Long-term forecasts show that the country’s development trajectory is increasingly untenable. With the economic impact of COVID-19, growth rates will be too low to alleviate poverty, inequality and unemployment. South Africa does however have options. A pro-growth social compact and evidence-based economic policy could, by 2044, dramatically improve the country’s prospects.
Key findings

- South Africa is at a crossroads. The current development trajectory is increasingly untenable and the country is not only steadily falling further behind its global peers but may be headed for a crisis.

- The COVID-19 pandemic and its impact on the economy results in a long-term growth forecast of 1.9% to 2044 – significantly below any rate that would alleviate poverty, reduce inequality and grow employment.

Recommendations

- In health: Improve healthcare through better management and increased efficiencies in the public sector, while driving down costs in the private sector. Once the economy has stabilised pursue a national health scheme that levers benefits from a partnership with the private sector towards the provision of universal healthcare.

- In education: Improve primary, secondary and tertiary survival and graduation rates with a deep focus on improved quality. Prepare the country for the Fourth Industrial Revolution by focusing on science, technology, engineering and mathematics.

- In energy: Amend the Integrated Resource Plan 2019 to pursue a least-cost energy solution as proposed by the Council for Scientific and Industrial Research (CSIR).

- In manufacturing: Invest in research and development and accelerate the expansion of information and communications technology (ICT) infrastructure, with an emphasis on widespread internet access. Support and promote value-added technology exports in partnership with the private sector.

- In investment and economic freedom: Grow domestic investment, pursue foreign direct investment and adopt policies to reduce the regulatory burden, and enhance economic freedom.

- In land and agriculture: Pursue land reform in the former homelands by providing tenure security and ability to legally transfer ownership. Support commercial agriculture, reduce food waste and improve water management.

- Forge a social compact between business, labour, communities and government that can pivot the country towards more rapid inclusive economic growth based on evidence and in partnership with the private sector.

- If President Cyril Ramaphosa successfully uses the coronavirus crisis to build a pro-growth social compact and implements evidence-based economic policies, South Africa’s economy could, by 2044, be almost 50% larger than the Current Path forecast for that year.

- In the Current Path forecast, 51% of South Africa’s population will be living in extreme poverty by 2044. In the Thuma Mina scenario that portion could be just 39%.
Introduction

The COVID-19 crisis has shaken South Africa, and indeed the world, to its core. But addressing the nation on 21 April 2020 President Cyril Ramaphosa sought to turn the crisis into an opportunity, promising 'not merely to return our economy to where it was before the coronavirus, but to forge a new economy in a new global reality.'

That, he argued, required a new social compact to accelerate the structural reforms needed to reduce the cost of doing business, promote localisation and industrialisation, overhaul state-owned enterprises and strengthen the informal sector.

This policy brief updates the findings contained in a longer research paper, South Africa First! Getting to Thuma Mina, published shortly before the global pandemic hit. The paper argued that South Africa had been caught in a classic middle-income growth trap and that it was steadily falling further behind the average for high-growth middle-income countries.

The reasons for this situation stem from the country's apartheid legacy but were further worsened by the global financial crisis of 2007/8 and the impact of poor governance and state capture. It occurs despite the country's demographic dividend, political transition and substantial natural assets. With COVID-19 the situation is increasingly precarious.

Structure and method

The analysis that follows was developed in three steps. It relies on the International Futures forecasting system (IFs), hosted by the University of Denver, that was also used for the more comprehensive previous research paper.

The first step was to update global growth forecasts with the most recent ones released on 14 April by the International Monetary Fund (IMF) that now include the fund’s understanding of the likely impact of COVID-19. Rather than its normal five-year growth forecast, the uncertainties associated with COVID-19 are such that these forecasts are only up to 2021.

The IMF forecast projects a deep recession in 2020 followed by a global recovery in 2021 – an optimistic V-shaped recession premised on the discovery and rapid global rollout of an effective vaccine.

Global growth in 2020 is expected to contract to -4.1% and then rebound to 2.8% in 2021. Thereafter growth would probably resume along a slightly more modest trajectory, although it would probably take up to a decade for the global economy to fully recover from the economic impact of the virus.

The second step imposes the Thuma Mina scenario that was developed for the previous paper on the revised IMF growth forecast. The scenario and its interventions are summarised below and models improved outcomes in six thematic areas that have led to economic stagnation.

Until COVID-19 hit, limited electricity supply was the dominant constraint on economic growth

These are poor health outcomes, bad education, lack of electricity, a capital-intensive manufacturing industry that is now experiencing deindustrialisation, an inhospitable investment climate, and failed land reform and water management that leave large rural areas trapped in poverty.

The final step compares the Current Path, reflecting South Africa’s expected growth to 2044 without reform, with the impact of the positive Thuma Mina scenario along various dimensions e.g. the rate of extreme poverty and average income, before concluding.

The forecast horizon is 2044 – 24 years into the future and 50 years after the 1994 elections. That was when Nelson Mandela was elected president amid unprecedented international acclaim and huge domestic expectations for a better future.

From load shedding to COVID-19

Until COVID-19 hit South Africa in April 2020, limited electricity supply was the dominant constraint on economic growth. In 2019 South Africa experienced the worst year on record of electricity load shedding with Stage 6 being implemented in December 2019. Amid that crisis, government released its updated Integrated Resource Plan (IRP 2019) in October that highlighted the short-term electricity supply gap that was expected to last until 2022 and set out the country’s energy mix to 2030.
Shortly thereafter, in January 2020, the Council for Scientific and Industrial Research (CSIR) released its response to the IRP 2019 confirming that the impact of the limited electricity supply from ESKOM on South Africa’s economic growth would limit economic growth to 1% in 2021 and 2022.

The CSIR modelled the implementation of the IRP 2019 and offered a number of recommendations. At that point South Africa was still expected to register modest 0.9% growth in 2020. This was reflected in Finance Minister Tito Mboweni’s annual budget vote presentation to Parliament a few weeks later during which he reaffirmed the constraint that limited electricity supply was placing on growth in 2021 and 2022.

The April 2020 IMF growth forecast that now factors in the impact of COVID-19, is that the South African economy will probably register a contraction of -5.8% in 2020, followed by a rebound to 4% in 2021. Thereafter South Africa’s growth will moderate (we expect 1.5% in 2022). Other forecasts, including the scenarios presented to the various Parliament committees by the South African Treasury, are significantly more pessimistic with a worst case of -16.1% GDP contraction in 2020.

Even with the sharp economic recovery in 2021 as expected by the IMF, the South African economy will be only marginally larger in 2023 than it was in 2019. The gap between the two indicates a significant easing of electricity demand until at least 2023. The economic contraction in 2020 due to COVID-19 is therefore so substantive that energy demand will inevitably be much lower.

As a result, it is unlikely that the limited electricity supply from ESKOM is still a cap on economic growth. This is provided it uses the intervening period to invest in maintenance, and that the government relaxes the...
constraints on additional renewables and self-generation, some of which has occurred.

The constraint on sufficient electricity supply does, however, reassert itself as a medium- to long-term constraint on growth. This includes the impact the country’s highly polluting coal-fired power plants have on health and the associated inefficiency that comes with efforts to constrain the loss of jobs in the coal sector at the expense of a more rapid transition to renewables.

In the words of CSIR lead analyst Jarrad Wright, ‘IRP 2019 is not a long-term visionary plan, does not report transparently and comprehensively and still applies arbitrary new-build constraints on variable renewable energy.’

The COVID-19 pandemic and its impact on the economy results in a long-term growth forecast of 1.9% to 2044 – significantly below any rate that would alleviate poverty, reduce inequality and grow employment. On this Current Path forecast South Africa will fall even further behind its global peers and social turbulence is bound to increase.

**From lockdown to Thuma Mina**

So what is possible should Ramaphosa be successful in using the coronavirus crisis to build a pro-growth social compact?

The analysis and full content of the Thuma Mina scenario is detailed in the previous Thuma Mina paper released in March 2020. It models the resolution of South Africa’s economic stagnation through reform in six key areas that currently constrain growth. These are health, education, energy, modern industrialisation, investment and economic freedom, and finally, agricultural reform. The content of each intervention cluster is summarised below.

**Health**

Signing the Presidential Health Compact in July 2019, Ramaphosa publicly acknowledged the crisis in South Africa’s health system.

The health intervention cluster focuses on reducing premature mortality through modestly lower death rates from traffic accidents, interpersonal violence, malnutrition in the form of undernutrition among children and obesity among adults, modelled on historical and comparative precedent.

This first group of interventions doesn’t rely on reform of the healthcare system beyond better management and increased efficiencies, so in the health scenario the interventions gradually begin to take effect in 2021, and steadily ramp up to 2044.

The second group simulates the successful implementation of an affordable national health scheme that eventually allows for universal healthcare for all. The effects begin to be felt in 2026. The results improve child and maternal health and reduce the prevalence of communicable and non-communicable diseases.

**COVID-19 and its impact results in a long-term economic growth forecast of 1.9% to 2044**

The biggest obstacles to achieving improved health outcomes are over-servicing and inflated costs in the private healthcare system, a poorly functioning public healthcare system and public debt. Better management and more competition is vital, and it’s clear that South Africa won’t be able to implement and cannot afford the National Health Insurance scheme as originally envisioned in the 2017 White Paper.

**Education**

The education cluster emulates a transition in South Africa’s education system to prepare the country to take full advantage of the Fourth Industrial Revolution. It improves primary school survival through secondary and tertiary intake rates.

Likewise, tertiary graduation is improved, and the proportion of science, technology, engineering and mathematics (STEM) students increases to around a quarter. In addition, there is an increased focus on vocational training at the secondary level as an alternative to tertiary education.

Finally, aggressive but reasonable quality improvements are modelled at both the primary and secondary levels as measured by test scores. These improvements are possible only if the ruling party can constrain the impact of powerful unions on the administration and management of South Africa’s fragmented and inefficient education system.
These improvements in investment are underpinned by a more conducive policy environment that eases doing business, increases labour market flexibility, enhances economic freedom e.g. through simplification and reduction of onerous black economic empowerment requirements, and modestly reduces firm tax rates.

**Land and agriculture**

The final cluster focuses on improving agricultural production, reducing food waste and ensuring better water management. It focuses on effective land reform in communal areas and government-owned land. At the heart of such reform is the need for tenure security in the former homelands and the ability to legally transfer such ownership.14

The transition to a more distributed renewables-based energy sector is foundational to modern industrialisation in South Africa.

**Commercial agriculture is already quite productive in South Africa, but further improvements in yields are possible**

The intervention models an increase in land under cultivation, in accordance with spatial estimates of the available state-owned land and former homeland areas that are suitable for cultivation. Yields per hectare improve as a result of reforms in land administration and improved support for smallholder farmers. Though commercial agriculture is already quite productive in South Africa, further improvements in yields are possible and included in the intervention.

The intervention also envisages streamlined value chains and support for on-farm practices that result in less food waste on the farm and in transit to market, modelled through investment in improved road infrastructure in rural areas.

Since demand for water is likely to outpace current plans, the intervention increases groundwater withdrawals – a currently underutilised source – and expands wastewater treatment. In addition, demand is mitigated by reducing the loss of non-revenue water (e.g. through the War on Leaks campaign).

**Impact of the Thuma Mina scenario**

By 2044, South Africa’s population will have increased by a quarter – from the current estimate of 60 million

Similar to many challenges in safety, security and health it is likely that only much more rationalisation and firm political leadership can unlock improvements.

**Energy**

The energy intervention cluster is benchmarked to the 70% renewable potential by 2050 as modelled by the CSIR in its November 2018 release of a least-cost energy scenario. This is unconstrained by ideology and the impact of particular lobby groups on planning.10

To emulate the CSIR least-cost energy scenario, the cluster reduces the capital cost per output unit of energy to reflect more rapid technological advancement that results from an enabling policy environment, as well as the impact of off-grid and mini-grids solutions using renewables.

It also increases labour participation rates to reflect the impact of a less capital-intensive shift to renewables and the effective implementation of a ‘just’ transition programme that creates green jobs that replace and exceed those lost from coal production. Coal inevitably still dominates in the energy scenario, but is overtaken by renewables a decade earlier than in the Current Path forecast.11

The transition to a more distributed renewables-based energy sector is foundational to modern industrialisation in South Africa.

**Modern industrialisation**12

In the industrialisation intervention South Africa reaches its goal of allocating 1.5% of GDP to research and development by 2030 and accelerates the expansion of information and communications technology (ICT) infrastructure, with an emphasis on fixed and mobile broadband internet access. The interventions include an export shift to promote manufactured and ICT exports.

This is a future of ‘glocalisation’, characterised by shorter value chains with fewer intermediaries and openings for new and smaller market entrants engaged in more distributed small-scale and local manufacturing.13

**Investment and economic freedom**

The investment intervention starts by growing domestic investment in the economy which is followed by measures to attract skilled foreigners and increase net foreign direct investment inflows.
to around 75 million. The successful implementation of Thuma Mina could increase average incomes by about 62% (or US$7 900) per person by 2044. The Current Path forecast is for GDP per capita to grow by only 25% to 2044 representing a modest improvement of US$3 300 in average incomes.

The difference in GDP per capita of around US$4 600 in 2044 between the Thuma Mina and Current Path forecast is a clear indication that it is possible for South Africa to regain its economic footing and get on a convergence pathway with that of its upper-middle-income peers.

In Thuma Mina, by 2044 South Africa’s economy will be US$735 billion or almost 50% larger than the Current Path forecast for that year. Simply put, instead of an economy that increases by 70% from 2020 to 2044, the Thuma Mina economy will have grown by 150%. Moreover, by 2044 South Africans can, on average, expect to live more than five years longer than in the Current Path forecast, to almost 72 years.

The sectoral composition of the economy is presented in Figure 3. Whereas the Current Path forecast for the size of the South African economy is US$834 billion in 2044, in the Thuma Mina scenario that number is US$1.230 trillion.

Each of the six economic sectors is larger in the Thuma Mina scenario in 2044 than in the Current Path forecast for that year. But less obvious from Figure 3 is the change in the sectoral composition, with the percent contribution of the agriculture, ICT tech, materials and manufacturing sectors larger than they would be in the Current Path forecast, and the contribution from the energy and services sectors smaller.

Successful implementation of Thuma Mina could increase incomes by about 62%

The 2.5% increase in the size of the manufacturing sector as a portion of the total economy by 2044 above the Current Path forecast is particularly important given the forward and backward linkages of manufacturing to improved productivity in the services and agricultural sectors. It reverses South Africa’s trend towards

Figure 2: Growth rates
deindustrialisation and is a critical component of a more productive economy.

Figure 4 presents the contribution of each intervention cluster to improvements in income in 2044. New industrialisation contributes the most, followed by energy. The third largest contribution, however, comes from the agglomeration effect. This means the various interventions are mutually reinforcing and interact to provide an additional boost to incomes.

For example, while the contributions from improved health and education are individually quite small, collectively they improve the human capital contribution to multifactor productivity within IFs and hence increase income growth.

It is no surprise that new industrialisation does best, for it includes a number of powerful general accelerators to growth such as increased levels of investment in research and development.

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It is no surprise that new industrialisation does best, for it includes a number of powerful general accelerators to growth such as increased levels of investment in research and development.

The relatively modest contribution from agriculture/water also needs some context. The agricultural sector in South Africa is small, accounting for less than 3% of GDP. Coming from such a small base, even large improvements in productivity by e.g. bringing portions of traditional land into production have limited impact on the total economy.

New industrialisation contributes most to growth, followed by energy

South Africa is however one of the few African countries that is largely food secure. According to Agricultural Business Chamber president Francois Strydom, South Africa has about 38 value chains, of which 24 are net exporters for eight out of every 10 years, providing two thirds of the food required in the Southern African Development Community region. The future situation is, however, less promising.

In the Current Path forecast we expect the country’s net agricultural import dependence, when expressed as percent of demand, to increase from less than 5% to above 30%. In the Thuma Mina scenario the country is able to constrain that increased import dependency to account for only 9% of food demand by 2044.
Had South Africa not been able to rely on its domestic agricultural sector for food provision during the COVID-19 lockdown, significant food imports would have been needed from elsewhere at a time when global trade had almost ground to a halt.

Poverty

More than half of South Africa’s total population of 60 million people currently survive on US$5.50 average income per person per day or less, which is the extreme poverty income threshold for upper-middle income countries established by the World Bank. That portion will peak at 55% in 2025 and could range from anything between 51% and 39% by 2044, depending on whether South Africa stays on the Current Path or implements the reforms required to achieve the Thuma Mina scenario. The forecasts are presented in Figure 5.16

The result of South Africa’s extraordinarily high levels of inequality is that little of the benefits of economic growth trickle down to the poorer sections of South Africa’s population. Beyond social grants, which already play an important role in constraining further increases in poverty and have helped reduce inequality, the only real solution to this quandary is job growth in the formal sector. Meanwhile the government has also committed itself to ‘strengthen’ the informal sector as a cushion to extreme deprivation.

Conclusion

South Africa is at a crossroads, and should the COVID-19 pandemic extend towards the end of 2020 and into 2021, the country may be headed for a crisis. The worst scenario that the National Treasury presented to Parliament on 30 April 2020 implies an official unemployment rate of close to 55%. This would mean the proportion of working-age individuals would fall from four out of 10 to three out of 10 with unfathomable results for social stability. Public debt is likely to stabilise only at around 95% of GDP.17

A perfect storm of bad governance, economic policy indecisiveness, an inchoate governing party, the COVID-19 pandemic and Moody’s recent downgrade of South Africa to junk investment status highlight the difficult choices confronting the country’s leadership.
In the original Thuma Mina paper released early in March 2020, the ISS warned that a ‘business as usual’ scenario was untenable. It pointed to the urgent need for South Africa to develop and rapidly implement policies based on evidence, i.e. of what works in a modern economy, rather than ideology or race.

The potential of a Thuma Mina high-growth scenario is achievable. But only if the executive can show the same level of public engagement, commitment to evidence-based policies and action relating to economic growth as seen in the initial response to the coronavirus. It must then sustain that commitment year on year for successive decades. Without such commitment and implementation, South Africa is set to become increasingly unstable, more unequal and its people steadily poorer.

Acknowledgements

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Notes


3 Frederick S Pardee Center for International Futures, Understand the Interconnected World, https://pardee.du.edu/understand-interconnected-world.


5 The South African Reserve Bank expects a contraction to 6.1% in 2020 and only 2.2% growth in 2021.

6 Briefing by National Treasury on Financial Implications of COVID-19 on both the Economy and the Budget, 20 April 2020, slide 19.

7 JG Wright, Energy in South Africa, brief contribution to workshop on South Africa’s development trajectory to 2044, prepared for the Institute for Security Studies, 2–3 December 2019, Cape Town, PowerPoint presentation, slide 38.

8 A growing number of studies show that the quality of healthcare plays a much larger role than previously understood in preventing premature mortality in low- and middle-income countries where, as with education, the focus has typically been on access. Quality implies ‘augmenting population-based and clinical-based coverage of effective health services; prioritising sensitive health conditions; developing effective, accessible, and integrated health-care networks; and developing and achieving quality targets for these prioritised health-care problems’. See A Rubinstein et al, Quality first of effective universal health coverage in low-income and middle-income countries, The Lancet Global Health, 6, 11, 2018, e1143.

9 This was, among others, the reason for a five-year health market inquiry by the Competition Commission, which tabled its final report in late 2019.


11 The energy interventions include a more prominent role for gas from sources such as the Brulpadda find and either a pipeline from the Rovumbu basin or the construction of a liquid natural gas terminal at one of the sites in KwaZulu-Natal or the Eastern and Western Cape currently under consideration.

12 In this policy paper the original industrialisation cluster intervention detailed in Annex 1 to the Thuma Mina paper has been divided into two. Investment and ease of doing business are now grouped in the investment and economic freedom cluster. The modern industrialisation cluster therefore consists of research and development, trade and strengthening digital infrastructure.


14 Land tenure reform can take the form of individual or communal tenure, but in the case of the latter the constitution requires the establishment of appropriate elected structures (as opposed to allocating this to chiefs and traditional councils). First set out in law in 2003, traditional authorities have largely been absent in the application of the law, with very few holding elections. Land tenure security will need additional upstream and downstream measures since small-scale farmers typically have much larger input costs per hectare when compared to large-scale farms.


16 Using the lower US$1.90 rate (roughly equivalent to South Africa’s lower bound poverty line) for extreme poverty to report on progress towards achieving the elimination of this scourge by 2030, in line with Goal 1 of the Sustainable Development Goals, South Africa will probably have around 20% of its population living in extreme poverty in 2030 on the Current Path and the rate would be increasing. In the Thuma Mina scenario the portion would be around 18% but the trend would be downward.

17 Private communication from Prof Philippe Burger to the author, 4 May 2020.
About the author

Dr Jakkie Cilliers founded the Institute for Security Studies. He was executive director until 2015, and is now Board of Trustees chair and head of the African Futures and Innovation programme. He is an Extraordinary Professor in the Centre of Human Rights and Department of Political Sciences, Faculty of Humanities, University of Pretoria, and a renowned author and analyst. His most recent book, *Africa First! Igniting a growth revolution*, was published in March 2020.

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