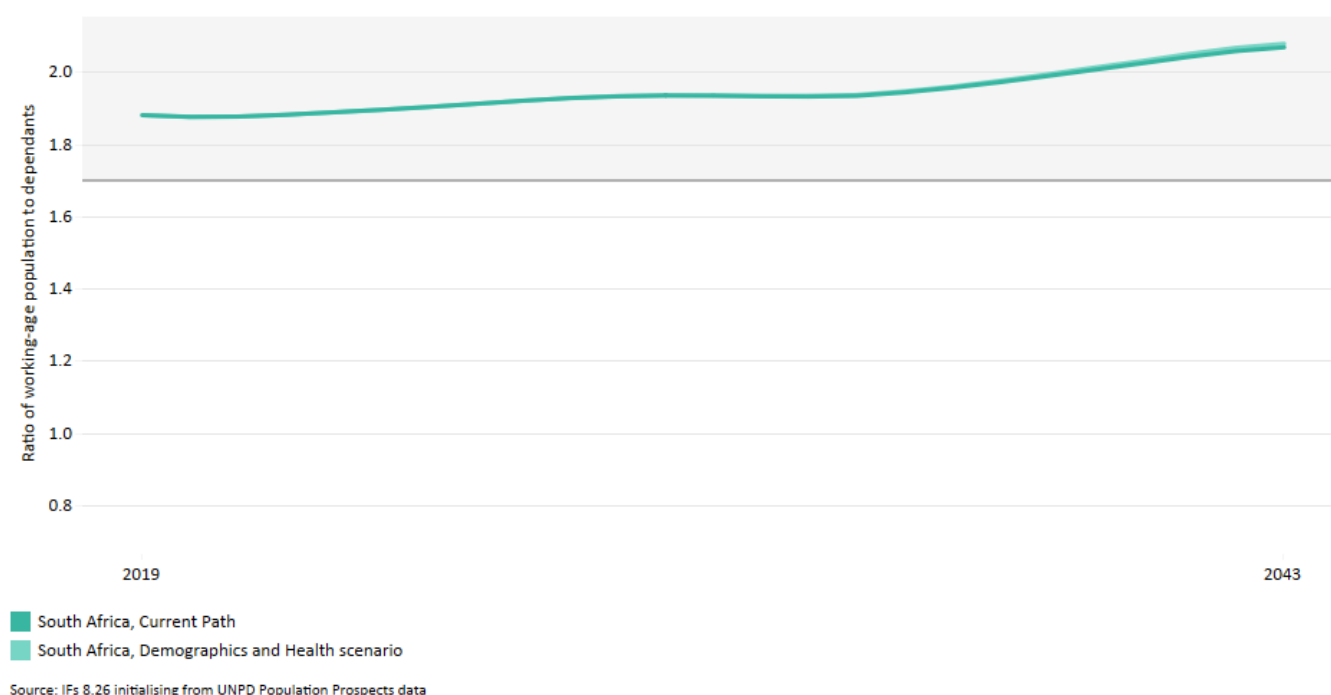


Chart 13 presents the demographic dividend in the Current Path and the Demographics and Health scenario from 2019 to 2043.

The demographic dividend is the window of economic growth opportunity when the ratio of working-age persons to dependents increases from 1.7 to 1 and higher.

South Africa entered a potential demographic window of opportunity around 2003 when the ratio of working-age persons (15 to 64 years of age) to dependants exceeded the ratio of 1.7 working-age persons to every dependant. Still, it has been unable to translate that dividend into more rapid economic growth and higher incomes. By 2023, the ratio had improved to 1.9 to 1, but the country had experienced a steady decline in GDP per capita for several years, given the impact of COVID-19, state capture, poor governance, poor health and an underperforming education system. Only six other African countries are in this potentially fortunate position: the island states of Mauritius, Seychelles and Cape Verde, and three countries in North Africa (Morocco, Tunisia and Libya). Labour productivity in South Africa has been on a slow decline for over a decade, but with prospects for improvements with the end of the COVID-19 crisis and expectations of improved government effectiveness and economic growth with the establishment of the GNU in 2024. South Africa's demographic dividend is set to increase and will peak at 2.1 to 1 in 2043 before starting to decline. As health and education indices improve, they will reduce the large drag that human capital currently exerts on economic growth.

While the contribution of labour to growth improves due to a healthier population, it also results in a larger elderly population (life expectancy in 2043 will be 73.7 years in the Demographics and Health scenario instead of 70.4 in the Current Path, with female life expectancy 6.1 years above that of men).

In the Demographics and Health scenario, South Africa's population increases by 1.1 million above the 2043 Current Path to 74.6 million people. A larger working-age population means that South Africa's GDP will be US\$21.5 billion larger in 2043 than the Current Path. GDP per capita will be US\$188 higher.

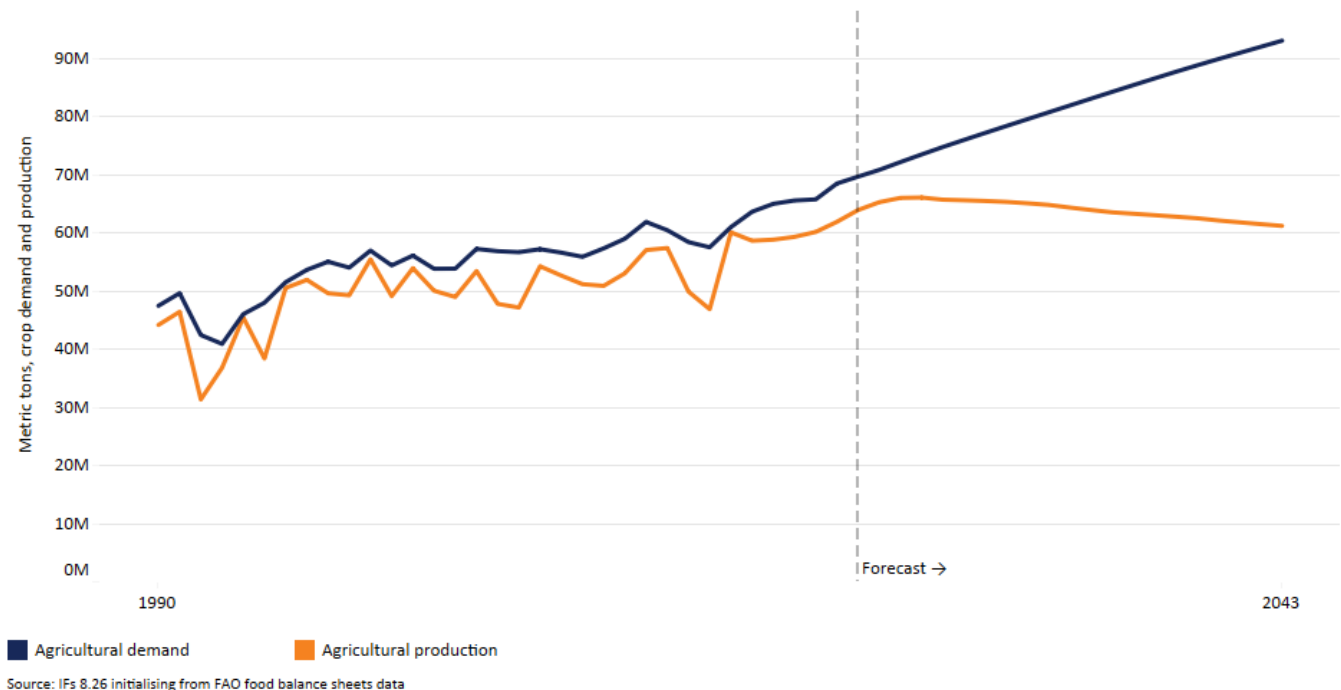
Outside Africa, most upper-middle-income countries (UMICs) have passed their peak dividend and are already experiencing a decline in the ratio of working-age persons to dependants. However, South Africa's working-age population is set to increase from 65% of its total population in 2023 to 68% by 2043. With sufficient capital and technology, the larger pool of workers could potentially accelerate rates of economic expansion.

The main reason for South Africa's poor productivity relates to its high disease burden, including [HIV/AIDS](#), cardiovascular, malignant neo plasma, respiratory infections, diabetes and other infectious diseases, on top of high levels of crime and injury, mortality from traffic accidents and unhealthy habits such as smoking and obesity.

As a result of its high disease burden, South Africa's 2023 rates of infant mortality, a good general indicator of the health sector as a whole, are almost 30% higher than the average for UMICs in Africa (32.2 vs 24.8 per thousand live births) and above even those for Botswana and Namibia, both of which also carry a large HIV/AIDS burden and also have very high levels of inequality. In the Demographics and Health scenario South Africa's infant mortality rate declines by a quarter in 2043 when compared to the Current Path but is still above the average for UMICs in Africa.

## Agriculture scenario

Chart 14: Crop production and demand in the Current Path, 1990-2043



The agricultural production and demand data in our modelling initialises from data provided on food balances by the Food and Agriculture Organization (FAO). This contains data on numerous agriculture types but disaggregates the forecast into crops, meat and fish, presented in million metric tons.

Chart 14 shows crop production and demand in the Current Path from 1990 to 2043.

The sector has been steadily increasing production over the past six decades. However, 2023 proved difficult due to continued load-shedding, animal disease outbreaks and port congestion. Despite these setbacks, the industry has demonstrated significant resilience between 2019 and 2023 compared to other economic sectors. These challenges include the disruptions caused by the COVID-19 pandemic and its associated lockdown regulations, the July 2021 unrest that severely impacted the food supply chain, and Russia's invasion of Ukraine, which led to increased costs of critical agricultural inputs and disrupted trade flows of essential commodities such as fertiliser, wheat, sunflower and rice.

Agriculture in South Africa is a vital sector that plays a crucial role in the economy, food production, employment, and poverty alleviation. It is the backbone of rural development, providing livelihoods for a significant portion of the population. During the [budget vote](#) in parliament in July 2024, the newly appointed agricultural minister noted that the sector contributes an average of 2.8% to the national economy (measured in GDP) and roughly 6% to total employment. Together with food production and processing, agriculture contributes up to 7% to GDP.

South Africa is among the few African countries achieving food security at the national level and is a net exporter of agricultural goods. Its varied climate supports one of the most diverse agricultural sectors globally, producing crops such as maize, citrus fruits, wine grapes, sugarcane, apples, and pears. It also boasts a vibrant poultry and livestock industry. South Africa's positive net trade balance has doubled over the past four years, driven primarily by citrus and maize

exports. The country's status as the second-largest global exporter of citrus remains a critical factor in the agro-processing sector's contribution to GDP. According to the [BFAP 2024 baseline report](#), maize and soybean yields have rapidly grown.

The agricultural sector's success is primarily driven by its innovative private sector, which responds to local and international market demands. The industry includes large-scale commercial farms and agribusinesses utilising modern farming techniques and technologies to boost productivity. The commercial sector consists of approximately 32 000 farmers, though a significant portion of agricultural output is produced by a small percentage of these farms.

In contrast, subsistence and smallholder farms—mainly located in areas under traditional authority—face challenges such as smaller plot sizes, inadequate infrastructure and poor access to critical inputs. Many farms acquired through the government's land reform program are underperforming, with more than 50% of agricultural land classified as low to medium potential. Targeted support and infrastructure development are necessary to make these lands productive. Furthermore, [two million](#) hectares of state-owned land, initially acquired for land reform, remain unallocated due to bureaucratic inefficiencies. The government also has more than two million hectares of land that has yet to be released to beneficiaries with title deeds or long-term tradeable leases. These farms were initially acquired as part of its land reform program but stalled due to inefficiencies. The 2003 Comprehensive Agricultural Support Programme ([CASP](#)) intends to assist emerging farmers by providing resources and infrastructure to improve productivity.

South Africa's agricultural sector also needs help with rainfall variability, including droughts, severe flooding and water scarcity. The 2015/2016 El Niño event, which caused the worst drought since [1904](#), significantly impacted maize and wheat production. Water scarcity, worsened by inadequate irrigation infrastructure and competing demands from different sectors, limits crop production, especially in regions with limited reliable water sources.

Despite production keeping pace with demand in past decades, South Africa risks becoming a net food importer in the coming years without further investments in infrastructure and agricultural yields. According to the Current Path, demand will outstrip supply beyond 2027, leading to a deterioration in food security. By 2043, crop production will be 60.7 million metric tons, and demand will exceed 83 million metric tons, translating to a 21.3 million metric ton shortfall.

Soil degradation, driven by erosion, nutrient depletion, and poor land management practices, contributes significantly to declining productivity. Moreover, sufficient investments in sustainable farming techniques and soil conservation efforts leave the sector ill-equipped to counter these challenges, leading to yield stagnation in the Current Path.

To counter these challenges, the Agriculture and Agro-Processing Master Plan ([AAMP](#)), adopted in 2022, seeks to enhance productivity, inclusivity and sustainability. Key strategies include improving infrastructure, expanding rural market access, and adopting sustainable farming practices. By focusing on increasing yields, expanding production, improving infrastructure, and adopting sustainable practices, the plan aims to drive long-term growth and resilience in the agricultural and agro-processing industries. The Agricultural Policy Action Plan ([APAP](#)) complements these by focusing on value-chain development and smallholder support. The Comprehensive Agricultural Support Programme (CASP), initiated in 2003, also provides resources to help emerging farmers involved in land reform. The

According to a [BFAP study](#), irrigated maize yields in certain provinces, such as the Eastern Cape, could reach up to 12.5 metric tons per hectare, a significant increase from current levels of 5.07 metric tons per hectare in commercial farming and 2.36 metric tons in subsistence farming. Other vital crops, such as wheat, soybeans, citrus, and grapes, also have the potential for increased production if infrastructure constraints—such as road access, reliable electricity, and efficient irrigation systems—are addressed.

BFAP remains optimistic in its medium-term outlook, noting that investments in improved irrigation systems, water management and new technologies can enable South Africa to maintain its net exporter status. In particular, the

expansion of irrigated agriculture and the use of climate-resilient crops are essential for addressing the challenges posed by climate variability.

The Agriculture scenario, as outlined in the [Agriculture](#) theme, mirrors these policies through ambitious yet feasible increases in yields per hectare, additional groundwater withdrawal, an aggressive rollout of irrigation systems, efforts to reduce food loss and waste, and the expansion of rural access roads. South Africa could significantly boost its agricultural productivity by investing in these areas. The country can also increase land under cultivation using available state-owned land and conducting tenure reform in the former homeland areas.

By addressing these challenges and investing in critical areas such as irrigation and soil management, South Africa's agricultural sector could increase average yields to 8.7 metric tons per hectare by 2043, enabling total crop production to rise to 96.1 million metric tons. This would secure South Africa's food supply and allow for increased export earnings, reinforcing the country's role as a critical player in the SADC region's food security.

**Chart 15: Import dependence in the Current Path and Agriculture scenario, 2019-2043**

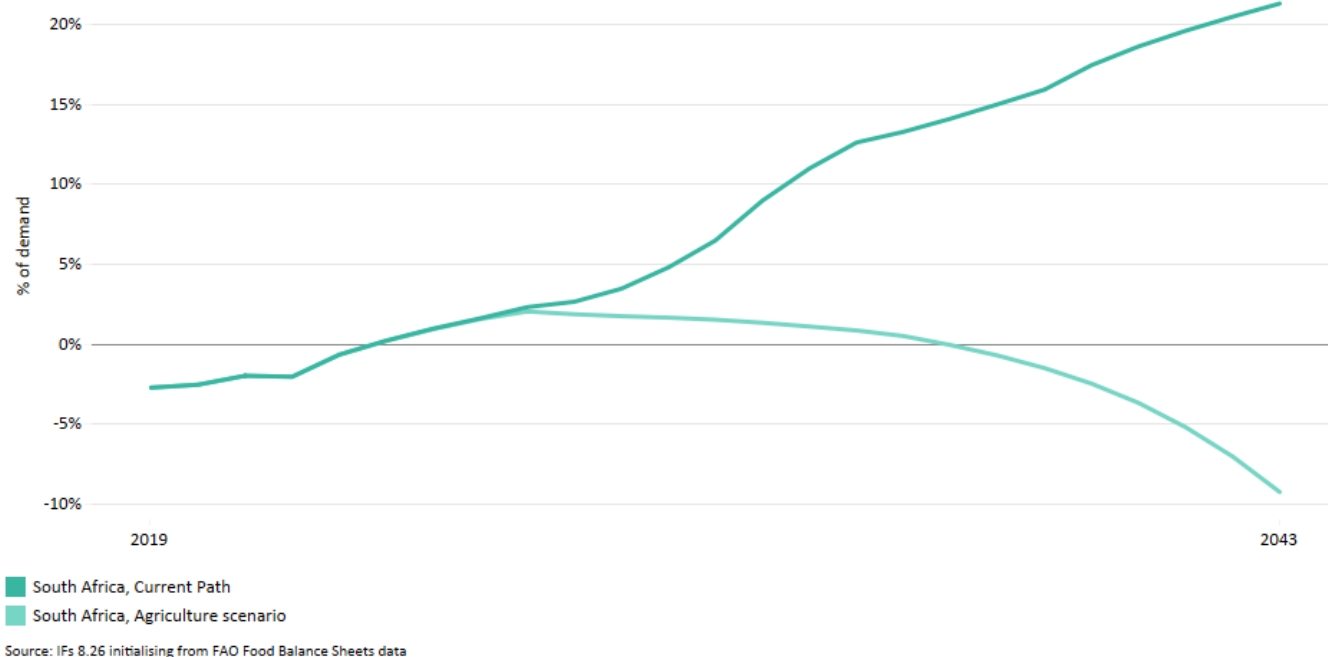


Chart 15 presents the import dependence in the Current Path and the Agriculture scenario, from 2019 to 2043.

South Africa remains one of the few African countries that are essentially food secure, contributing significantly to the food supply in the SADC region. However, future projections are less optimistic. The Current Path is that South Africa's reliance on agricultural imports will grow to 15% of its domestic demand by 2043, indicating increased vulnerability to global market fluctuations.

The Agriculture scenario presents a much more hopeful trajectory with South Africa exporting the equivalent of 21% of its demand by 2043. It illustrates that with targeted interventions, South Africa could shift towards producing a net surplus (it currently has a small deficit), thereby enhancing its capacity to support domestic and regional food security. In the

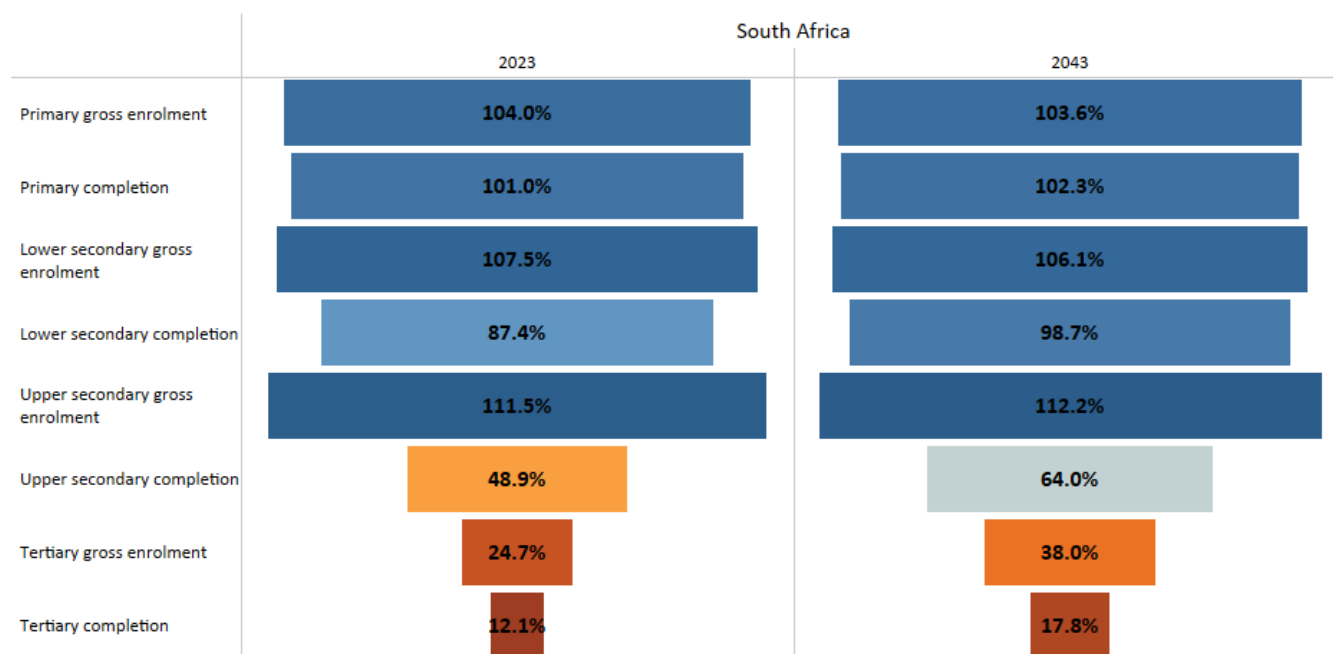
Agriculture scenario, agricultural exports will increase to 28 million metric tons, equivalent to US\$6.2 billion, compared to the 3.6 million metric tons (valued at US\$1.3 billion) in the Current Path for 2043. Additionally, crop imports will decrease to US\$4 billion, compared to US\$6 billion in the Current Path.

The proposed interventions would also stabilise the agricultural sector's value-added contribution to GDP which is at 2.4% in 2023 to 2.9% of GDP in 2043, in contrast to the 1.7% on the Current Path. This emphasises the critical importance of strategic investments and policies in agriculture to safeguard food security, bolster economic growth, and reinforce South Africa's role as a critical food supplier in the region.

## Education scenario

Chart 16: Progress through education funnel in the Current Path, 2023 and 2043

% of of-age children



Source: IFs 8.26 initialising from Barro-Lee data

Chart 16 depicts the progress through the educational system for primary gross enrolment, primary completion, lower-secondary gross enrolment, lower-secondary completion, upper-secondary enrolment, upper-secondary completion, tertiary enrolment, and tertiary completion in the Current Path (for 2023 and 2043). The numbers reflect per cent of-age children.

With the advent of democracy, South Africa's education system undertook the enormous task of redressing the legacy of apartheid, particularly the chronic underfunding of black learners. However, progress has been stymied by several key issues, such as policy incoherence, poor management and corruption, aggressive teacher unionisation, an insufficient focus on technical and vocational education at secondary and tertiary levels, and a focus on early childhood development—issues that are now attracting more government attention.

A 2016 comprehensive [report](#) from the University of Stellenbosch identified four binding constraints to improving educational outcomes, particularly for learners from low-income backgrounds:

1. **Weak Institutional Functionality:** This is most pronounced at the provincial level, where ineffective governance and administration impede the implementation of national policies.
2. **Undue Union Influence:** Union activities, while protecting workers' rights, have sometimes contributed to resistance against necessary changes, such as performance evaluations and accountability measures for teachers.
3. **Inadequate Teacher Knowledge and Skills:** Many teachers need more content knowledge and pedagogical skills to deliver quality education, particularly in critical areas like literacy and numeracy.
4. **Wasted Learning Time:** Inefficient use of school hours and insufficient opportunities for learning further exacerbate educational deficits.

The consequences of these systemic issues are stark. The 2016 report revealed that around 60% of South African children could not read for meaning by the end of Grade 3.

The subsequent Covid-19 pandemic compounded these issues, with school closures and rotational timetables exacerbating educational inequalities, particularly in poorer communities. A 2021 [study](#) paints an even bleaker picture, showing that 81% of Grade 4 learners in South Africa cannot read for meaning in any language. This suggests that recent learning losses have set reading outcomes back a decade.

Money is not the problem. In 2023, South Africa's government allocated 6.6% of its GDP to education, almost two percentage points higher than the average for upper-middle-income countries (UMICs) globally and surpassed the average for UMICs in Africa. Despite this substantial investment, the South African education system grapples with significant challenges rooted in its historical context and current systemic inefficiencies. South Africa is the most critical learning [underperformer](#) relative to GDP per capita among low- and middle-income countries. With a spending commitment equivalent to some high-performing Scandinavian countries, South Africa does worse than Kenya or Tanzania, which have GDP per capita of less than one-fifth of South Africa. Chart 16 shows that throughput along the education funnel is high; the problems are related to quality - also reflecting poor governance, corruption and government efficiency.

In recent years, there has been some progress towards addressing these challenges. The South African education system is gradually shifting towards greater coherence, with an increased focus on technical and vocational training to prepare students for the demands of the Fourth Industrial Revolution. The 2013 White Paper for Post-School Education and Training and the subsequent [National Plan for Post-School Education and Training 2021-2030](#) envisioned a significant increase in enrolment at Technical and Vocational Education and Training (TVET) and Community Education and Training colleges. The goal is for these institutions to enrol over two-thirds of all post-school education students, thus expanding opportunities for practical, skills-based learning.

In addition to practical matters relating to overcrowding, lack of basic facilities and teacher shortages, recommendations relating to improved education include the need for policy coherence across the various departments and levels of government (the most significant problems appear to lie at the provincial level), better management and aggressive efforts to eliminate corruption in the education sector, create a culture reflecting lifelong learning for teachers, as well as find a balance between teacher unionisation, parent involvement and government line responsibility. South Africa already focuses on early childhood development and technical and vocational education at secondary and tertiary levels.

The Education scenario addresses some of these shortcomings through ambitious yet attainable improvements in the South African education system, including higher intake, transition and graduation rates from primary to tertiary levels. It also emphasises gender parity, additional vocational training at the secondary level, and an increase in the share of science and engineering graduates. Perhaps most importantly, we include interventions to improve the quality of primary and secondary education.

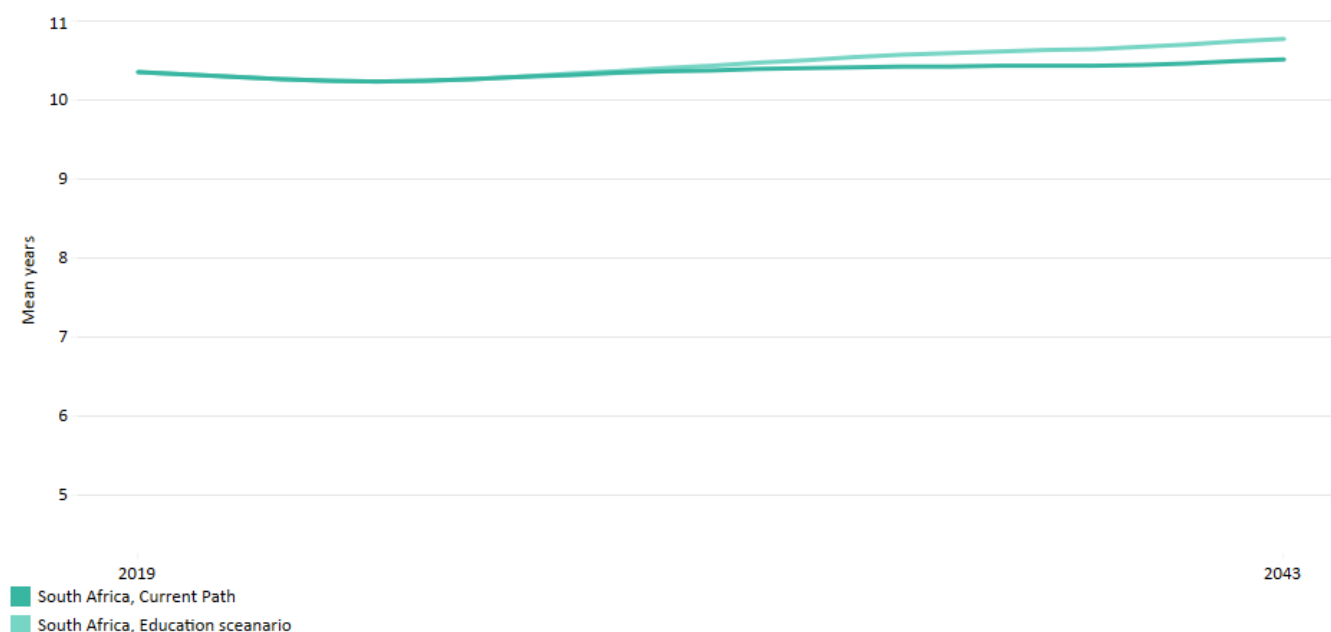
If successfully implemented, this scenario could significantly boost net enrolment rates for secondary and tertiary education, improve primary and secondary test scores, and improve quality, leading to better educational outcomes.

In the Education scenario, upper-secondary completion rates will increase from 49% of children of age in 2023 to 77% in 2043. The Current Path is 64%. Tertiary education graduation rates will increase to 24% of the age group in 2043 compared to 18% in the Current Path by 2043. In 2023, it is 12%.

Regarding quality, the scenario improves total primary test scores by 13% and total secondary test scores by 17%.

Chart 17: Mean years of education in the Current Path and Education scenario, 2019-2043

15 to 24 year age group



Source: IFs 8.26 initialising from Barro-Lee data

Chart 17 presents the mean years of education in the Current Path and in the Education scenario, from 2019 to 2043, for the 15 to 24 age group.

The average years of education among the adult population aged 15 to 24 serves as a crucial indicator of how the stock of knowledge in society is evolving. In South Africa, the mean years of education reached 10.3 in 2023, aligning closely with the 10.2 average for upper-middle-income (UMIC) African countries and significantly surpassing the 7.1 average for Africa as a whole. While the mean years of education among the female population are slightly below the average for UMICs in Africa, male attendance is notably 1.1 years lower than female attendance, yet it remains slightly above the average for upper-middle-income peers.

The establishment of the Government of National Unity in July 2024 includes new leadership in the Department of Basic Education and the promise of **reform**. The government's priorities now include creating safer and better schools, addressing critical issues such as infrastructure and educational quality, and making foundational changes that could influence long-term educational outcomes. These reforms are essential, as educational outcomes evolve slowly, requiring consistent investment and policy innovation to foster significant improvements over time.

In the Education scenario, and reflecting this renewed commitment, South Africa's investment in education will remain steady, with education expenditure expected to account for 4.93 percent of GDP by 2043. In this context, the increase in mean years of education to 10.8 by 2043 reflects the impact of the government's renewed focus on educational reform, placing South Africa slightly above the average for its income peers.

## Manufacturing scenario

Chart 18: Value-add by sector in the Current Path and Manufacturing scenario, 2023 and 2043

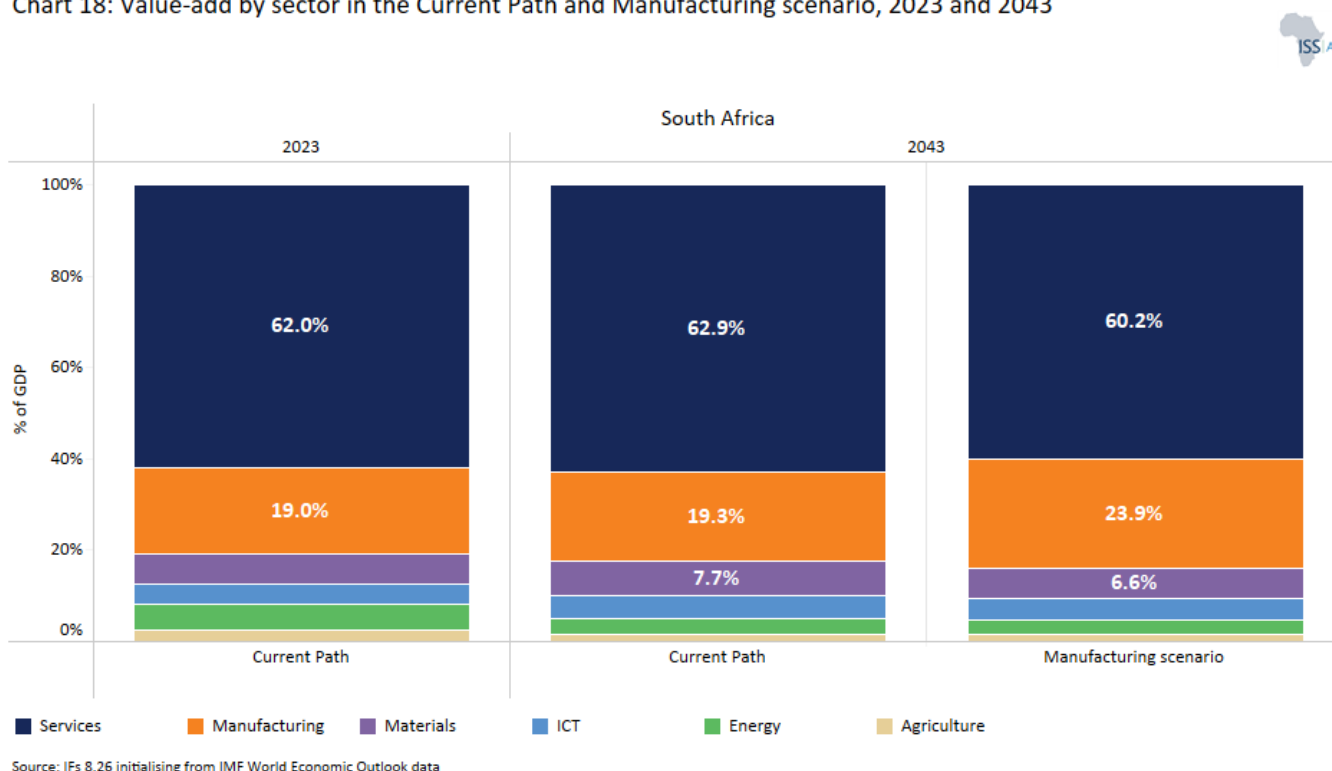


Chart 18 presents the value add by sector, for 2023 and 2043, in the Current Path compared to the Manufacturing scenario.

The contribution of South Africa's manufacturing sector to GDP peaked at almost 25% in 1981, having steadily increased since independence in 1961. During this period, South Africa was under more punitive international sanctions and, amongst others, developed a sophisticated domestic arms industry that relied on various measures, such as large oil from the coal sector and general import replacement policies. Import replacement has its limits, however, and isolated from the global financial market and the positive effects of technological transfers, the country was, by the 1980s, essentially bankrupt.

With the transition from apartheid in 1990, many changes occurred, including rapidly opening up South Africa's economy but with adverse effects on its hitherto protected industries. The country experienced significant deindustrialisation as the protection and subsidies that specific sectors enjoyed were removed. In addition to a much more open economy and international competition, the flood of Chinese manufacturing goods into Africa has undercut South African manufacturing exports in its natural hinterland. Various domestic policy measures intended to correct domestic economic imbalances, particularly stringent measures to effect **black economic empowerment** and associated requirements on ownership and shareholding, also discouraged foreign investment.

Whereas the manufacturing sector in other UMICs, such as Belarus, Thailand, and Hungary, was above 30% in 2023, in South Africa, it is at 19% (US\$74.6 billion), comparable to Brazil and Namibia. On the Current Path, the contribution from manufacturing remains stagnant at 19.4%, although it increases in size to US\$122.8 billion.

Various documents frame South Africa's industrial policies, including the National Industrial Policy Framework (NIPF) and

Industrial Policy Action Plan (IPAP). The country has a history of using industrial policy to deploy trade instruments, incentives, tools, and regulations. In recent years, the Department of Trade, Industry, and Competition embarked upon partnerships, developing a masterplan for each of eight sectors covering areas such as automotive, clothing, steel, and poultry to support localisation, increased investment, exports, and job retention.

In the Manufacturing scenario, reasonable but ambitious growth in manufacturing is envisaged through increased government revenues, part of which is invested in the manufacturing sector as part of a coherent and unified national framework for reindustrialisation and more expenditure on research and development (R&D). An increase in firm taxes funds the increase. The scenario includes an increase in female and male labour participation rates, reflecting growth in employment as part of a deliberate strategy to grow light manufacturing. Increased welfare transfers to unskilled workers mitigate the initial rises in inequality typically associated with a manufacturing transition and transfers from skilled workers to the government. The two interventions (more transfers to unskilled workers and reduced transfers to skilled workers) emulate government efforts at redistribution, such as furthering its progressive tax regime to reduce inequality.

In the Manufacturing scenario, the sector's contribution to GDP increases from 19% in 2023 (US\$74.6 billion) to 23.9%, equivalent to US\$166.2 billion in 2043, comparable to the contribution of manufacturing to GDP in Guatemala and Columbia. The Current Path for 2043 is 19.4% (US\$122.8 billion). Government policy is to support new energy vehicle production and green industrialisation. The country intends to leverage its export footprint with the BRICS+ block through the African Continental Free Trade Area (AfCFTA) and through the African Growth and Opportunity Act (AGOA) with the US and its Economic Partnership Agreement with the EU.

The Manufacturing scenario increases the size of the country's economy by 9.6% in 2043 (to US\$695 billion instead of US\$634 billion in the Current Path). Instead of an economy that is US\$634.1 billion in size in 2043, the size of the manufacturing sector will then contribute 23.9% instead of 19.4% to GDP. Hence, the manufacturing sector is US\$43.4 billion larger in 2043 compared to the Current Path.

In an effort to reduce inequality and extreme poverty, South Africa has a progressive tax regime and already allocated 10.72% of GDP to welfare transfers in 2023 (US\$42 billion), but below the average rate in UMICs in Africa and globally. In the Manufacturing scenario, transfers to unskilled workers come to an additional US\$25.8 billion by 2043 (i.e. on top of the transfers in the Current Path). The transfers are funded by higher taxes on skilled workers and increased firm tax. The result is that the Manufacturing scenario has the largest impact on poverty reduction and also reduces inequality as measured using the Gini coefficient (a measure of statistical dispersion intended to represent the income or wealth distribution of a nation's residents and is the most commonly used measure of inequality).

Visit the [Manufacturing](#) theme for more on our conceptualisation and details on the scenario structure and interventions.

Chart 19: Value-add by the manufacturing sector in the Current Path and Manufacturing scenario, 2019-2043

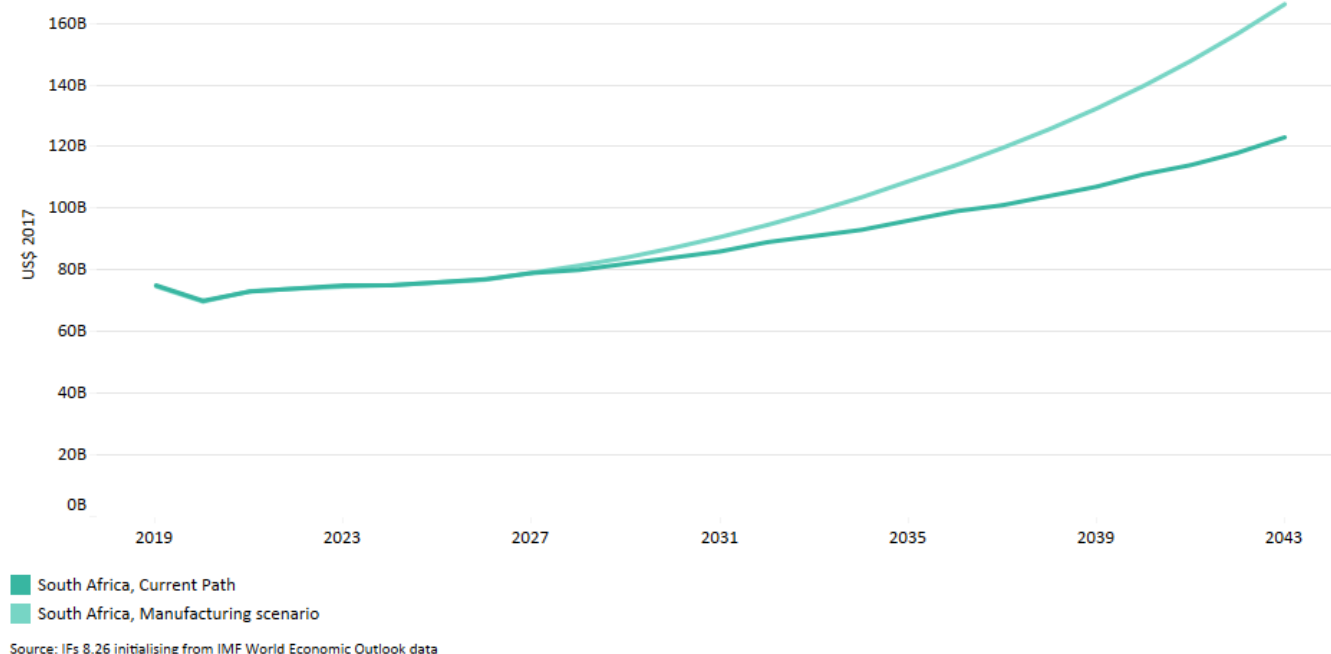


Chart 19 presents the contribution of the manufacturing sector to GDP in the Current Path and in the Manufacturing scenario, from 2019 to 2043. In addition to a larger economy, the scenario also reduces the number of persons living below US\$6.85 by 3.1 million, the most significant contributino amongst the eight sectoral scenarios.

In addition to a revitalised mining sector and ongoing support to its vehicle manufacturing sector, repairing and rebuilding South Africa's existing infrastructure in water, electricity and sewerage provide large opportunities for investment in intermediate industrialisation, particularly. For example, the ESKOM [Transition Development Plan 2022-2031](#) indicates that the total capital expenditure for transmissions amounts to approximately R188 billion of which R144 billion is for capacity expansion and R34 billion in capital expenditure. Together with the demand for the repair and expansion of other parts of basic infrastructure, electricity transmission offers a huge opportunity for industrialisation. Concurrent with investments in manufacturing the country would need to reduce the carbon-intensity of its products lest it fall victim to the EU's Carbon Border Adjustment Mechanism (CBAM) that will impose tariffs on imports based on their carbon content.

## AfCFTA scenario

Chart 20: Export and imports as % of GDP in the Current Path, 2000-2043

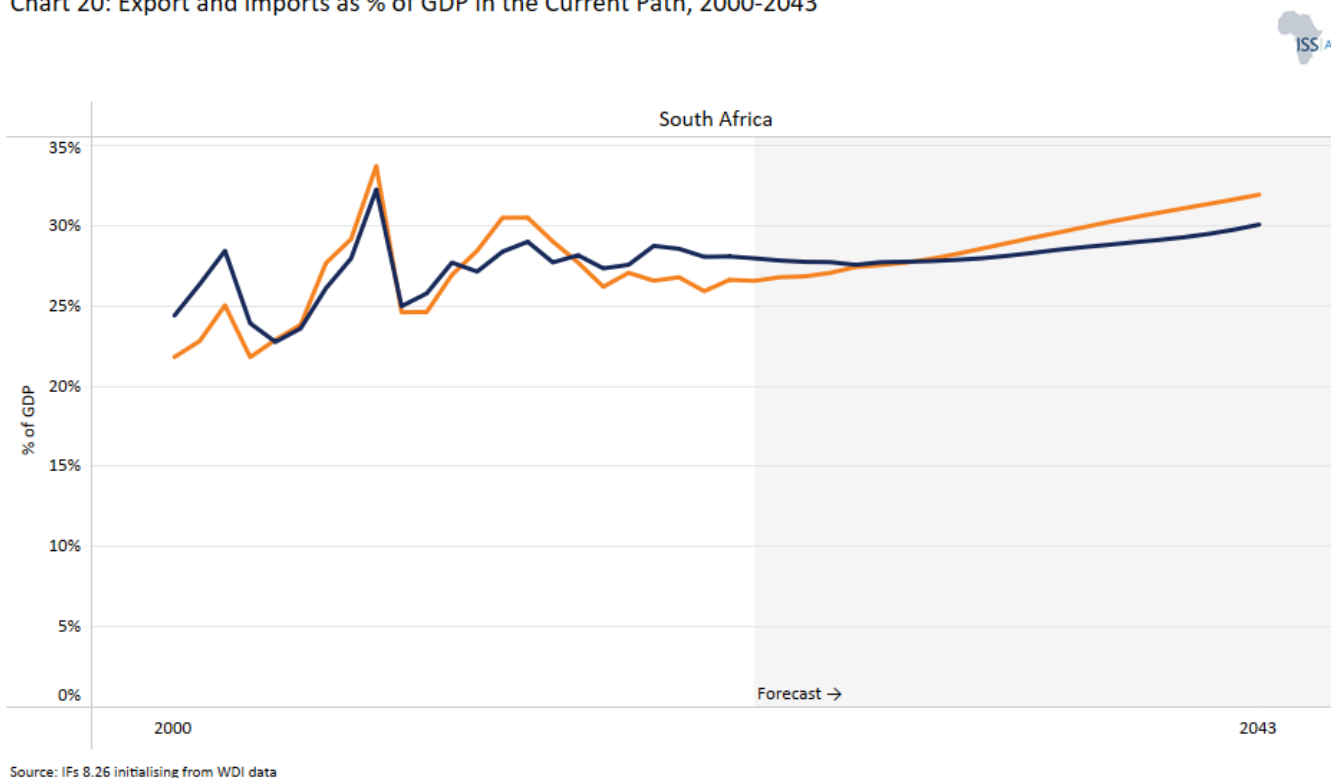


Chart 20 depicts exports and imports as a percentage of GDP from 2000 to 2043 in the Current Path and the AfCFTA scenario.

The AfCFTA scenario emulates the full implementation of the African Continental Free Trade Agreement by 2034. The scenario increases manufacturing, agriculture, services, ICT, and materials<sup>[1]</sup>. It also includes improved multifactor productivity growth from trade and reduced tariffs for all sectors. The tariff reductions differ per sector and are per the AfCFTA agreement. According to the [World Bank](#), the full implementation of the AfCFTA could increase South Africa's income by 3.8% relative to the Current Path by 2035. We used this number against which to benchmark the impact of our AfCFTA scenario.

Please visit the theme on [AfCFTA](#) for further conceptualisation and details on the scenario structure and interventions.

Since 1962, when the UN General Assembly took a first (non-binding) resolution condemning South Africa's apartheid policies, calling for economic and other sanctions, the country was subject to various trade, arms, sports and financial sanctions, eventually placing significant pressure on the South African economy. Internal pressure mounted, culminating in a limited and eventually a national state of emergency in 1985. 1977, the voluntary UN arms embargo became mandatory, and a voluntary international oil embargo followed in 1987. Meanwhile, the US and, eventually, the International Monetary Fund (IMF) were prohibited from providing loans to the country. By 1989, bipartisan support in the US favoured economic sanctions, and considerable momentum had built up in favour of disinvestment from South Africa. Large capital flight from the country eventually contributed significantly to the unravelling of apartheid.

After the unbanning of Nelson Mandela and the ANC, the country had the option of increased participation in regional and global value chains to facilitate access to intermediate goods, attract foreign direct investment (FDI) given substantial

international goodwill, and build the capabilities of local suppliers and, hence, promoted industrialisation and productivity growth. However, the absence of supportive conditions for competitiveness improvements means that poor trade integration, rapid liberalisation and competition from China led to deindustrialisation and locked South Africa into low-value production and exports. Still, in its Atlas of Economic Complexity, the Growth Lab ranks South Africa as the 68th most complex and diversified export basket out of 133 studied. The South African economy is considered "modestly complex" by international standards and ranked one position below Egypt, the most complex in Africa. An increase in the complexity ranking reflects positively on national productivity and economic sophistication.

The associated analysis by the Growth Lab indicates a decline in complexity compared to a decade prior; however, although South Africa is still slightly above expectations given its income levels, it dropped three positions in the global ranking. The analysis by the Growth Lab confirms the steady deindustrialisation that occurred since manufacturing value-add peaked at 25% of GDP in 1981.

Compared to other upper-middle-income (UMIC) countries globally, South Africa is significantly more dependent on income from primary exports at around 10.6% of GDP and energy imports. The average energy import share for UMIC countries (excluding China) is 6.2%. Moving forward, South Africa is, however, positioned to take advantage of many opportunities to diversify its production, given an end to its debilitating electricity shortages, promises of better governance and the opportunities presented by regional and international trade. To this end, the energy transition modelled in the Large Infrastructure and Leapfrogging includes a rapid decline in South Africa's coal mining industry, including associated exports.

However, South Africa's trade and industrial policy has been **cautious** regarding trade agreements. Instead of an export orientation, recent years have seen an increased focus on localisation, thus increasing the incentive to produce for the protected domestic market over exploring new export opportunities. This has raised barriers for new entrants and lowered competition for incumbent firms. These policies have reduced the efficiencies in South Africa's manufacturing sector and eventually reduced the country's ability to compete internationally. South Africa's declining trade competitiveness contrasts sharply with its value-added trading potential.

South Africa is already a member of the **Southern African Customs Union** (with Botswana, Lesotho and Eswatini) and the 16-member **Southern African Development Community** (SADC). SACU is the world's oldest customs union, formerly established in 1910, and its members maintain a standard external tariff, share customs revenues, and coordinate policies and decision-making on a range of trade issues. SACU has various **trade agreements** with the United Kingdom, the European Union, the European Free Trade Association (EFTA), MERCOSUR, the United States and other countries. For its part, SADC is in the process of establishing a Free Trade Area. COMESA, EAC and SADC have also established a **Tripartite Free Trade Area** (TFTA). The TFTA agreement entered into force in July 2024, fully liberalising tariff lines and eliminating non-tariff barriers. It is currently coordinated on a rotational basis among the three RECs. However, progress with trade integration in SACU, SADC, and the TFTA has been below expectations.

In 2016, South Africa joined the Economic Partnership Agreement (EPA) between the EU and the SADC EPA group (Botswana, Lesotho, Namibia, Mozambique, South Africa, and Eswatini), which expanded market access, especially in agriculture. South Africa also benefits from the African Growth and Opportunity Act (AGOA), a unilateral preferential agreement with the US.

Despite these agreements and opportunities, South Africa's exports constitute only 28% of GDP in 2023, compared to 54% for Thailand, 63% for Thailand and Malaysia, and 87% for Vietnam, and modestly above the average for Africa. Among Africa's eight UMICs, only Algeria has a lower rate of exports as per cent of GDP. The South African **Reserve Bank** highlight various reasons for the country's disappointing trade performance, including 'the structure of the country's export basket (which remains dominated by commodity products), its dependence on a limited number of large but mature export markets, and the high cost and deteriorating competitiveness of the general business environment.'

Even modest improvements in leveraging trade to drive growth would profoundly impact the South African economy.

According to the [Observatory of Economic Complexity](#), South Africa's top exports in 2022 were gold (US\$22.7 bn), platinum (US\$19.1 bn), coal briquettes (US\$12.7 bn), cars (US\$6.89 bn), and diamonds (US\$6.22 bn), mainly exporting to China (US\$23.4 bn), United States (US\$10.9 bn), Germany (US\$9.96 bn), India (US\$9.14 bn) and Japan (US\$8.85 bn). In 2022, South Africa was the world's biggest exporter of platinum (US\$19.1 bn), manganese ore (US\$2.96 bn), chromium ore (US\$2.51 bn), precious metal ore (US\$1.97 bn) and titanium ore (US\$656 million). That year top imports of South Africa were refined petroleum (US\$17.1 bn), cars (US\$4.62 bn), crude oil (US\$4.34 bn), motor vehicles; parts and accessories (US\$3.76 bn), and broadcasting equipment (US\$3.12 bn), mainly importing from China (US\$23.5 bn), Germany (US\$9.67 bn), India (US\$8.32 bn), United States (US\$6.11 bn), and Saudi Arabia (US\$4.5 bn).

The EU is South Africa's largest [trading partner](#), accounting for around 22% of total trade in 2021. SADC absorbs 87% of South Africa's exports to Africa, much of which (around 64%) are manufactured goods. However, South Africa's services exports have stagnated since 2005 and have declined in recent years, contrary to the global trend in most other middle-income countries.

South Africa is a founding member of the [African Continental Free Trade Area](#) (AfCFTA), established in 2018 and came into legal force the following year, although only operational in April 2024. Under the agreement, AfCFTA members are committed to eliminating tariffs on most goods and services over a period of 5, 10 or 13 years, depending on the country's level of development or the nature of the products. Its long-term objectives include creating a single, liberalised market, reducing barriers to capital and labour to facilitate investment, developing regional infrastructure, and establishing a continental customs union. The establishment of the Pan-African Payment and Settlement System ([PAPSS](#)) in 2022 allows payments among companies operating in Africa to be done in any local currency.

South Africa has a natural advantage in trade with the region, and the full implementation of the AfCFTA has the potential to boost its manufacturing trade with the region and its role as a logistics and services hub in Southern Africa.

Speaking at the opening of Parliament on 18 July after the 2024 elections that resulted in establishing a GNU, President Ramaphosa noted: 'We see great potential for growth beyond our borders. As we strengthen economic diplomacy with our largest and potential trading partners, we will prioritise the implementation of the African Continental Free Trade Area to increase our exports to the rest of the continent.'

The AfCFTA scenario increases total trade (imports plus exports) as a percentage of GDP from 54.5% in 2023 to 75.5% in 2043. On the Current Path, it would be 62%. The difference is equivalent to US\$129.5 billion of additional trade. Implementing the Agreement will be particularly beneficial to South Africa given its level of development and more significant manufacturing sector compared to its neighbours. It could be part of a more comprehensive developmental program to incentivise industrialisation and investment. In addition to requirements relating to network inefficiencies, to unlock these opportunities, the government would have to introduce incentives that reduce the current export concentration levels, which are limited to a few firms, and incentivise small and medium-sized exporting firms.

A recent paper by the [South African Reserve Bank](#) argues that the country 'urgently needs to address the high costs of investment and trading across borders; review the impact of existing industrial, localisation and sector-specific policies on export behaviour; implement a comprehensive and well-targeted export promotion and export finance framework; and update its trade policy approach to negotiations across the continent and internationally.'

Chart 21: Trade balance in the Current Path and AfCFTA scenario, 2019-2043

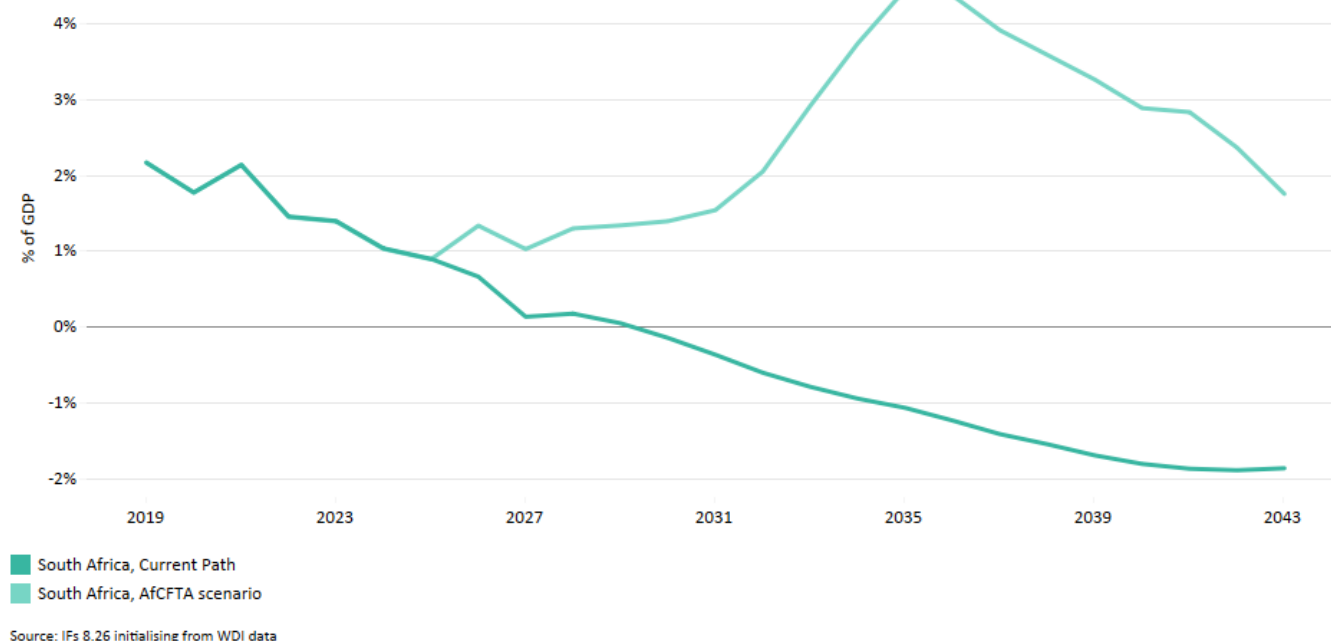


Chart 21 presents the trade balance in the Current Path and in the AfCFTA scenario, from 2019 to 2043 as a percentage of GDP.

South Africa is Africa's largest trading nation by value when considering exports plus imports, estimated at US\$214 billion in 2023 and equivalent to around 54% of GDP. Egypt has the second-highest trade by value in Africa. Broken down by individual countries, China, the United States, Germany, Japan and the United Kingdom were South Africa's top export destinations. China also leads as the largest source of imports followed by Germany, the United States, India and Saudi Arabia.

Higher exports associated with greater global and regional integration could bring substantial additional gains for South Africa, boosting growth and employment, particularly if accompanied by export diversification in both products and markets. It could also support the adoption of productivity-enhancing technology through imported intermediate goods, which have not yet widely penetrated South African markets. This could also enable increased scale economies and specialisation, leading to job creation, inclusive growth and poverty reduction. In the view of the [World Bank](#) an outward orientation could help increase competition in domestic markets and it argues that international trade has contributed significantly to prosperity in many developing countries by supporting the development of new, higher-paying jobs and increasing the efficiency of firms, as well as by providing consumers with cheaper and better products.

The Bank argues, that traditional drivers of growth— household and government consumption—have been hampered by a depressed labour market and tighter fiscal policy, constraining the South African government's ability to boost aggregate domestic demand. The result is that South Africa has underperformed in terms of exports relative to its peers over the past two decades, including when compared to Brazil, Russia, India, China, Turkey, Thailand and Malaysia. Thus, according to the Bank: 'Total merchandise exports have stagnated in the years preceding the [COVID-19] pandemic with all major product groups except food products declining during the decade from 2010 to 2019. They have also continued to be dominated by minerals and agricultural products, while manufactured exports have become increasingly concentrated in resource-based products, with the exception of the automotive sector. Overall, after the 1990s, the growth of

manufacturing exports has been insufficient to enable a manufacturing export-led growth path. The economic contraction during the global financial crisis, followed by a tepid economic growth, which coincided with the continuous decline in electricity supply, growing governance and policy uncertainties, and continued fierce import competition during the remainder of the decade and a half, contributed to the exit of firms and the hollowing-out of the productive base in manufacturing, including that of exporters'.

South Africa stands to benefit greatly from the AfCFTA scenario including a positive current account balance, reflected in Chart 21. GDP growth in South Africa has a propensity to rapidly increase imports and often results in a negative trade balance that requires efforts to temper growth down. The total economy will be US\$58.3 billion (or 9.2%) larger (than the Current Path). The GDP per capita in South Africa was US\$12 980 in 2023 and is set to increase to US\$15 380 on the Current Path. In the AfCFTA scenario, South Africa's GDP per capita increases to US\$16 330 in 2043, an improvement of 6.2% (or US\$950) above the Current Path although extreme poverty only declines marginally given the country's high levels of inequality.

## Large Infrastructure and Leapfrogging scenario

Chart 22: Electricity access: urban, rural and total in the Current Path, 2000-2043

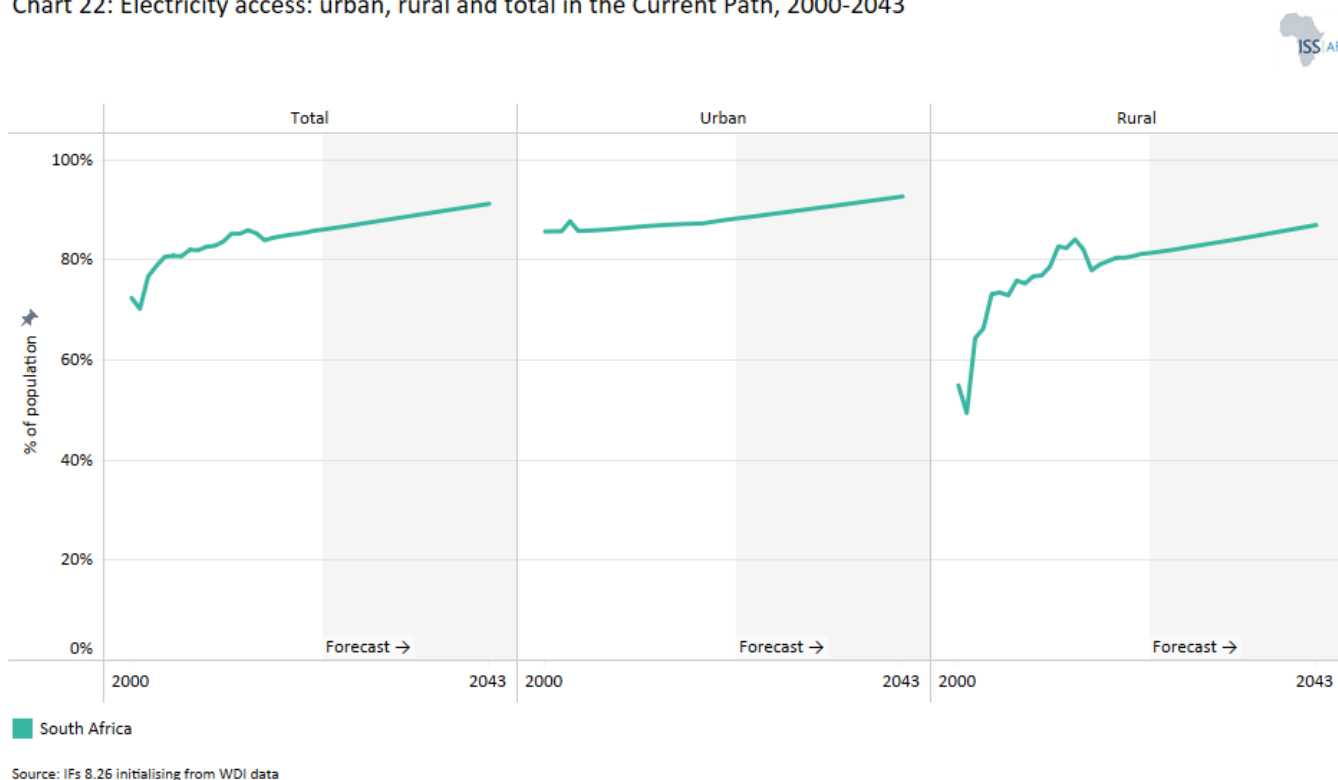


Chart 22 presents the Current Path of access to electricity for urban, rural and total population from 2000 to 2043.

In July 2024, during the presentation of the 2024/25 departmental budget policy [speech](#), the newly appointed Minister of Public Works and Infrastructure vowed to ‘unleash a wave of infrastructure investment ... to turn the country into a construction site’ with the ambitious goal of increasing the ratio of gross fixed capital formation from 14% to 30% of GDP. This commitment was soon supported by a [report](#) from S&P Global Market Intelligence, highlighting the urgent need to address South Africa’s infrastructure bottlenecks in energy, ports, rail, and water. The associated inefficiencies have led to significant delays and increased costs, particularly hampering smaller firms’ ability to export. South Africa’s disadvantage due to its distance from significant trading markets has been further exacerbated by the inefficiencies of its ports, deteriorating rail infrastructure, and high road freight and pipeline transport costs.

South Africa has made significant progress in expanding electricity access, outpacing most other African nations except for those in North Africa. In 2023, 86% of South Africans had access to electricity (the ninth-highest rate in Africa), rising to 91% in the Current Path and 100% in the Large Infrastructure and Leapfrogging scenario. By comparison, Africa’s average electricity access rate was 57% in 2023 and will reach 72% by 2043. Notably, South Africa’s urban-rural electricity access gap will be just seven percentage points by 2043, much narrower than the 41-percentage point difference observed across the continent in 2023.

However, South Africa has been plagued by regional blackouts (load shedding) since 2007 due to poor planning and chronic mismanagement, leading to insufficient generation capacity and low energy availability. The sector also faces challenges such as rampant illegal connections and the inability of many customers to afford rising electricity prices. This situation began to improve in 2024. While coal will continue to dominate the energy mix, the country is rapidly increasing its renewable energy capacity. Focus is also [shifting](#) towards gas and a new nuclear build program.

The 2023 Integrated Resource Plan (IRP) outlines a phased approach to nuclear energy, with an additional 2 500 MW expected to come online between 2031 and 2035, followed by 1 925 MW between 2036 and 2040, and 10 075 MW projected for the period 2041-2050. Other energy production considerations include exploiting local recoverable shale and inland and coastal gas reserves (based on recent discoveries) and importing gas from Mozambique and Namibia. South Africa must also develop and extend its transmission grid, which is currently constrained in parts of the Eastern, Northern and Western Cape. The sector also faces challenges such as rampant illegal connections and the inability of many customers to afford rising electricity prices.

In August 2024, President Ramaphosa signed the [Electricity Regulation Amendment Act](#) into law, enacting far-reaching reforms in the country's electricity sector. The Act aims to boost investment in new generation capacity to secure energy supply, establish an independent transmission system company within five years to oversee the national grid and impose severe penalties for infrastructure damage and sabotage.

With electricity outages now under control, South Africa's next major challenge is water. As a water-scarce country, South Africa has faced crises like Cape Town's "Day Zero" between 2015 and 2018, when the city came close to running out of water. Although the crisis was averted, the country continues to struggle with national water shortages due to delays in crucial infrastructure projects. For instance, the nine-year delay in starting the Second Phase of the Lesotho Highlands Water Project, which is vital for supplying more water to the Vaal River for Gauteng, means the demand-supply situation will remain tight until 2028. Similarly, the uMkhomazi Water Project for eThekweni and surrounding municipalities has faced significant delays.

Looking ahead, the [National Water Resource Infrastructure Agency Bill](#), once enacted, will facilitate substantially more investment in national water resource infrastructure. However, the performance of municipal water and sanitation services has sharply [declined](#) in recent years, mainly due to poor leadership at the municipal level. According to the Department of Water and Sanitation (DWS), 73% of the country's 144 Water Services Authorities (WSAs) scored as critical or poor according to the 2023 Blue, Green, and No-drop assessment reports, increasing the risk of water-borne diseases, including cholera. Additionally, the national average for municipal non-revenue water, water "lost" before reaching customers, increased from 37% in 2014 to 47% in 2023. Municipalities with high levels of non-revenue water cannot pay water boards for treated water. They cannot afford to properly maintain and operate their water distribution infrastructure, often diverting funds intended for water services to other purposes.

To address the poor management and maintenance of water infrastructure, the [Water Services Amendment Bill](#) will provide the 134 municipalities that serve as water services authorities with additional powers. The Department of Water Affairs and Sanitation also intends to launch a large-scale water awareness campaign.

South Africa has the largest network of paved roads in Africa, with high road density. However, a lack of maintenance in recent years has led to significant deterioration, particularly in the Free State province. The decline in rail services has resulted in a substantial shift of commuter and freight transport to roads, contributing to over 10 000 fatal crashes annually—an issue that the Road Traffic Management Corporation (RTMC) estimates costs almost 3% of the country's GDP. Following the decline in public transport, particularly rail, the 2020 [National Household Travel Survey](#) found that taxis carry 83% of public transport users, associated with more significant wear and tear to roads and more traffic accidents. Efforts to reduce road deaths are guided by the [National Road Safety Strategy \(NRSS\) 2016 -2030](#).

Other elements of the transport sector, such as rail and ports, have also [deteriorated](#), particularly during the COVID-19 pandemic. The rail freight system has been plagued by long delays in moving critical bulk minerals, containers, and vehicles, while port terminals and strategic border crossings suffer from congestion. South Africa's [ports](#), operated by state-owned Transnet, have been among the world's worst-performing and least competitive; in 2023, Cape Town and Ngqura (in the Eastern Cape) ranked 405th and 404th globally, respectively. In mid-2024, an internal report revealed that

coal shipments had plunged to over a three-decade low due to inefficiencies at Transnet, which cited a lack of locomotives and spare parts, along with infrastructure faults and signalling system issues.

In response to these challenges, the government, in collaboration with businesses and unions, formed the National Logistics Crisis Committee (NLCC) to improve the operational performance of industry supply chains, including freight rail and ports; implement reforms to modernise the freight transport system for efficiency and competitiveness; and enact necessary regulatory changes or exemptions to enable efficient procurement and adequate funding for network maintenance. The NLCC oversees the implementation of the Freight Logistics Roadmap, which includes a framework for private sector participation, a Freight Road to Rail Migration Plan, and a Transnet Recovery Plan. Additionally, in 2023, the Cabinet approved a Rail Policy to guide the future of freight rail and urban commuter rail.

Many of South Africa's infrastructure problems stem from the collapse of municipal management. The next phase of Operation Vulindlela, a turnaround program managed by the Presidency, will prioritise fixing local government with assistance from the Development Bank of Southern Africa (DBSA), a significant lender to local governments.

To address these challenges, the Large Infrastructure and Leapfrogging scenario simulates improvements in infrastructure investment, policy reforms and institutional capacity to overcome the bottlenecks in energy, water, transport and municipal services, thereby driving sustainable economic growth and development. The scenario includes improved rural and urban electricity access and accelerated fixed and mobile broadband connectivity. It incorporates general investments in significant infrastructure projects ("other infrastructure") like rail, ports and airports. It reduces electricity transmission and distribution loss and lowers the cost of adding ICT connections. The scenario also includes an additional nuclear build, natural gas exploitation and a rapid uptake and deployment of renewable energy as reflected in the 2019 and 2023 versions of the Integrated Resource Plan (IRP).

Visit the themes on [Large Infrastructure](#) and [Leapfrogging](#) for our conceptualisation and details on the scenario structure and interventions.

The Large Infrastructure and Leapfrogging scenario envisions South Africa achieving 100% electricity access by 2043, compared to 91% on the Current Path, with remarkably rapid improvements in rural areas by deploying mini-grids and renewable energy solutions.

These advancements translate into tangible economic benefits: GDP per capita in 2043 would be US\$1 000 (or 6.5%) higher than the Current Path, and an additional 3.13 million people would be lifted above the poverty line of US\$6.85 per day. The scenario projects the South African economy to grow to US\$694.8 billion by 2043, which is US\$60.7 billion more than the Current Path.

These improvements have far-reaching implications, extending beyond the energy sector. Enhanced infrastructure would also bolster other areas, such as increased trade under the AfCFTA scenario and improvements in agricultural productivity. The systemic benefits of these infrastructure investments are further amplified in the Combined scenario, which captures the synergistic effects across multiple sectors.

Chart 23: Energy demand and production in Current Path and Large Infra/Leapfrogging scenario, 2019–2043

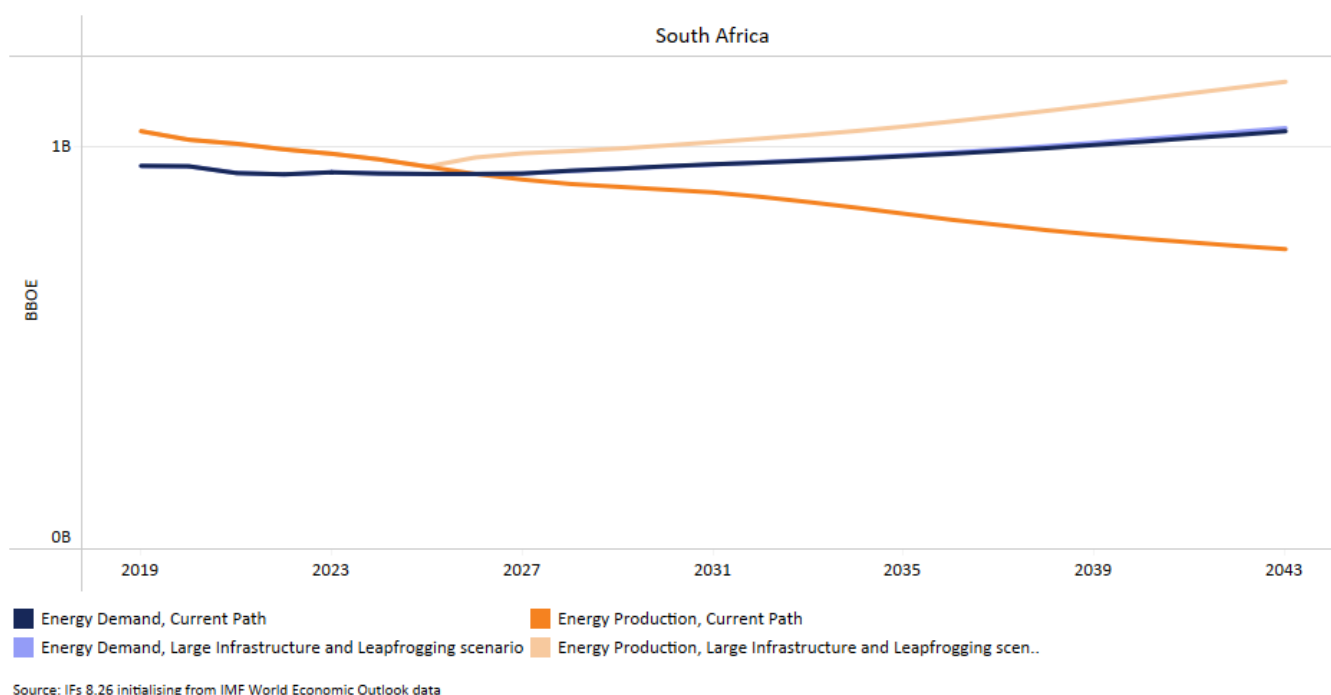


Chart 23 compares energy demand with production in the Current Path with the Large Infrastructure and Leapfrogging scenario, from 2019 to 2043. It shows the extent to which the country faces significant Current Path energy insecurity beyond 2025 and the extent to which the Large Infrastructure and Leapfrogging scenario reverses that trend.

South Africa has a large energy sector compared to other countries at similar levels of development, pointing to energy inefficiencies. For example, in 2023, South Africa's energy sector represented 5.6% of GDP, compared to a global average for upper-middle-income countries (UMICs) of 3.3%. In 2023, South Africa's energy production consisted of:

- 95% from coal
- 2.1% each from nuclear and other renewables
- 1% from gas
- 0.1% from hydro
- negligible from oil.

The future is one of increased energy insecurity as the country has committed to using less coal (of which it also exports large quantities), pointing to the need for large investments in renewables and other sources.

The two recent versions of the Integrated Resource Plan (IRP) published, in 2019 and 2023, set out government aims to secure electricity supply through a balanced approach between supply and demand, considering environmental concerns and overall costs. The IRP 2023 sets out scenarios in two timelines. The first is to 2030, with a focus on addressing existing generation capacity constraints and system needs. The plan aims to then achieve a resilient national electricity sector during the second period from 2031 to 2050. In pursuit of these goals, the Large Infrastructure and Leapfrogging scenario,

with its associated emphasis on additional renewables, nuclear, and gas and renewable energy production, will reduce South Africa's dependence on coal compared to the Current Path significantly.

In the energy modelling for the Large Infrastructure and Leapfrogging scenario, we first reduce energy production from coal in accordance with South Africa's schedule for the decommissioning of its coal fired plants as set out in various planning documents, particularly those relating to commitments relating to reductions in greenhouse gas emissions to keep global warming to 1.5°C, if possible. Instead of 66% of energy production from coal in 2043, in the scenario, coal accounts for only 21% of energy production. In accordance with South Africa's stated National Determined Contribution, only the Majuba, Kusile and Medupi coal-fired plants would still be operational in 2043 with an installed capacity of 13.5GW. In the meanwhile South Africa's energy demand would have increased substantially, pointing to a growing gap between production and demand reflected in the Current Path in Chart 23. To fill the demand-production gap, we increased renewable, gas and nuclear production to the level that would provide energy security (i.e. matching production with demand), and reduced the country's energy exports to ensure that the reduced domestic coal demand does not merely translate into exports.

The Large Infrastructure and Leapfrogging scenario:

- Ramps up renewables to 20% of total production by 2030 and 65% by 2043.
- Increases nuclear capacity to 14.5 GW by 2050 as proposed in two of the production scenarios in IRP 2023<sup>[2]</sup> (up to 4.4% of South Africa's much larger total energy production by 2043). The additional nuclear build includes 2.5 GW to come online between 2031 and 2035. In late 2024 the Department of Electricity and Energy announced that it would prepare a submission to cabinet to revive the country's pebble bed modular reactor project.
- Increases the portion of energy from gas from less than 1% to 19% of total production, including exploiting local recoverable shale and inland and coastal gas reserves (based on recent discoveries off the South and West coasts) and importing gas from Mozambique and Namibia.
- No changes were made to the forecasts of energy from hydro or oil.
- A reduction in coal exports. In 2023 South Africa's energy exports, mostly coal, amounted to US\$11 billion, reflecting the country's position as a net exporter of energy. South Africa could, should the international market exist, continue in that role but ongoing exports would undermine South Africa's contribution to carbon reductions globally. The market for coal exports will likely decline if coal-importing countries stick to their carbon emission targets. Instead of earning US\$6.7 bn from energy exports in 2043 on the Current Path, South Africa will only earn US\$490 million in the Combined scenario.

The scenario provides energy security but production barely keeps pace with the rapid growth that will occur in the Combined scenario, examined elsewhere. So, in the Combined scenario, South Africa still has a degree of energy insecurity but energy imports are significantly below the Current Path, given the increase in domestic production. See Chart 37.

South Africa must also develop and extend its transmission grid which is currently constrained in parts of the Eastern, Northern and Western Cape.

The results of these choices will have significant implications for South Africa's carbon emissions from fossil fuels although recent research by Robert Howarth at Cornell University on the methane emissions from LNG appear to indicate that it generates more greenhouse gases than coal, challenging the assertion that gas is cleaner. See Chart 36.

Chart 24: Access to mobile and fixed broadband in the Current Path and Large Infra/Leapfrogging scenario, 2019-2043

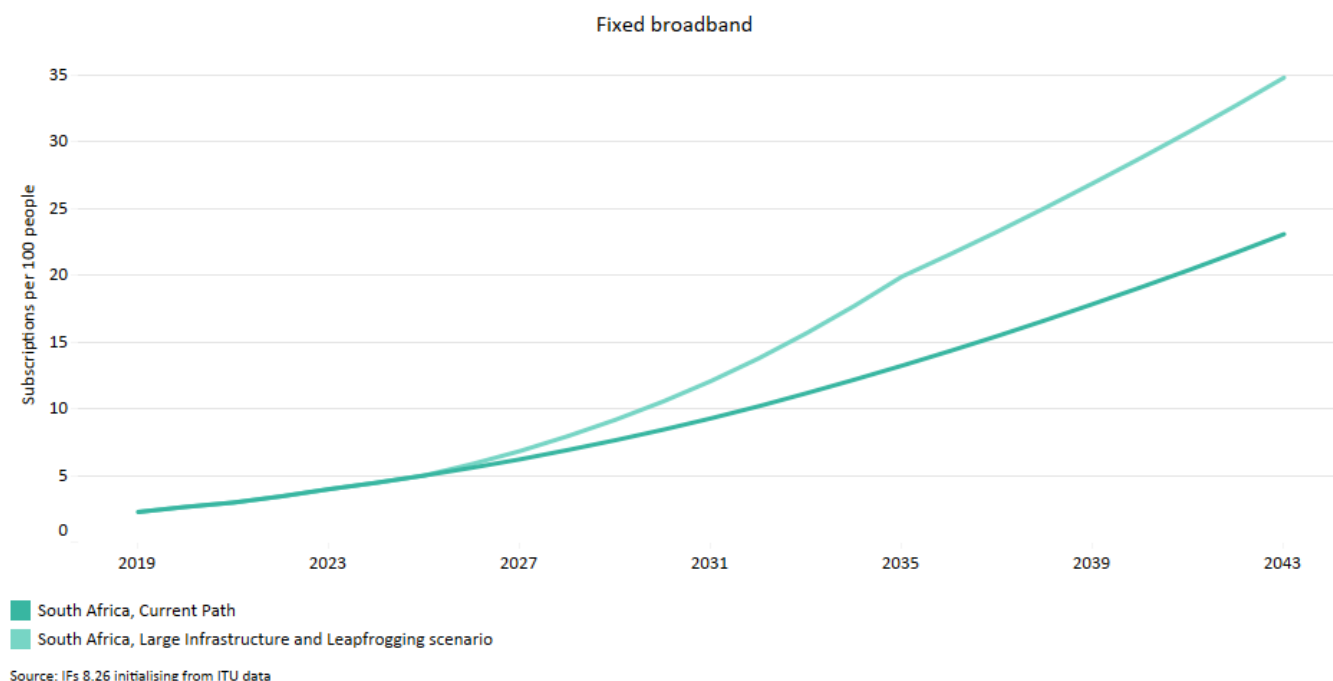


Chart 24 presents the percentage of the population and number of people with access to mobile and fixed broadband in the Current Path and in the Large Infrastructure and Leapfrogging scenario, from 2019 to 2043.

Over the past decade, South Africa's online presence has expanded significantly. In 2023, 66% of the population had access to the internet, a significant increase from the 10% recorded in 2009 although still short of the National Development Plan (NDP) pathway which envisions a fully connected society by 2030. According to the Digital Quality of Life Index (DQL) 2023 (an index that ranks countries according to internet affordability, quality, e-infratructure, e-security and e-governance), South Africa ranked 1st out of 25 African countries surveyed and overall 72nd out of 121 countries globally.

With four fixed broadband subscribers per 100 people in 2023, South Africa slightly surpassed the African average of 3.5. The Current Path is for 23.1 subscriptions per 100 people, still above the 21.4 average for Africa. In the Large Infrastructure and Leapfrogging scenario fixed broadband subscriptions will increase to 34.6 per 100 in 2043. This surge, over the Current Path, aims to boost high-speed, reliable internet access across the nation. This expansion will assist in bridging the digital divide, ensuring equitable access for all communities.

In parallel, mobile broadband has shown remarkable penetration, with subscriptions already high at 137 per 100 people in 2023. This figure will climb by an additional 5% in the scenario, reaching 163 subscriptions per 100 people by as early as 2027. Mobile broadband remains a pivotal element of South Africa's connectivity strategy, providing essential links for many in remote areas and promoting widespread internet usage throughout the country.

## Financial Flows scenario

Chart 25: FDI, foreign aid and remittances as % of GDP in the Current Path and Financial Flows scenario, 1990-2043

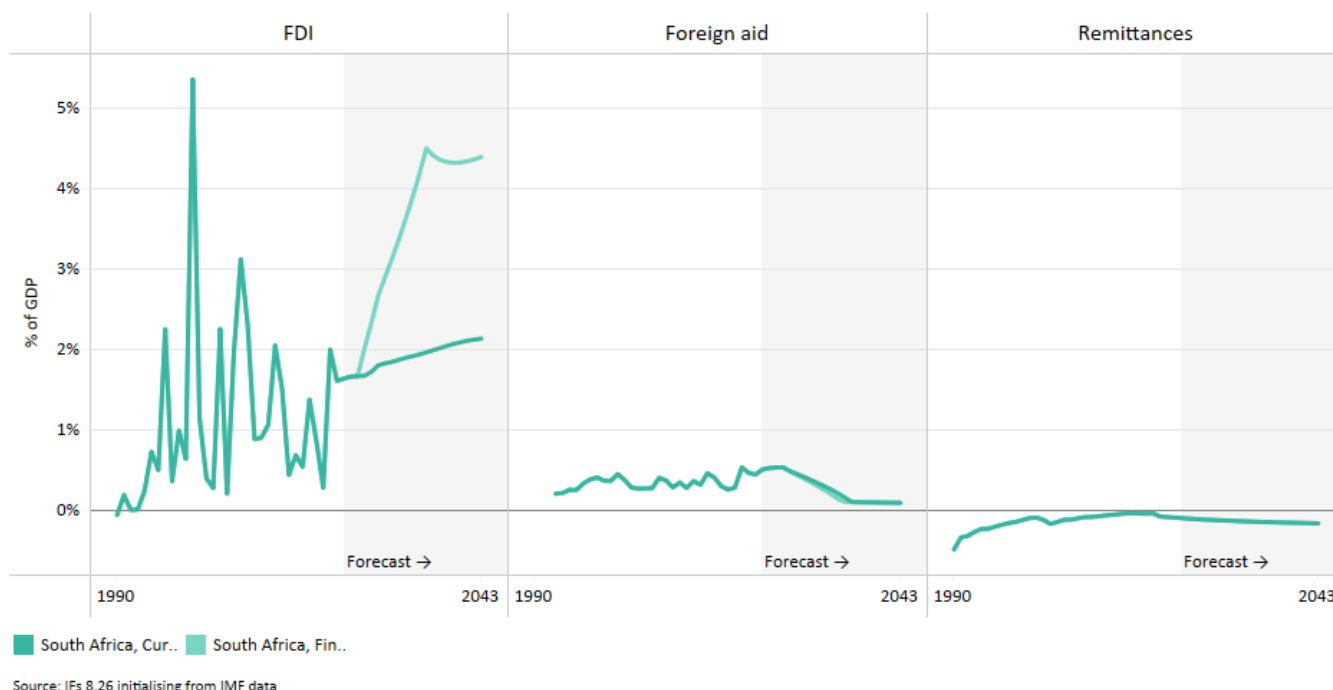


Chart 25 presents the trends in FDI, aid, and remittances as a percentage of GDP in the Current Path from 1990 to 2043.

This section first discusses remittances, followed by development aid, foreign direct investment and illicit flows.

South Africa has historically been a significant source of outward remittances within the Southern Africa Development Community (SADC) region, especially during the 1970s and 1980s when its mining sector heavily relied on migrant labour from neighbouring countries. This reliance drove high remittance outflows as workers returned money to their home countries. However, starting in the 1990s and continuing into the early 2000s, these outflows declined due to a combination of factors: the downturn in the mining sector, broader economic challenges, a reduction in the demand for foreign labour and high remittance costs. This decline in remittances reached its lowest point between 2015 and 2019. South Africa has also received some inward remittances (although dwarfed by outflows) as skilled outward emigration grew.

Remittance outflows from South Africa have slightly increased following the initial decline during the COVID-19 pandemic. This resurgence is partly due to the recovery in employment and economic activity, along with improvements in policies and financial mechanisms that have made sending money across borders more accessible and cost-effective. Additionally, renewed economic ties and continued migration are expected to drive further increases in remittance outflows in the coming decades. The Current Path suggests that with ongoing policy enhancements and technological advancements in the remittance sector, South Africa's role as a key source of remittances within the region will continue to grow, providing critical financial support to neighbouring countries such that by 2043, remittance outflows will likely grow to US\$1 billion per annum, up from US\$385 million in 2023 (Chart 25).

South Africa received little development aid owing to its status as an upper-middle-income economy, and it is unlikely that

this trend will change. In 2023, the country received aid equivalent to 0.5% of the GDP (US\$2 billion). In the Current Path, assistance to South Africa declines to 0.1% of GDP in 2043 (US\$0.6 billion).

Traditionally, European countries such as the United Kingdom, Netherlands, Belgium, Germany, Luxembourg as well as the United States, Japan, China, and Australia have been the largest foreign investors in South Africa. Most of their investments are in the financial, mining, manufacturing, transportation and retail sectors. In recent years, FDI from China has surpassed that of the United Kingdom, which historically held a dominant position as a significant investor in South Africa due to its strong historical ties. Investment from China is mainly in mining and infrastructure.

Declining investor confidence has dramatically impacted the South African economy, where actual gross fixed capital formation by the private sector is significantly below that of peer countries. Although it attracted more FDI after transitioning to democracy in 1994, inflows slowed after 2000.

The Ramaphosa government has been actively pursuing domestic and international investment as part of its broader economic recovery plan to stimulate economic growth. It hosted investment summits in 2018, 2019 and 2022 — against a target to raise US\$100 billion in new investment over five years. These targets have fallen foul of COVID-19 and ongoing challenges in infrastructure, poor investment climate and instability, with large riots in KwaZulu-Natal and Gauteng in July 2021 that accompanied the brief incarceration of former president Jacob Zuma. **Other policies** include the Critical Infrastructure Program (CIP), an incentive scheme to bolster infrastructure investment, and the establishment of five Industrial Development Zones (IDZs) and six special economic zones (SEZs). The latter focuses on industrial development, and the IDZs offer duty-free import of production-related material and various other incentives.

Currently, South Africa attracts limited FDI, although more than 180 Fortune Global 500 **companies** are present in South Africa. Modern economies must be plugged into the global capital market. South Africa is globally more connected to the international financial system than any other African country but has yet to gain ground. Accessing capital at a reasonable cost is indispensable for South Africa, a country with a meagre national savings rate. In 2023, South Africa received FDI inflows of roughly 1.6% of GDP, slightly below the 1.8% average for Africa's eight UMICs. The average for UMICs globally in 2023 was 3%. Without unlocking sustained high levels of domestic and foreign investment, South Africa will not escape its recent history of slow economic growth trajectory.

The Financial Flows scenario reduces outward financial flows to emulate a reduction in illicit financial outflows. It includes an aggressive intervention on increased inward flow of investment stocks and portfolio investment. Unlike most African countries, the South African scenario does not include interventions on additional aid (owing to its income status) or changes to remittances.

You can visit the theme on **Financial Flows** for our conceptualisation and details on the scenario structure and interventions.

In the Financial Flows scenario, FDI inflows to South Africa increase significantly to 4.4% of GDP in 2043 compared to 2.1% of GDP in 2043 on the Current Path. The impact of the Financial Flows scenario is to increase South Africa's stock of FDI in 2043 to US\$331 billion (50% of GDP) compared to the Current Path forecast of US\$188 billion (30% of GDP). The stock of FDI in South Africa was US\$107 billion in 2023 (27% of GDP).

These elevated levels of FDI will require policy certainty, regulatory oversight, an improvement in South Africa's credit rating, removal of its "grey listing" by the Financial Action Task Force related to money laundering and terrorist financing and a reduction in the regulatory burden and cost of doing business.

South Africa can expect substantial economic benefits if these levels of FDI can be achieved, including accelerated

economic growth that could also lead to higher living standards. The impact of the Financial Flows scenario is an economy that is US\$1 billion larger in 2043 and a positive increase in per capita income of US\$510 in 2043 compared to the Current Path forecast. Extreme poverty increases marginally (by 30 000 persons) in 2043 since FDI invariably benefits skilled labour.

Chart 26: Government revenue in the Current Path and Financial Flows scenario, 2019-2043

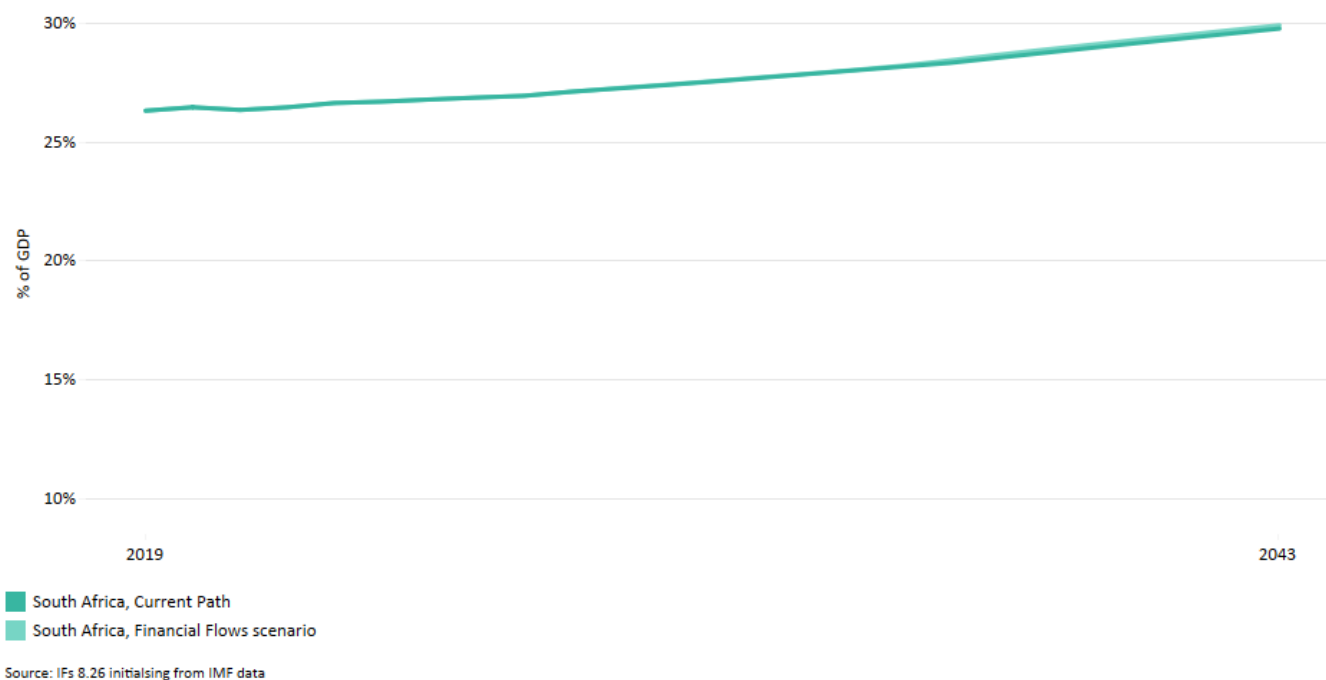


Chart 26 presents government revenue in the Current Path and the Financial Flows scenario, from 2019 to 2043. The data is in US\$ and % of GDP.

Wagner's law, or the law of increasing state activity, is the observation that public expenditure increases as national income rises. It is reasonable to expect that government revenues will increase as a per cent of GDP in the Financial Flows scenario compared to the Current Path.

Measured as a per cent of GDP, government revenue in South Africa stood at 26.6% of GDP (equivalent to US\$104.5 billion) in 2023. In the Current Path, government revenue will reach 29.8% (equivalent to US\$188.7 billion) of its GDP in 2043. In the Financial Flows scenario, however, government revenues will increase by 0.14 percentage points of GDP to about US\$199 billion (equivalent to 29.9% of GDP) in 2043, around four percentage points below the average for upper-middle-income countries in Africa or UMICs globally. Increasing government revenues will add additional capacity to government. Much of the increase (US\$10.3 billion) is due to the effect of more inward investment on growth.

## Governance scenario

Chart 27: Government Effectiveness score in the Current Path, 2002-2043

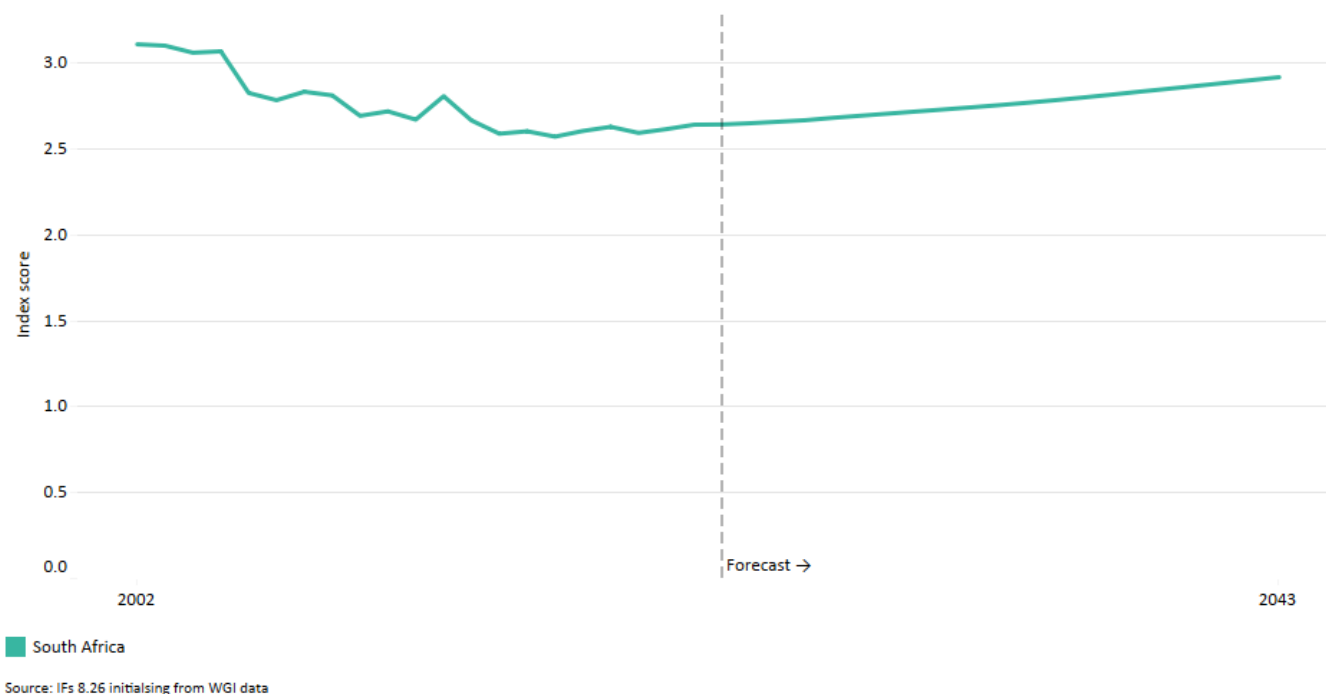


Chart 27 presents the Current Path of government effectiveness for South Africa from 2002 to 2043.

The World Bank's [index](#) on government effectiveness captures perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies.

Governance effectiveness in South Africa has steadily declined since the World Bank started releasing regular estimates in 2002 and was particularly affected by state capture, corruption and various inefficiencies under the presidency of Jacob Zuma from 2009 but was still, in 2022 (last year for which data is available), the fourth highest in Africa and higher than the average for upper-middle-income countries (UMICs) globally. Efforts to improve effectiveness nominally started under President Ramaphosa in 2018. Still, they were hampered by the Zuma faction's fightback and COVID-19, during which the government and the economy came to a standstill. Also, there appeared to be little accountability within the executive branch, with no apparent consequence management for poor performance. After the 2021 local government elections, political infighting at regional and metropolitan levels has also led to instability, inadequate oversight and lack of accountability as support for the ANC dropped to 46% (national average), forcing the party to enter into several unstable coalition agreements in various municipalities and cities, and a deadly scramble for access to tenders.

Government effectiveness in South Africa has been undermined by corruption, lack of transparency and a weak civil service, which have translated into declining confidence that hinders economic development. According to a 2023 [report](#) released by Statistics South Africa, the highest satisfaction rate with government services was found in those who utilised higher learning institutions (90%), whereas the lowest satisfaction related to public housing services (61%). Generally, the level of trust in government is declining.

Among Africa's eight UMICs, Mauritius, Botswana and Namibia (marginally) do better on the World Bank's measure of government effectiveness than South Africa. The latter two are valuable benchmarks, given their geographic proximity and shared levels of inequality.

Various other indices provide additional context to South Africa's low and declining score on government effectiveness. For example, South Africa's competitiveness has remained at around 60th spot (out of 63 countries surveyed) on the World Economic Forum's [Global Competitive Index](#). The country does poorly on matters relating to government adaptability, the lack of business dynamism (an apartheid legacy) and its rigid labour market, and administrative burdens.

South Africa does relatively well when comparing economic freedom; however, its score is comparable to that in neighbouring Namibia and Botswana, which is high compared to most African countries and above most comparable UMICs globally. The Fraser Institute Index of [Economic Freedom](#) ranks South Africa at 94th globally, doing poorly on the size of its government and freedom to trade internationally but well on its legal system and protection of property rights. According to the [Institute](#), economic freedom exists when property is acquired by individuals without force, fraud, or theft and is protected from physical invasions by others. In this framing, individuals are free to use, exchange or give their property as long as their actions do not violate the identical rights of others. In a free economy, individuals can choose, trade, cooperate with others, and compete as they see fit.

Compared to most African countries, South Africa has high levels of democracy (see sections below) reflected in its liberal constitution and bill of rights. Still, more accountability or better governance is needed. The 2023 edition of the Transparency International [Corruption Perception Index](#) ranks South Africa at 72 out of 180 countries globally following five years of decline, now comparable to Benin, Bulgaria, Ghana and Senegal, and significantly below neighbouring Botswana and Namibia, are among the top least corrupt countries in Africa. South Africa is the 12th least corrupt African country.

In response to the declining levels of government effectiveness, the cabinet adopted a national framework for the [professionalisation](#) of the public service in 2022 towards meritocracy and to insulate it from undue political interference and vested interests. However, progress is likely to falter without commensurate reform of how black economic empowerment is pursued, although recruitment and selection processes are being overhauled, along with performance management systems. These are intended for use across the public sector, and compulsory induction courses guide public sector reform, such as strengthening law enforcement agencies, judicial reform, and professionalising public service. Reforms were boosted with Project Vulindlela, a government-wide initiative launched in 2020 to accelerate the implementation of structural reform in government that would reduce input costs, lower barriers to entry and increase competition, such as removing red tape and implementing a new ownership model of state-owned enterprises, many of which had become dysfunctional. The expanded second phase scope of Operation Vulindlela, as announced by President Ramaphosa during the July 2024 opening of parliament speech, is as follows:

- Reforming the local government system and improving the delivery of essential services,
- Harnessing digital public infrastructure as a driver of growth and inclusion,
- Accelerating the release of public land for social housing and redirecting housing policy to enable people to find affordable homes in areas of their choice.

Later that month, the President signed the Public Procurement Bill that created an updated single framework for procuring goods and services across departments, constitutional institutions, municipalities, municipal entities, and public entities. Among its wide-ranging provisions, the Act lists persons disallowed from submitting bids, including public office

bearers, employees of Parliament or provincial legislatures, and officials or employees of public entities, constitutional institutions, municipalities and municipal entities. Like many similar efforts, additional bureaucracy is unlikely to deliver better outcomes without consequence management.

Chart 27 presents South Africa’s score on government effectiveness as taken from the World Bank and the Current Path to 2043. It also shows the intervention in the Governance scenario, which improves government effectiveness in South Africa to that of Botswana by 2035, an improvement of 11% compared to the 2035 Current Path. Prior to that, government effectiveness in South Africa was comparable to that in neighbouring Namibia. Mauritius is the UMIC country in Africa that does the best, while Libya does the worst.

Chart 28: Governance dimensions in the Current Path and Governance scenario, 2023 and 2043

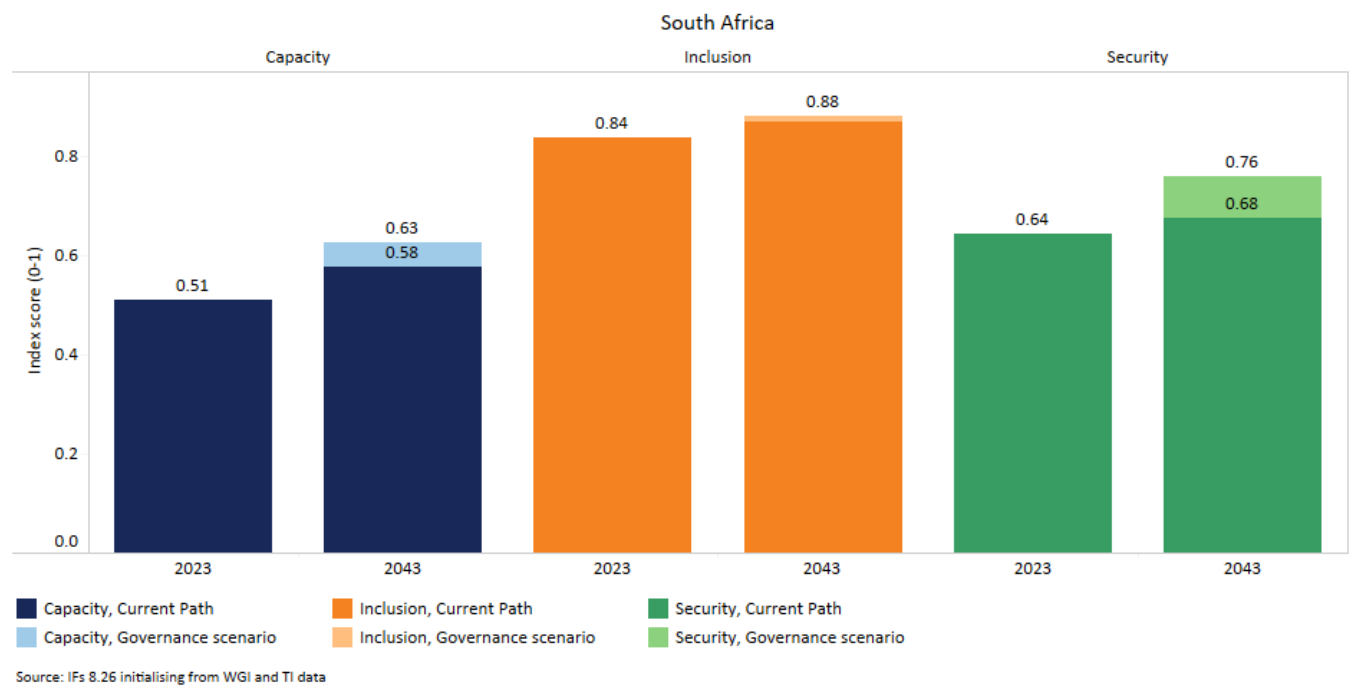


Chart 28 presents the composite governance index for the Current Path versus Governance scenario, for 2023 and 2043.

Our modelling conceptualises governance consisting of three dimensions, stability, capacity and inclusion, allowing the user to compare governance between countries and progress across time. Each consists of an index (0 to 1) for each dimension, with higher scores indicating improved stability, more capacity, and enhanced inclusion. The composite index state’s progress using the average of these three indices.

Visit the theme on [Governance](#) for a full conceptualisation and details on the composition and drivers of each dimension. Better security is the result of interventions to improve South Africa’s score on an internal government security index and reduced mortality from intentional injuries (i.e. murder). Better capacity follows improvements in government regulatory quality, reduced corruption, more economic freedom and higher government effectiveness (shown in Chart 27). Because South Africa already scores very high on democracy and on gender empowerment compared to upper-middle-income countries (UMICs), the interventions on both are modest. In most instances the improvements in governance take South Africa closer to that of Botswana, a neighbouring country with similar levels of inequality but higher levels of average income.

South Africa does relatively well on the combined governance index, but below expectations given levels of income. Amongst African UMICs Mauritius, Botswana and Namibia do better and Algeria, Gabon, Equatorial Guinea and Libya does worse. The paragraphs below discuss each of the three dimensions of governance with South Africa doing very poorly in security, roughly as expected on capacity and above its peers on inclusion. The interventions in the Governance scenario therefore push harder on improvements in security and capacity.

The reasons for its poor score on security is due to South Africa's high rates of violent crime, murder in particular, and a dysfunctional criminal justice system - although it is important to keep in mind that it is one of the few African states that regularly surveys and releases crime data. Among Africa's eight UMICs only Libya did worse than South Africa in the 2023 score on security risk.

Homicides serve as a useful proxy for broader violence patterns in a society and negatively impact social capital and translate into a drag on growth. According to data from the [Global Burden of Disease](#) South Africa consistently ranks amongst the ten countries with the highest homicide death rates among adult men and women. In the [2023 Global Peace Index](#) (a composite index drawing on a variety of measures) South Africa ranked at 156 out of 163 countries.

Lack of security acts as a major deterrent to investment in South Africa. A 2018 study found that the yearly cost of [violence against children](#) alone came to nearly 5% of the GDP. In its 2023 report [Safety First: The Economic Cost of Crime in South Africa](#), the World Bank estimated that crime costs the economy at least 10% of GDP annually, in terms of stolen property; protection costs – encompassing security and insurance; and missed economic opportunities.

The drivers of South Africa's high levels of violent crime are multidimensional and require an integrated response. High crime rates damage the economy, contribute to the misallocation and inefficient use of resources and undermine progress towards the country's development objectives. Numerous [studies](#) have been done that indicate that well-designed and implemented policies that target priority crimes, murder in particular, can yield positive results in the medium term. Tackling organised crime, which has thrived on the declining capacity of the policy and justice institutions with large impacts on economic activity could be another. All of this is achievable given appropriate leadership and prioritisation within the current budget allocations to the criminal justice system.

South Africa has less government capacity than three other UMICs in Africa, namely Namibia, Botswana, and Algeria although doing better than Mauritius, Gabon and Equatorial Guinea. Government revenue as a percent of GDP is a good measure of government capacity and stood at almost 27% in 2023, close to the average for UMICs although below neighbouring Namibia and Botswana. Government revenues is largely determined by tax rates. The [tax-to-GDP](#) ratio in South Africa was 27% in 2021, more than ten percentage points above the average for Africa. Only Morocco, Seychelles and Tunisia have higher tax-to-GDP ratios.

When it comes to inclusion, South Africa liberal constitution, independent judiciary, bill of rights, press freedom and regular free and fair elections means that it does better than any other African UMIC and ranks amongst the highest UMICs globally. On its own, high levels of inclusion do not compensate for a lack of capacity or security, although it does translate into a political system with significant legitimacy and hence with the ability to absorb and withstand high levels of social turbulence and violence. That was put to test during the July 2021 [riots](#) in KwaZulu-Natal and in Gauteng that was sparked by the brief imprisonment of former President Jacob Zuma. The riots cost the economy US\$3.2 billion during which more than 300 people died and thousands were injured.

There are clear signs that South Africans are becoming disillusioned with the inability of government to deliver economic growth, jobs and reduce unemployment. For example, in the release of its most recent data-series on attitudes to democracy in Africa, [Afrobarometer](#) found that confidence in democracy in South Africa has declined more than in any other African country. From a registration rate of 80% of eligible voters in 2014, the level of registration has declined to

70% in 2024. **Voter turnout** has also declined with each election, to the extent that, with the 2024 elections, it stood at 58.6%. It was 74% in 2014.

At the head of a new Government of National Unity President Ramaphosa intends, again, to launch a **National Dialogue** 'to forge a common vision and build a comprehensive social compact with a clear programme of action to realise our aspirations for the country.' The Dialogue would advance the three strategic priorities of the GNU, namely:

- Inclusive growth and job creation,
- Poverty reduction and reducing the high cost of living,
- Building a capable, ethical and developmental state.

To tackle crime and corruption, and improve security, the President spoke about the importance of capable, sophisticated and independent law enforcement agencies that can fight complex and organised crime using modern technology to assist crime fighting. Furthermore, these agencies must be able to employ data-driven approach to identify violent crime hotspots and inform the allocation of policing resources alongside prevention measures. The focus must be on tackling priority crimes like illegal mining, gang violence, cash-in-transit heists and the construction mafia through specialised police units. There is, however, considerable evidence of lethargy, inaction and **obstruction** in the pursuit of corruption and state capture within the country's criminal justice system following the extended period of state capture and malfeasance under former President Jacob Zuma that continues to hamper progress.

In the Governance scenario, governance in South Africa improves by 7% in 2043 when compared to the Current Path, overtaking the average governance index of Namibia in 2031 and halves the gap with Botswana, which has the second-highest score on the combined governance index next to Mauritius. These four countries also have the highest average scores on governance in Africa.

## Endnotes

1. BFAP Baseline. An agricultural outlook for the period 2024-2033
2. Because the Infrastructure and Leapfrogging scenario includes reductions in energy exports, largely coal, we have removed the energy export adjustment for South Africa in the AfCFTA scenario.

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Jakkie Cilliers and Alize le Roux (2024) South Africa. Published online at [futures.issafrica.org](https://futures.issafrica.org). Retrieved from <https://futures.issafrica.org/geographic/countries/south-africa/> [Online Resource] Updated 16 November 2024.

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