Growth Through Inclusion in South Africa

Chapter 1: Growth Through Inclusion

A Report by The Growth Lab
at Harvard University

Ricardo Hausmann, Tim O'Brien, Andrés Fortunato, Alexia Lochmann, Kishan Shah, Lucila Venturi, Sheyla Enciso-Valdivia (LSE), Ekaterina Vashkinskaya (LSE), Ketan Ahuja, Bailey Klinger, Federico Sturzenegger, and Marcelo Tokman

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About the Growth Lab

The Growth Lab is a research program at Harvard University. With its multidisciplinary team of roughly 50 staff, fellows, and faculty led by Professor Ricardo Hausmann, the Growth Lab pushes the frontiers of economic growth and development policy research. The Growth Lab advances academic research on the nature of economic growth and conducts place-based engagements that aim to understand context-specific growth processes, help address key constraints, and identify promising growth opportunities. Through its research and teaching activities, the Growth Lab has become a global thought leader offering breakthrough ideas, methods, and tools that help practitioners, policymakers, and scholars understand how to accelerate economic growth and expand opportunity across the world. Consistent with the mission of the Harvard Kennedy School of Government, in which the program is housed, the Growth Lab works to expand capabilities for improved economic policymaking such that more people and societies can enjoy higher levels of wellbeing through stronger, more sustainable, and more inclusive economic growth processes.

Growth Lab applied projects utilize a variety of tools from economics and other disciplines with a focus on understanding place-specific growth challenges and enabling learning-by-doing to address these challenges locally. Key frameworks developed at the Growth Lab and applied within projects include Growth Diagnostics and Economic Complexity. Growth Diagnostics is a methodology that identifies the most binding constraints to better growth outcomes, which informs and allows policymakers to take highly impactful actions. Economic Complexity is a growing field of research that leverages network science and machine learning to understand what economic activities a given country or region could expand into next, based on what it currently does. Growth Lab applied projects aim not only to understand constraints and opportunities in specific places, but also to empower local stakeholders in real time and *in situ* to address constraints and seize economic opportunities through training, capacity building, and the development of practical, place-based tools. All applied Growth Lab projects aim to generate publicly available research of relevance to the local community as well as frameworks, tools, teaching resources and learning experiences that strengthen the HKS community.

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1.1 Executive Summary

When South Africans threw off the structures of apartheid three decades ago, the nation captivated the world. The early 1990s marked a victory for generations of freedom fighters, and the future of an inclusive South Africa was set in motion. There was no telling what could be accomplished with the full force of South Africa's human capabilities, creativity, and resilience in combination with its industrialized economy and established comparative advantages in global trade. There was good reason to be hopeful as the Presidency of Nelson Mandela ushered in an active period of reconciliation. By including all South Africans in the functioning of society and the economy, the Rainbow Nation seemed poised to leverage its substantial economic assets at full strength. In 1995, South Africa supported the 47th most complex economy in the world[1] – on par with China (ranked 46th) and far ahead of any other African nation (Tunisia was next at 66th). There was good reason to believe that the economy would grow rapidly, and opportunity would expand to many more South Africans.

But more than a generation later, jobs are scarce and South Africa's economic potential remains unrealized. The national economy has experienced slow, slowing, and highly vulnerable growth. Inequality is the highest in the world, and structures of exclusion remain embedded in South African society both within and across racial groups and geographies. Black South Africans continue to face poverty and joblessness at very high rates, and overall wealth, although racially more balanced, remains as concentrated in a narrow few as it was at the end of apartheid (Chatterjee *et al.*, 2022). Though government policies have worked to dismantle many structures of the apartheid state and increase living standards, these efforts have not translated into the creation of job opportunities for too many South Africans. Despite immense effort aimed at socio-economic transformation, including policies of broad-based black economic empowerment, inclusion has been very limited in practice.

South Africa is failing to achieve growth and inclusion. Income per capita has been falling for over a decade. Unemployment at over 33% is the world's highest, and youth unemployment

[1] See country rankings in the Growth Lab's Atlas of Economic Complexity (https://atlas.cid.harvard.edu/rankings). South Africa's position has since weakened to 70th (China is now 17th and Tunisia 44th).

exceeds 60%. Poverty has risen to 55.5% based on the national poverty line,[2] yet many more households depend on government transfers to sustain meager livelihoods. Most cities are failing to adequately connect people to productive opportunities and are failing to innovate, grow, and drive inclusion. Rural areas in former homelands, where almost 30% of South Africans live, exhibit dismally low employment rates and remain exceptionally poor. Individuals living in these areas need to leave for an equal chance to earn a decent living. This report aims to answer why South Africa is failing to grow and failing to move the needle on economic inclusion three decades after the end of apartheid. The evidence points to two causes: collapsing state capacity and the persistence of spatial exclusion.[3]

State capacity has collapsed across many government functions that are essential for a functioning economy. Critical network industries, including electricity, transport infrastructure and services, security, and water and sanitation have experienced major deteriorations over the last 15 years. The economy has been forced to cope with increasing electricity rationing, leading to a declaration of national disaster in February 2023 after more than 15 years of load shedding. Rail and port capacity has declined, generating large losses in exports. The collapse in state capacity to deliver key inputs has, in effect, squandered the country's comparative advantage in cheap, coal-fired electricity. Urban crime is very high, and theft and sabotage undermine the functioning of many national infrastructure systems. Communities across the country are increasingly vulnerable to all forms of disaster – both natural and manmade – due to weakened public services. National finances are under increasing strain as South Africa relies on fiscal transfers to bail out state-owned enterprises (SOEs) and to redistribute national income to households to alleviate poverty and hardship. Many municipalities now face severe fiscal challenges which undermine already weak public service delivery. South Africa is seeing signs of unsustainability in its repeated credit downgrades and large sovereign risk premia. All the while, as growth slows, exclusionary forces are becoming more entrenched.

Spatial exclusion has been entrenched by well-intentioned policies in urban areas and an absence of effective strategy to include rural former homelands. Under apartheid, townships were intentionally separated from central business districts and economic infrastructure, leading to fragmented and disconnected cities. Apartheid also relied on

[2] Poverty figure corresponds to 2014, the latest official value.
[3] Throughout the report, the terms capacity and capability are used interchangeably. They both refer to the ability of the state or organization to effectively carry out the tasks and responsabilities assigned to them.

differential treatment to former homelands vis-à-vis the rest of the country, effectively separating those areas from the industrialized economy. Despite attempts to reverse this exclusion, policies since 1994 have unintentionally perpetuated many aspects of spatial exclusion. We find that urban planning regulations and zoning policies prevent dense, affordable housing in desirable locations and consequently limit both formal and informal employment. We also find strong evidence that formal jobs are limited because long commutes from low-density areas in and around cities make transportation costs and reservation wages high, while low residential densities prevent the development of a thriving informal economy. Meanwhile, rural former homelands continue to be economies separate and distinct from the rest of the country and face extremely low rates of employment.

This report summarizes the causes of slow growth and persistent exclusion within the South African economy. It starts by laying out the unavoidable conclusion that the economy is not delivering the shared prosperity that South Africans desire and deserve. We then document why growth is weakening. We diagnose a common pattern of breakdown in state capability that has caused growth to slow *(Chapter 2)*. Unlike a natural disaster, which is followed by a recovery when the disaster recedes, South Africa's collapse in state capability will continue to erode if systemic causes are left unaddressed. But this collapse does not fully explain South Africa's unemployment and inequality, however, which trace to a longer-term problem of spatial exclusion *(Chapter 3)*. While this problem has origins in apartheid, we find that post-apartheid policies have to a significant extent reinforced rather than counteracted patterns and processes of spatial exclusion. These two issues – collapsing state capability and spatial exclusion – together leave South Africa's enormous potential in its people, land, assets, and capabilities underutilized. Achieving a better economic future will require addressing both constraints. Given the collapse of South Africa's key advantage of cheap and reliable electricity, the country must also evolve its comparative advantage in a changing global economy. Since the 1990s, the global economy has become more integrated, and the world is now moving increasingly rapidly toward decarbonization. South Africa may have lost its historic comparative advantage in low-cost electricity via coal, but it has great potential to develop new green growth drivers that will help to supply global decarbonization *(Chapter 4)*.

Progress must come from a recognition of what is not working and corresponding actions to address both proximate causes and deeper causes of these problems. The collapse in

state capacity has policy and political causes and will not be resolved without significant change and bold leadership. The deeper causes of collapse stem in part from ideological gridlock within government, which has prevented critical decisions to be made in time, as has happened repeatedly in both electricity and rail. It also stems from a particular ideology that prevents society from contributing to supply societal needs; for example, by limiting private, provincial, and municipal power generation. It also stems from the mistaken belief that preferential procurement rules could be imposed on complex organizations, such as the network industries, at little cost. These rules have instead — in many cases — overburdened critical public organizations. South Africa also has a peculiar form of fiscal decentralization that has overburdened many municipalities that do not have the local capabilities to match the responsibilities. Finally, South Africa has seen a rise in political patronage, which has interacted with the other causes of state collapse. Together, these interacting causes of state collapse have created a vicious cycle where talent becomes harder to attract and retain in government, yet talented public servants are needed to restore and rebuild state capacity.

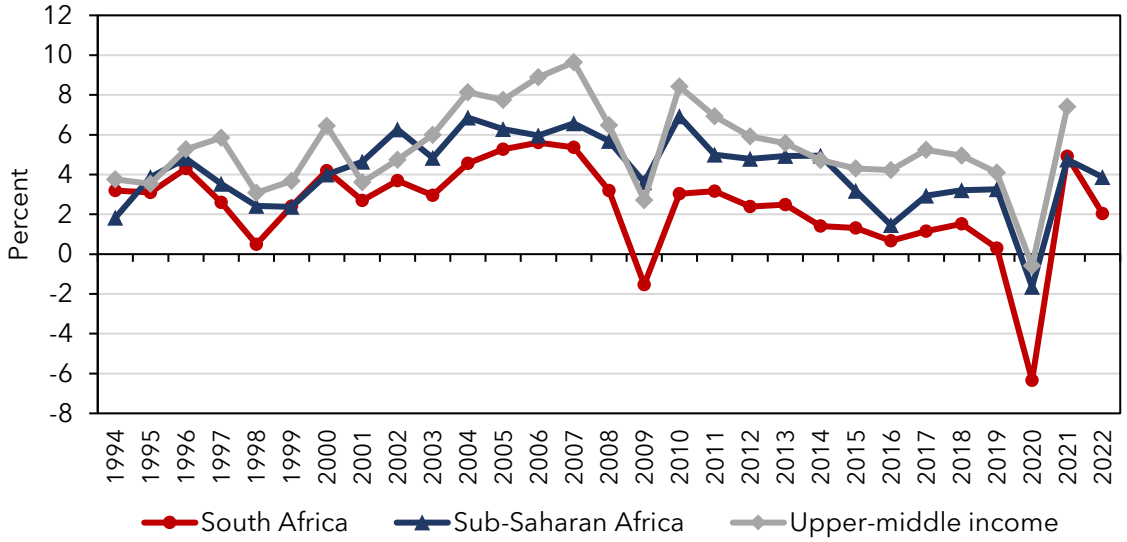
To reach its true economic potential, South Africa must include more of its citizens in the growth process. The path to growth through inclusion must include the recovery of state capacity and increasing the power of all members of society to exercise economic choice. The country cannot prosper with over half of its working-age population not working. It cannot afford to keep its citizens spatially disconnected. It cannot expect to grow with a collapsing state that *de facto* uses its power to limit society's capacity to help accomplish essential goals of the nation. South Africa's economic challenges may seem overwhelming at the current moment, but the promise of the Rainbow Nation is not out of reach. This report seeks to inform new paths to growth that will come through more effective economic inclusion. Inclusion must start by understanding and tackling key issues that drive exclusion. For the economy to function and leverage all the human capabilities, productive knowledge, physical assets, and natural endowments that South Africa has, the government needs to work. South Africa needs a more effective form of statism that does not overburden state organizations with additional goals that undermine their core mission. South Africa also needs to develop new and better mechanisms for driving inclusion, empowerment, and transformation that include far more of society. Central to this challenge is spatial inclusion, which is ultimately about giving people the choice of where to live and what markets to access. This includes not only the labor market,

but also markets for ideas, innovation, entrepreneurship, capital, finance, and partnerships that are undermined by the segregation of cities and other spaces.

1.2 Growth and Inclusion in Numbers

South Africa has a growth problem, which has intensified over the last fifteen years. Annual GDP growth averaged 3.6% per year from 1994 through 2008, or 2.0% in per capita terms, lower than that of upper-middle income countries and Sub-Saharan Africa on average (Figure 1.1). At its peak in 2006-2007, South Africa grew at a slower pace of growth than most peers and then experienced a sharper contraction in 2008-09. After the Global Financial Crisis, South Africa's growth remained more subdued. In fact, growth declined to an average of 0.7% (-0.5% in per capita terms) in the five years prior to COVID-19. In 2020, South Africa's contraction was again sharper than others. Since 2020, income per capita has not yet recovered to its pre-pandemic level even as South Africa has benefited from high commodity prices of several resources. Expectations are that South Africa faces difficult years ahead. Figure 1.2 shows the path of GDP per capita indexed to 100 in the year 2019 (before COVID-19), according to the IMF's projections. While Sub-Saharan Africa and emerging economies are expected to return to growth but without a recovery to the pre-pandemic path (Panels B & C), South African GDP is projected to continue to stagnate without returning to its pre-pandemic level (Panel A).

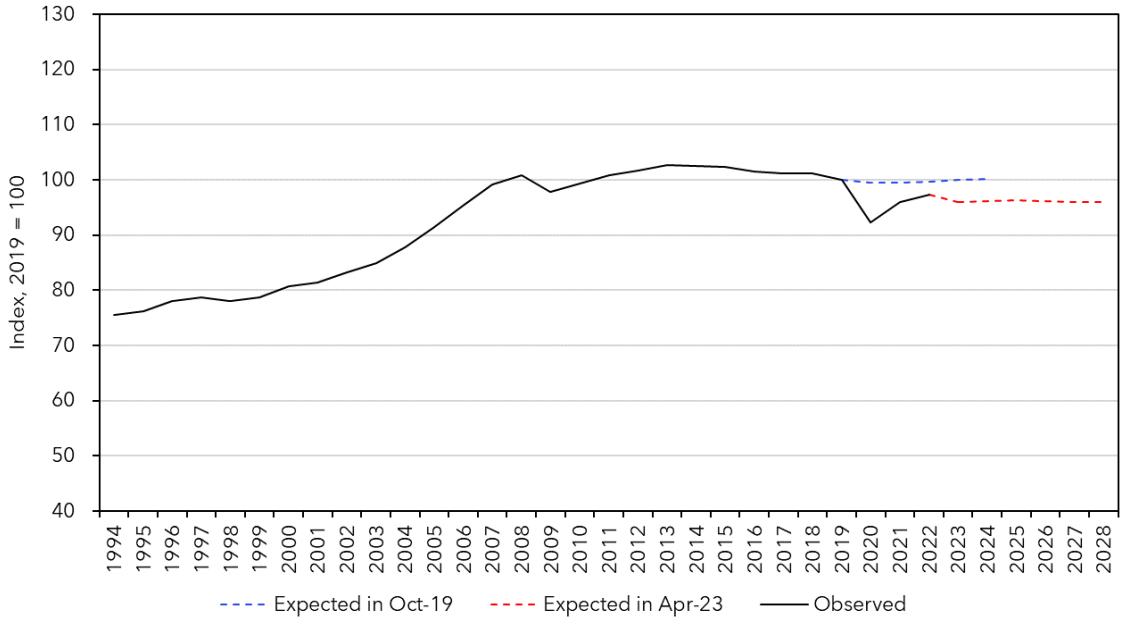
FIGURE 1.1: REAL GDP GROWTH – SOUTH AFRICA VS. PEERS



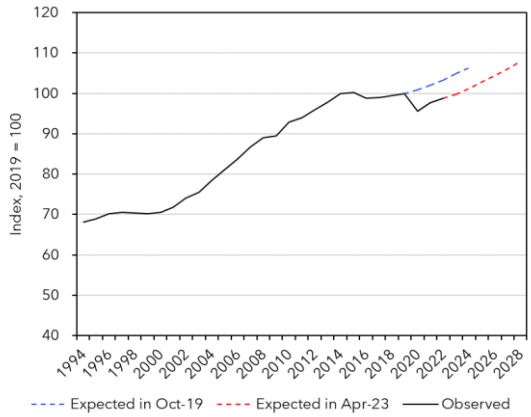
Source: Own elaboration based on World Economic Outlook (April 2023) for South Africa and Sub-Saharan Africa and World Development Indicators for Upper-Middle-Income Countries.

FIGURE 1.2: REAL GDP PER CAPITA – OBSERVED AND FORECASTS

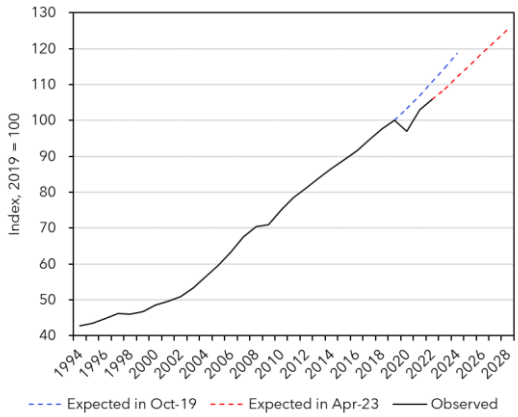
Panel A: South Africa



Panel B: Sub-Saharan Africa



Panel C: Emerging Economies

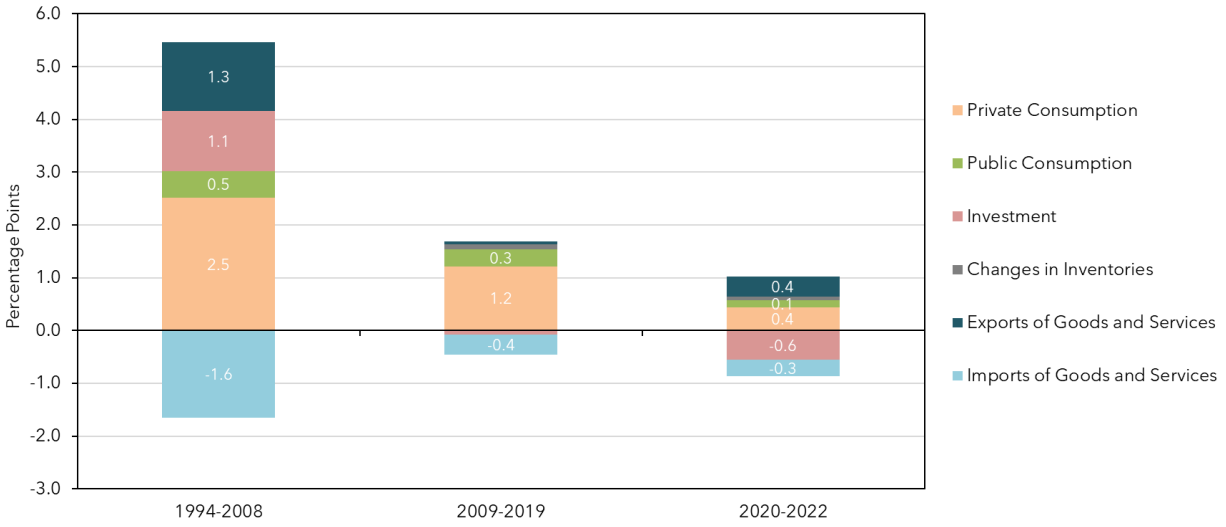


Source: Own elaboration based on World Economic Outlook (April 2023 and October 2019)

The COVID-19 pandemic hit South Africa hard, which exacerbated a pre-existing problem of declining global competitiveness across several sectors. As documented by Hausmann *et al.* (2022), over the fifteen years since 2008, sustainable growth drivers increasingly faded away, leaving an economy driven only by consumption: exports and investment contributed virtually nothing to overall growth over 2009-19 (Figure 1.3). This change cannot be explained by a decline in commodity prices alone because export volumes also stagnated. As a sign of declining competitiveness in the global economy, South Africa has

lost global market share since 2015 across numerous manufacturing industries, including textiles, machinery, chemicals, and electronics, as well as across agriculture and travel, and tourism exports.[4] If South Africa's global market share had just remained constant at its 2004-11 average, exports would have been 13.3% greater in 2019. South Africa then faced four intensive waves of COVID-19 infection over 2020-22. The onset of COVID-19 led to a further rapid decline in exports (by 25%) and investment (by 12%), and investment has not recovered to pre-pandemic levels. Meanwhile, private and public consumption continued to grow but at a slower rate than before COVID-19.

FIGURE 1.3: CONTRIBUTION OF EXPENDITURE COMPONENTS TO CAGR OF REAL GDP



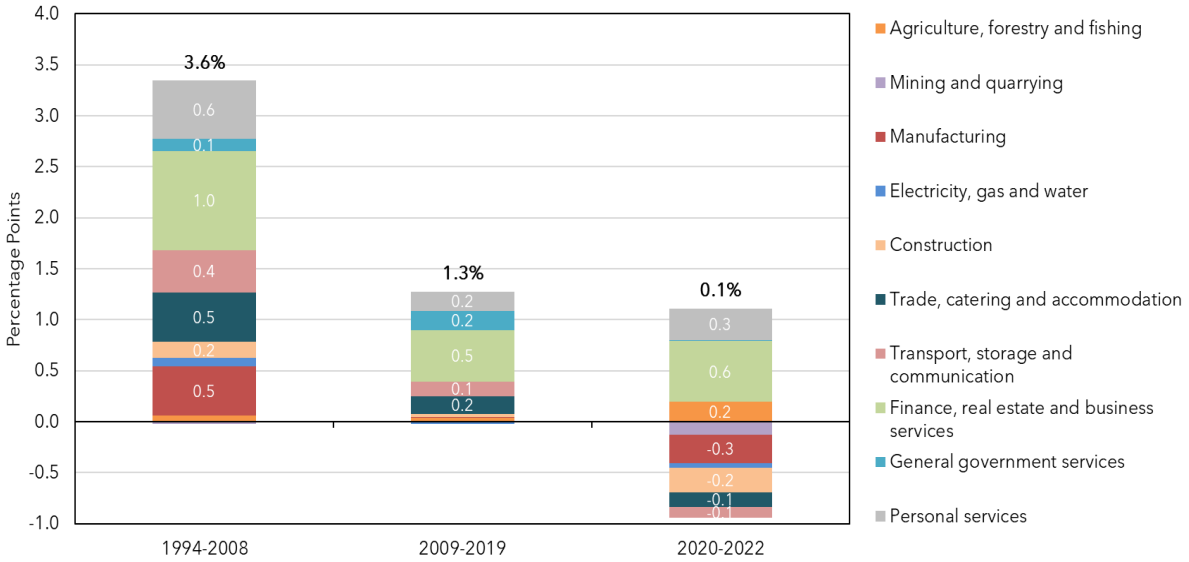
Note: Due to data discrepancies, the sum of the contributions of each expenditure component for each period slightly differs from the CAGR of the real GDP.
Source: Own elaboration based on StatsSA.

Sector performance patterns over time are reflective of key supply-side constraints. At the sector level, the economic slowdown has been driven by declines in utilities, manufacturing, and mining (Figure 1.4). The weakening of mining began before 2008 – despite global commodity prices remaining strong for several years after – while the fall in utilities and manufacturing occurred over the last fifteen years. The declining growth of manufacturing was especially noteworthy as the sector has been an important source of government attention and middle-class jobs. Manufacturing shed jobs since 2008 at a pace well beyond what global trends of "premature deindustrialization" can explain, as shown by Fortunato (2022). This exceptional deindustrialization can be traced to key supply-side

[4] See South Africa on the Atlas of Economic Complexity (https://atlas.cid.harvard.edu/countries/246/market-share)

constraints – especially the intensifying electricity crisis – and a high reliance on domestic demand, which has declined amidst South Africa's overall growth slowdown. With the core of the economy not generating jobs, the few jobs that were created tended to be in security, household services, and publicly funded community services. It is hard to imagine how this form of job creation can generate economic dynamism to move the economy forward. Public work programs in recent years have created some job opportunities, but these are temporary and of much lower quality than the productive jobs that were destroyed or never created.

FIGURE 1.4: CONTRIBUTION OF SECTORS OF ACTIVITY TO CAGR OF REAL GDP

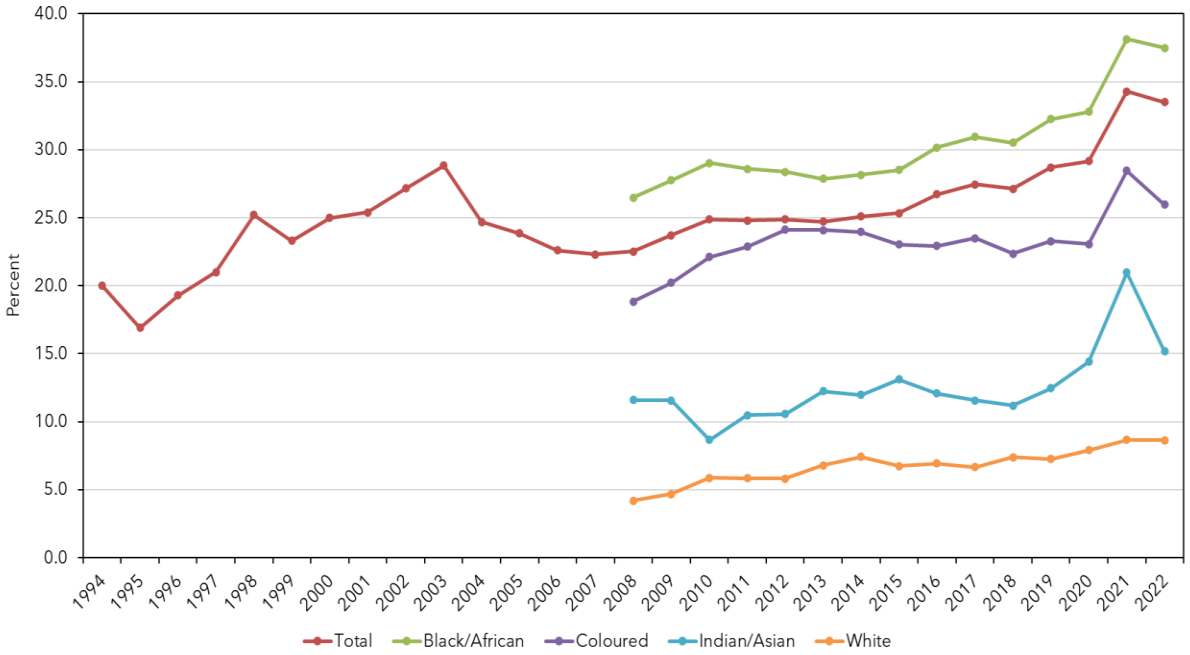


Note: Percent bold labels refer to the CAGR of the real GDP.
Source: Own elaboration based on StatsSA.

The modern South African economy is defined by exceptional levels of labor market exclusion. South Africa's unemployment and inequality levels are among the worst in the world. In a labor market diagnostic, Shah (2022) puts this in perspective with the observation that the richest decile in South Africa is about as rich as the richest decile in Greece while the poorest decile in South Africa is as poor as the poorest decile in Cameroon. This results in a very high poverty rate for South Africa's level of income. But these are not new problems; they were defining features of South Africa back in 1994, although they have worsened. On average, unemployment has been increasing by 0.5 percentage points per year since the end of the apartheid, reaching 33.5% in 2022 (from 20% in 1994) (Figure 1.5). Perhaps most worrisome, youth unemployment reached more than 61.5% in 2022, according to StatsSA. Black South Africans are not only the population group with the highest level of unemployment but the

difference in unemployment rates between Black and White South Africa has widened substantially. If one looks instead at employment rates, so as not to overlook people who are outside of the labor market because they have given up looking for work, South Africa has one of the worst employment rates in the world (39% in 2022). The number of individuals not engaged in education, employment, or training (known as "NEETs") has also been on the rise. While this is not a new or emerging problem for South Africa, low growth has worsened labor market exclusion. But even the higher growth prior to 2008 did not fully reduce the problem.

FIGURE 1.5: UNEMPLOYMENT RATE, TOTAL AND BY POPULATION GROUP

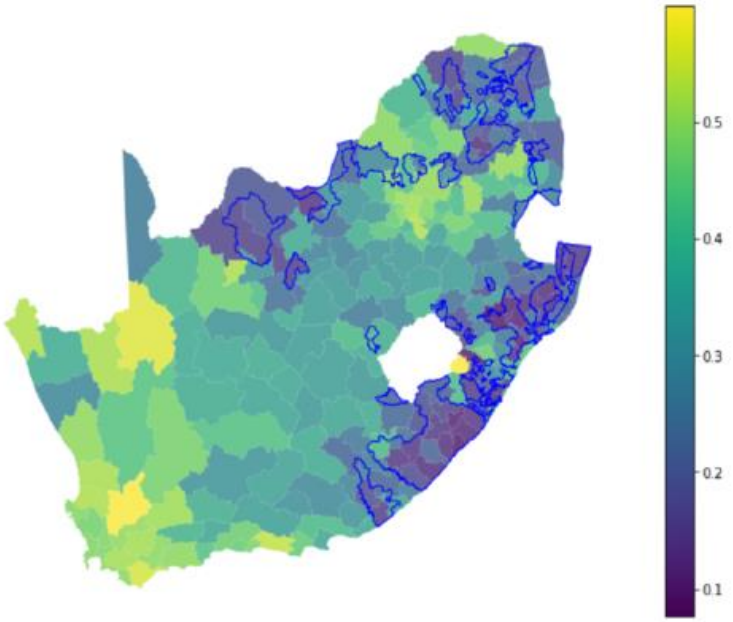


Source: Own elaboration based on SARB and StatsSA.

Spatial divides play a crucial role in South Africa's high unemployment rate, especially for Black South Africans. Nothing expresses more the extreme spatial imbalances in South Africa than the difference in employment rates between the former homelands and the rest of the country. The dismally low national rate of employment at the national level of 39% is an average of two very different worlds. In the areas outside of non-metro former homelands (i.e., excluding Pretoria and Durban), where 63% of the working-age population lives, the employment rate hovers around 46% – low but not uncommon by international standards. Inside the non-metro former homelands, the employment rate of the working-age population was barely 26%. In some municipalities that are within the former homeland boundaries, it is below 10% (Figure 1.6). Within the non-metro former homelands, the problem seems to be

concentrated in the rural areas, which include almost 80% of the population of these areas. In these places, the employment rate is barely 21%, while it is 42%, twice as high, in the urban areas of the former homelands.

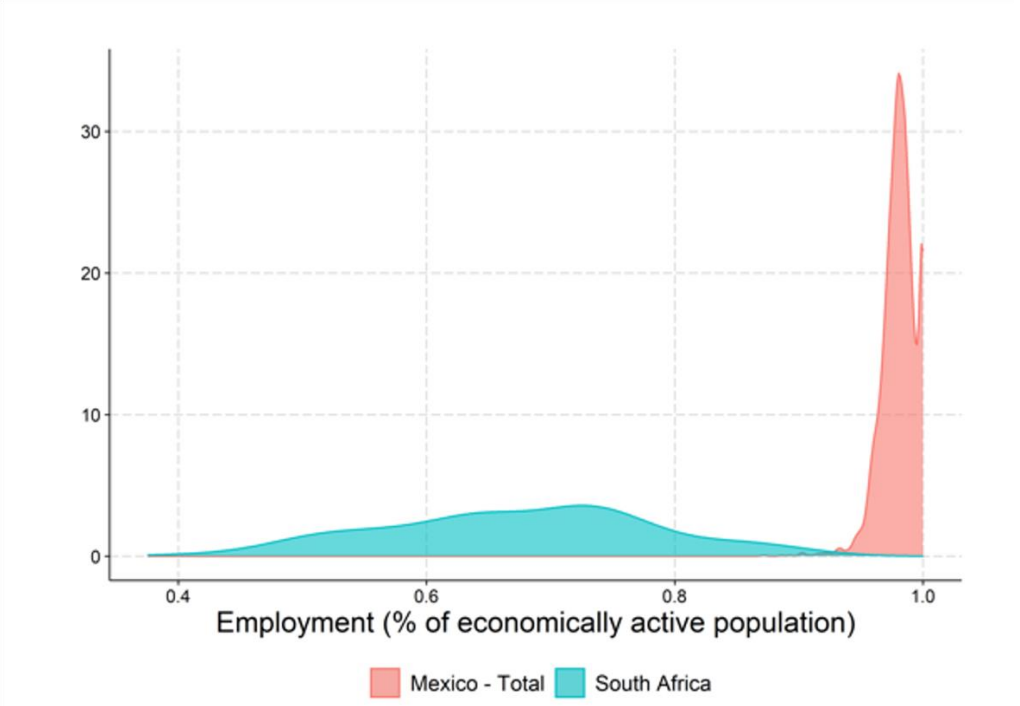
FIGURE 1.6: EMPLOYMENT RATES BY MUNICIPALITY



Source: Lochmann (2022)

The persistent exclusion of rural former homelands from the modern economy is one critical type of exclusion that South Africa must reverse to achieve growth through inclusion. The fact that the rate of employment in urban areas of former homelands is very similar to the rates in both rural and urban areas outside the homelands indicates that there are uniquely low job opportunities in the rural areas of the former homelands, where some 32% of South Africans live. These differences cannot be explained by the personal characteristics of those living in the former homelands, because individuals who leave the former homelands tend to find job success in other areas of the country at a similar rate to anyone else (Lochmann, 2022). This implies that homelands face place-based economic challenges that have not been overcome through various improvements to infrastructure and social transfers in these areas. Furthermore, this means that education and skill gaps in the former homelands, though significant, are not the binding constraint to more employment in those areas. South Africa is extreme in both its low level of employment overall and the variance in how low employment rates are across municipalities, as can be seen in a comparison with Mexico, which is a country with a similar level of per capita income (Figure 1.7).

FIGURE 1.7: DISTRIBUTION OF EMPLOYMENT RATES ACROSS MUNICIPALITIES – MEXICO (2019) & SOUTH AFRICA (2011)



Source: Own elaboration based on South African National Census of 2011 and INEGI.

Space also plays a large role in explaining low employment rates in urban settings across the country. In urban areas, workers on average face very long commute times and high transportation costs, making them unusually far and disconnected from centers of productive formal jobs, which tend to concentrate near central business districts. Relatedly, South Africa has a surprisingly low rate of informal employment, especially as expressed as self-employment or employment in microenterprises. Worldwide, these jobs tend to be spatially more dispersed and closer to people's homes. In most middle-income countries, let alone low-income countries, self-employment, and micro-enterprises tend to provide work and incomes for a significant fraction of the labor force. For a country at South Africa's level of income, the expected level of own account work, given the international experience is around 20%. But in South Africa in 2019, before the COVID-19 recession, the rate was just 4%. According to Shah (2022), this outcome cannot be explained by the larger presence of social grants, by stringent labor market regulations, by low education, or by high crime. Evidence provided by Shah and Sturzenegger (2022) suggests that South Africa's unusual urban structure with very distant and low-density residential areas leads to very high transport costs, lowering formal employment, but also very low foot traffic near people's homes, lowering the viability of informal work. To

make formal work viable, employers must compensate workers for the large direct and indirect commute costs, making labor expensive for formal firms and less attractive for workers. In this way, spatial exclusion can be understood as a key driver both of low formal employment and extremely low informal employment in South Africa.

The urban structures of South Africa have origins that date back to apartheid, but these structures have been exacerbated by housing policies and urban planning adopted since 1994. The urban areas where many South Africans live are far and disconnected from centers of formal jobs. Although post-apartheid policy has aimed to break down spatial divides, policies have had unintended consequences that have entrenched many of the same outcomes. Housing policy following apartheid has centered on state-provided homes in far away, low-density places, with an emphasis on providing publicly supplied housing through the Reconstruction and Development Programme (RDP). City centers were kept at unusually low densities through restrictive floor area ratios, maximum height regulations, and parking regulations. In this context, the informal settlements that were created are telling as they are better located and provide housing units that are smaller than the typical government-provided RDP housing, indicating that the trade-offs implied in government policy do not reflect the preferences of citizens.

It is unfortunately clear that South Africa's trajectory is not one of growth or inclusion, but rather stagnation and exclusion. South Africa's economy is stagnating and, in fact, losing capabilities, export diversity, and competitiveness. While the racial composition of wealth at the top has changed, wealth concentration in South Africa has not and remains very high. Moreover, the broader structures of the economy have not allowed for the inclusion of the labor and talents of South Africans — black, white, and otherwise. There appear to be major spatial impediments to labor market inclusion in cities and large spatial patterns of exclusion in former homelands. As the performance of network industries and public capabilities have deteriorated and growth has slowed, exclusion has only worsened. Empowerment of a few has *de facto* come at the expense of the many. Since the policies that are in place today are not accomplishing their essential goals, South Africa needs new tools and attention devoted to more effectively achieving economic inclusion, empowerment, and transformation.

1.3 Prioritizing Constraints to Growth and Inclusion

Change is required to achieve South Africa's growth and inclusion goals, but where should change be focused? It is one thing to accept that outcomes are not in line with the overall goals of society, but it is another thing to identify and address the constraints that are preventing the goals from being achieved. Even in good times, governments cannot address all constraints facing an economy all at once; but when challenges are mounting, prioritizing binding constraints is even more important. South Africa has battled several waves of COVID-19 infections, devastating flooding events, and episodes of violence over the last several years. Regular and worsening rationing of electricity through load-shedding led the President to declare a "State of Disaster", which was later revoked, while water supply crises, port functionality, and other severe breakdowns are also becoming disasters in their own right. Under these conditions, it becomes natural for the government to prioritize the emergencies it faces. However, in doing so, effective responses must also treat the deeper causes of recurring problems, which are rarely as obvious. In some cases, response actions that treat symptoms may worsen underlying problems.

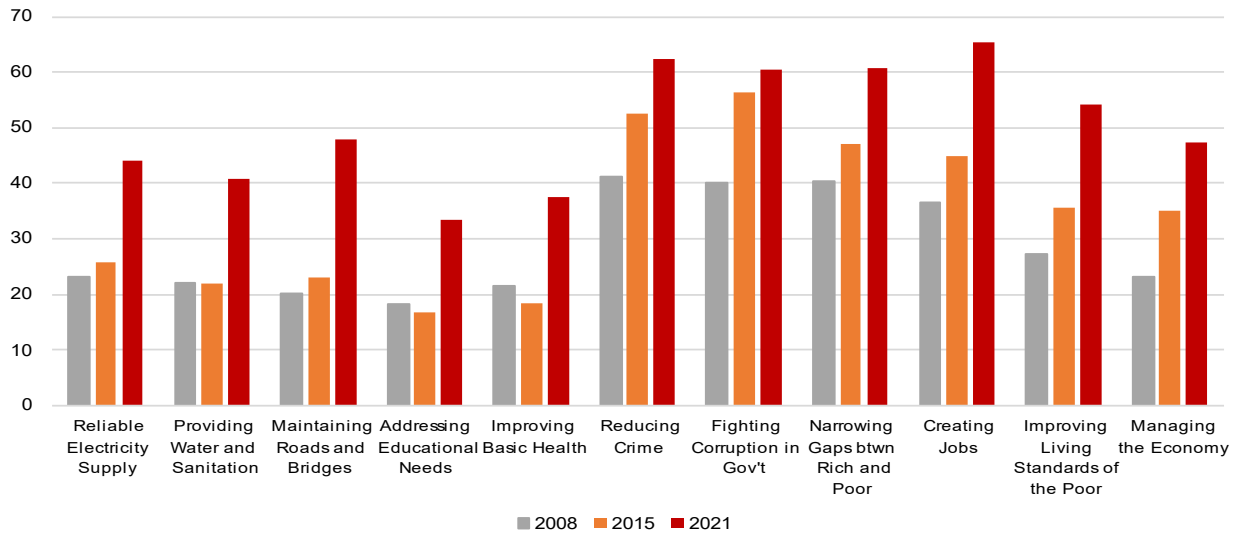
This report provides an assessment of the causes behind South Africa's economic challenges and identifies a resulting set of priorities for how South Africa can achieve growth through inclusion. Using principles of growth diagnostic research in tandem with collaborations with numerous South African policymaking bodies, research organizations, and private sector stakeholders, we arrive at two fundamental constraints. One of these constraints – the destruction of capabilities to provide public goods – has been worsening over the last fifteen years and is responsible for declining national growth. The other constraint – the inefficient spatial structure of the economy – has been an issue for longer and helps to explain both low dynamism over the long-term and persistent lack of inclusion even during times of higher growth. Taken together, these two fundamental issues are at the heart of South Africa's economic challenge. They explain why previous research (Hausmann *et al.*, 2022) finds that the economic slowdown is not due to macroeconomic problems or external shocks, but rather to persistent and worsening domestic supply-side constraints. This has meant that demand stimulus measures via fiscal policy have proven ineffective or even counterproductive. In addition to dissecting these constraints and offering pathways forward on each in a proximate

sense, we also identify several deeper issues that have undermined the state from acting on solutions to known problems.

1.3.1 Collapsing State Capacity

The fundamental reason that growth has slowed over the last fifteen years is a collapse of state capabilities to provide the public goods on which the economy depends. Few things are as clear evidence of a system not working as it should as when the power goes out. When this happens regularly and systematically, this is evidence that the electricity system has broken down. And when similar system breakdowns happen across a variety of public goods (Figure 1.8), this is evidence of causes that extend beyond the electricity system and a particular SOE responsible for providing the public service – Eskom, in this case. But how do we know when such systems are binding economic growth and inclusion? A summary of evidence is provided here. In Chapter 2 of this report, we provide a full diagnosis of the crisis in the electricity system to understand both electricity-specific failures and broader causes of state collapse as well as a discussion of the problem of municipal government collapse.

FIGURE 1.8: SHARE OF RESPONDENTS INDICATING GOVERNMENT HANDLING AS "VERY BADLY"



Source: Own elaboration based on Afrobarometer Surveys.

The declaration of a state of disaster in the electricity system in early 2023 reflected acceptance of a problem that was evident long before. Beginning in 2007, peak demand for electricity began to outstrip supply, and Eskom started to use load-shedding to balance the system. Since then, the electricity issue has only worsened with load-shedding intensifying and

electricity prices rising. Recently, the South African Reserve Bank (SARB) estimated that load-shedding causes about a USD 50 million daily loss, on average, and without power outages the reserve bank would have projected South Africa's growth in 2023 to be 2.3% rather than 0.3%.[5] This 2% difference is enormous and could get worse. During the winter months, load-shedding was anticipated to reach stage 10 – meaning that upwards of 1 GW must be reduced through rationing — in a system that only has a little over 6 GW in total capacity. But, as this report discusses, this problem was obvious well before the rapid rise in load-shedding over the last two years. For the situation to have gotten to this point after 17 years of load shedding is an indication of a more severe governance failure. Countries that face similar electricity crises, such as Colombia in 1992 and Chile in 2007 were able to turn the situation around in less than 5 years.

Ending load-shedding is not a sufficient policy goal. Rather, South Africa needs to rebuild the electricity system to deliver low-cost and reliable electricity to all users. The crisis is particularly damaging for South Africa because the country's international comparative advantage was based on its cheap coal-fired electricity and on the energy-intensive industries that formed around it, such as mining and mineral processing. The collapse of utilities overall can explain around 40% of South Africa's growth slowdown even before the recent escalation of the crisis (Hausmann *et al.*, 2022). With electricity now being a comparative disadvantage and with coal being phased out in the context of the global energy transition, the country's key industries face present and future challenges.

Outages and load-shedding have considerably increased losses for all types of firms in South Africa but particularly for energy-intensive firms. As studied by Fortunato (2022), while there were around 2 hours of outages per month in 2007, this increased to 20 hours in 2020, which resulted in annual losses of approximately 7% for the median formal firm. While 15% of firms reported electricity as a constraint in 2007, 55% did so in 2020 — far and away the top-reported constraint. To overcome the loss of reliable electricity from the grid, firms increased their use of backup generators; 60% of manufacturing firms owned or shared a generator in 2020 (versus only 20% in 2007). In 2020, reliance on generators was in line with far poorer countries and countries in conflict, including Yemen, Lebanon, Iraq, and the DRC. More recently, firms have expanded off-grid renewable solutions where possible. While many

[5] See Statement of the Monetary Policy Committee, January 2023.

African nations have struggled with electricity provision, South Africa is somewhat unique in that it had reliable cheap electricity, which was at the core of its comparative advantage in energy-intensive industries. The country has catastrophically lost this ability to produce and supply electricity.

The electricity system failure helps to explain why the growth slowdown has been driven by the collapse in manufacturing, mineral processing, and utilities that was previously noted. Since the manufacturing sector is three times more energy-intensive than other sectors in the economy, it is not surprising that its contribution to real GDP growth fell from 0.5 percentage points per year during 1994-2008 to zero during 2008-2018. Moreover, the subsectors within manufacturing that are more intensive in energy (measured by the share of electricity as intermediate input) have shown even lower growth rates during the latter period (Fortunato, 2022). Since Eskom as a company was also devastated by increasingly weak revenues alongside highly unproductive investment, its financial position worsened. While manufacturing also faced other challenges, electricity is the leading cause of their negative productivity growth and loss of competitiveness. The electricity problem looms large across all sectors, even those that have seen recent growth, such as business process outsourcing (BPO).

Unfortunately, this pattern is also present in other network industries – including ports, rail, water and sanitation, and digital communications. This is why the government's current reform effort, based on the wide-ranging Economic Reconstruction and Recovery Plan and implemented through Operation Vulindlela, is focused on responding to challenges in each of these systems. While electricity is the most binding constraint for the economy overall, industries that intensively need other public inputs are also facing increasing headwinds. The Port of Durban has experienced its own visible collapse that can be seen in the persistent backlog of ships in the harbor, and the failings of the rail system can be seen in the bottleneck it represents for mining output and in the complete shutdown of passenger rail lines. Water supply is worsening due to administrative failures, and under the pressures of climate change, many fear that water availability will be the subject of the next national disaster. Locally, Nelson Mandela Bay has been facing a water supply crisis. While these priorities are clear, the reform efforts of Operation Vulindlela are increasingly revealing the complexity and interrelatedness of the breakdown in public capabilities across government.

As SOEs' core competencies have deteriorated, capabilities within national and local governments have weakened, as have their financial health. Municipalities play a significant role in the provision of public services, often acting as intermediaries in distribution. This is the case for the distribution of water and quite unusually in electricity. Surveys of satisfaction with these services show a decline over time for most municipalities, and measures of water access have worsened. Municipalities, even as intermediaries, face related financial difficulties. The State of Local Government Finances report of 2022 found that 169 municipalities across the country were in financial distress at the end of the 2021/22 financial year (South Africa National Treasury, 2022). As of 2022, municipalities owed water boards and Eskom around R15 billion and R53 billion, respectively. Municipalities are unable to collect water and electricity payments from consumers, which has substantially undermined local government solvency, worsening underlying challenges of effective and efficient local spending. As discussed in Chapter 2, there is a large variance in public satisfaction with local service delivery, which traces to a fundamental pattern of shifting a high level of spending authority and responsibility to local municipalities without the underlying capabilities to deliver these responsibilities effectively. This is a problem sometimes referred to as "premature load bearing," which was brought upon by a rapid decentralization of expenditures, which precedes the more recent crisis of financial distress of municipalities.

In electricity, the proximate cause of the crisis is poor management and under-investment in generation, transmission, and storage capacity, but the deeper cause is a distinct type of political gridlock. South Africa's deficit in electricity is due to a lack of capacity in the system. When this became apparent in 2007, South Africa committed three errors that made today's crisis worse. First, it bet heavily on badly designed coal power plants as the costs of renewables were falling. Second, it delayed maintenance in its aging fleet to create more capacity in the short run. Third, it waited too long to seriously bring in private investment. Liberalizing the participation of society especially in generation and transmission will be the most effective way to mobilize the necessary investments South Africa needs to get out of this current crisis. Yet, it has taken nearly 17 years for South Africa to make serious moves in allowing for private and municipal participation, and even now the progress of reforms is unconscionably slow. In the meantime, South Africa bears large costs for this inaction and gridlock. The current reform bills meant to establish an electricity market have not been

passed, nor do they clarify important aspects about the role of market participants and alternatives to the current failing system of distribution by municipalities.

A current focus on emergency response and a lack of clarity in the vision for the future shape of the electricity market prevents society from contributing more to solving the electricity supply problem. Even if the final design of the market only takes shape over time, economic agents need to have a much clearer idea of the direction and contours of future policies to be able to participate today. Thus, South Africa needs to create a functioning market for electricity with the following principles: (1) greater participation of society in generation, transmission, distribution, and storage; (2) efficient distribution markets that are not too small to benefit from economies of scale (as many municipalities currently are); (3) clear rules for all market participants that eliminate conflicts of interest and prevent discriminatory treatment; and, (4) final prices that reflect the marginal cost of production, including intra-day pricing. Additionally, given the current state of the electricity crisis, the goal should be to procure as much power as efficiently and cheaply as possible. This means relaxing preferential procurement rules and focusing the power of government procurement more strategically. Eskom has been forced to procure expensive, low-quality coal, and struggles to get good parts and technical capacity for required maintenance. Removing such rules should be a priority not only during the emergency response but also during the permanent functioning of the system. The current procurement of energy through the Renewable Energy Independent Power Producer Programme (REIPPP) should be extended to include transmission and storage investment needs so that transmission and stability constraints do not limit the expansion of generation.

In electricity and beyond, a collapse of public capabilities has become systematic and requires a more systematic response. Breaking systems is usually easier than repairing them. Repair requires a clear diagnosis of failure at a system level in both technical and wider political, administrative, and organizational dimensions. Four primary factors contribute to state capacity decline: political gridlock, entrenched ideology, overburdening of state organizations with objectives beyond their core mandate, and political patronage. This reality has empowered a minority to the detriment of the majority. Rekindling growth requires recovering and strengthening state capacity, and we close Chapter 2 with an outline of how to do so by reversing excessive "load bearing", building up and protecting capacity, and leveraging rather

than restricting capabilities that exist in wider society. Certain capacities have been rebuilt (for example the tax collection ability of the South African Revenue Service), showing that change is possible.

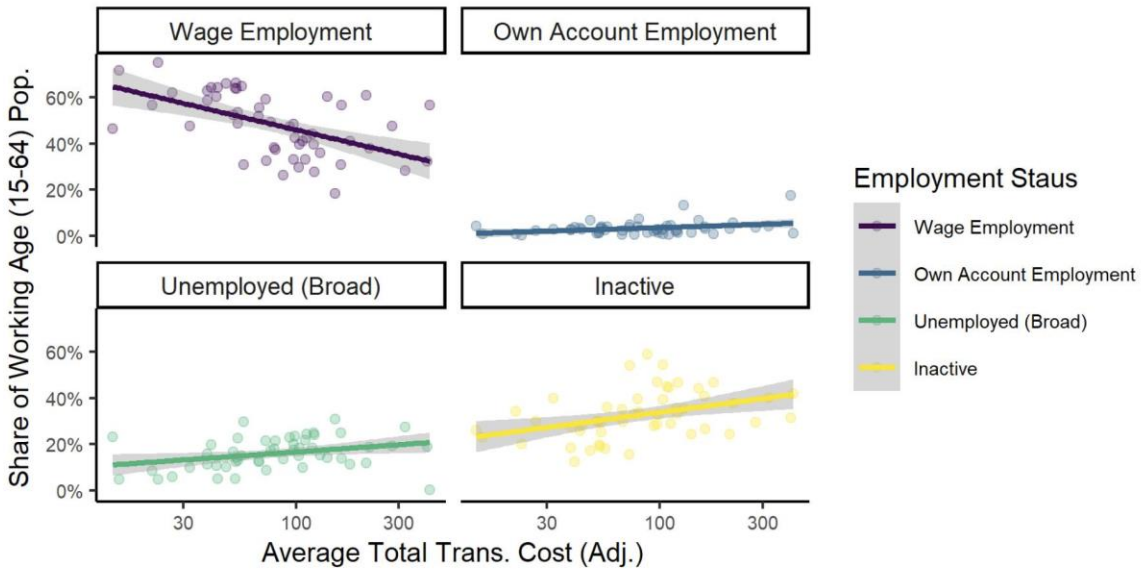
1.3.2 Spatial Exclusion

South Africa is exceptional in its human geography, and its spatial patterns undermine growth through inclusion. South African cities are unique in their degree of fragmentation, with long distances between where people live and central business districts. The economics of cities shows that the essential role of cities is as labor and product markets (Bertaud, 2018), that is places where workers can bring their skills and abilities together, organized within business establishments, to produce goods and services. If people cannot effectively move from home to work and back at a reasonable cost in terms of money and time, the benefits of agglomeration cannot be realized. This is precisely the problem facing South Africa's cities, and it is reflected in the very long travel times and high commute costs that South Africans face in getting to and from work. At a certain point, paying the commute cost becomes prohibitive for workers and businesses, especially at lower levels of skills and expected wages. Many places in urban South Africa are beyond this threshold. South African cities are characterized by a sprawling, low-density, and disconnected urban structure.

Spatial exclusion in cities has been entrenched through housing policies and urban development norms followed since 1994. Though many South African cities bear the spatial imprint of apartheid, we find that post-apartheid policies have entrenched spatial exclusion. A national push to provide free low-density detached housing in the periphery of cities, rather than through higher-density solutions closer to the center of cities, has made commute costs a serious impediment to labor market participation. This problem is being repeated in fast-growing secondary cities through norms in urban planning and policies that disincentivize density and incentivize sprawl. Because the government housing supply excludes people from market opportunities, informal settlements have been growing in better-connected areas. However, they often lack the complementary public goods that make them vulnerable to flooding, crime, and other hazards. Nevertheless, people choose to live in these vulnerable conditions because they are closer to opportunity.

The direct consequence of the low proximity to labor markets is high commuting times and transport costs, which discourage job creation. Commuting time and transport costs are very high in South African cities. As studied by Shah (2022), while direct commuting costs were 17% of net wage income, the total cost (including the opportunity cost of time when commuting) averaged 57% of net wage income. These are averages across all workers and do not even count those who cannot afford to get to work,[6] and the picture looks much worse for disadvantaged socio-economic groups as the ratio of transportation costs to wages is highly regressive. While direct costs of transport to work represented more than 35% of labor income for those in the lowest income quintile in 2010, they represented less than 10% for those in the highest quintile of the income distribution. In addition, the total time of transport and the risks of crime are much higher for the modes of transport used by low-income individuals, such as bus, taxi, and train systems. Shah and Sturzenegger (2022) study this issue through a spatial labor market matching model and find that this distortion can explain much of South Africa's labor market exclusion. Higher costs of transport are associated with a decline in wage employment (both formal and informal) and an increase in unemployment (Figure 1.9).

FIGURE 1.9: LABOR MARKET INDICATORS VS. TOTAL TRANSPORT COSTS BY DISTRICT MUNICIPALITY



Source: Shah and Sturzenegger (2022) using 2017 National Income Dynamics Study and 2020 National Household Travel Survey.

[6] Banerjee and Sequeira (2020) found, using a randomized control trial, that providing transport subsidies to young job seekers revealed that the cost of commuting was high in relation to the actual returns from job search, leading beneficiaries to search for opportunities closer to home.

Reversing this recurring problem is possible through more compact cities, which is a job for policy. This can be achieved by removing restrictive regulations that disempower housing choice and redirection in public housing spending to support smaller and better-located housing options. Inertia in city design and numerous regulations on housing development severely disincentivize organic densification and instead incentivize the development of dislocated housing. As argued in Chapter 3 of this report, the solution must start by addressing key constraints on housing development that come from overly restrictive building codes and zoning regulations that prevent the development of denser housing. Taking national and local restrictions together, these jointly restrict where you can build, how you can build, and how dense you can build. At the same time, urban planning and infrastructure investment implicitly incentivizes the sprawl of metro areas rather than strategically putting better-connected parts of cities into housing production. By addressing these issues, cities can improve their economic prospects through increasing labor market inclusion, while both cities and the national budget can improve their fiscal positions through better allocation of public infrastructure spending. Cities that are positioned to better absorb surplus labor, ideas, and human capacities from the rest of the country will benefit everyone.

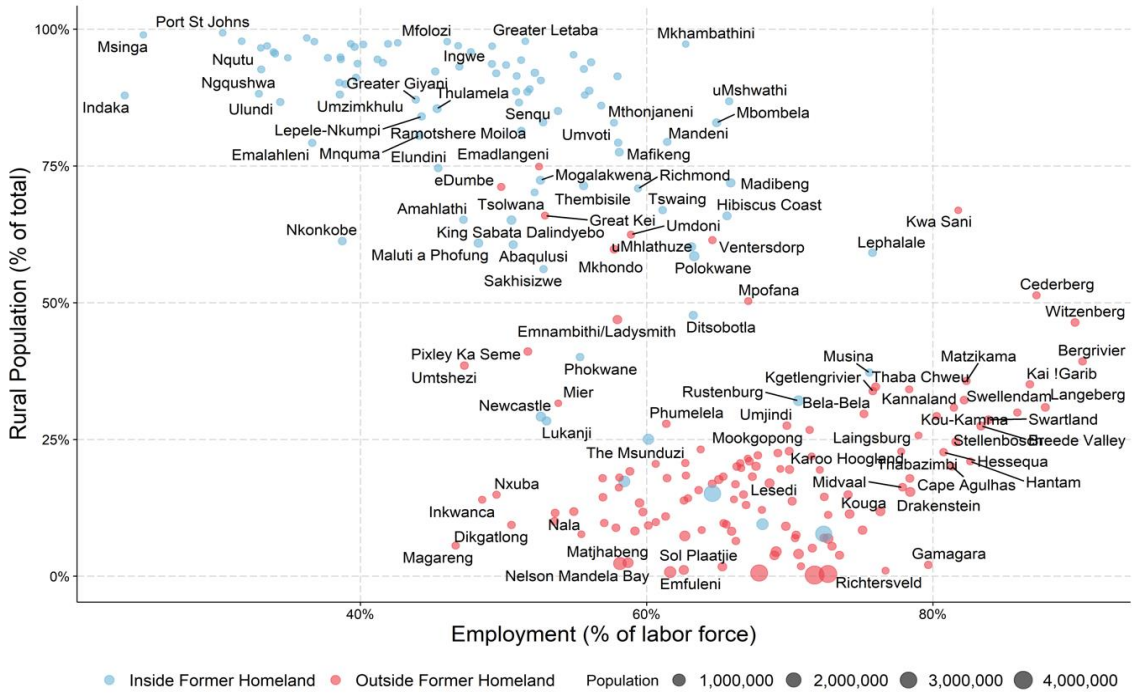
The spatial problem also manifests itself across regions and larger distances, especially for residents of the rural areas of former homelands. The largest inequalities and wholesale exclusion occur within rural areas of former homelands. While employment outcomes in South Africa's metros and rural areas outside of former homelands are not great, what drives South Africa's labor market indicators to extraordinary levels is the extremely poor labor market outcomes in rural areas of the former homelands. Since the end of apartheid, former homelands have become more connected through infrastructure, but very long physical distances remain. In some cases, paved roads and other basic infrastructure remain glaringly lacking, including in large portions of the Eastern Cape Province. There has been a clear pattern, documented by Lochmann (2022), that despite overall infrastructure improvements and support to households, the economies of former homelands remain weaker than can be explained by observable characteristics.[7] Workers from former homelands have been

[7] For more discussion see Chatterjee *et al.* (2022), Von Fintel (2014, 2018), David *et al.* (2018), Schotte *et al.* (2022), Neves and Du Toit (2013, 2014), Kwenda *et al.* (2020), Mudiriza and Edwards (2020), Leibbrand *et al.* (2010), Todes and Turok (2018), Visagie and Turok (2020), Turok (2021), Wittenberg (2003), Abel (2019), among others.

migrating out in search of opportunities and landing jobs on par with others, indicating that the problem is with the places and not the people.

A place-based approach for the former homelands should make it more attractive for businesses to move in rather than for workers to move out. Whereas internal migration is natural and observed globally, South Africa does not reap its full possible benefits. It needs more dynamic urban growth centers that can absorb more people and provide more jobs. At the same time, if barriers to rural success are removed, rural areas of former homelands could capitalize more on their latent comparative advantages. Employment patterns in rural areas outside of former homelands are illustrative, as more rural areas outside of homelands tend to have higher employment rates than more urban areas outside of homelands. The reverse is true within homelands (Figure 1.10).

FIGURE 1.10: EMPLOYMENT RATES AND RURAL POPULATION BY MUNICIPALITY



Source: Own elaboration based on the South African National Census of 2011.

Exceptions to the general rule of worse economic performance in homelands are powerful examples of what can change. There are cases of economies within former homelands that are relatively more connected to markets and production that have managed to capitalize on market opportunities. For example, villages around Makhado and Elim in

Limpopo have achieved higher employment by developing enterprises that serve demand in the surrounding market under the umbrella of a community trust. More disconnected areas have in some cases found ways to integrate into the modern economy through different types of commercial partnerships, especially in agriculture (Klinger *et al.*, 2023). What has worked in these cases echoes organizational structures in franchising, which is a very mature business sector and an important source of jobs in South Africa (Klinger, 2022). But these are a few isolated cases which are exceptions to a rule of a highly dualistic agricultural sector leaving large swaths of land idle and underutilized (Sturzenegger *et al.*, 2023). There are also cases of growing urban agglomerations within former homelands – for example, Mthatha in the Eastern Cape – which are evolving quickly as they absorb internal migration and serve as hubs of retail and other services. These cities appear to face similar problems to non-homeland cities in their low density and sprawl but also function differently in that they are spatially less disconnected and allow for more informal work to occur. Much of the housing expansion of these areas occurs on communal land.

To include more residents of rural homelands in the modern economy, two responses are needed. The first need is to better connect the most rural population centers through paved roads and other basic infrastructure. These network expansions remain incomplete and dramatically reduce the development pathways for large parts of the country. But lack of physical connectivity is only one part of the problem. Even those areas that have much greater physical connectivity often lag far behind their surrounding areas in economic activity. The solution to this problem is an approach that we refer to as "bridging knowhow" and explain in more detail in Chapter 3. Productive knowhow needs to be bridged between competitive businesses and industries outside of homeland areas and communities within former homelands, and this takes place most directly through business partnerships. South Africa has reached a point where the benefits of such business models are proven, and several types of entities have emerged as connectors and enablers of partnerships., namely: partnership advisors, local NGOs, and community trusts. There are important challenges that must be overcome when these partnerships work – including developing trust and technology transfer – and issues of communal land and governance systems can be hurdles. However, a deeper and more dynamic market for such partnerships is possible, which would better connect businesses in need in need of land and labor with communities with matching comparative

advantages. As more areas of former homelands gain physical connectivity, these opportunities will expand further.

1.3.3 Green Growth Potential

South Africa has lost a critical source of comparative advantage in cheap and reliable electricity because of the collapse of state capacity. As studied by Fortunato (2022), industries that use electricity most intensively have seen the sharpest declines in output and employment. This has undermined South Africa's export capacity and had an outsized impact on the larger economy due to the very high energy intensity and electricity intensity of South Africa's exports overall. South Africa has effectively lost its comparative advantage in cheap and reliable electricity. In the face of this constraint, efforts to grow through localization and fiscal stimulus have been ineffective and may have narrowed growth opportunities further. Localization strategies have prioritized the local market at a time when demand was not growing and disadvantaged downstream industries in value chains, and fiscal policy has led to rising interest rates and crowding out of capital-intensive industries. As South Africa addresses the two binding constraints of collapsing state capacity and spatial exclusion, growth will need to be driven by a re-emergence of comparative advantage that is consistent with changes in the global economy. In the context of global decarbonization, this will not be possible by simply returning to the energy mix of the past because industries and consumers are increasingly demanding production with a lower carbon footprint.

Promisingly, South Africa has an immense opportunity to capitalize on changing global demand due to decarbonization. It has strengths and potential for export growth and innovation that can help to supply many of the goods, services, and innovations that the world will need to decarbonize. Over the last decade, international agreements have tended to focus on the demand side of decarbonization by asking countries, cities, and companies to reduce their demand for fossil fuels and their carbon footprint more generally. At the same time, global decarbonization creates transformative supply-side opportunities for countries to produce goods and services that will allow the world economy to decarbonize. South Africa represents only about 1% of global carbon dioxide emissions and a lower share of cumulative historic emissions, so its impact on global climate change through reductions in its emissions will have a very limited direct impact on climate change. However, South Africa has an impressive set of assets in its resources, companies, and knowhow that could have a very substantial impact on

supplying the inputs to global decarbonization in the years to come. This "green growth" opportunity could be a substantial driver of South Africa's recovery in the future, but opportunities will not become realities automatically. Reversing collapsing state capacity – particularly the loss of cheap and reliable electricity – and more targeted industrial policies are both needed to help to jumpstart new sources of growth. Green growth has such high medium- and long-term potential in South Africa that we devote Chapter 4 to discussing this in detail.

South Africa has natural and historic advantages for three strategic pillars of green growth. These advantages are currently undermined by collapsing state capacity, spatial exclusion, and certain policy levers that are currently used (within industrial policy, trade policy, and immigration policy, for example), but these conditions could be changed. The three strategic pillars that we explore in detail are: (1) making the enablers of global decarbonization; (2) making green versions of grey products for the global market; and (3) exporting green knowhow. Taken together, these strategies would help to recover and expand new comparative advantage for South Africa and, potentially, the larger region of Southern Africa. Each requires highly targeted industrial policies.

Each of these strategies includes a range of opportunities. Under the first strategy, South Africa could participate much more in the supply of critical minerals and provide the world with many of the enablers of clean tech such as vanadium redox flow batteries (for grid-level storage), platinum-metal-group-based fuel cells, and electric vehicles, among others. We explore several relevant green supply chains in detail in this report. Under the second strategy, South Africa could harness its ample resources of sun and wind to be a competitive location for energy-intensive production with a low carbon footprint. These opportunities could be spurred on initially by the development of green industrial parks, but the scale will ultimately depend on South Africa regaining cheap and reliable electricity and sustainably reducing the cost of capital for new projects. The third strategy of exporting green knowhow is relevant for South Africa because the country has both excellent research and development capabilities and existing companies – like SASOL – with unique knowhow in decarbonization-related technologies.

Achieving South Africa's green growth potential will require a new way of looking at the energy transition together with targeted industrial strategies. South Africa has launched initiatives focused on a "Just Energy Transition," with a focus on responding to challenges of

regionally concentrated coal economies but which also recognizes the benefits to all of society from new technologies that can both respond to the electricity crisis and serve as new drivers of growth. On paper, this is consistent with the green growth opportunity, but in practice, there is a risk that too much attention is focused on phasing out coal more quickly and too little national policy and international support on the three strategies discussed in this report. There may be potential to leverage more international finance and knowhow through incorporating these strategies into the Just Energy Transition framework.

Green growth opportunities show that the South African economy does not exist in isolation from a globalized economy, which has implications for current industrial, trade, and immigration policies. As the growth of the South African economy has slowed, industries that have relied on domestic demand have faced not only direct pressures on their productivity – due to collapsing state capacity – but also faced declining demand. This has occurred in manufacturing, construction, transportation services, and business services, among other industries. Over the last decade, the government has relied increasingly on localization strategies, which have focused on capturing more domestic demand by substituting imports. In a context where the decline in domestic demand is worsened by supply constraints, this strategy can be counterproductive. It also misses the larger opportunity of reaching global markets that are much larger and where demand growth is much stronger than in South Africa. As South Africa focuses inward, firms can miss out on numerous emerging opportunities to reach global and regional demand. This is true for both existing businesses that would benefit from government actions to expand market access and for the entry of new businesses that could capitalize on South Africa's comparative advantages. An inward-looking strategy in a slowing economy is costing South Africa many jobs. As South Africa has increasingly turned to protective measures in recent years, it may lose out on the opportunities created by the African Continent Free Trade Area (AfCFTA), which has the potential to benefit many South African exporters and attract new exporters.

South Africa continues to miss out on the benefits of high-skill immigration. Though reforms to South Africa's visa regime have been prioritized as one pillar of Operation Vulindlela, the country remains out of step with peers who recognize the importance of high-skill immigration as an engine of growth and transformation. Most worrisome, the country has experienced rising numbers of skilled worker outmigration, losing more skilled workers than

what it receives (Halstein, 2021) and patent data shows that South Africa is seeing weakening innovation capacity. South Africa needs access to global talent and immigration policy can be a tool for attracting talent. The importance of high-skill immigration is not a new observation as a straightforward policy response was already recommended by the International Advisory Panel on ASGISA in 2008 to enable high-skill immigration (Hausmann *et al.*, 2008, Banerjee *et al.*, 2008). This remains essential for South Africa to leverage its greatest strengths and expand growth drivers, which inescapably require complementing the knowledge of South Africans with outside expertise.

1.4 Macroeconomic Consequences

Attempts to address the effects of both the collapse of public goods and the spatial constraints through fiscal means have weakened the macroeconomic position of the country. Collapsing state capacity – in electricity, rail, ports, water and sanitation, security, and local services – has caused GDP and export growth to weaken, negatively affecting tax revenues. State capture also reportedly undermined the tax administration capacity of the government, which has thankfully been largely recovered through improvements at the South African Revenue Services, which have been reflected in tax revenues. With unemployment and poverty high, there have been large pressures for social transfers and public employment. For instance, social transfers have increased from 4.9% of GDP in 2010 to 6.0% in 2022. These transfers were sharply increased during the COVID-19 pandemic through the Social Relief of Distress Grant, but transfers to households were already on an upward trend prior to the pandemic. These fiscal measures are meant to compensate people for their exclusion rather than increase inclusion. The result of these forces was a worsening of the fiscal balance.

The poor performance of SOEs also led to large capital transfers, which had a significant impact on national debt accumulation. Total contingent liabilities coming from guarantees to public enterprises have increased at an annualized rate of 12.1% since 2005. More than two-thirds of this increase comes from bailing out Eskom, followed by bailouts of other independent power producers as well as the South African National Roads Agency Limited (SANRAL). Contingent liabilities from Eskom grew at an annualized rate of 53.1% between 2005 and 2022, reaching 5.1% of GDP in 2022. Moreover, they imply an increase in gross

borrowing requirements of 3.4% of GDP between 2023 and 2025. This debt accumulation puts increasing pressure on the budget.

These two macroeconomic responses to the growth slowdown and SOE mismanagement worsened the fundamentals of fiscal sustainability, leading to an increase in the cost of borrowing and a deterioration in the country's creditworthiness. South Africa's gross debt rose from 23.6% of GDP in 2008 to 71.1% in 2022, an increase of 47.5 percentage points in 15 years, leading to several downgrades of the credit rating to BB- in 2020, below investment grade. In 2022, interest payments represented 4.8% of GDP and 17% of total revenues, limiting the capacity of the government to use its revenues to address other needs. The rise in debt has been the consequence of deficits that have been above sustainable levels. The consolidated government overall fiscal deficit increased from 3.6% in 2011 to 9.9% in 2020, though the government has been able to reduce the overall fiscal deficit to 4.2% of GDP in 2022 through exercising fiscal discipline together with a recovery of revenues.

Given that the nature of the constraints facing the economy are on the supply-side, fiscal demand stimuli have been counterproductive. In fact, fiscal multipliers have been negative (Hausmann *et al.*, 2022); rather than helping growth, they have been hurting it, largely by increasing the cost of capital and crowding out investment. However, while negative, the size of the expenditure multiplier is estimated to be small. This implies that fiscal policy cannot be blamed for low economic growth. The central point is that expansionary fiscal policy is merely not the right policy tool to respond to the challenges that South Africa faces today.

Looking ahead, while the primary focus of this report is not centered on macroeconomic policies, it has become increasingly evident that the macro-fiscal situation presents a rather challenging outlook. Despite the commendable efforts of the National Treasury, fiscal targets have been difficult to achieve. The collapsing state not only directly impacts the increasing debt levels but also indirectly contributes to a low tax collection due to the anemic economic growth it ushers in. A lower-than-expected mining tax revenue – a sector dependent on electricity, rail, and port capacity – is an example of it. Furthermore, higher-than-expected public wages increases have constrained the reduction of government spending this year. Finally, while SARB has succeeded in keeping inflation within its targeted band, deteriorating public finances – in a context on increasing global uncertainty – can risk driving prices up.

While challenging, it is imperative for South Africa to regain investment grade. Through the collapse of Eskom, the country has lost its comparative advantage in coal-based electricity generation. Cheap electricity underpinned the comparative advantage in energy-intensive industries such as mining and mineral processing. The global energy transition will require that South Africa increasingly forgo the use of coal and expand the use of renewable energy. Electricity is a highly capital-intensive industry as are mining, mineral processing, as well as green versions of hydrogen, ammonia, and steel. The country's long-term comparative advantage in these new green growth opportunities will depend on keeping the cost of capital low. This requires a reduction of sovereign risk by returning the country to investment grade. Given the presence of negative fiscal multipliers, fiscal consolidation can be growth-enhancing in South Africa by crowding in investment. Hence, both the short- and long-term goals of the country will benefit from a focus on the return to investment grade.

1.5 Summary of Recommendations

The remainder of this report discusses South Africa's constraints in more detail and arrives at proximate and deeper recommendations. Proximate recommendations reflect actions that would directly impact the constraints that have led to weak growth and exclusion. Deeper recommendations aim to address the deeper causes of these constraints and reasons why proximate solutions have often not been implemented. Figure 1.11 provides a list summarizing the recommendations included throughout this report.

FIGURE 1.11: SUMMARY OF RECOMMENDATIONS FOR GROWTH THROUGH INCLUSION

On Strengthening State Capacity	
On the Electricity Crisis	Create a functioning market for electricity with the following principles: (1) Greater participation of society in generation, transmission, distribution, and storage; (2) Efficient distribution markets that are not too small to benefit from economies of scale (as many municipalities currently are); (3) Clear rules for all market participants that eliminate conflicts of interest and prevent discriminatory treatment; and (4) Final prices that reflect the marginal cost of production, including intra-day pricing.
	Appoint a reform and unbundling sherpa/Czar to push implementation.
	Remove all preferential procurement requirements for the REIPPP. Develop strategic procurement programs that strengthen industries with clear potential to eventually compete in global markets (and move toward this targeted approach instead of widespread, ineffective preferential procurement).
	Use REIPPP design for investments in transmission and storage. Include transmission and storage (with geographical considerations) in the next REIPPP procurement window.
	Rent existing power plants to other operators incorporating high incentives for efficiency.
	Enable new comparative advantage in green electricity: (1) streamline approval of renewable generation, transmission, and storage projects; (2) promote private green industrial zones powered by renewable energy to attract energy-intensive industries that want to decarbonize quickly; (3) explore pumped storage hydropower with Lesotho to facilitate the absorption of more renewable projects.
On Municipal Governments	Reassign responsibility for electricity and water distribution to geographically efficient regulated monopolies. Such companies could then collect other fees on behalf of municipalities via their monthly bills.
	Develop public "capability banks" and position national/regional entities as service providers to municipalities for activities where local governments cannot be expected to have local expertise nationwide.
On State Capacity Overall	*Unburden Capacity* – Expand relaxation of preferential procurement requirements on all SOEs and other public entities.
	Build Up and Protect Capacity – Gradual civil service reform to replace the reliance on cadre deployment. Explore long-term system of civil service cadres that are recruited nationally but deployed across different municipalities and levels if government.
	Leverage Existing Capacity – Establish clear markets that allow for societal capabilities to help fill supply gaps in network industries (rather than selling assets through privatization).

On Spatial Inclusion	
On Urban Planning and Building Regulations	Three main areas of regulatory change: • Relax National Building Regulations (overly restrictive materials and accessibility restrictions). • Relax Local Building Regulations (FAR, BCR, parking, and elevator requirements to allow for higher density). • Change zoning regulations to allow for greater density and mixed-use multi-family housing.
	On urban planning and development: • Incorporate underutilized urban land for housing and development. • Ensure that development impact fees are evenly applied in the city core and periphery.
	Process rules: Move towards regional and provincial zoning standards to limit highly localized NIMBY vetoes to housing.
	Develop and incentivize active public-private problem-solving task forces for housing expansion.
On Budget Reorientation	Revise the human settlements budget to increase demand-side housing subsidies as opposed to direct supply programs that dictate where housing is built. Partner with the financial sector to expand mortgages/lending to those with limited credit histories.
	Link conditional grant funding for housing and related infrastructure to where local building and zoning regulations meet minimum standards for increasing density or where demand-side subsidies are mobilized.
	Reorient budget towards more experimental, innovative mixed-use urban projects, especially on well-located government-owned land.
On public transportation	Prioritize the revival of passenger rail, especially by devolving key functioning routes to more capable metros.
	Additional pilots and scaling of efforts to formalize and expand the minibus taxi system in a way that can support public transport systems.
On Bridging Knowhow	Create and expand markets for business partnerships through supporting investments in hard infrastructure (i.e., roads) and soft infrastructure and services (information systems for matching, partnership advising).
	Leverage agents to enable partnerships through matching third-party trust: Partnership advisors, local NGOs, traditional governments (incl. trusts), possible new roles for universities.

On Green Growth Potential	
On Green Growth	Targeted industrial policy for opportunities that are growing in global demand and where South Africa can develop comparative advantage: • Pillar 1: Make the enablers of global decarbonization – mining strategies for critical minerals, targeted support actions for pioneers in emerging green supply chains, and policies to transition the automotive industry towards electric vehicles. • Pillar 2: Make green versions of grey products for the global market – promote privately-operated Green Industrial Parks (w/ dedicated renewable power). Leverage SASOL's technological strengths to develop green fuels. • Pillar 3: Export green knowhow – Develop capabilities to export knowledge-intensive services in engineering, procurement, and construction (EPC) of green projects, develop new mastery over green technologies (e.g., Fischer-Tropsch for green products, Vanadium Redox Flow battery technology for grid-scale storage, membrane technology for fuel cells and electrolyzers). Strengthen R&D support policies for green technologies. Deepen international partnerships and allow for easy entry of talent through more open high-skill immigration and business travel.
	Return South Africa to investment grade to lower the cost of capital of new investments in the electricity system and other green growth opportunities and develop a world-class electricity market to lower industry-specific risks.
	Prioritize actions to reduce development costs for investment in renewable generation, transmission, and storage infrastructure (e.g., easy permitting; grid interconnection, government-facilitated land).
On Trade Policy	Redirect industrial policy away from import substitution for a limited and stagnant domestic market and instead target industries that can leverage the domestic market but that have the potential to grow by supplying the global market.
	Move from laggard to leader in the African Continental Free Trade Area to increase market access and opportunities for South African companies.
On Knowhow Access	Make South Africa a competitive destination for global talent.
	Continue to reduce administrative delays and costs of business visas.

Chapter 1 References

Abel, M. (2019). Long-run effects of forced resettlement: evidence from Apartheid South Africa. *The Journal of Economic History*, 79(4), 915-953.

Acemoglu, D., Gelb, S. and Robinson J.A. 2007, Black economic empowerment and economic performance in South Africa.

Andrews, M. (2008). Is black economic empowerment a South African growth catalyst? (Or could it be...).

Baldauf, S. (2006). Class Struggle: South Africa's new, and few, black rich. The Christian Science Monitor.

Banerjee, A. V. and Sequeira, S. (2020). Spatial mismatches and imperfect information in the job search.

Banerjee, A., Galiani. S., Levinsohn. J., McLaren. Z., and Woolard, I. (2008). Why has unemployment risen in the new South Africa? *1. Economics of Transition,* 16(4), 715-740.

Bertuad, A., ed. (2018). *Order without design: How markets shape cities*. Cambridge, MA: MIT Press.

Bhorat, H., Buthelezi, M., Chipkin, I., Duma, S., Mondi, L., Peter, C., and Friedenstein, H. (2017). Betrayal of the promise: how South Africa is being stolen. *State Capacity Research Project*, 1-72.

Blonigen, B. A. (2016). Industrial policy and downstream export performance. *The Economic Journal*, 126(595), 1635–1659.

Chabano, N., Goldstein, A., and Roberts, S. (2006). The changing face and strategies of big business in South Africa: More than a decade of political democracy. *Industrial & Corporate Change*, 15(3), 549-577.

Chatterjee, A., Czajka, L., and Gethin, A. (2022). Wealth inequality in South Africa, 1993–2017. *The World Bank Economic Review*, 36(1), 19-36.

David, A., Guilbert, N., Hamaguchi, N., Higashi, Y., Hino, H., Leibbrandt, M., and Shifa, M. (2018). Spatial poverty and inequality in South Africa: A municipality level analysis.

Fortunato, A. (2022). Getting back on the curve: South Africa's manufacturing challenge.

Halstein, J. (2021). Skilled labour emigration in South Africa.

Hausmann, R., 2008. Final recommendations of the international panel on ASGISA (South Africa).

Hausmann, R., Sturzenegger, F., Goldstein, P., Muci, F., Barrios, D., and UNU-WIDER (2022). Macroeconomic risks after a decade of microeconomic turbulence: South Africa (2007–2020). WIDER Working Paper, Vol. 2022, UNU-WIDER

Klinger, B., Ordonez, I. and Sturzenegger, F. (2023). Scaling partnerships to activate idle community land in South Africa.

Klinger, B., 2022. More (Inclusive) entrepreneurship in South Africa: The Role of franchising.

Kwenda, P., Benhura, M., and Mudiriza, G. (2020). Former homeland areas and unemployment in South Africa: A decomposition approach (No. 12941). IZA Discussion Papers.

Leibbrandt, M., Woolard, I., McEwen, H., and Koep, C. (2010). Employment and inequality outcomes in South Africa. University of Cape Town: Southern Africa Labour and Development Research Unit.

Lochmann, A. (2022). Diagnosing drivers of spatial exclusion: Places, people, and policies in South Africa's former homelands.

Mudiriza, G. and Edwards, L. (2020). The persistence of apartheid regional wage disparities in South Africa (No. 816). Economic Research Southern Africa.

Sartorius, K. and Botha, G. (2008). Black economic empowerment ownership initiatives: a Johannesburg Stock Exchange perspective. *Development Southern Africa*, 25(4), 437-453.

South Africa National Treasury (2022). The State of local government finances and financial management (June 2022).

Sturzenegger, F., Klinger, B., and Ordonez, I. (2023). What is South Africa's crop production potential?

Neves, D. and Du Toit, A. (2013). Rural livelihoods in South Africa: Complexity, vulnerability and differentiation. *Journal of Agrarian Change*, 13(1), 93-115.

Neves, D. and Du Toit, A. (2014). The government of poverty and the arts of survival: mobile and recombinant strategies at the margins of the South African economy. *The Journal of Peasant Studies*, 41(5), 833-853.

Schotte, S., Zizzamia, R., and Leibbrandt, M. (2022). Snakes and ladders and loaded dice: Poverty dynamics and inequality in South Africa between 2008 and 2017. *South African Journal of Economics*, 90(2), 214-242.

Shah, K. (2022). Diagnosing South Africa's high unemployment and low informality.

Shah, K. and Sturzenegger, F. (2022). Search, transport costs, and labor markets in South Africa.

Tangri, R. and Southall, R. (2008). The politics of black economic empowerment in South Africa. *Journal of Southern African Studies*, 34(3), 699-716.

Todes, A. and Turok, I. (2018). Spatial inequalities and policies in South Africa: Place-based or people-centered? *Progress in Planning*, 123, 1-31.

Turok, I. (2021). Urbanization, agglomeration, and economic development in South Africa.

Visagie, J. and Turok, I. (2020). Rural-urban migration as a means of getting ahead. In: Leslie Bank et al., eds. *Migrant Labour after Apartheid*. Cape Town: HSRC Press.

Von Fintel, D. (2014). Hunger in the former apartheid homelands: determinants of convergence one century after the 1913 land act. *Agrekon*, 53(4), 38-67.

Von Fintel, D. (2018). Long-run spatial inequality in South Africa: early settlement patterns and separate development. *Studies in Economics and Econometrics*, 42(2), 81-102.

Wittenberg, M. (2003). Decentralisation in South Africa. Econometric Research Southern Africa.