



COUNTRY PRIVATE SECTOR DIAGNOSTIC

# CREATING MARKETS IN SOUTH AFRICA

Boosting Private Investment to Unlock  
South Africa's Growth Potential



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# ABBREVIATIONS

4IR	Fourth Industrial Revolution	GoSA	Government of South Africa
AEMFC	African Exploration & Mining Finance Corporation	GVC	Global Value Chain
AGOA	African Growth and Opportunity Act	HCV	Heavy Commercial Vehicle
AIDC	Automotive Industry Development Center	HDI	Human Development Index
AIS	Automotive Investment Scheme	HGF	High Growth Firm
APAP	Agricultural Policy Action Plan	ICASA	Independent Communications Authority of South Africa
APDP	Automotive Production Development Program	ICT	Information and Communications Technology
ASCCI	Automotive Supply Chain Competitiveness Initiative	IFC	International Finance Corporation
ASEAN	Association of Southeast Asian Nations	IMASA	Institute for Market Agents
BAIC	Beijing Automobile International Corporation	IPP	Independent Power Producer
BBBEE	Broad-Based Black Economic Empowerment	IPAP	Industrial Policy Action Plan
BCI	Business Confidence Index	JSC	Johannesburg Stock Exchange
BRICS	Brazil, Russia, India, China, and South Africa	JV	Joint Venture
CCSA	Competition Commission of South Africa	LCV	Light Commercial Vehicle
CEF	Central Energy Fund	M&A	Mergers & Acquisitions
CGA	Citrus Growers Association	MCI	Mobile Connectivity Index
CPF	Country Partnership Framework	MCV	Medium Commercial Vehicle
CPSD	Country Private Sector Diagnostic	MERSETA	Manufacturing, Engineering and Related Services Sector Education and Training Authority
DAFF	Department of Agriculture, Forestry and Fisheries	MIC	Middle-Income Country
DE4A	Digital Economy for Africa	MICT SETA	Media, Information and Communication Technologies Sector Education and Training Authority
DFI	Development Finance Institution	MIDP	Motor Industry Development Program
DST	Department of Science and Technology	MNO	Mobile Network Operator
DTI	Department of Trade and Industry	MSME	Micro, Small, and Medium Enterprise
DTPS	Department of Telecommunications and Postal Services	MTEF	Medium-Term Expenditure Framework
DWS	Department of Water and Sanitation	MVA	Manufacturing Value Added
EITI	Extractive Industry Transparency Initiative	MVNO	Mobile Virtual Network Operator
EME	Exempt Micro Enterprise	NAACAM	National Association of Automotive Component and Allied Manufacturers
EPA	Economic Partnership Agreement	NAAMSA	National Association of Automobile Manufacturers of South Africa
EU	European Union	NAFTA	North American Free Trade Agreement
FAO	Food and Agricultural Organization	NDP	National Development Plan
FDI	Foreign Direct Investment		
FSCA	Financial Sector Conduct Authority		
GAP	Good Agricultural Practice		
GDP	Gross Domestic Product		

NERSA	National Energy Regulator of South Africa	SCD	Systematic Country Diagnostic
NFPM	National Fresh Produce Markets	SEZ	Special Economic Zone
NGP	New Growth Path	SKD	Semi-Knockdown
NW&SMP	National Water and Sanitation Master Plan	SME	Small and Medium Enterprise
OECD	Organisation for Economic Co-operation and Development	SOE	State-Owned Enterprise
OEM	Original Equipment Manufacturer	SSA	Sub-Saharan Africa
PA	Prudential Authority	STEM	Science, Technology, Engineering, and Mathematics
PI	Production Incentive	TBCSA	Tourism Business Council of South Africa
PICC	Presidential Infrastructure Coordinating Committee	TFP	Total Factor Productivity
PPBEC	Perishable Produce Export Certification Agency	TVET	Technical and Vocational Education and Training
PPP	Public-Private Partnership	UPFS	Uniform Patient Fee Schedule
PPP	Purchase Power Parity	USF	Universal Service Fund
PMR	Product Market Regulation	VAA	Vehicle Assembly Allowance
PSET	Post-School Education and Training	VALA	Volume Assembly Localization Allowance
R&D	Research and Development	WAS	Water Administration System
REIPPP	Renewable Energy Independent Power Producer Procurement Programme	WDI	World Development Indicators
SAA	South African Airways	WDR	World Development Report
SAAM	South African Automotive Master Plan	WEF	World Economic Forum
SABS	South African Bureau of Standards	WOAN	Wholesale Open Access Network
SADC	Southern African Development Community	WTO	World Trade Organization

*All dollar amounts are U.S. dollars unless otherwise indicated.*

# EXECUTIVE SUMMARY

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Addressing the constraints for private sector development at national and sectoral levels is a priority for the government of South Africa. It is also a critical element in the current administration's plan to scale-up investment over five years, and thereby stimulate job creation and promote inclusive growth. Since taking office in 2018, President Cyril Ramaphosa has underlined the importance of investment to turn around the economy. Consequently, government has committed to passing the necessary reforms to attract \$100 billion in foreign direct investment (FDI) into South Africa as a way to complement domestic investment. Steps taken to date have focused on the governance of state-owned enterprises (SOEs), which play a leading role in the infrastructure space, consultations and approval of key sector-specific industrial policies and regulations, and initial measures to ease the cost of doing business.

The Country Private Sector Diagnostic (CPSD) contributes to this effort by identifying policy actions and interventions in key sectors of the economy where short-to-medium term reforms could unlock investment and jobs. It follows a standardized methodology developed by IFC that has been rolled out globally. In its review of South Africa's cross-cutting constraints and enabling sectors, the report puts a special focus on the gaps in skills, the need for better infrastructure, and opportunities to address the country's developmental challenges using private sector solutions. The report also lays out options to strengthen competitiveness in the agriculture and agribusiness, automotive, and ICT sectors. It is our hope that the findings and recommendations will be of interest to policymakers, the private sector, and other multilateral and bilateral financing institutions.

## *Country context and state of the private sector:*

**Faster job creation and wage growth are of paramount importance to support inclusion in South Africa and reverse the negative trends in many social and labor indicators.** Between 2009 and 2017, South Africa's growth rate averaged 1.6 percent. Job creation and wage growth have been insufficient. Since 2008, 3.5 million people have entered the labor force whereas 1.6 million additional jobs have been created. This has put pressure on the unemployment rate, which reached 26.7 percent in 2017. Unemployment, in turn, contributes to high poverty and inequality, making it more difficult to overcome the legacy of exclusion under apartheid. South Africa is among the most unequal countries in the world with a Gini coefficient of 0.63.

**This will require policies that can support competitiveness, higher productivity, and deeper integration into global value chains.** Exports and inward FDI have lagged in comparison to middle-income economies, a consequence of the decline in the country's competitiveness at the global level. While South Africa continues to have a strong manufacturing base, it is losing market share in several of its core export products, both because it is being outcompeted by more dynamic economies in East Asia and owing to its own supply-side and institutional constraints. The low GDP growth has been associated with negative growth in total factor productivity (TFP), in strong contrast to the high TFP growth rates of BRICS countries since the early 1990s.

**What factors can explain weak performance of South Africa's private sector and the economy at large?** As argued in the literature on the middle-income trap, countries that have reached a middle-income status often find it difficult to progress to the next level and experience growth stagnation. Many low-



to-medium income economies have created jobs through rapid industrialization, focusing on growing a labor-intensive manufacturing base with strong linkages across regional and global value chains. Although most of South Africa's population is low-skilled, relatively high wages, an inadequate logistics infrastructure, the regulatory burden on private companies and policy uncertainty make it difficult to compete with low-cost manufacturing destinations and build a more export-oriented economy. In fact, many of South Africa's labor-intensive industries, such as textiles and apparel, have experienced major contractions since the opening of the economy in the 1990s and the sharp real depreciation in the exchange rate has not led to a supply response, in large part due to these structural constraints.

**Weaknesses in human capital, infrastructure, and the business environment are key factors that constrain private investment and growth in South Africa.** Indeed, 25 years after the end of apartheid, the country still struggles with poor education outcomes—student performance is well below that of many middle-income economies and skilled workers are in short supply. In infrastructure, key sectors are dominated by SOEs that are not able to provide the scale of investment or quality of services (at competitive prices) needed by innovative, export-oriented companies. Although South Africa has a more business friendly investment climate than most countries in the region, it is not on par with that in high growth economies and firms report red tape among the main constraints to growth. Lastly, innovation—a key condition for productivity growth, is extremely low with private research & development (R&D) accounting for only 0.3 percent of GDP (World Bank 2017a). These factors make it difficult to move to higher-value activities in agriculture, manufacturing, and services that are needed to boost growth in South Africa.

### Cross-cutting constraints

Following the overall country context, the report reviews the state of the private sector and cross-cutting constraints that were identified in the recent World Bank Group Systematic Country Diagnostic (An Incomplete Transition, World Bank Group 2018a). Removing these inhibitors to investment will be central for achieving the government's long-term goals:

- **Availability of skills.** The level of available skills is insufficient to support technology upgrades and the growth of new industries. New industries such as ICT record a strong deficit of qualified professionals—nine out of 10 skills in the highest demand in South Africa are in IT-related fields. In this context, training solutions are urgently needed to prepare the workforce for jobs that are in high demand. Recent relaxations on visa requirements to skilled immigrants could also help in increasing skills supply in South Africa.
- **Business environment and investment policy.** South Africa ranks at 82 in the *Ease of Doing Business* rankings (World Bank, 2018d. “Doing Business Report”, Washington DC: World Bank), trailing behind OECD and many reform-oriented developing countries. New firms and MSMEs are disproportionately affected by costs and delays for regular business procedures. As in other developing economies, the growth of MSMEs is also held back by access to finance gaps, despite South Africa's well-developed and sophisticated financial system. A final element is South Africa's framework for investment promotion, which will need to be improved to meet the \$100 billion FDI target. Currently, investors must deal with many entities with overlapping roles, making it difficult for the private sector to find the information and resources needed to develop an investment project.
- **Regulatory obstacles to competition.** Government interventions that restrict entry, facilitate collusion, or create an unlevel playing field perpetuate legacy competition issues resulting from the large, often vertically integrated firms and conglomerates in key productive sectors. This can lead to anticompetitive outcomes and the exclusion of emerging entrepreneurs. Hindering regulations and policies have been recognized as the second-most important constraint after skills deficit among start-ups.<sup>1</sup>
- **Limited integration into regional and global value chains and weak connectivity.** South African retail chains have spread across Southern Africa and further afield; however, most manufacturing companies have achieved only limited integration into regional and global value chains and their growth is therefore limited by domestic demand. The high cost of trade logistics constrains South Africa's access to markets and



overall competitiveness. The infrastructure investment needs far exceed the government's fiscal resources, exacerbated by financing and capacity constraints of SOEs that are responsible for key transport and logistics services.

In recent years, these constraints have been compounded by policy uncertainty, governance challenges confronting the public sector and SOEs, and increasing institutional weaknesses. These have been seen as inhibitors to investment and a major factor that could put the country's investment grade credit rating at risk.

## Key findings from the enabling sectors and sector deep dives

### Enabling sectors

**In view of their importance in long term competitiveness and driving inclusion in South Africa, the section on enabling sectors reviews policy options to mobilize private investment and private sector solutions in education and skills, as well as in key subsectors of infrastructure.** There are many untapped opportunities where private sector and capital markets could play a positive role to fill financing gaps, improve the cost-effectiveness of current delivery models, and mitigate capacity constraints in the public sector. This reinforces the need for developing a systematic Maximizing Finance for Development (MFD) agenda with strong support from Development Finance Institutions (DFIs).

**In education and skills, South Africa ranks poorly in the quality of learning and human development indicators, and despite the efforts to boost skills development, many workers lack critical skills.** In the World Bank Human Capital Index, South Africa ranks 126 out of 157 countries for which data is available. It ranked below lower-income neighbors Namibia, Malawi, Zimbabwe, Eswatini, and Botswana, and far below expectations based on its income level. One of the results is that South African labor markets are characterized by critical skills shortages and skills premiums. Ultimately, this has resulted in relatively high labor costs and impaired competitiveness.

**Affordable quality private education institutions**

**have the potential to play a bigger role** in reversing the bimodal education system that is linked to the history of exclusion and driving competitiveness, but legal and administrative barriers limit their participation. One consequence of the complex oversight and approval system is that the process for modernizing the curriculum and opening new programs is lengthy and cumbersome. TVETs can play a particularly important role and will need support to develop public-private partnerships and deepen their collaboration with companies.

**In infrastructure, serious supply constraints in energy and water and inefficiencies in transport logistics impair competitiveness and inclusion.** Over the past year, the state-owned energy utility, Eskom, reintroduced load-shedding in response to a supply-demand gap, and the investment gap has widened due to its fragile balance sheet and increasing debt. Several large generation plants are at the end of their lifespan, posing short-term risks. Like energy, water infrastructure in South Africa has limited private sector participation and suffers from insufficient investment. Critical water shortages are expected by 2030. South Africa's WEF ranking for transport infrastructure declined from 49 to 64 over the last decade. Underinvestment is evidenced in rail networks, which have not been updated or extended to support non-mining activities.

**Several government initiatives are underway to strengthen the national infrastructure policy framework, with a focus on better and faster implementation, and crowding-in resources from DFIs and the private sector.** Efforts to improve coordination and introduce a more efficient budgetary and implementation process include the Presidential Infrastructure Coordinating Committee (PICC), the Strategic Integrated Projects (SIPs), and the Budget Facility for Infrastructure (BFI). In the 2018 Economic Stimulus and Recovery Plan, the government announced the establishment of the South Africa Infrastructure Fund to consolidate these initiatives and transform the "approach to the rollout, building and implementation of infrastructure projects." The role of SOEs and how best to complement their efforts with greater private sector participation stands out as the major issue going forward.

**Domestic capital markets have an important role to play to finance infrastructure through long-term (LT) local currency financing.** With combined assets of R 6 trillion (over \$400 billion) held by

local institutional investors, South Africa is a clear candidate for accessing long-term, local-currency capital to help finance the country's development needs and reduce the overall exposure to foreign-currency risk for sovereign and project sponsors. At present, institutional investors allocate a very small fraction of their investments to infrastructure assets, with most infrastructure financing conducted through project finance funded through bank loans, or funded directly on the balance sheets of SOEs and municipalities. The issue is how to scale up the investments of institutional investors in infrastructure in a sustainable manner, given the long-term nature of many of their liabilities.

### Sector deep dives

The core of this CPSD analysis is the identification of opportunities for market creation as well as potential for increasing development impact of investment. To that end, three deep dives were conducted to put a lens on sector-specific opportunities for scaling-up investment and leveraging private sector solutions, with a focus on identifying policy options that can be implemented in the short to medium term. A sector scan was undertaken to guide the deep dive selection (summary in Annex 1). This was complemented by in-depth consultations with entrepreneurs and leading companies, business associations, financial institutions, think tanks, and the IFC investment team at the WBG. The three sectors covered—agriculture and agribusiness, automotive, and ICT—are vital and dynamic, economically important, and have dense backward and forward linkages to the rest of the economy. With the right policies, these sectors have the potential to make a much stronger impact on inclusion; and the findings provide pointers that are relevant for other sectors. The Annexes provide a summary of opportunities in other sectors that were briefly reviewed for the CPSD (tourism, health, mining).

Common issues that emerge from the three deep dives are the need for long-term policy certainty to attract investment, stronger national and subnational capacity to implement key sectoral policies, and the need for more effective support programs. Many opportunities exist to leverage existing strengths through public-private partnerships, blended finance initiatives, supplier development programs, and skills development programs, among others. Such initiatives can improve the provision of human capital and address skills shortages. In the long-term, this can help to mitigate emerging vulnerabilities for

traditional export markets and gradually reduce dependence on natural resource exports.

**Effective implementation of key industrial policies, including the tenth Industrial Policy Action Plan (IPAP) will enable investment in areas that can have a positive impact on inclusion.** IPAP was launched in May 2018 and emphasizes stronger interventions to support transformation led by the flagship Black Industrialists Scheme. The IPAP prioritizes 12 sectors, including automotive, agroprocessing and ICT, the sectors covered in the deep dives. The IPAP also outlines a stronger drive on exports growth, focusing on existing lead firms and dynamic national export champions and new, especially black-owned entrants. Key challenges for implementation will be to more clearly assess underlying market failures, ensure transparency in award procedures, limit discretionality, and strengthen ex-post monitoring so that public funds are used effectively.

Another important agenda has to do with enlarging market access, specifically by growing regional value chains within the Africa region. While small and difficult to access today relative to traditional export markets in OECD, the African neighborhood could hold the biggest opportunity for future growth. Major investments have been made by South African companies in agriculture, agribusiness, and food retail across Southern Africa, and deepening these regional value chains will be key to boosting long-term trade. In automotive, EU and U.S. markets are increasingly saturated, and assembly operations are being set up in Kenya, Nigeria, and Rwanda which could provide opportunities for South African component suppliers. Regional opportunities can be leveraged through trade diplomacy—including through SADC and the Continental Free Trade Area—and programs to facilitate deeper regional value chains.

### Agriculture and agribusiness

Agriculture and agribusiness are an important source of jobs and incomes, especially in the country's rural areas. They are also important for food security both at home and in many countries across the region to which South Africa exports food: exports of agricultural goods increased from \$4.4 to over \$10.6 billion over the past decade.

**Despite positive trends, the sector is vulnerable. More effective support to emerging farmers and provision of public goods is needed to increase the**

**sector's impact.** Agriculture remains highly dualistic: production is driven by a small number of large capital-intensive commercial farms, while smaller farms face low economies of scale and inadequate access to financing. Critical skills are lacking among emerging farmers, while the sector intensifies in knowledge and technology. Sector governance is also fragmented, with policy mandates spread across numerous ministries and departments with overlapping responsibilities and declining capacity to meet their objectives.

**Policy uncertainty around land and water rights poses a downside risk to investment.** Growing impatience with the pace of resolving South Africa's racially skewed land ownership has led the National Assembly to review Section 25 of the Constitution to potentially enable expropriation without compensation. There is wide consensus on the need for land reform, but uncertainty about the form it will take and its outcome.

### Automotive

**The automotive industry is the leading manufacturing industry in South Africa. Like other industries, it initially developed under strong protectionism but has successfully integrated with the global economy.** While South Africa accounts for only 0.6 percent of global automotive production, the country is Africa's leading automotive producer. This industry performed better than most other manufacturing industries when it comes to investment, output and exports. It accounts for 30.1 percent of manufacturing output, 13.9 percent of total exports, and 8.6 percent of formal jobs when linkages with other industries are taken into consideration (Econometrix 2017). The presence of major original equipment manufacturers (OEMs) and supportive government policies have played an important role in developing the industry.

**Overall the industry outlook is positive.** The newly developed Automotive Master Plan 2020–2035 provides the much-needed policy certainty to the industry. The plan aims to increase production volumes and strengthen domestic value addition. The OEMs are making significant investments in training and collectively spent R 1.5 billion in training and development between 2015 and 2017. Some of the government's investments in the supplier development programs are starting to bear fruit.

**Challenges for future growth include South Africa's small domestic market, limited capacity of suppliers, and no regional value chains in close proximity.** The resulting lack of economies of scale discourages the growth of the components industry. As with other knowledge intensive industries, the automotive industry is grappling with skills shortages. Furthermore, rigid wage setting mechanisms also contribute to the relatively high labor cost. Going forward, it will be important to avoid fragmentation of the government's support programs by evaluating and scaling up the most successful initiatives. Skills and supplier development programs can also be funded by the planned Venture Capital Fund.

**Many of the obstacles faced by the automotive industry and the manufacturing industry at large are external to manufacturing firms.** Indeed, to compete with firms from advanced and rapidly growing Asian economies, firms need to rely on complementary assets like infrastructure and education. In South Africa, these sectors are dominated by SOEs and suffer from a shortfall of investment. Although the problem is observed in many middle-income countries, it is more pronounced in South Africa, particularly in technical and vocational education, transport, and energy infrastructure. Lastly and critically important for long-term growth, a targeted trade diplomacy is needed to expand exports to fast-growing markets, particularly in Sub-Saharan Africa, and to maintain exports to the United States and the European Union.

### Information and Communications Technologies

**The NDP acknowledges the ICT sector as an enabler for “the development of a dynamic and connected information society and a vibrant knowledge economy that is more inclusive and prosperous” by 2030.** The Department of Trade and Industry has identified ICT and electronics among the 12 IPAP priority sectors in South Africa that have the highest growth and investment potential. Already, investment into ICT is growing. It is currently close to 3 percent of GDP. The sector now contributes approximately 17 percent of all service exports and there are vibrant entrepreneurial ecosystems emerging in several cities.

**However, policy constraints impede the development of South Africa's ICT sector.** Relatively high Internet costs and slow speeds constrain the growth of



the ICT industry and contribute to the slow development of spillover applications. This makes it more difficult and costlier for citizens, especially the poorest communities, to access e-government, education, and e-health services. The long delay in deciding on the mechanism for assigning high-demand spectrum is a key policy constraint. Moving ahead with the release of the spectrum will catalyze private investment into telecom networks, enabling upgrading to 4G and eventually 5G, encouraging further entry and competition into the broadband segment, and laying the foundation for the Fourth Industrial Revolution (4IR).

**While the outlook for ICT is positive, urgent action is needed to unlock the potential of the digital economy to enhance productivity, incomes and well-being in the long-term.** Recent setbacks on the approval of the Electronic Communications Amendment Bill mean that more time will be needed to create an environment that encourages investment by current incumbents with high levels of capacity and attracts new entrants that can bring new business models and technologies on the market. Several policy options exist to facilitate the transition away from infrastructure-based competition towards a new paradigm of services-based competition. The decision needs to take account of the comprehensive studies carried out by DTPS, CNRS, and the private sector, but also consider how best to tap the strengths of the vibrant digital ecosystem in South Africa. Solving the shortage of digital skills at different levels will require a mix of public and private initiatives, leveraging on good practices that already exist in the country.

## Conclusion

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**The government's goal to attract \$100 billion FDI and the outreach to global and local businesses have created a more positive environment for investors, but policy uncertainty remains an obstacle.** Some of the announced reforms since President Ramaphosa took office have been implemented, but many more are still needed. The political economy is complex, and at times hinders much-needed reforms. Ultimately, policy uncertainty could continue to put a damper on South Africa's investment climate in the medium term.

Against this backdrop, the CPSD provides policy options and outlines possible World Bank and IFC interventions to unlock barriers to private investment and leverage private sector solutions to improve the delivery of public services (see table of recommendations below and details in the full report). In the context of the Country Partnership Framework (CPF) dialogue, the report can be a useful engagement tool for stakeholders—the government, the private sector, and other DFIs—to select priorities and policy directions. By relying on private sector solutions and crowding-in investment, South Africa could break the spiral of stagnation and move to a higher equilibrium and an economy that delivers on the jobs targets in the NDP. A resurgence as a regional economic powerhouse would help to unlock South Africa's potential so that it can realize the economic and social promises of the 1994 transition.

## Key recommendations

Factors affecting private investment	Policy options outlined in the report	World Bank Group role
<b>Cross-cutting constraints<sup>2</sup></b>		
<p><b>Business environment and investment policy:</b> Red tape increases costs, delays day-to-day operations, and is not conducive to new firm creation. There are constraints in access to finance for MSMEs. The framework for investment promotion is inadequate.</p>	<ul style="list-style-type: none"> <li>■ Reform regulations in lagging areas (for example, property registration) and strengthen local capacity for implementation.</li> <li>■ Fast-track digital platforms to speed up key business procedures.</li> <li>■ Develop credit scorecard innovations for MSMEs and adopt digital technology to reduce collateral requirements.</li> <li>■ Develop a movable collateral registry to include a wider range of asset types.</li> <li>■ Empower a streamlined national level investment promotion agency that has the capacity to achieve sub-national coordination.</li> <li>■ Rationalize investment incentive framework to ensure competitive incentives that are automatic, transparent, and less discretionary.</li> </ul>	<ul style="list-style-type: none"> <li>■ <b>Advisory support</b> to streamline regulations at national and subnational levels; address policy, institutional legal and regulatory barriers to FDI generation; scale platforms under the Digital Economy for Africa program; and support financial inclusion initiatives.</li> </ul>
<p><b>Limited integration into global value chains and weak connectivity:</b> South Africa's conglomerates face trade and logistics costs to integrate into global value chains; MSMEs struggle to integrate into supplier networks of large firms.</p>	<ul style="list-style-type: none"> <li>■ Raise efficiency in ports and cargo rail through regulation and partnerships with the private sector.</li> <li>■ Foster supply chain development and localization.</li> <li>■ (See the enabling sectors and deep dives for the key sector-specific policy options).</li> </ul>	<ul style="list-style-type: none"> <li>■ <b>Advisory support</b> to design supply chain programs and for PPPs in ports and cargo rail.</li> </ul>
<p><b>Regulatory obstacles to competition:</b> Some government interventions perpetuate legacy competition issues in selected enabling and productive sectors.</p>	<ul style="list-style-type: none"> <li>■ Establish a database of government incentives and a framework for their design and implementation.</li> <li>■ Assess the role and mandate of industry associations to minimize anticompetitive outcomes.</li> <li>■ Build capacity for regulators and policy makers to embed competition principles.</li> </ul>	<ul style="list-style-type: none"> <li>■ <b>Advisory support</b> to competition authorities.</li> </ul>
<b>Enabling sectors: Education and skills</b>		
<p>Enrolment and completion rates are low. Participation of the private sector is relatively low due to legal and administrative barriers. Raising quality of TVET education is challenging. Education infrastructure investment is backlogged.</p>	<ul style="list-style-type: none"> <li>■ Explore alternative ways to optimize resources allocation to higher education institutions such as performance contracts, research contracts, and encouraging fundraising.</li> <li>■ Reform the compliance framework for private institutions by reducing</li> </ul>	<ul style="list-style-type: none"> <li>■ <b>Advisory support</b> to reform TVET curriculum, strengthen management, improve governance, and develop framework regulations to encourage greater private sector participation.</li> <li>■ <b>Potential IFC investment</b> in private higher education institutions and</li> </ul>

Factors affecting private investment	Policy options outlined in the report	World Bank Group role
	<p>the number of regulatory bodies and relaxing stringent regulations.</p> <ul style="list-style-type: none"> <li>■ Encourage TVETs to partner with industry, to increase relevance to firm needs, and mobilize resources.</li> <li>■ Increase investment into education infrastructure through reforms to PPP framework.</li> </ul>	student accommodation.
<b>Infrastructure</b>		
<p><b>Energy:</b> Significant short-term supply risks result from technical vulnerabilities and limited generation capacity. New power connections are inefficient. Eskom's balance sheet is fragile, and its payments are in arrears. There is also a greater risk for anti-competitive outcomes due to the presence of dominant firms and the high degree of vertical integration.</p>	<ul style="list-style-type: none"> <li>■ Continue to strengthen the governance and management of Eskom.</li> <li>■ Bring in more IPPs and encourage embedded generation to leverage the decreasing cost of renewable energy (for example, in solar and wind) and diversify the energy mix.</li> <li>■ Improve payments through net metering and smart meters.</li> <li>■ Publication of refinancing guidelines for REIPPP program.</li> </ul>	<ul style="list-style-type: none"> <li>■ <b>Advisory support</b> to support cost minimization mechanisms for Eskom, embedded generation and mobilization of a broad base of long-term domestic and institutional investors in IPPs, building on the REIPPP program.</li> <li>■ <b>IFC investment</b> into renewable energy and embedded generation.</li> </ul>
<p><b>Transportation:</b> Infrastructure is deteriorating due to underinvestment, poor management of SOEs, and barriers to private participation. Sector regulation is also restrictive of competition, especially in rail and air transport. Regulatory and financial advantages are granted to SOEs through government bailouts, and regulatory functions.</p>	<ul style="list-style-type: none"> <li>■ Improve governance of SOEs such as Transnet and South African Airways (SAA).</li> <li>■ Introduce pro-competition rules and a framework for competitive neutrality between private firms and SOEs where both compete in the same market.</li> <li>■ In the longer term, consider how SOE activities can be refocused to sectors where the private sector is unable to operate efficiently.</li> </ul>	<ul style="list-style-type: none"> <li>■ <b>Advisory support</b> to reform the governance of SOEs, improve pro-competition rules in segments where SOEs operate, ensure competitive neutrality between public and private firms, and foster PPPs.</li> </ul>
<p><b>Water:</b> Multiple institutions are involved in the sector, resulting in a complex and inefficient water supply chain. A supply deficit is expected because of technical and institutional factors and underinvestment. High levels of non-revenue water.</p>	<ul style="list-style-type: none"> <li>■ Reform the governance system to increase efficiency.</li> <li>■ Continue to strengthen efficiency of water use.</li> <li>■ Strengthen the framework for trading water rights.</li> <li>■ Diversify the use of water by bringing in more ground water and desalination.</li> <li>■ Foster more PPPs.</li> </ul>	<ul style="list-style-type: none"> <li>■ <b>Advisory support</b> to introduce international best practices for reducing non-revenue water, reforming the framework for governance, trading water rights, supporting more PPPs.</li> <li>■ <b>Possible IFC investment</b> in municipal water infrastructure projects.</li> </ul>

Factors affecting private investment	Policy options outlined in the report	World Bank Group role
<p><b>Capital markets for infrastructure finance:</b> Challenges include limited competition, high costs, regulatory limits to adopting new technologies, lack of viable project pipelines, limited vehicles for co-investing, and opportunities confined to equity [local banks dominate debt financing].</p>	<ul style="list-style-type: none"> <li>■ Address regulatory constraints preventing new entrants in the domestic capital markets.</li> <li>■ Upstream policy reform to deliver infrastructure projects that are "market ready."</li> <li>■ Create opportunities for long-term domestic and international institutional investors.</li> </ul>	<ul style="list-style-type: none"> <li>■ <b>Advisory support</b> to modernize the Financial Markets Act, provide upstream support to ensure a viable and bankable project pipeline, identify pilot transactions, create capital market solutions to enable refinance for IPPs, and mobilize a broader base of long-term domestic and institutional investors into PPPs.</li> <li>■ <b>Potential IFC demonstration transaction co-investing</b> with domestic and international long-term institutional investors.</li> </ul>

**Deep dives: Agriculture and agribusiness**

<p><b>Governance framework:</b> Policy is spread across numerous ministries and departments with overlapping responsibilities, while capabilities to meet mandates are declining. Efforts to monitor and evaluate past support programs (especially in terms of land reform and redistribution) are limited.</p>	<ul style="list-style-type: none"> <li>■ Increase space for PPPs in trade-related services (trade information, certifications, veterinary services).</li> <li>■ Improve access to key export markets (especially EU but also emerging export destinations). Address non-tariff barriers within the Southern African Development Community (SADC) region.</li> </ul>	<ul style="list-style-type: none"> <li>■ <b>Advisory support</b> to support an agriculture sector public expenditure review (including land reform spending), expertise to move towards PPP models in key trade-related services, develop new trade agreements for key export markets (especially in Asia), analyze the impact of trade barriers within SADC region, and support multi-country harmonization of standards.</li> <li>■ <b>World Bank lending</b> for capacity building and financial support for producer organizations to provide support services (entry, exporting).</li> </ul>
<p><b>Access to finance for emerging farmers:</b> Subsistence and emerging farmers remain largely excluded from agricultural finance and insurance products. The lack of credit results in low investment, dampening yields and productivity. Increasing levels of financial inclusion have not led to a deepening of the relationship between emerging farmers and agricultural financial service providers. Most emerging farmers lack collateral and the capacity to develop bankable business plans.</p>	<ul style="list-style-type: none"> <li>■ Support development of agriculture insurance.</li> <li>■ Increase efforts to bring commercial banks into lending to emerging farmers, for example, by providing risk guarantees and facilitating access to collateral.</li> </ul>	<ul style="list-style-type: none"> <li>■ <b>Advisory support</b> on agricultural insurance markets, especially in the context of increased climate risks, and for an agriculture finance diagnostic to understand the demand and supply side constraints.</li> <li>■ <b>World Bank lending</b> to scale-up the Land Bank project supporting blended finance initiatives for emerging farmers.</li> <li>■ <b>Potential IFC investments</b> to direct funding to key players in chosen sectors to strengthen out-grower programs and risk sharing facilities with South African banks.</li> </ul>
<p><b>Skills among emerging farmers:</b> Agricultural colleges remain in poor shape. In some core areas there</p>	<ul style="list-style-type: none"> <li>■ Enable greater skills transfers from larger commercial to emerging farmers through mentorship.</li> </ul>	<ul style="list-style-type: none"> <li>■ <b>Advisory support</b> to assess existing mentoring programs for emerging farmers to determine interventions that</li> </ul>

Factors affecting private investment	Policy options outlined in the report	World Bank Group role
<p>are gaps leading to a shortage of agriculturalists, agricultural engineers, and veterinarians.</p>		<p>lead to retention and skills transfer.</p> <ul style="list-style-type: none"> <li>■ <b>Potential World Bank lending</b> to support skills programs in key deficit areas through extension programs, universities and TVETs, including potential direct funding to agricultural colleges.</li> </ul>
<p><b>Land and water rights:</b> Lack of secure land and water rights deter investment and limit scope for credit.</p>	<ul style="list-style-type: none"> <li>■ Bring certainty to investors by finalizing the amendments to land reform and the framework for how this will be applied.</li> <li>■ Consider performing a comprehensive land audit to improve shared understanding of redistribution to date.</li> </ul>	<ul style="list-style-type: none"> <li>■ <b>Advisory support</b> to assess the effectiveness of past restitution and redistribution programs, conduct a comprehensive land audit, and support exchange and lesson learning from other countries' land reform processes.</li> </ul>
<p><b>Climate change and water scarcity:</b> Growing demand is likely to lead to more intense competition for natural resources, increased greenhouse gas emissions, further deforestation, and land degradation. Substantial spatial misallocations exacerbate water insecurity.</p>	<ul style="list-style-type: none"> <li>■ Increase preparation for El Nino by strengthening government insurance for disasters.</li> <li>■ Explore the potential to expand access to agriculture insurance to emerging farmers which can act as collateral for loans.</li> <li>■ Develop a comprehensive approach to risk management.</li> <li>■ Investing in improved water-efficient irrigation systems.</li> </ul>	<ul style="list-style-type: none"> <li>■ <b>Advisory support</b> to develop a Climate Smart agriculture strategy, develop risk management techniques to help emerging farmers access credit, conduct analytical work for an audit on water rights linked to restituted or redistributed land.</li> <li>■ <b>Potential World Bank lending</b> to develop improved and more water-efficient irrigation.</li> </ul>
<p><b>Barriers to competition:</b> Industry associations can perform valid roles in a market but can also serve as fora for information exchange and therefore facilitate collusion. The involvement of associations and large incumbents in channeling government support to emerging farmers may lead to conflicts of interest. The imbalance of market power between small suppliers and large buyers (such as retailers and processors) reduces incomes for small suppliers.</p>	<ul style="list-style-type: none"> <li>■ Assess the role and mandate of industry associations and consider how to minimize the potential for anticompetitive outcomes.</li> <li>■ Ensure effective implementation of new provisions of the Competition Law to tackle anticompetitive behavior by associations or abuse of dominance by large buyers.</li> <li>■ Advocate with large buyers to encourage fair dealing with small suppliers (for example, through codes of conduct).</li> <li>■ Build mechanisms and capacity for regulators and policy makers (such as SABS, ITAC, DAFF, dti) to embed competition principles in standards, market rules, and public policies. Establish a pro-competition framework for the design and award of government support programs.</li> </ul>	<ul style="list-style-type: none"> <li>■ <b>Advisory support</b> to the Competition Authorities' enforcement and advocacy work in the sector; embed competition principles in key value chains in the market framework for National Fresh Produce Markets and in the retail sector; implementation of the Competition Law (including clear and predictable regulations and guidelines); to rationalize the role of industry associations in the market; analyze the impact of existing tariff formulas for wheat, sugar, and maize on consumer prices and market contestability.</li> </ul>

Factors affecting private investment	Policy options outlined in the report	World Bank Group role
<b>Automotive</b>		
<p><b>Size of the domestic market and regional integration:</b> The domestic market is small and imports account for a significant share. There is no regional value chain.</p>	<ul style="list-style-type: none"> <li>■ Assess the impact and cost-benefits of the Automotive Masterplan to ensure that it can meet volume and localization targets.</li> <li>■ Enable expansion of exports to the Africa region through trade negotiations; university-industry collaboration to adapt vehicles to African roads.</li> <li>■ Trade diplomacy with the United States and the EU to maintain South Africa's exports in its current markets.</li> </ul>	<ul style="list-style-type: none"> <li>■ <b>Advisory support</b> to develop regional value chains and cross-border trade in components.</li> </ul>
<p><b>Skills and supplier development:</b> Skills are in short supply in the engineering, management and select artisanal professions. TVET institutions suffer from outdated curriculum with poor links to industry needs. Capabilities are weak in component manufacturing.</p>	<ul style="list-style-type: none"> <li>■ Improve merSETA's outreach and the impact of training to suppliers.</li> <li>■ Evaluate and scale-up good practices in existing supplier development programs.</li> <li>■ Continue ASCCI's initiatives to localize certain parts based on the interest of OEMs and availability of local expertise.</li> <li>■ Incorporate skills and supplier development programs into the activities eligible for support from the planned Venture Capital Fund.</li> </ul>	<ul style="list-style-type: none"> <li>■ <b>Advisory support</b> to upgrade TVETs, assess and strengthen supplier development programs and localization potential, share expertise in structuring, management and deployment of the planned Venture Capital Fund.</li> <li>■ <b>Potential IFC investment</b> in private TVET schools, instruments for short-term and long-term financing needs of suppliers, equity finance for existing and new JVs/M&amp;As; Capex for expansion, modernization, greenfield investment, corporate finance, and working capital; support establishment of pooled funds and blended finance facilities.</li> </ul>
<p><b>R&amp;D and metrology:</b> Firms in the automotive industry are less likely to invest in R&amp;D than other manufacturing firms. Domestic suppliers incur high costs of testing abroad due to lack of accredited metrology institutions. R&amp;D tax incentives prioritize new to the world innovation and involve a long application process.</p>	<ul style="list-style-type: none"> <li>■ Create incentives for industry-university collaboration, with a focus on MSMEs.</li> <li>■ Incentivize universities to offer testing services to component manufacturers.</li> <li>■ Strengthen the capacity of the Bureau of Standards.</li> <li>■ Reform R&amp;D tax incentives to encourage OEMs and domestic suppliers to invest in innovation.</li> </ul>	<ul style="list-style-type: none"> <li>■ <b>Advisory support</b> to support industry-university collaboration programs, R&amp;D incentives policy, strengthen public metrology institution.</li> </ul>
<p><b>Investment climate:</b> Deficiencies exist in the investment climate, including red tape, unreliable electricity supply, and high trade logistics costs, and scope to strengthen the design of support programs to minimize market distortions.</p>	<ul style="list-style-type: none"> <li>■ Reduce the costs of obtaining electricity connection and improve reliability of supply.</li> <li>■ Improve trade logistics by introducing electronic single window and further harmonization of documents and procedures.</li> </ul>	<ul style="list-style-type: none"> <li>■ <b>Advisory support</b> to improve the investment climate at the local level, upgrade SEZs based on local practices, improve interconnectivity of customs systems; and improve the design of support programs to minimize market distortions.</li> </ul>

Factors affecting private investment	Policy options outlined in the report	World Bank Group role
<b>Information and communication technologies:</b>		
<p><b>Gaps in infrastructure development:</b> Policy uncertainty holds back investment needed to upgrade networks and deters entry by new companies. Coverage issues affect deployment of services in some rural areas and townships.</p>	<ul style="list-style-type: none"> <li>■ Different regulatory approaches would encourage better use of existing fiber infrastructure, for example, facilities sharing regulation.</li> <li>■ Programs to get coverage at decent speeds in areas of economic exclusion could be implemented, for example, in townships using the Universal Service Fund (USF).</li> </ul>	<ul style="list-style-type: none"> <li>■ <b>Advisory support</b> on the regulatory environment and implementation based on WBG experience in other countries.</li> <li>■ <b>Potential IFC investment</b> to mobile network operators (MNOs) with funding needs at their various subsidiaries, potential acquisitions or deployment in both the wholesale and retail broadband markets, acquisition of towers in the market, selectively support data center operators in South Africa that need funding for expansion projects into the rest of Africa.</li> </ul>
<p><b>Price of data and quality of service:</b> Gaps in the legal and regulatory framework have been a critical bottleneck, and a major reason for the limited availability of high-demand spectrum to upgrade broadband networks to 4G and 5G.</p>	<ul style="list-style-type: none"> <li>■ Clarify the policy direction and develop a plan on the assignment of high-demand spectrum to give certainty to the industry.</li> <li>■ Accelerate the digital migration by providing a policy directive on the process.</li> <li>■ Strengthen the independence and capacity of ICASA, the regulator responsible for ICT, and implement pro-competition provisions in the ECA Bill.</li> <li>■ Explore regulatory approaches to promote data affordability for example, through more innovative use of the USF.</li> </ul>	<ul style="list-style-type: none"> <li>■ <b>Advisory support</b> on methods for spectrum assignment in light of the WBG's experience in countries such as Mexico; review the regulatory options for accelerating digital access and promoting competition.</li> </ul>
<p><b>Digital skills:</b> Low basic literacy and numeracy skills among a large segment of students hold back digital skills. Inadequate and insufficient digital programs and curriculums which are not aligned with labor market/industry needs.</p>	<ul style="list-style-type: none"> <li>■ Promote digital literacy at schools, and continue to attract students into STEM subjects.</li> <li>■ Foster PPPs as a tool to deliver digital skills that are directly needed within the private sector.</li> <li>■ Reform TVET system (programs, curriculums, labs/workshops, professional development of instructors) to better align with industry needs.</li> <li>■ Explore possibility of PPPs for development of Digital Skills at basic education and TVET institutions.</li> </ul>	<ul style="list-style-type: none"> <li>■ <b>Advisory support</b> to conduct a Digital Economy for Africa (DE4A) diagnostic to identify interventions in areas such as digital financial services, digital skills, and digital platforms; scale up XLAfrica, a pan-African accelerator for digital startups, and mLab on digital skills;</li> <li>■ <b>Potential IFC investment</b> to increase investment in digital skills PPPs, scaling up state of the art rapid skills development models, for example, through competitive processes and blended finance.</li> </ul>







# 01 SOUTH AFRICA'S PRIVATE SECTOR: CONTEXT AND CROSS-CUTTING CHALLENGES

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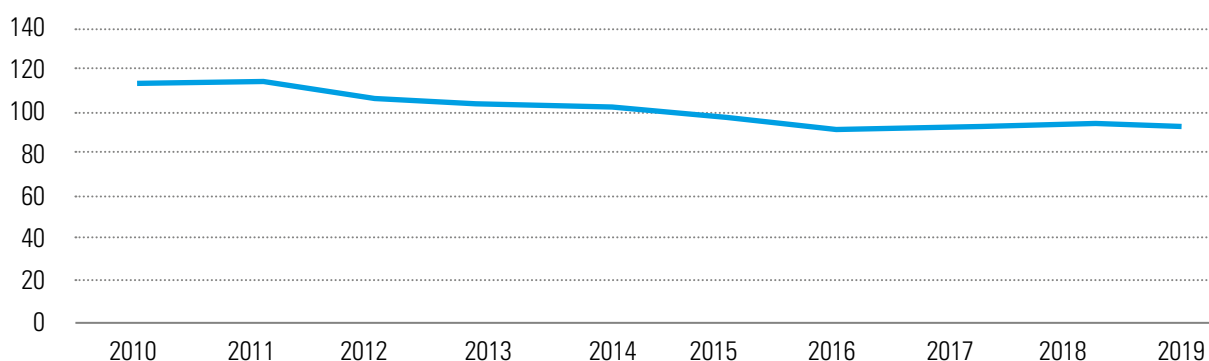
The purpose of this Country Private Sector Diagnostic (CPSD) is to assess opportunities and constraints holding back private sector investment and growth in South Africa. It draws on analysis of the main cross-cutting constraints to private sector competitiveness and growth, existing research, and stakeholder consultations. The CPSD also reviews the opportunities for leveraging private investment and solutions in key enabling sectors as well as in productive sectors that could play a key role in South Africa's growth. These deep dives into agriculture and agribusiness, automotive, and information and communication technologies help to identify sector-specific obstacles that hamper private sector investment and growth, and unpack the implications of the cross-cutting constraints in the economy.

This section of the CPSD takes stock of private sector in South Africa and outlines the main cross-cutting constraints facing businesses. It is based on a review of recent experience of private sector development in the country—including the findings from the 2018 Systematic Country Diagnostic (SCD). Because of its relevance to current policy debates, and the fact that the country's business environment and integration into value chains were analyzed in detail in several World Bank Group publications,<sup>3</sup> this section provides a more in-depth review of the regulatory obstacles to competition.

At the macro-level, South Africa's economy has lagged in terms of growth. Growth per capita averaged 1.1 percent between 1994 and 2000, 2.9 percent between 2001 and 2008, and has stagnated since 2009. South

Africa has been outperformed by other BRICS (Brazil, Russia, India, China, and South Africa) and Sub-Saharan African countries and, worryingly, recent growth projections have been revised downward. The South African economy is expected to grow at 1.3 percent in 2019 and 1.7 percent in 2020. Growth is expected to accelerate in 2020, but under the assumption that structural reforms gather momentum, policy uncertainty fades, and FDI commitments materialize. Global threats to the country's economic outlook are expected from a slowdown in global growth, trade disputes, the normalization of U.S. monetary policy, changes in investor appetite, and weak commodity prices.

The deterioration of South Africa's macroeconomic environment was accompanied by falling private investment<sup>4</sup> and particularly inward FDI. The SACCI Business Confidence Index (BCI) reflects the market-related business climate, identifying economic developments that have a bearing on the business mood and potential for private sector growth in South Africa. While new leadership in government in 2018 has created a more positive mood, a clear downward trend in business confidence has been visible over the last decade (Figure 1).<sup>5</sup> Between 2013 and 2017, FDI inflows declined by 37 percent CAGR. In 2017, FDI inflow to developing economies increased by 2 percent, but declined by 41 percent in South Africa. Recent data from SARB showed an uptick in FDI to \$4.9 billion in 2018, which represents a five-year high, but it's too early to understand whether the country has turned the corner or whether this is a temporary effect.

**FIGURE 1 SACCI BUSINESS CONFIDENCE INDEX, 2010-19**

Source: SACCI.

**Weak GDP growth and stagnating investment have impaired job creation efforts, exacerbating the country's unemployment challenge.** Since 2008, 3.5 million people have entered the labor force. However, with 1.6 million additional jobs created, the result has been a continued increase in the unemployment rate. In 2018, the narrow unemployment rate was 26.7 percent with 6.1 million people unemployed (36.7 percent—over one-third of the labor force—if discouraged workers are included). This led to many of South African job seekers being discouraged. Historically disadvantaged groups (blacks, youth, and women) are more acutely affected by unemployment.<sup>6</sup> For instance, ratio of female to male labor force participation is 0.7.

**High levels of unemployment increase people's vulnerability to poverty as well as inequality.** This makes it harder to overcome the legacy of exclusion and inequality that stems from South Africa's history of apartheid. South Africa's poverty rate fell significantly since 1994; however, poverty remains high for an upper middle-income country with more than half (55 percent) of the population being poor at the national upper bound poverty line of R 992 per person per month (in 2015 prices). Moreover, with a Gini coefficient of 0.63, South Africa is one of the most unequal countries in the world (World Bank, 2018b).

### 1.1. State of the private sector

South Africa has several of the essential conditions necessary to attract investment at the levels of the mid-2000s, and for its businesses to grow, invest,

upgrade, and export into new markets. These include strong, independent institutions, such as the judiciary, competition authorities, and the Central Bank; a deep and diversified financial sector; and universities that rank among the top 500 globally (World Bank, 2018a). Recent political developments also give hope for optimism.

In addition, South Africa's private sector is more diversified than that of many other developing economies. Based on a recent analysis of tax data, 28 percent of formal firms are in manufacturing, 37 percent in services (construction, hotels, restaurants, transport, storage, communication, utilities and other services), and 18 percent in commerce; yet there is economic activity across all sectors. South Africa has been a highly-industrialized economy for many years and today it continues to have a larger share of firms in manufacturing compared to Vietnam, Peru, Moldova and Bangladesh—countries for which similar data are available.

The services sector has been the main driver of employment, but as noted already, the economy has not created enough jobs. Services account for most of the new job creation (Aterido et al., 2017). Within the service sector, tourism has been one of the leading subsectors in job creation—recent trends and opportunities in this sector are presented in Annex 5. However, this has not been enough to absorb South Africa's large pool of unskilled workers—withstanding job creation that has come from large and high-growth firms in diverse sectors (see Box 3 below). Recent evidence, such as Kerr et al. (2014), indicate that job creation and destruction

rates in South Africa are similar to those in OECD countries and this suggests fewer rigidities in the

labor market, although there are country-specific aspects that can be hard to capture.<sup>7</sup>

### BOX 1 THE ROLE OF SOUTH AFRICA'S MSMEs AND LARGE FIRMS IN JOB CREATION: WHAT CAN WE LEARN FROM RECENT STUDIES

Comparative studies show that large firms account for the bulk of job creation in developing countries (such as Ayyagari, Demircuc-Kunt, and Maksimovic 2014). This is also the case in South Africa—recent studies suggest that large, old firms account for a big share of current employment, in part because of the market structure prior to 1994. Recent research sheds some light on South Africa's employment profile and the relationship to firm size:

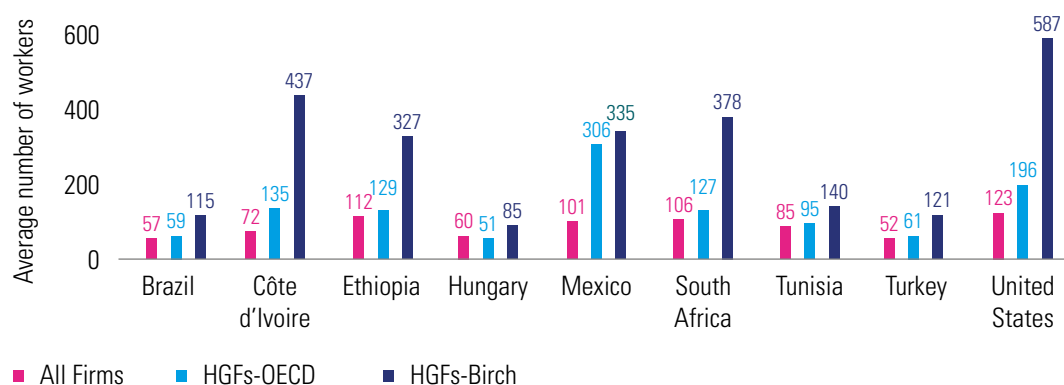
- Up to 56 percent of South African jobs are concentrated in the top 1,000 large companies (Small Business Institute 2018).
- The share of people working in firms with fewer than 50 workers has been declining since 2000 (Rankin et al. 2013).
- Since 2008, the proportion of employment among firms with fewer than 10 workers, and those with between 10 to 49 workers has been declining (ibid).
- Between 2005 and 2011, there was net job destruction in all size categories of firms with less than 500 employees (ibid).
- Kerr et al. (2014) provides empirical evidence that

large South African firms are better net job creators than smaller firms.

#### A subset of large firms—high-growth firms (HGFs)—is a major driver of job creation in many countries including in South Africa.

According to the OECD, a HGF is a firm that (a) initially possesses 10 or more employees or that has at least four times national per capita income in annual revenues, and (b) experiences average annualized employment or revenue growth of greater than 20 percent over a three-year period. A World Bank (2019a) flagship study on HGFs shows that for nine emerging markets, HGFs make up about 20 percent (or fewer) of firms in manufacturing and services yet create as much as 80 percent of all new jobs. In South Africa, HGFs constitute 12 percent of firm distribution but account for 32 percent of total jobs (World Bank, 2019a). Moreover, as illustrated in Figure 2 below, HGFs tend to be larger than other firms. In a seminal paper that uses the new SARS-NT firm-level panel dataset, Mamburu (2017) finds that size has a positive impact on the likelihood of a firm being high-growth. Kreuser and Newan (2018) find that size is correlated with growth for South Africa's manufacturing firms.

**FIGURE 2 HIGH GROWTH IN FIRMS TEND TO BE LARGER THAN OTHER FIRMS**



Source: World Bank. 2018.

Without significant improvement in the business environment facing MSMEs (for example, the cost of starting a business and constraints in access to finance), there are reasons as to why large firms including HGFs will likely continue to be the main source of employment in South Africa for some time to come:

- Global linkages—a firm's exporting status, share of exports, FDI inflows and imports of technology— increase the likelihood of a firm being high growth.
- Diversification and participation in capital markets provides resilience against shocks that MSMEs cannot easily gain
- More likely that large firms can survive during fluctuations and benefit from periods of growth (Maburu, 2018).
- Networks—for instance, in Thailand, firms that are more connected with others through direct ownership, holding companies or subsidiaries are more likely to experience high growth (World Bank 2018).
- Finally, both large firms and HGFs tend to have better access to skills and finance.

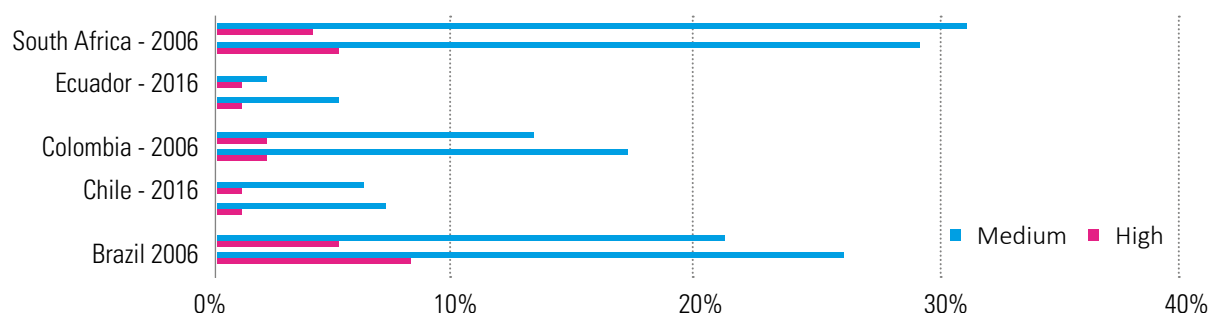
**The history of industrial support, protections, and state control has shaped market structures in key agricultural and manufacturing markets in South Africa.** These were historically tightly protected oligopolies or monopolies, sometimes under state control. Despite the privatization of a number of these state-controlled enterprises or boards in the late 1990s, without consistent complementary measures to open these markets to trade and competition, the structures of these markets remained in place. In some cases, the behavior of firms in these markets has reflected previous regulatory conditions.<sup>8</sup> Moreover, a number of markets appear to have privately “re-regulated” following deregulation. The strong role currently played by industry associations in South Africa, which in some cases is supported by sector regulation, has partly facilitated this.

**The effects of state support are most pronounced in South Africa's heavy industries.** Examples of private firms that inherited their dominant market positions from former state-owned enterprises exist in steel, iron, non-ferrous metals, basic chemicals, and petroleum production. These industries are particularly important for competitiveness because they provide inputs for the automotive, construction, and agricultural sectors. Where firms reach efficient scale, this could reduce average costs overall. The

question is how to achieve this, and how firms can be encouraged to compete and innovate. This points in part to the need for strong enforcement of competition law, which is discussed below.

**The role of manufacturing, which developed under strong protectionism, has declined with the opening of the economy.**<sup>9</sup> With few exceptions, such as the automotive industry, manufacturing industries recorded losses in market share in their core export products. The loss of global competitiveness in manufacturing has meant that more South African firms have turned to the domestic economy and less technologically advanced export markets in the rest of Sub-Saharan Africa, with the SADC region replacing the EU as the largest export destination.

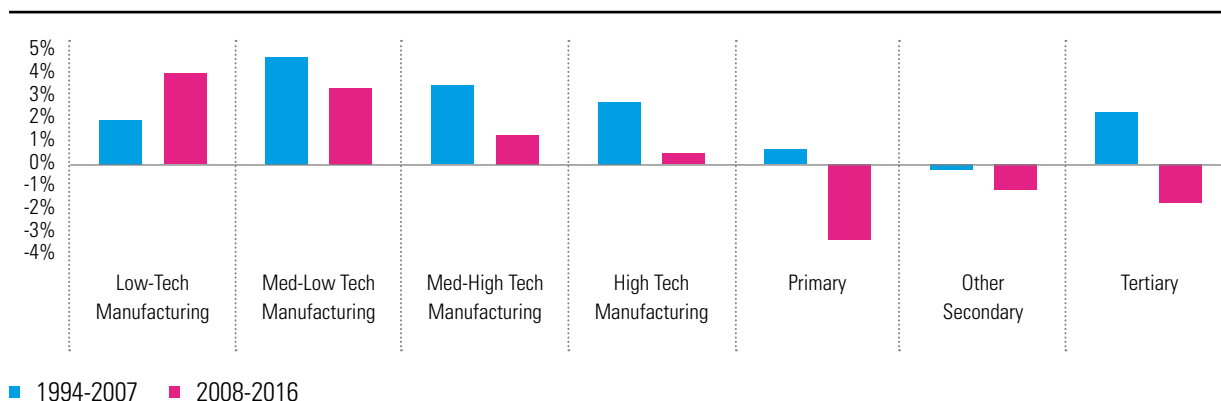
The upshot of these trends is that minerals and metals continue to dominate South Africa's exports. Minerals and metals account for the bulk of the export basket, which exacerbates the volatility of exports and output and leaves the country vulnerable to volatility of global commodity prices. A bright spot on the export outlook is medium and high-tech exports, as the share of total exports increased between 2006 and 2016—this is also reflected in South Africa's performance on measures of export sophistication.<sup>10</sup>

**FIGURE 3 SHARE OF MEDIUM-AND HIGH-TECH PRODUCTS IN TOTAL EXPORTS**

Source: World Bank (2018a) Systematic Country Diagnostics background notes.

A key vulnerability for South Africa's private sector is the negative growth in total factor productivity (TFP) and limited innovation recorded over the last decade. World Bank estimates indicate that TFP declines cost the equivalent of 0.7 percentage points of foregone GDP growth every year on average between 2008 and 2016. This contrasts with India and China, which managed to sustain high TFP growth since the early 1990s (though South Africa's experience in this regard mirrors that of Brazil). The TFP decline was driven primarily by productivity losses within, rather

than between sectors. Figure 4 shows TFP trends by sector. TFP growth in manufacturing has decelerated significantly in recent years, although these sectors have fared better than the primary, other secondary, and tertiary sectors. Mining, footwear and textiles, fiber and rubber products, electricity and water supply, construction, transport, and non-financial private services recorded large drops in TFP levels since 2008 (World Bank 2017.<sup>11</sup> One major factor behind this is the low and declining levels of private R&D and innovation.

**FIGURE 4 TFP GROWTH WITHIN SECTORS**

Source: World Bank 2017.

## 1.2. Cross-cutting constraints

Building on the recently completed SCD report (see Box 2 below), this section outlines cross-cutting constraints specific to achieving the government's job and investment targets, as well as broader concerns with governance in the

country that undermine investor confidence. The section goes into more depth on the issues of the regulatory obstacles to competition. The review of the challenges and opportunities in the areas of education and skills, and in infrastructure sectors, are presented in more detail in the next section on enabling sectors.

## BOX 2 FIVE PRIORITY CONSTRAINTS IDENTIFIED IN THE RECENT SCD

1. **Insufficient skills.** Skills are critical for both labor supply and demand. They raise the productivity of workers and entrepreneurs, help firms expand their production at competitive prices, and raise aggregate demand in the economy for more goods and services. Producing what is required involves hiring more workers, both low- and high-skilled.
2. **The skewed distribution of land and productive assets and weak property rights.** South Africa's historical, highly skewed distribution of land and productive assets is a source of inequality and social fragility—and it fuels the contestation of resources. Property rights are weak for the poor in townships, informal settlements, and rural areas (tenure security), while property rights are coming under pressure for investors in agriculture and mining.
3. **Low competition and integration into global and regional value chains** is a major deterrent to growth and job creation, and it keeps prices high, especially for the poor.
4. **Limited or expensive spatial connectivity and under-serviced historically disadvantaged settlements** continues to reflect the legacy of separate development.
5. **Climate change** is imposing considerable costs on South Africa, a water insecure country with high reliance on carbon-based production. The low-carbon transition will put pressure especially on communities depending on carbon-intensive industry.

## Policy uncertainty

Despite the reforms that the new administration has undertaken, policy uncertainty and weaknesses in policy implementation continue to be cross-cutting constraints that deter investment. Lengthy deliberations around land reforms, the application of BBBEE legislation, and changes in regulation of mining activities through the Mining Charter, have been cited by analysts, the private sector, and rating agencies as inhibitors to economic activity. Uncertainty around sector-specific policies is critically important. The deep dives give indications of the relevant areas where private sector is looking for clear policy directions to maintain and scale-up investment.

## Business environment

South Africa's business climate adds substantial red tape to day-to-day operations and is not conducive to the establishment of new firms. The country ranks 82 in the *Ease of Doing Business* rankings at the global level (World Bank, 2018d. "Doing Business Report", Washington DC: World Bank), far behind its position ten years ago. The pace of business environment reform has stagnated. The distance to frontier score (which compares a country's performance on *Doing Business* indicators with global best practices) has seen a slight

decline from 65.11 in 2016 to 64.89 in 2018. Specifically, the report ranks South Africa at 107 out of 190 countries for the efficiency of registering property. It takes seven procedures and 23 days to register property at an average cost of 7.6 percent of the value of the property. There are also inefficiencies in land administration and land markets have low volumes of transactions and large variations in prices across the country<sup>12</sup> —Annex 2 reviews key issues confronting land markets.

## Access to finance for MSMEs

Building small businesses that contribute to the economy and create jobs is one of South Africa's biggest development opportunities. However, the MSME sector has been relatively stagnant over the last ten years. The number of MSMEs grew by only 14 percent between 2008 and 2017, and only 14 percent of the country's small businesses are formalized. The National Development Plan (NDP) sets out the importance of MSMEs as a priority segment for development, given their employment-generating potential. However, access to finance remains one of the most frequently cited obstacles to growth, with related issues pertaining to technical skills, access to markets, and the broader investment environment strongly affecting MSMEs' ability to secure equity or debt funding.

**Recent findings from the 2017 IFC MSME Finance Gap Report<sup>13</sup> indicate there is an estimated unmet \$30.3 billion formal MSME finance demand in South Africa.** Current finance supply to formal MSMEs is \$41.5 billion. IFC estimates the total demand from the formal sector to be \$71.8 billion. The gap between supply and demand accounts for 10 percent of GDP. Moreover, an additional \$24.2 billion potential demand for finance is estimated among informal enterprises.

**Causes of the MSME financing gap include:** (a) supply and demand-side issues, including macroeconomic conditions, a lack of MSME expertise at banks, and negative perceptions among MSMEs on borrowing, (b) limited access to collateral, and (c) a skewed proportion of asset ownership across racial groups because of apartheid's policy and economic legacies. According to the World Bank Enterprise Survey, the most popular tool banks use is securing loans with collateral: 70 percent of MSME loans in 2007 were secured with collateral valued at over 100 percent of the loan amount. A new round of the Enterprise Survey will be collected in 2019 which will present a more accurate picture of the business environment and access to finance constraints facing MSMEs. A significant aggravator of this issue is banks' preference for immovable assets, such as property, which they prefer because the legal and registry framework makes property less risky. Information asymmetry is also an issue. Banks price MSME finance as high risk in the absence of better information, and only high-risk small businesses are willing to pay this price.

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**New digital technologies such as automated credit scoring can partially address this issue by allowing for economies of scale to be reached through volume.** Screening and processing MSME loans incur relatively

high administration costs. A digital approach can lower these costs but requires banks to have reliable and consistent information to accurately score firms. However, MSMEs in South Africa do not typically keep good-quality financial records. The FinScope Small Business Survey indicates that only 46 percent of small businesses keep financial records, and that a complete absence of record keeping is more prevalent among micro and informal firms. When information is collected, it relates to sales rather than cash flow or net income, making it difficult for banks to accurately measure risk.

**Similarly, the capital market typically serves the needs of large firms, although this is slowly changing.** This is chiefly because of the high transaction costs of issuing equity or debt securities, along with complex listing and regulatory requirements. However, recent developments are beginning to change debt access in South Africa. The Johannesburg Stock Exchange introduced the Alternative Exchange (AltX) in 2003. This was an attempt to encourage MSMEs to raise capital with relaxed listing requirements and to migrate to the JSE's main board once they were ready. By April 2018, 44 firms were listed on the AltX market segment of the JSE for a combined market cap of just under R 12 billion—equivalent to around 0.1 percent of the JSE's market capitalization.

**Potential avenues for expanding access to finance and markets include:** (a) developing credit scorecard innovations for MSMEs to help reduce collateral requirements, and (b) developing a movable collateral registry to include a wider range of asset types that are more prevalent among MSME borrowers. The coverage of credit bureau reporting could also be improved to cover individuals' lending activities for business purposes. The coverage of trade credit and other data sources should also be improved. Banks would need to increasingly adopt digital technology to reach and increase both formal and informal MSMEs. Moreover, the enabling environment for MSMEs can be improved through improving data collection, policies, and policy coordination in South Africa.

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policies, and policy coordination in South Africa.

## Investment policy and promotion framework

South Africa's framework for investment promotion would need to be enhanced to meet the \$100 billion FDI target. Investors have to deal with roughly 30 government entities with overlapping roles, making it difficult to navigate South Africa's investment climate and find the information and resources needed to develop an investment project.

To turn the tide on FDI, the regulatory and institutional frameworks for investors must be improved and IPAs must improve their services. InvestSA, the national investment promotion agency (IPA), could play a stronger role in the FDI agenda to effectively connect public and private sectors, and address key constraints affecting investment in South Africa (FDI in particular). It could also foster discussion, decision making, and implementation of solutions to make South Africa better at attracting, retaining, and expanding FDI. Four key recommendations based on recent WBG work are to strengthen the following:

- The institutional positioning, autonomy, and mandate of InvestSA and provincial IPAs
- South Africa's and InvestSA's strategic focus and leadership of the national FDI strategic process
- The institutional capacity to deliver investor services, including relevant investor service programs catering to the needs of strategic segments while building the capacity and systems of IPAs
- Coordination between national and subnational investment promotion entities on issues including investment mandates, investment referral systems, and foreign investor networks

## Limited integration into global value chains

South Africa's conglomerates have developed some manufacturing and retail networks within the

region, but have limited integration into global value chains. Leading FDI firms, meanwhile, have limited backward linkages to domestic suppliers. These factors have combined to reduce the responsiveness of many South African firms' exports to the rand's depreciation (World Bank, 2018a) and limited diversification out of minerals and metals into higher value-added manufactures and act as a further drag on productivity. As such, trade and industrial policy can inadvertently support uncompetitive firms and hurt competitiveness throughout the value chain.

Ranked at 20 in 2016, South Africa is ahead of the region and at the top of the upper middle-income country group on the Logistics Performance Index. However, the cost of trade logistics, including inland handling, remains higher than peers. Port costs went down significantly since 2012 but were still 88 percent higher than global average in 2016–17. Furthermore, South Africa's port tariffs continue to favor the transport of minerals over manufactured goods. This makes the country a less attractive destination for efficiency-seeking FDI. The next section discusses the constraints and opportunities for private investment in the transport sector, in the broader context of the infrastructure agenda. The ICT deep dive at the end of the report will review the issues surrounding internet connectivity.

## Regulatory obstacles to competition

The structure of economic ownership across South African markets has been perceived as perpetuating the legacy of exclusion. Three main structural characteristics can limit opportunities to enter markets for MSMEs or previously excluded entrepreneurs—concentration within markets, vertical integration, and conglomerate structures. First, concentration within markets and the presence of dominant firms, particularly in industries that provide key inputs to downstream businesses, has the potential to raise costs for all downstream firms. Second, the degree of vertical integration has been perceived to reduce opportunities for new businesses to form linkages with existing firms and to raise barriers to entry. Lastly, conglomerate structures are perceived as indicative



of the concentration of wealth in the economy. Economies of scope could provide advantages that MSMEs and new firms find difficult to match.

**Large firms often enjoy advantages in the market in comparison to MSMEs.** The top 1 percent of largest firms (by employment) in South Africa account for around 50 per cent of employment and 60 per cent of revenue (World Bank 2017), and from that vantage point are important contributors to job creation and growth. While large employment size does not necessarily translate into market power (or a lack of competition) in output markets, the concentration of employment in a few large firms can also be reflective of the concentration of market share in some output markets. Having better access to export markets has helped larger firms as domestic demand contracted, whereas newer entrants and MSMEs that depend on the domestic market find it hard to grow due to weak economic conditions. But there are also cases where government interventions have perpetuated the legacy of large (sometimes vertically integrated) firms that form conglomerates. These can be seen in important upstream sectors and some manufacturing and agribusiness industries.

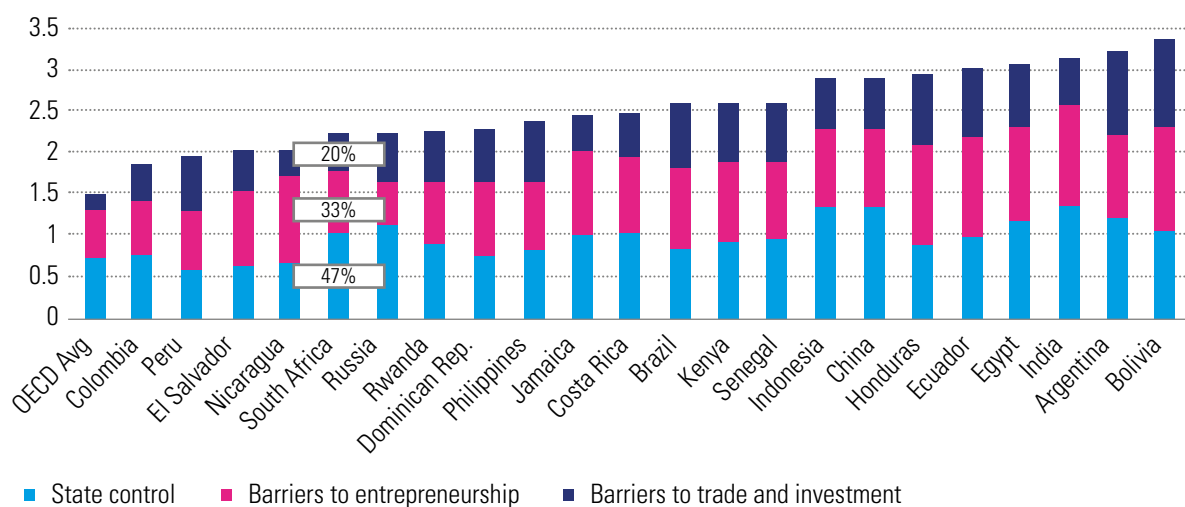
**In this context, South African policymakers should ensure that government interventions in markets are aligned with competition principles to allow firms to enter, expand and compete on a level playing field.** Broadly, the following would go a long way towards

creating a conducive domestic environment for new entry and competitive markets in South Africa:

- Embedding competition principles in **market rules/regulations** (including sectoral regulation, public procurement frameworks, as well as trade and investment policies)
- Allowing private firms to compete on a **level playing field with State Owned Enterprises (SOEs)** in markets where both operate, and
- Ensuring **investment incentives and industrial policy schemes** are awarded transparently, in a way that includes new and small firms, and do not create undue advantages for some players

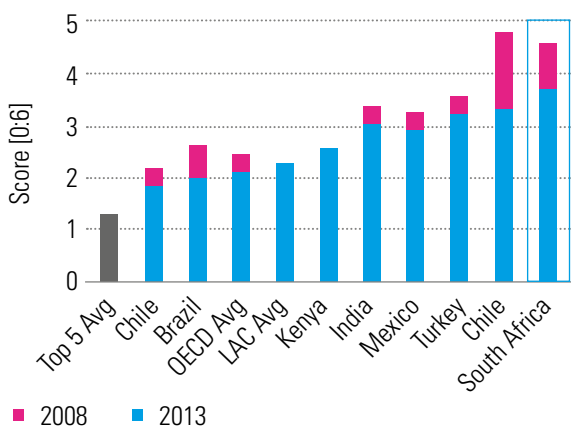
**South Africa performs relatively poorly in comparison to its peers in terms of restrictions to competition stemming from state control.** According to the OECD's Product Market Regulation (PMR) methodology, which measures the restrictiveness of certain areas of regulation to competition, South Africa performs around the mid to low end of its peer countries [lower score indicates lower restrictiveness], although it falls above the OECD average. However, on the state control component of overall restrictiveness South Africa performs relatively worse than peers. This includes aspects such as the scope of SOE involvement in the economy, direct government control of enterprises, price controls, and the use of command and control regulations.

**FIGURE 5 THE RESTRICTIVENESS OF SOUTH AFRICA'S PRODUCT MARKET REGULATIONS**

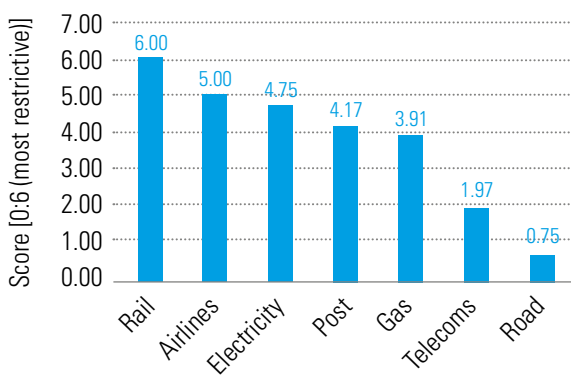


Source: OECD PMR Database, 2013 is most recent year available.

**FIGURE 6 ELECTRICITY, COMMUNICATIONS AND TRANSPORT REGULATIONS: SOUTH AFRICA VERSUS PEERS, 2008 AND 2013**



**FIGURE 7 SOUTH AFRICA ENERGY, TRANSPORT, COMMUNICATION REGULATION: SCORE COMPONENTS**



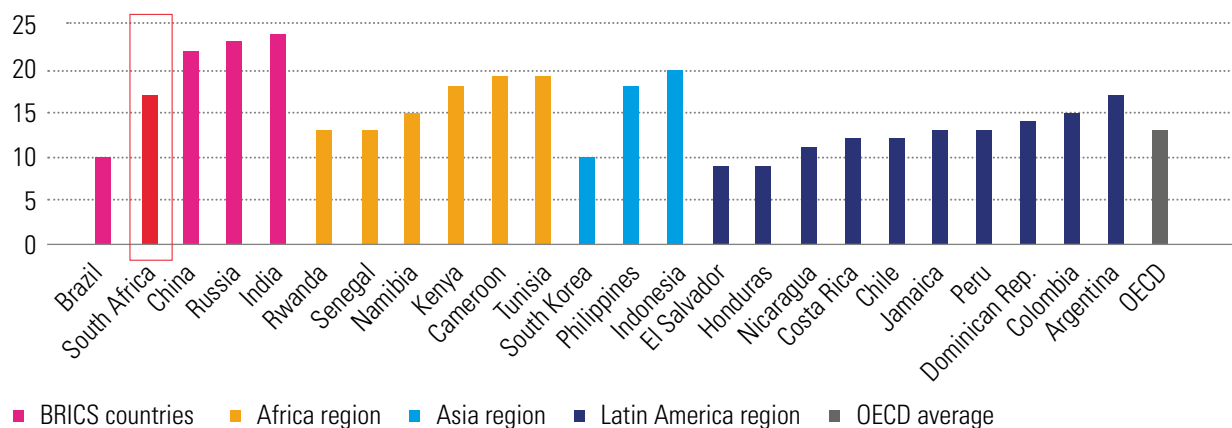
Source: OECD Sectoral Regulation Database. 2013.

Note: Data not available for Russia. Kenya, LAC countries provide indicators for electricity, telecoms, and air transport only.

The participation of SOEs in commercial activities in almost 180 domestic markets is likely to shape competition dynamics—particularly in markets where private sector participation is viable and where SOEs are highly vertically integrated.<sup>14</sup> Of 27 sectors examined under the PMR, South Africa has SOEs present in 17, higher than OECD average and some African peers, but in the mid-range of BRICS peers.<sup>15</sup> However, an analysis of South Africa’s 22 major primary SOEs found these entities have 82 subsidiaries between them, operating in almost 180 domestic markets.<sup>16</sup> These include sectors

where government involvement is common—and sometimes necessary—such as electricity transmission and rail infrastructure. However, around 57 percent of these 180 markets lack a clear economic rationale for SOE involvement based on the existence of a market failure. These include manufacturing, travel agencies, storage, and wholesale trading. South African SOEs are also deeply vertically integrated along 47 supply chains. The Central Energy Fund (CEF) and Transnet are both present in 10 markets of separate supply chains in addition to further markets along other chains.

**FIGURE 8 NUMBER OF SOEs PRESENT IN SPECIFIC SECTORS**



Source: OECD Product Market Regulation database, and OECD-World Bank Group Product Market Regulation database. South African figures are as at 2013. Other countries are various latest available years.

Anticompetitive effects are caused not only by the presence of SOEs per se, but also by regulatory or financial advantages that can create an unlevel playing field between the public and private sectors. The PMR indicators show that sector regulation in energy, transport, and communications—all industries that remain either wholly or substantially under state control—are relatively restrictive of competition in South Africa. Preferential treatment through government bailouts or conflicts of

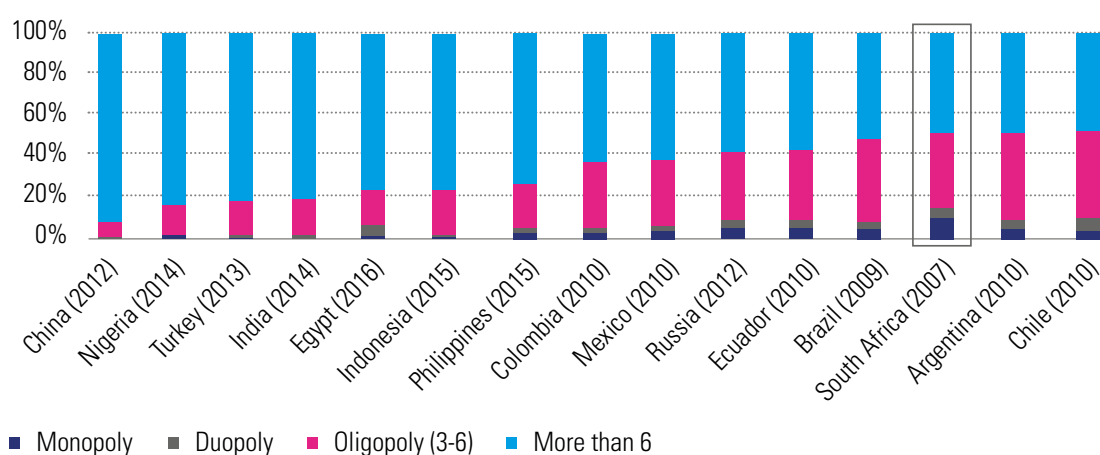
interest create an environment where SOEs have fewer incentives to compete (or increase their productivity), while private firms may be less able to compete. This affects their capacity to innovate and become competitive. In some cases, SOEs also play a regulatory role for the markets in which they are present, which can create a conflict of interest. Recent examples of preferential treatment in the transportation and energy sectors are discussed below in the section on enabling sectors.

### BOX 3 AN OVERVIEW OF CONCENTRATION AND CONGLOMERATION ACROSS SOUTH AFRICAN MARKETS<sup>17</sup>

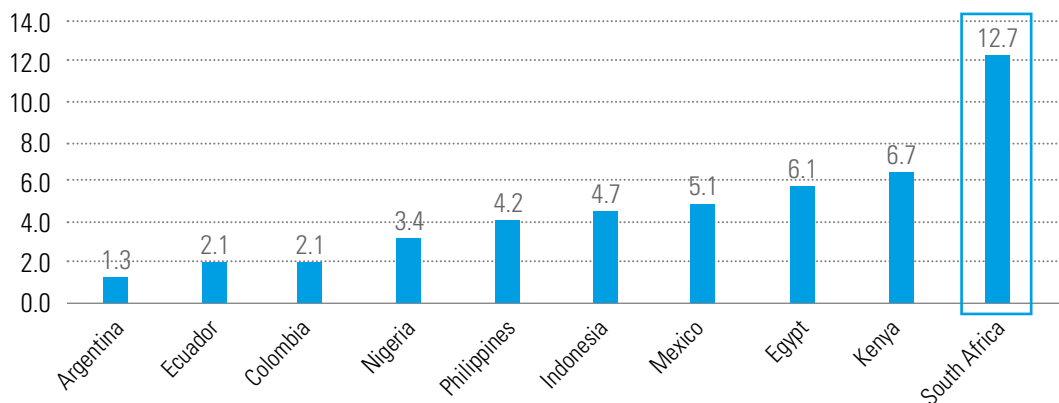
**Corporate ownership appears to be skewed towards having one or a few firms operating within specific markets, across markets (conglomerates), and along value chains (vertical integration).** The proportion of firms that consider themselves as operating in a monopoly market is relatively high in South Africa compared to peers. The proportion that consider themselves as operating in a market with more than two competitors, meanwhile, is relatively low (Figure 9). While few South African firms have at least one subsidiary, those that do tend to own

considerably more subsidiary firms than in comparator countries—an indicator of conglomerate structure and vertical integration. The average number of total domestic subsidiaries per chain of subsidiary firms in South Africa is around one—almost twice as high as the next highest comparators of Kenya and Egypt (Figure 10). Moreover, a wave of domestic mergers and acquisition (M&As) was seen in South Africa post-apartheid as the economy responded to joining the global economy. The number of M&As in South Africa has remained high since then.

**FIGURE 9 PROPORTION OF FIRMS THAT CONSIDER THEMSELVES AS OPERATING IN A MARKET WITH FEW COMPETITORS**



Source: Authors calculations using Enterprise Survey data for most recent years available.

**FIGURE 10 AVERAGE NUMBER OF TOTAL (DIRECT AND INDIRECT) DOMESTIC SUBSIDIARIES OF ALL DUOS**

Source: Nyman and Koschorke, 2019 (forthcoming).

Note: The analysis here uses data from the Orbis corporate ownership database provided by Bureau van Dijk Electronic Publishing (BvD). The information used here is based on the ownership structures as at August 12, 2017.

**If firms have incentives to behave in a pro-competition way, these structural features of South Africa's economy can yield benefits. For example, in South African manufacturing industries, larger firms appear to charge lower markups. Scale can lower costs of production and allow those firms to compete in global markets.** In fact, recent firm-level analysis for South Africa shows that larger firms (in terms of employment) charge significantly lower markups than smaller firms on average after controlling for various firm level characteristics (up to

27 percent lower between the largest and smallest categories).<sup>18</sup> Vertical integration can reduce costs along the value chain, which encourages investment. In addition, firms that are part of a conglomerate are more likely to benefit from economies of scope which can lower costs. These benefits can be passed on to South African consumers and local downstream businesses— provided market policies encourage those large firms to compete—either among each other or with international competitors, in both export markets and domestically.

**The design of industrial policy incentive programs can result in an unlevel playing field.** Analysis shows that there is a lack of transparency of incentive programs, which can raise the complexity of navigating the incentive landscape and disadvantage smaller firms. Of 134 active incentive programs (made up of tax benefits, tax rebates/refunds, and grants) reviewed in 2017,<sup>19</sup> most had at least one of three characteristics which could unintentionally raise the chance of anticompetitive market distortions. These characteristics are: lack of transparency; discriminatory characteristics unrelated to the specific policy objective of the program; or some form of discretion in selection criteria. Depending on the criteria used to assess transparency, between 44 and

100 percent of these programs are non-transparent.<sup>20</sup> In response to the lack of transparency, a consulting industry that specializes in advising companies on applying for incentive programs has developed in South Africa. The fees for this advice are likely to be prohibitive for smaller firms.<sup>21</sup>

**The lack of a framework for the design of incentives means the underlying rationale is not always clear.** While the Department of Trade and Industry (dti) is the coordinator of South Africa's industrial policies, the 134 incentive programs under review were managed by a total of 13 government agencies. There is no clear framework to ensure that the schemes addressed a market failure and there is

no centralized inventory of available incentives and multiple agencies manage incentives schemes. However, there is no clear framework to ensure that the schemes addressed a market failure.

**In antitrust enforcement, several findings of cartelistic behavior have been made against firms that were historically state-owned or state-protected.** For example, the Competition Commission found that such companies had engaged in cartels or collusion in several industries that supply critical intermediate products, and this led to divestments and settlements involving large fines. The Competition Commission has also attempted to use “abuse of dominance” provisions in the competition law to discourage excessive pricing by these firms—including through “Import Parity Pricing” practices— but with mixed success, given

the difficulties inherent in proving such excessive pricing cases. Below we provide background on recent amendments to South Africa’s competition law that in part aim to facilitate tackling abuse of dominance cases.

**Despite such ex-post enforcement action against these firms, market rules continue to protect the position of such firms.** Several cases illustrate how market rules enable formerly state-owned firms to remain dominant and limit smaller players’ entry—Box 6 below provides a case in the energy sector. There are also examples, such as in the steel sector, where the government agreed to impose duties on imports and this sparked complaints from downstream users regarding their lack of access to lower priced imports, while benefiting large incumbent companies.

#### BOX 4 RECENT AMENDMENTS TO SOUTH AFRICA’S COMPETITION LAW

**South Africa has a relatively strong competition law framework in place. Recent amendments to the Competition Law intend to allow the Competition Commission to more directly target issues such as market structure and concentration.** The following are the key areas of the amendments:

- **Changes to merger review**, which includes increasing the scope of ministerial involvement, elevating the public interest inquiry to the same level as the competition inquiry, and adding a National Security review providing for an assessment of mergers with a foreign acquiring firm based on impacts on national security by an executive body.
- **Increased flexibility in the granting of exemptions** to include conduct that promotes transformation (for example, entry by MSMEs and historically disadvantaged individuals).
- **Expanding the scope and remit of market inquiries**, which would allow the Competition Commission to take remedial actions based on market

structure (including imposition of structural remedies) and to grant the minister enhanced powers in the market inquiry process.

- **Changing abuse of dominance provisions to make it easier for the Competition Commission to pursue abuse of dominance cases**, particularly in relation to anticompetitive behavior that put MSMEs and historically disadvantaged individuals at a competitive disadvantage.
- **Allowing for more stringent sanctions**, for example, increasing the maximum fine for a repeat offence.

**Several of the amendments will require a clear implementation framework to avoid raising uncertainty for firms.** Amendments such as the national security review for acquisitions by foreign firms, the possibility of structural remedies following a market inquiry, and the undermining of the authorities’ independence from the Minister for Economic Development could all bring uncertainty to both existing firms and new investors. This could ultimately reduce investment in the economy and thus have counterproductive.

**Both competition enforcement and implementing pro-competition regulation are critical agendas that could have significant effects on productivity growth, jobs, and welfare.** Recent firm-level analysis for formal manufacturing firms in South Africa finds

that in formal manufacturing industries, firms that face greater competition (proxied by lower markups) have significantly higher productivity growth, employ more people, and have higher employment growth on average.<sup>22</sup> Meanwhile, a simulated scenario in

which South Africa reduces regulatory restrictiveness in professional services suggests that growth in value added in industries which use professional services intensively would, all other things being equal, be between \$1.4–\$1.6 billion. This is equivalent to an additional 0.4–0.5 percentage points of GDP growth. Following enforcement action in South Africa

to tackle cartels in four sectors—wheat, maize, poultry, and pharmaceuticals—poverty stood to fall by 0.4 percentage points under conservative assumptions (World Bank 2016). Based on this, the poverty impact per rand spent on antitrust enforcement was around 38 times higher than the impact of cash transfers.

## In Summary

Factors affecting private investment	Policy options outlined in the report	World Bank Group role
<b>Cross-cutting constraints</b>		
<p><b>Business environment and investment policy:</b> Red tape increases costs, causes delays to day-to-day operations, and is not conducive new firm creation. There are constraints in access to finance for MSMEs. Inadequate framework for investment promotion.</p>	<ul style="list-style-type: none"> <li>■ Reform regulations in lagging areas (for example, property registration, getting electricity) and strengthen capacity for implementation at the local level.</li> <li>■ Fast-track digital platforms to speed up key business procedures.</li> <li>■ Develop credit scorecard innovations for MSMEs and adopt digital technology to reduce collateral requirements.</li> <li>■ Develop a movable collateral registry to include a wider range of asset types.</li> <li>■ Empower a streamlined national level investment promotion agency that has the capacity to achieve sub-national coordination.</li> <li>■ Rationalize investment incentive framework to ensure competitive incentives that are automatic, transparent, and less discretionary.</li> </ul>	<ul style="list-style-type: none"> <li>■ <b>Advisory support</b> to streamline regulations at national and subnational levels; address policy, institutional legal and regulatory barriers to FDI generation; scale platforms under the Digital Economy for Africa program; and support financial inclusion initiatives.</li> </ul>
<p><b>Limited integration into global value chains and weak connectivity:</b> South Africa’s conglomerates face trade and logistics costs to integrate into global value chains; MSMEs struggle to integrate into supplier networks of large firms.</p>	<ul style="list-style-type: none"> <li>■ Raise efficiency in ports and cargo rail through regulation and partnerships with the private sector.</li> <li>■ Foster supply chain development and localization.</li> </ul>	<ul style="list-style-type: none"> <li>■ <b>Advisory support</b> to design supply chain programs and for PPPs in ports and cargo rail.</li> </ul>
<p><b>Regulatory obstacles to competition:</b> Some government interventions perpetuate legacy competition issues in selected upstream and productive sectors.</p>	<ul style="list-style-type: none"> <li>■ Establish a database of government incentives and a framework for their design and implementation.</li> <li>■ Assess the role and mandate of industry associations to minimize anticompetitive outcomes.</li> <li>■ Build capacity for regulators and policy makers to embed competition principles.</li> </ul>	<ul style="list-style-type: none"> <li>■ <b>Advisory support</b> to competition authorities.</li> </ul>

## 02

# ENABLING SECTORS: DRIVERS OF LONG-TERM COMPETITIVENESS AND ECONOMIC INCLUSION

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Growth theory studies have provided substantial evidence that the drivers of long-term competitiveness in emerging countries include infrastructure, human capital development, political institutions and macroeconomic fundamentals.<sup>23</sup> In South Africa, through the research on the SCD and complementary research in the area, it is clear that there are two major factors that are impairing competitiveness, (a) the deficit in skills and overall human capital development, and (b) the infrastructure backlog which impacts the cost of doing business in general and cost of trade logistics in particular. Resolving these two issues would enable South Africa to attract more efficiency seeking FDI, rather than resource and marketing seeking FDI. This would also enable South Africa to participate more meaningfully in regional and global value chains.

These issues are not only important in driving long-term competitiveness but will also play a critical role in fostering inclusion. Indeed, South Africa finds itself in a challenging situation of declining competitiveness and signs of a middle-income trap, and a legacy of apartheid excluding large shares of the population from fully participating in and benefitting from mainstream economic activities. South Africa's policymakers must therefore find a pragmatic balance between improving productivity and innovation, upgrading, accessing new markets, and attracting efficiency seeking FDI on the one hand, and creating opportunities for the historically marginalized on the other. Private investment is needed to close backlogs that have resulted from public underinvestment; however, major barriers stand in the way. Reforms in these sectors are critical for South Africa's NDP

objectives and the World Bank Group's twin goal agenda, as outlined by the World Bank (2018a).

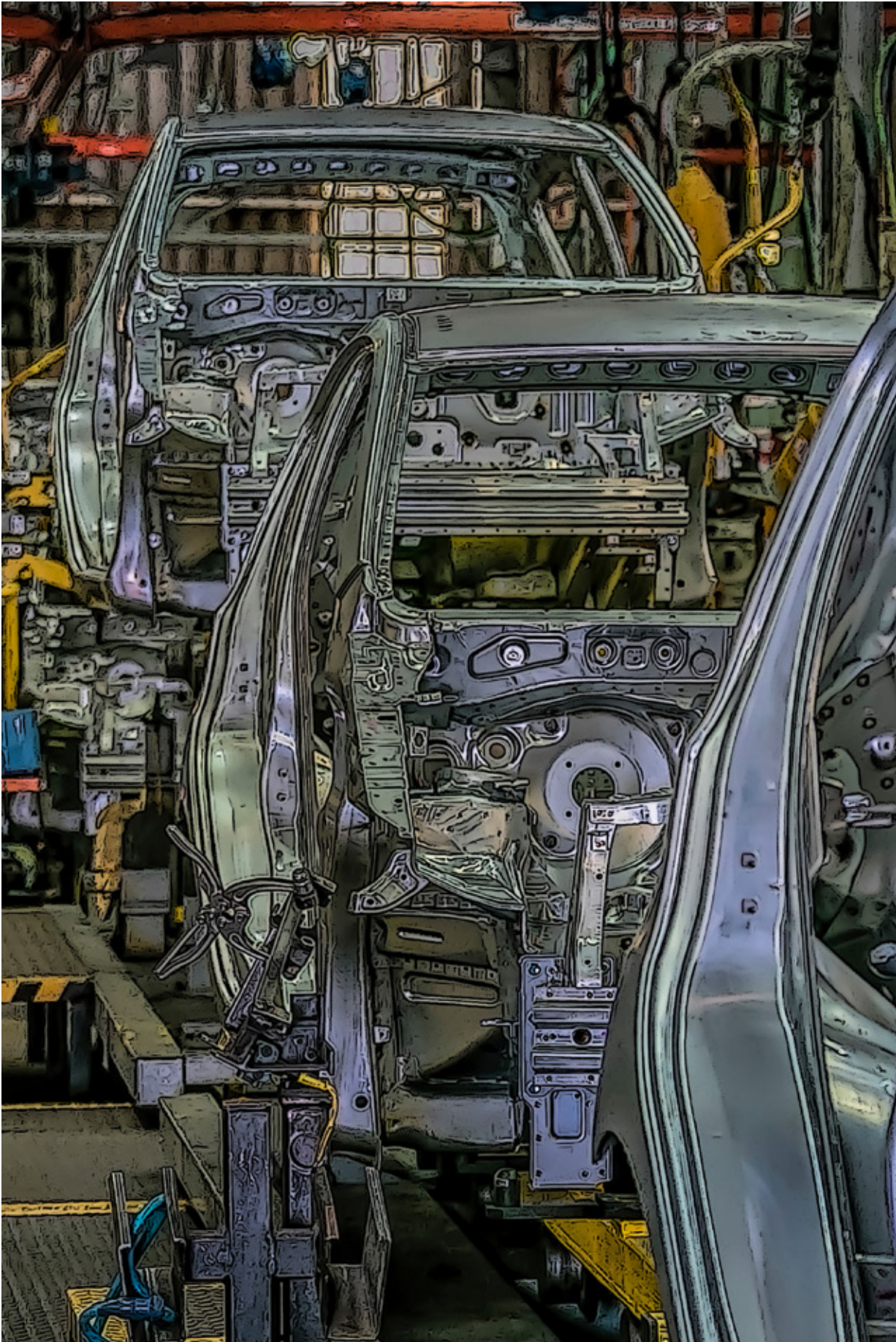
### 2.1. Education and skills

#### Overview

Human development in South Africa lags many middle-income countries and even countries in the region with lower levels of income. According to the World Bank Human Capital Index, South Africa ranks 126 out of 157 countries for which data is available.<sup>24</sup> South Africa ranked below neighbors Namibia, Malawi, Zimbabwe, Eswatini and Botswana, and far below expectations based on its income level (World Bank, forthcoming).

The significant investments made in education since 1994 have not managed to raise enrolment rates to the desired levels. In 2016, around 14 million learners were enrolled for basic education with an enrolment rate of 83.6 percent for the population aged between 5 and 14. That places it significantly behind the global average of 89 percent and the OECD average of 98.7 percent (World Bank Development Indicators 2018; OECD 2018). At the tertiary level, enrolment has increased by over 80 percent since 1994 (Taylor and Schindler 2016). In 2015, around 2.2 million students enrolled in Post-School Education and Training (PSET), an enrolment rate of 19 percent (World Bank, 2019b). This is substantially behind the average global tertiary education enrolment rate of 36.7 percent and China's tertiary enrolment rate, which at 42







percent is more than twice that of South Africa (World Bank Development Indicators 2018).

**South Africa's weak outcomes on education are also a result of the poor quality of learning.** On average, learners complete 9.3 years of pre-primary, primary and secondary school by age 18. However, when years of schooling are adjusted for quality of learning, this is only equivalent to 5.1 years compared to 5.3 for Botswana, 5.4 for Malawi, and 5.8 for Namibia (World Bank 2019).

**Combined with an enterprise sector that is capital- and skills-intensive, the lag in education has led to a critical skills shortage in the labor market just as the country faces record-high unemployment levels.** Economic growth over the past two decades, while modest, has largely been driven by skills-intensive sectors (DHET 2016). Demand for skilled workers is high. The labor market, however, has a surplus of low-skilled workers primarily made up of historically disadvantaged population groups that find it hard to take advantage of available economic opportunities. Indeed, only 6 percent of South Africans between ages 25 and 64 have tertiary education qualifications, in comparison to 42 percent in OECD countries (OECD 2018). The World Economic Forum (WEF, 2017) reports that 9 percent of firms identify a lack of skills as a constraint to business.

**This acute skills shortage—and the associated premium on the top end of the skills distribution—is one of South Africa's major constraints to competitiveness.** The WEF (2018) ranks South Africa 84 out of 140 countries for the overall skills index with the ease of finding skilled employees at 50.3 out of 100 (77 out of 140 countries.) As a result, South Africa has a skills premium. Overall, the average return to an additional year of schooling in South Africa is the second highest in the world after Rwanda.<sup>25</sup> Tertiary graduates in South Africa earn twice as much as workers who only completed high school (Stats SA 2010, Monthly Earnings Survey) and experience low unemployment of just 1.9 percent.<sup>26</sup> Analysis of LinkedIn data shows that South African firms depend heavily on importing foreign skills.

**The rest of the section unpacks these issues with a focus on tertiary education.** A more comprehensive review of the issues has been published recently by the World Bank Group.<sup>27</sup>

## Performance and key challenges

### Early and Basic Education

**Only a small fraction of South Africa's children has access to early education.**<sup>28</sup> In 2016, approximately 1.5 million children could access early childhood development (ECD) services, with an enrolment rate of 75 percent among six-year-olds compared to 98 percent in OECD countries (OECD 2018). The situation is even more dire for younger children. For instance, in OECD countries 95 percent of all five-year-old children are in school, compared to just 39 percent in South Africa (OECD 2018). Government aims to provide a subsidy to all children accessing ECD services in registered centers. Over the MTEF period, R 1.1 billion is allocated to ensure that an estimated 113,889 more children receive the subsidy (Education Year Book 2018). The lack of investment in the early years can result in the need for remedial help later in life: by then, it will be costlier and less effective (Kotze 2015).

**Investments in basic education have mainly come from government with good results in terms of expanded access.** The South African government spends 6 percent of GDP on education (17 percent of government expenditure), comparable with OECD countries. In 2014, South Africa spent \$9,200 per student in basic education, which compares well with the OECD average of \$9,600. This has enabled South Africa to expand no fee schools; consequently, basic education enrolment has improved significantly since 1994. The number of learners who completed primary basic education increased from 8.3 million to 12.4 million between 1996 and 2016. There are 24,000 public schools in South Africa; total enrolment in these schools accounts for 95 percent of all enrolment (IRR 2018). Around 88 percent of schools and 66 percent of learners benefit from the no-fee funding policy. Parents who cannot afford to pay or who can only afford a smaller amount are granted an exemption or reduction in fees.

**Despite these investments, there are severe backlogs in infrastructure and resource provision. At a basic education level, these backlogs include teacher shortages and inadequate sanitation facilities.** The World Economic Forum (WEF 2018) Global Competitiveness Report ranks South Africa 107 out of 140 countries for the pupil-to-teacher ratio in primary schools. With regards to sanitation, a total of 10,661 schools in South Africa currently do not

have proper sanitation facilities, sometimes resulting in deadly incidents.<sup>29</sup> Thus, while government expenditure as a proportion of GDP is comparable to OECD countries, questions remain as to whether this expenditure is effectively used and well targeted, particularly for previously marginalized schools (UNICEF 2017).

**Another challenge in South Africa’s education is the uneven quality of basic education. This has still not been resolved.** Around 95 percent of South African learners depend on public education—the quality of which substantially lags that of private education. South African learners constantly rank bottom and second last for PISA test scores. What is even more troubling is that South African learners are outperformed by international learners in lower grades. Moreover, the Southern and Eastern Africa Consortium for Monitoring Educational Quality (SAQMEC) III results show that peer countries with smaller education budgets—among them Kenya, Eswatini, and Botswana—outrank South African learners in reading and mathematics scores.

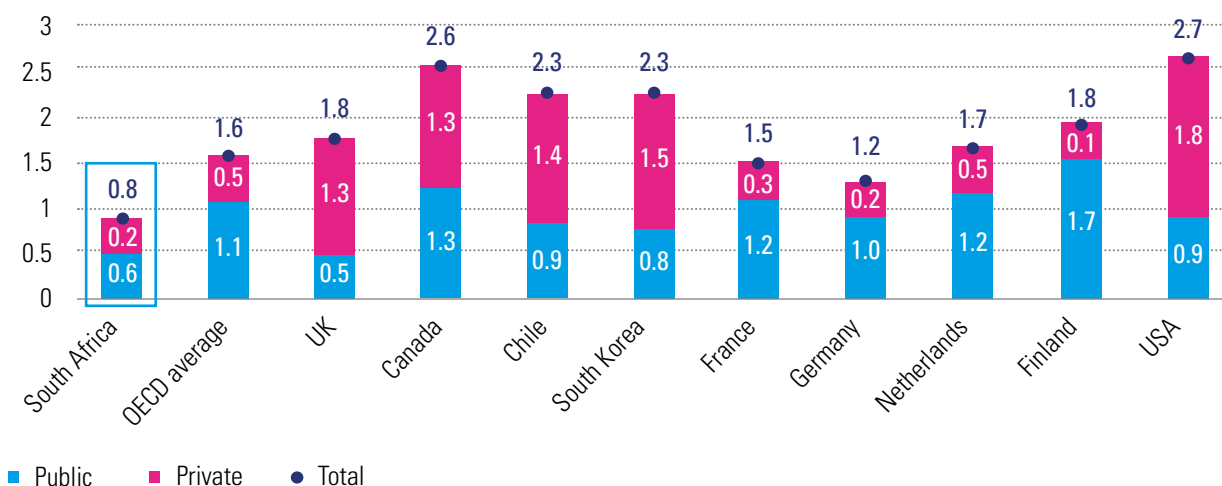
**While the public sector continues to play a dominant role in providing basic education, private schools in South Africa are seeing rapid growth as parents vote with their feet.** The number of learners enrolled in

private schools increased by 130 percent between 2000 and 2016 (256,000 to 590,000) (Institute of Race Relations 2018). There was a similarly large increase in the number of independent schools over that period, while the number of state schools declined. Between 2000 and 2016, the number of private schools increased by 91 percent, from 971 to 1,855 (ibid).

### Tertiary Education

**Since 1994, tertiary education has expanded remarkably, with the public sector still acting as the main player in South Africa’s tertiary education system.** Almost one million students are now in the public sector, which represents a big step from 500,000 enrolled students in 1994 (CHE 2016). In 2016 there were 50 public TVET colleges with 250 registered campuses for delivery of qualifications and part-qualifications (DHET 2016b). In 2016–17, government invested R 49.2 billion in tertiary education (Education Year Book 2017). In 2014, South Africa spent \$11,000 per tertiary student, behind the OECD average of around \$16,400 (OECD 2017). At the same time, the proportion of public funding going to tertiary education is much lower in South Africa than in most OECD economies.

**FIGURE 11 TOTAL SPENDING ON TERTIARY EDUCATION IN 2014 AS A PERCENT OF GDP, SOUTH AFRICA VERSUS COMPARATOR COUNTRIES**



Source: OECD and DHET.

**South Africa has several top-ranking universities but there are significant challenges in the quality of education offered in the second-tier university sub-sector and in Technical and Vocational Education and Training (TVET).** Times Higher Education ranks eight South African universities in the top ten in Africa and two South African universities among the top 10 in BRICS countries. On the other hand, the WEF (2018) Global Competitiveness Index ranks South Africa's quality of vocational training at 98 out of 140 countries. Overall, WEF (2018) ranks the skills set of South African graduates at 85 out of 140 countries.

**TVETs were introduced as a complement to university education that is better focused on the needs of the workplace, but enrolment is lagging.** In 2013, only 13 percent of South African learners who were not in secondary school attended vocational training compared to 29 percent in G20 countries (OCED 2018). Challenges faced by TVETs include inadequately skilled lecturers, a lack of management and leadership capacity, poor educational infrastructure and underfunding (DHET 2010). Consequently, there is qualification-job mismatch in TVETs: these institutions are not teaching the skills that industry demands (DHET 2016). Moreover, only a third of TVET students eventually complete their studies (World Bank, forthcoming). And finally, TVETs also suffer from some stigmatization as they are seen as a distant second-best option after university (DHET 2016).<sup>30</sup>

**Low tertiary enrolment rates are driven by limited access to ECD, the poor quality of basic education that most South African learners receive, low secondary education completion rates, and financial constraints.** As a proportion of total learners who start school, only 60 percent reach matric and only 37 percent complete matric (van Broekhuizen et al. 2016). Ultimately, only 12 percent of the cohort of learners who started primary school enrolled for tertiary education after 12 years (van Broekhuizen et al. 2016). This was partly due to learning deficits acquired in basic education (World Bank, 2019b).

**Additionally, a lack of collateral from students and low completion rates limit banks' interest in the student loan market.** The National Student Financial Aid Scheme (NSFAS) provided scholarships to nearly half of students from the poorest 40 percent of schools during their first year of study, while only 11 percent of learners from the richest 20 percent of schools received such support, making it a progressive

scheme. Yet it still left many students—including poorer ones—uncovered or under-covered.

**In this context of poorly performing public education at basic level, and uneven quality and limited spaces at post-school level, private institutions have reoriented to cater to lower-income households.** In 2014, 120 independent schools charged less than R 15,000 a year and about 60 less than R 10,500—fairly affordable fees and lower than some former “Model C” public schools which continue to have the best infrastructures and resources among public schools. Low-fee private schools range from schools run by private companies, such as Curro, or founded by entrepreneurs, such as Spark Schools. These low-fee private schools not only service wealthy areas but are expanding to poorer communities (IRR 2018). Private schools require fewer resources to achieve comparable results to public schools (van der Berg, 2017). At the tertiary level, private institutions such as the ADvTECH Group's Rosebank College can offer programs with a tuition of around R 25,000 annually. This is more affordable than some of South Africa's public universities which can charge up to R 45,000 annually.

### Barriers to private sector entry and investment

**Despite growing enrolment at different levels, the share of students enrolled in private higher education lags other emerging countries.** Only around 10.5 percent of South Africa's PSET students are enrolled in private PSETs. In MENA and SSA, private enrolment share is 39 percent and 32 percent, respectively. As of December 2017, the Register of Private Higher Education had 100 registered institutions and 27 provisionally registered institutions. Between 1995 and 2016, the number of students enrolled in private tertiary education institutions decreased from 150,000 to 90,000 students (CHE 2016).

**Legal and administrative barriers prevent greater private sector participation, particularly entry by new higher private sector institutions and make it more difficult for existing institutions to expand.** For new institutions, the process for accreditation is cumbersome and license conditions are stringent. For instance, private institutions must hire their full contingent of administrative and academic staff before being authorized to operate. Additionally, private institutions are not allowed to refer to themselves as “universities,” even those licensed to award accredited university degrees up to a doctoral level.

Specifically, South Africa's complex education regulatory and approval system creates a barrier for private sector entry and expansion. There are many quality assurance bodies, but a lack of standardized practice and requirements and a lack of coordination.<sup>31</sup> One consequence of the complex oversight and approval system is that the process for modernizing the curriculum and opening new programs seems to be overly lengthy and cumbersome (Development Bank Southern Africa 2016). It can take up to 18 months for a "new" qualification to be accredited even when the institution is registered (SAPHE 2017).

These stringent procedures may be stemming in part from the lack of trust by policymakers in the potential contribution of private institutions. In 2000, there were 323 private higher education institutions but only 89 were accredited by SAQA at the time (CHE 2016). There was rapid growth of private higher education institutions, but the quality of teaching was largely poor, and many were eventually discovered to be unregistered "fly-by-nights" (CHE 2016). Moreover, private higher education institutions in South Africa have been perceived as inferior to the big public research institutions. This is the reverse of the situation at basic education level.

#### BOX 5 INCREASING ACCESS TO QUALITY AND AFFORDABLE HIGHER EDUCATION - THE CASE OF ADvTech

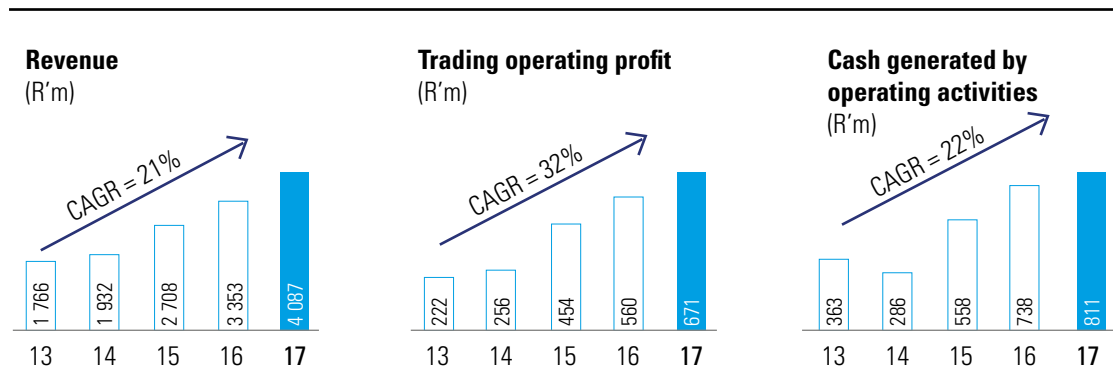
**ADvTECH Group is one of the largest private education groups in South Africa. It is listed on the JSE with a market capitalization of R 9.7 billion.** ADvTECH has three business units: schools, tertiary education institutions and staff resourcing. In total, ADvTECH has around 92,500 students across 122 institutions. Its tertiary division is the fastest-growing segment and accounts for a quarter of private tertiary enrolment with qualifications ranging from Higher Certificates to PhDs. Through the Independent Institute of Education (IIE), ADvTECH offers 165 tertiary qualifications with a broad scope that includes accounting, branding, commerce, communication, culinary, design, education, finance, hotel and hospitality, information technology, humanities, law, management, psychology, technical and vocational (TVET), and tourism.

**ADvTECH's curriculum is regularly updated, and graduates have high employability.** All new academic programs are developed through market research and academic benchmarking. Once the curriculum is finalized, it is shared with industry associations such as the Chartered Institute of Business Management for endorsement. The IIE has been accredited by the British Accreditation Council (BAC). Lecturers are recruited for their work experience and classes are smaller than in universities. Through its "Work Integrated Learning" program, students apply hard and soft skills in projects that simulate situations they would

encounter in the workplace. This approach seems to be paying dividends: 86 percent of Vega College graduates find employment in their field of study; 42 percent doing so find employment before they graduate.

**ADvTECH has positioned itself to attract students from different socio-economic levels.** Rosebank College is based on a volume and value model. It targets students from low- to middle-income households. In 2017, around 15,600 students were enrolled in Rosebank College. The 2017 tuition fees ranged between R 15,000 for the most affordable qualification, a Higher Certificate in Office Administration, and R 31,000 for the most expensive program, the Bachelor of Information Technology in Business Systems. An equivalent qualification costs up to R 45,000 at one of South Africa's public universities. In many cases, Rosebank College graduates are able to repay their tuition investment after working for two years.

**Through this business model, the group has achieved strong growth in recent years, driven by the tertiary division's financial performance.** In 2017, the group achieved revenues of R 4.1 billion with an EBITDA margin of 24.2 percent (see Figure 12 below). The tertiary division accounted for 39 percent of the group's total revenue. Rosebank College is the fastest-growing brand, proving that even with a lower fee, its model is sustainable.

**FIGURE 12 ADvTech FIVE-YEAR FINANCIAL TRENDS**

Source: ADvTECH Annual Report 2017, IFC (2018) and interviews with management.

## Recent policy developments and recommendations

South Africa will need to address the challenges of enrolment, quality and completion in its education system with participation of the private sector. The recently published World Bank (2019b) South Africa Economic Update (SAEU 12) outlines several interventions that have the potential to increase tertiary education quality and enrolment in a fiscally sustainable way. Ultimately these interventions can help South Africa reach the lofty goals of enrolling 5.6 million tertiary students by 2030 as envisioned by the DHET (2013) White Paper. The key interventions outlined in the World Bank (2019b) SAEU include:

- A sustainable mix of PSET institutions and delivery modalities in private and public sector to increase enrolment in a fiscally sustainable way. For instance, expanding enrolment to UNISA and giving greater consideration to community colleges taking the flexibility that they offer into account.
- Strengthening quality assurance, creating closer links to the productive sectors and the labor market, and implementing performance-based funding to encourage better performance from PSETs. In this regard, policy-makers could consider funding formulas, performance contracts and competitive funds.

- Using alternative options to mobilize additional resources such as donations, contract research, consultancies, continuing education and other fund-raising activities.

**Improving the quality and relevance of public TVET institutions and employability of TVET graduates in South Africa is also critical.** A review of the legal and regulatory impediments to achieving a public-private funding model would help to make the TVET sector financially sustainable. Better assessment of the employability of the TVET's existing curricula and extent of duplication between approved programs, and steps to re-focus, rationalize and upgrade the TVET curricula, programs, and education delivery mechanism (effective use of technology and open learning as appropriate) would increase graduates' employability. TVET's placement office need support to ensure students have increased access to practical training, internships and apprenticeship by increased coordination and partnership with private sector employers, including through public-private partnerships.

Private higher education institutions are viewed by the NDP as an important component of higher education, but to unlock the potential there is a need for a number of regulatory reforms that can encourage greater private participation. Recent policy developments have been in the direction of increasing the role of state funding as a response



to the “#Fees Must Fall” movement.<sup>32</sup> Making the administrative process and legal compliance easier, defining standard processing times for making decisions regarding licensing, accreditation and approval of new programmes, reducing the number of regulatory bodies, and improving coordination between all bodies involved can reduce the barriers to entry and expansion confronting the private sector. South Africa should also consider allowing private institutions to award foreign qualifications that are fully accredited in their country of origin.

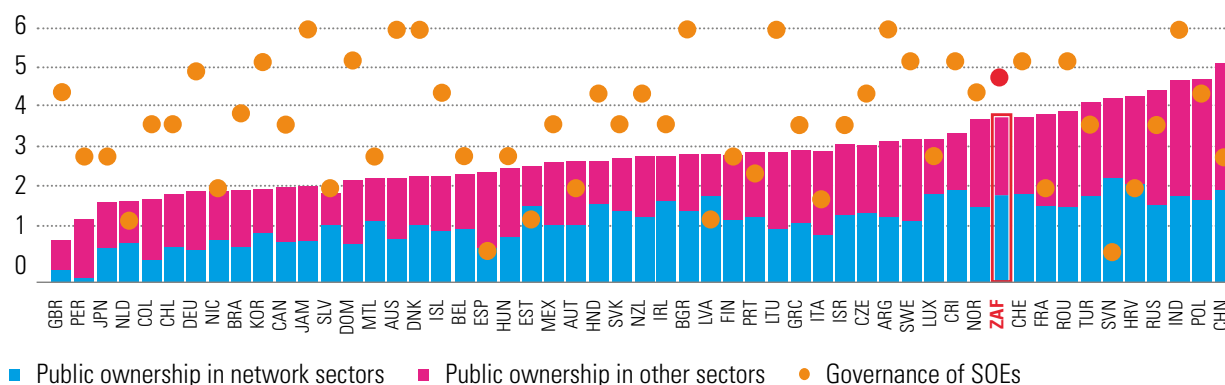
**Greater private sector participation would ensure that the capacity of PSETS increases with minimal fiscal implications.** Private sector institutions have demonstrated that they are often better placed to more aptly align curriculum with industry trends. Increasing tertiary enrolment will also require South Africa to address the acute shortage of affordable student accommodation. This will go a long way in improving student welfare and academic performance. There are several reforms that can unlock private sector participation in student participation, such as PPPs between public universities and private companies.

## 2.2. Infrastructure

### Overview

Many of South Africa’s infrastructural sectors continue to be dominated by SOEs whose governance and management challenges (see cross-cutting section) are getting in the way of infrastructural development. For instance, South African Airways (SAA) has had seven CEOs in less than four years, has had to be bailed out several times in recent years amidst declining fiscal spaces. Other SOEs have also experienced high board and executive management turnover, perennial underperformance necessitating regular bailouts, and challenges regarding the division of power between their boards and the various shareholder ministers. Another issue for corporate governance of South Africa’s SOEs is the appointment of board members and executive officials with questionable qualifications. And finally, it has been argued that SOEs may be overstaffed, resulting in inefficiencies and exorbitant wage bills. For energy, water, and transportation, we discuss some of these issues in detail in the respective sections below.

**FIGURE 13 PUBLIC OWNERSHIP AND SOE GOVERNANCE INDEX**



Source: OECD, 2014.

**Limited government resources, the oversized role of SOEs in key infrastructure sectors, and the limited space for private participation ultimately result in underinvestment and decline in the quality of infrastructure.** South Africa is expected to continue to reprioritize expenditure to fulfil fiscal consolidation, meaning significantly lower public investment spending, both at the national level and

through provincial and municipal infrastructure grants (World Bank 2018). At the same time, in infrastructure sectors such as water, there is minimal private sector participation. While South Africa’s infrastructure and logistics continue to lead Africa, ranking first in Africa according to the Ernest and Young Africa Attractiveness Index 2018, global benchmarking shows that South



Africa has been on a decline. Between 2005 and 2018, South Africa's overall competitiveness ranking declined from 40 to 61 in a sample of 137 countries (Global Competitiveness Report 2018). Deteriorating infrastructure was one of the key reasons for this same period as evidenced by infrastructure ranking declining from 49 to 61. Electricity supply and quality of infrastructure were two areas of particular concern, ranking at 97 and 72, respectively.

Against this backdrop, there is an urgent need to intensify efforts to attract private investment through a **Maximizing Finance for Development (MFD) approach**. MFD aims to leverage the private sector and optimize scarce public resources by identifying projects where financing can come from sustainable private sector sources that limit debt and contingent liabilities. The approach builds on substantial cross-World Bank Group experience in working with governments to crowd in the private sector to help meet development goals. It is part of a broader effort to employ private sector solutions working with partners to help achieve the SDGs. MFD has the potential to assist in solving several of the challenges identified in South Africa's infrastructure challenges discussed below.

### 2.2.1. Energy

The state-owned utility, Eskom, is the main supplier of South Africa's electricity. Distribution is shared between Eskom, municipalities and some other licensed distributors. Eskom is vertically integrated and accounts for 90 percent of electricity generation and all electricity transmission. The private sector accounts for 5 percent of electricity generation and plays no role in transmission and distribution. In 2017, electricity and gas accounted for 2.2 percent of GDP and 56,000 jobs and Eskom is by far the largest producer of electricity in Africa (Quantec 2018).

South Africa has made huge progress in expanding access to electricity. Eskom's household electrification program provided connection to an additional 5.7 million households between 1994 and 2014 (Department of Energy n.d.). South Africa now has an electricity access rate of 90 percent: much higher than the Southern African access rate of 31 percent (International Energy Agency 2017). South Africa's National Development Plan aims to have universal access by the year 2025.

While access to electricity has been expanded, South Africa lags in the efficiency of new connections.

The *Doing Business 2018* report ranks South Africa at 112 out of 190 countries in terms of the efficiency of getting an electricity connection. While the cost of getting electricity is low by global standards (146 percent of GDP per capita) and there are only four procedures to get a connection, it takes up to 84 days. And, while Eskom's tariffs are below the average of high-income countries, affordability remains a constraint for inclusivity and competitiveness.

Since the crisis of 2007–15, the electricity supply has been relatively stable. However, there are significant short-term and long-term downside risks that have materialized in recent months.<sup>33</sup> Eskom's large energy surplus of the 1990s began to decline when government started to expand access to rural communities and the mining sector was expanding thanks to a commodity boom. By early 2008, Eskom was unable to keep up with demand and had to implement load shedding. Grid capacity was increased under the Integrated Resource Plan through the commissioning of Medupi and Kusile Power Stations. Between 2010 and 2016, the actual net electricity energy sent-out for the country declined at an average compound rate of -0.6 percent (Deloitte 2017). This was on the back of declines in manufacturing and mining which reduced the electricity intensity of the South African economy. Currently, the energy availability factor (which should be above 80 percent) is below 70 percent. Short-term risks to supply include large coal generation plants that are at the end of their lifespan and have planned and unplanned outages, while black start capacity is limited. These risks resulted in Eskom implementing Stage 2 of "load shedding" in June and November of 2018, and Stage 4 load shedding in February and March 2019.<sup>34</sup>

## Performance and key challenges

The South African government has recently taken measures to strengthen Eskom's leadership and governance and begun a reduction in staff headcount. Following cabinet reforms by President Cyril Ramaphosa, government appointed a full board, a new CEO and a new CFO. The change in leadership is expected to increase accountability and transparency within the state-owned utility. In December 2018, Eskom announced that it would reduce senior executives from 21 to nine and reduce management by 330 as part of a cost-reduction strategy.

**After years of delays in implementing measures to unbundle electricity transmission, President Ramaphosa announced that Eskom would be unbundled into three divisions focused on generation, transmission, and distribution.** In 2011, the Independent System and Market Operator (ISMO) bill was drafted with the intention of creating a single buyer model. Under the ISMO bill, a state-owned company acts as the buyer of electricity from generators and is responsible for transmission, functions currently being performed by Eskom. ISMO is meant to facilitate the introduction of more private players in the electricity generation sector through the establishment of a non-conflicted buyer and dispatcher of electricity. ISMO has been under discussion for the last eight years without being passed in parliament. President Ramaphosa, during his State of the Nation Address in 2019, announced that Eskom would be restructured to establish three entities to isolate costs and enable fund raising. It is still unclear how exactly the restructuring will actually be implemented.

**Eskom's balance sheet remains fragile, with a debt of R 419 billion as of November 2018. Cash flows are insufficient to fund heavy maintenance costs, large capital expenditures and debt repayments.** Eskom had a loss of R 2.3 billion in 2018. Eskom has a large wage bill and increasing maintenance costs due to aging infrastructure. Poor credit rating, challenges in governance, and improper expenditure restrict access to debt financing. In fact, Eskom now accounts for government's largest contingent liability—the state-owned utility's precarious financial position was one of the reasons for South Africa's sovereign debt downgrades.

**Eskom has recently received a number of implicit subsidies from government.** Government granted Eskom a R 60 billion shareholder loan which was converted to equity in 2015. In 2016, a further R 23 billion was injected (Deloitte 2017). Government has also granted Eskom R 350 billion

worth of guarantees for its debt, and R 218 billion had been utilized by 2017 (Deloitte 2017). In the 2019 budget speech, the Minister of Finance, Tito Mboweni, announced that over the next three years the National Treasury would set aside R 69 billion to help restructure Eskom.

**Lower than requested tariff increases mean that Eskom's revenue will be low, further undermining the utility's financial position.** Under the Multi-Year Price Determination (MYPD) framework, the National Energy Regulator of South Africa (NERSA) approves Eskom's tariff increases on the basis of a rate-of-return and allowable revenue. This results in low tariffs when sales have been over-forecasted. While the real electricity price increased by 147 percent between 2007 and 2016, Eskom's tariffs are still below long-run marginal cost (Deloitte 2017). Moreover, high tariffs would have implications for households and the overall competitiveness of South Africa's economy. In April 2019, NERSA approved a 13.87 percent average price increase, effective on April 1, 2019 for Eskom direct customers and a 15.63 percent average price increase for municipalities, which will be implemented on July 1, 2019.

**Eskom's financial position suffers from increasing municipal arrears.** Since 2013, municipal payment decreased from 97 percent to 86 percent (Eskom Holdings 2017). As of November 2018, municipalities owed Eskom a total of R 17 billion. Eskom has repayment contracts with defaulting municipalities; however, these agreements are often not honored (ibid). Furthermore, NERSA's approach of applying the same percentage increases in price across all municipalities is regressive, which means that lower-percentile municipalities with fewer resources and less capacity have payment problems.

**And finally, other energy sectors in South Africa are characterized by substantial competition restrictions.** This is discussed in more detail in Box 6 below.

## BOX 6 COMPETITION RESTRICTIONS IN OTHER ENERGY SECTORS

*Gas:*

**Market rules in the piped gas sector have reinforced Sasol's dominance in the sector and limited smaller players' entry in downstream gas supply markets.**

There are currently only two sources of piped gas supply into the South African market, both of which are supplied by Sasol Gas. Sasol is also the lead player in the gas transmission/distribution markets and, according to sector regulation, has exclusivity over distribution in areas covered by its distribution network (Gauteng, Mpumalanga, Free State, and KwaZulu-Natal). Moreover, a lack of mandatory access for third parties to Sasol's distribution network makes it difficult for new entrants in the trading market to supply gas customers. And while there is a mandatory third-party access to transmission pipelines, this is only the case for uncommitted capacity, which restricts access from independent traders. This situation has severely limited entry of independent suppliers into the downstream gas trading market.

**Sasol's vertical integration between transmission, distribution and offtake of piped gas may further limit its incentives to voluntarily make capacity available to independent traders.** Downstream manufacturers have complained that the structure of the market provides Sasol with an advantage in downstream manufacturing, given its favorable access to inputs, despite maximum gas

energy prices being regulated. Moreover, the CCSA has made findings of anti-competitive behavior by Sasol in the gas sector, where Sasol had engaged in price fixing and market allocation of piped gas.

*Fuels:*

**A range of regulations create barriers to entry and competition in fuels markets (such as petroleum and LPG).** The government regulates wholesale margins and controls the retail price of petrol, based on import parity price formulas, and retail licenses are limited. In LPG, four firms collectively account for more than 90 percent of the wholesale market and the Competition Commission identified various barriers to entry in a market inquiry into the sector.<sup>35</sup> In addition, pricing of LPG is set by the Department of Energy (DoE) – through the setting of maximum refinery gate price (MRGP) and the maximum retail price (MRP). According to the Competition Commission, the current MRGP framework disincentivizes refineries from prioritizing LPG production as compared to other petroleum products, which impacts negatively on the security of supply for LPG. In the fuel pipeline sector, questions regarding the independence of the regulator NERSA towards Transnet's pipeline transport operations were raised after a license for a new pipeline was granted to Transnet despite a private sector bid at a lower tariff rate.

## Recent policy developments and recommendations

**Government has had substantial success in enabling greater private sector participation on the supply side, which has also helped to diversify the energy mix.** Under the IRP, the Renewable Energy Independent Power Producer Procurement Programme (REIPPPP) resulted in generation capacity of over six gigawatts being procured from the private sector in recent years. A competitive bidding process over the five consecutive bidding windows has seen the price of renewable power decrease substantially.<sup>36</sup>

However, South Africa is still lagging behind other developing regions in terms of private sector participation in electricity generation. In Sub-Saharan Africa, East Asia and the Pacific, private utilities

make up 15 percent of electricity supply compared to South Africa's 5 percent. Greater participation by the South African private sector may in part have been hindered by electricity tariffs that do not reflect marginal cost. Moreover, since 2016, Eskom has failed to sign the remaining IPP contracts for Bidding Windows 4 and 5 of the REIPPPP.<sup>37</sup> The failure to sign reflects Eskom's ability to exercise its market power by denying IPPs access to an essential facility—the transmission network - which risks to reverse gains made through the REIPPPP described above. In this regard, the conflict of interest inherent in Eskom's vertically integrated structure and pricing power, could be key inhibitors to private sector investment.

**The Integrated Resource Plan (IRP) which outlines South Africa's long-term energy plan is being updated.** The first IRP was published in 2010 and was effective until 2030. The draft Updated IRP would extend

the coverage period to 2050. Updates to the IRP include changes to key input assumptions regarding technology costs, electricity demand projection, fuel costs, and Eskom's existing infrastructure performance and additional commissioned capacity. Under the new assumptions, a slower pace of new project development would suffice to meet the capacity objectives of 2030. Furthermore, planned capacity additions will be implemented almost entirely by the private sector with solar, wind, and gas-fired power representing the bulk of the new supply. Further consultations on the draft IRP are expected in 2019 to address the concerns from stakeholders including social partners, and after that it will be resubmitted for cabinet approval. The delays have been a source of policy uncertainty.

**Bringing in more renewable and gas-fired generation through IPPs and Embedded Generation will help South Africa reach its carbon footprint objective.** Currently, 92 percent of South Africa's power generation is based on coal. While the draft IRP update proposes to procure an additional capacity of about 16 gigawatts from renewable sources until 2030 and despite the planned decommissioning of about 12 gigawatts of coal-fired generation, coal is likely to remain the dominant source of electricity generation for South Africa for the foreseeable future. There is therefore a need to foster more private sector participation so that South Africa can reach the IRP's objectives of reducing the coal-based electricity to less than 20 and 30 percent by 2040 and 2050, respectively. In addition to the continuation of the REIPPP procurement program, gas-fired IPPs and liquified natural gas imports from Mozambique can play an important role in diversifying the generation mix and balancing the intermittent supply from solar and wind power.

### 2.2.2. Transportation

#### Overview

**South Africa leads African and many emerging markets in transport and logistics infrastructure, but quality is deteriorating.** South Africa is ranked 29 out of 167 countries (third among the upper-middle income countries in the sample) in the World Bank mean LPI for the period 2012–18 with the best global performer outscoring South Africa by only 22 percent. The Skytrax 2016 World Airport Awards ranked South Africa's three major airports as the top three in Africa. Despite these accolades, there are problems

in South Africa's transport infrastructure across all modes as evidenced by deteriorating quality. South Africa ranks 64 on the World Economic Forum's 2016–17 infrastructure index, second in Africa to Mauritius, but 10 years ago, South Africa ranked 49. Transportation in South Africa currently accounts for 5.2 percent of GDP and more than a million jobs (Quantec; Quarterly Labour Force, April 2018). Key subsectors include:

- **Water:** While transportation by water only accounts for 1.2 percent of total transport GDP, this transportation mode is key for trade. Ninety percent of South Africa's goods are traded by sea through eight commercial ports spread through the country's long coastal line and 16 port terminals.
- **Land:** Rail and road account for 88.5 percent of transportation GDP. South Africa has 30,400 kilometers of track rails servicing passengers and freight. Passenger rail has 585 train stations and a total fleet of 4,735 coaches. South Africa also has a high-speed train, the Gautrain. It connects Pretoria, Johannesburg, and OR Tambo International Airport through 80 kilometers of rail, and carries around 60,000 passengers daily. Gautrain was conceived in 2006, under Africa's largest PPP at R 25.2 billion. South Africa also has the tenth-largest road network in the world, stretching around 750,000 kilometers. Most South Africans have access to public buses and minibus taxis. Because of its size and widely dispersed economic centers, land freight transport dominates South Africa, accounting for 85 percent of freight.
- **Air:** Air's share of transportation GDP is 10.2 percent. South Africa leads African countries on available airline seat kilometers per week. There are nine major airports in South Africa; three of these (O.R. Tambo in Johannesburg, Cape Town, and Durban's King Shaka) have close to 35 million passengers and 375,000 aircrafts annually (Transport Yearbook 2015–16). In 2017, over 12 million passengers travelled in and out of South Africa by air (Quantec 2017).

**The state is responsible for most of South Africa's transport infrastructure and is vertically integrated along value chains, apart from public road transport.** Public and private entities operate South Africa's ports under a publicly owned and regulated ports

system. Transnet is vertically integrated along the entire cargo/freight logistics value chain and dominates the value chain from the landing of cargo or liquids in South African ports to their final destination. Passenger rail is maintained through the state-owned Passenger Rail Agency of South Africa. In air, the state owns South African Airways (SAA) and three domestic airlines. Through the Airports Company South Africa (ACSA), the state owns and operates the nine principal airports, including the three main international airports. The structure in road transport is different. While road infrastructure is primarily owned and maintained by government, privately owned minibuses dominate public road transport. Road freight also consists of a number of private players.

## Performance and key challenges

**Underinvestment and institutional factors have led to a deterioration in transport infrastructure.** These factors include declining capacity in the management of SOEs and slow responsiveness to updating regulations (World Bank 2018). In road transport; opposition to the South African National Roads Agency's e-tolling system—which has resulted in diminished opportunities for private financing of sections of the national road network—and an increase in public financing requirements for road provision and maintenance (World Bank 2018).

**Across modes, substantial barriers to competition and private entry in South Africa's transportation sector are a result of a lack of competitive neutrality and pro-competition regulation.** For example, state-owned Transnet not only acts as a ports operator but also has a mandate to carry out regulatory functions in the sector through the National Ports Authority (one of its divisions). This gives rise to a conflict of interest and can put rivals at a disadvantage. A combination of vertical integration and dominance (reinforced by regulations that restrict competition) have created conditions where large SOEs in the transport sector may have been able to abuse their dominance. For example, SAA has previously been fined by the Competition Commission for excluding its rivals. Meanwhile, Transnet is currently being investigated by the Competition Commission for excessive pricing and exclusionary practices in its ports business.

**A combination of informal and formal advantages**

**and exclusionary behavior seem to have limited new entry and competition in air transport.** State-owned carrier SAA has suffered losses over the past decade from which it has been repeatedly bailed out with government funds and guarantees. Despite various attempts at market entry by private operators after deregulation in 1991, only one of the 11 private airlines that entered the industry between 1991 and 2012—SA Airlink—is still in operation.<sup>38</sup> Additional formal and informal constraints that potential market entrants have faced include delays in obtaining licenses as well as opposition from existing domestic airlines. A 25 percent cap on foreign equity in the domestic transport sector is a further deterrent for market entry that ultimately prevented an international LLC from entering the South African market. Finally, South Africa's bilateral air transport service agreements may have further protected SAA's position on certain routes. According to the WTO's Air Liberalisation Index (ALI), South Africa's bilateral air services agreements are more restrictive than those in Brazil, India, Ghana, Nigeria, Europe, and the United States, although they are less restrictive than China and Russia.<sup>39</sup>

**High prices are an issue across several modes of transportation.** For example, in public road transport, estimates suggest that those who commute spend as much as 40 percent of their gross earnings on transport because of the cost of gasoline, which has been driven up by taxes (World Bank 2018a). Expensive commutes make it more difficult for the poor to access urban jobs and raise their reservation wage—that is, the wage that makes it worthwhile to work, given the associated costs. Another example is ports, where South Africa's fees are 88 percent higher than the global average. Moreover, the design of rail continues to favor bulk transportation; tariff structures put cargo transporters at a disadvantage. As a result, non-mining businesses face high tariffs and often must rely on road freight (ibid).

**For road freight transportation, cost is more an issue of regional administrative inefficiencies and input prices.** The price gap between South African domestic-road-transport rand per ton-kilometer (R 0.65/tons per kilometer) and the best practice rand per ton-kilometer (R 0.57/tons per kilometer) is relatively small. But it has a substantial impact on total freight costs. Inefficiencies increase prices on cross-border routes by between 10 and 30 percent, as well as compromising the quality of some goods



and reducing the number of trips per month that transport operators can complete.

**Across all modes of transport, South Africa lags in the efficiency of cross-border trading.** The *Doing Business 2018* report ranks South Africa 147 out of 190 economies in terms of trading across borders. In 45 of the 115 economies exporting by sea, border compliance can be achieved in 48 hours or less. The average time to comply with these border procedures across the four South African ports is almost three times the average for the high-income OECD economies that trade by sea, and 50 percent longer than the average for the BRIC economies (*Doing Business South Africa Subnational 2018*). These higher border compliance times in South Africa stem from inefficiencies in handling. Handling time is more than twice the overall average for trading across borders (by land and sea) in all 190 economies. Inefficient cross border trading procedures impair competitiveness and regional integration.

## Recent policy developments and recommendations

South Africa's transport policy has been hampered by lack of coordination between tiers of government and other related infrastructure projects such as housing. In its White Policy Draft, the Department of Transport (DoT) recognizes that the responsibility for infrastructure used by different transport modes is fragmented between different government departments and parastatals and between different levels of government. This has led to "mismatches" in infrastructure provision, inefficiencies in operation, and duplication of facilities with consequent sub-optimal utilization. The DoT thus aims to create meaningful and accountable transport authorities at a provincial, municipal or city level. Such structures need to enhance coordination between different modes of transport and better coordination between spatial planning and transportation issues to overcome apartheid's legacy of exclusion.

**Changes in regulation and levelling the playing field have the potential to enable greater private sector participation.** In the White Paper Draft, the DoT recognizes the need for private sector involvement in closing the gaps in infrastructure investment as public finances are inadequate. The DoT aims to improve business fundamentals and to remove regulatory uncertainty to enable private sector

involvement. Greater private sector participation would also require government to address how bailouts to SOEs distort markets. Moreover, a single economic regulator for all modes of transport has the potential to reduce regulatory fragmentation and so enable private sector participation. Fast tracking the implementation of the Single Transport Economic Regulator (STER) could help with this issue.

**As evidenced by the Gautrain success story, PPPs can enable South Africa to rapidly upgrade transport infrastructure in a fiscally sustainable way.** In May 2017, some 19 new Gautrain stations were in the pipeline by May 2017 with the Gautrain Management Agency planning to extend the rail route by 150 kilometers over the following 20 years. PPPs have the potential to play a key role in implementation of the expansion of Gautrain and other infrastructure expansion projects.

### 2.2.3. Water

#### Overview

South Africa has improved water provision over the past two decades, but the level of inequality in access is still concerning. While 89 percent of South African households have access to piped or tap water in their dwellings either off or on-site (Stats SA 2018), 36 percent of households do not have access to a reliable water supply (Water & Sanitation Master Plan 2018). Moreover, 22 percent of households that depend on municipal water reported water interruptions that lasted more than two days at a time. In the agricultural sector, where use accounts for 61 percent of national water use, around 70 percent of South Africa's commercial farms use 95 percent of the water allocated to the sector. The national Gini-coefficient of water access is 0.36 (Cole et al. 2018).

**Most South African dams are privately owned, but water storage and supply mainly lie with government.** There are more than 5,000 registered dams and government is responsible for 320 large dams, which account for 93 percent of the country's total storage capacity. A total of 144 municipalities are water services authorities, meaning that supply is their responsibility. South Africa's four river basins that contribute 45 percent of the country's total river flow are shared with neighboring countries. Water contributes 0.34 percent to GDP and employs over 15,000 workers (Quantec 2018).



## Performance and key challenges

Forecasts show that South Africa could have a demand-supply deficit of around 2.7 to 3.8 billion cubic meters annually by 2030. This is a short-fall of around 17 percent of available and surface and ground water. The demand for water is increasing because of population growth and rapid urbanization. Households account for 27 percent of national water use; average domestic water use is around 237 liters per person per day while the global average is 173 liters per person per day. This, coupled with the fact that agriculture—a water-intensive sector—is a priority growth area for the government, will only increase pressure on the demand side. Supply, meanwhile, is stagnant and has downside risks.

**The downside risks to supply are significant and include technical and institutional factors.** More than half of South Africa's municipalities have limited technical staff. On the labor demand side, municipalities are failing to appoint the appropriate professionals; on the supply side there are significant gaps in skills. For instance, there are fewer than 100 dam safety approved professionals in South Africa; more than two-thirds of them are older than 60 and nearing retirement. In terms of institutional capacity, a third of the country's municipalities are regarded as dysfunctional. Government has listed 27 priority district municipalities which it has identified as being particularly dysfunctional and requiring specific intervention.

As a result of myriad institutions with a suite of functions, South Africa's water supply chain is complex and inefficient. The Department of Water and Sanitation (DWS) is responsible for water and sanitation policy, regulation of water supply and sanitation provision, oversight of water sector institutions, water resources planning, as well as the operation and maintenance of 342 large dams. Municipalities are responsible for supplying water to households and the South African Bureau of Standards (SABS) sets several water quality standards for the sector, including drinking water standards. Applying for a water use license in South Africa can take up to 300 working days.

**Other significant supply downside risks include ecological decay and infrastructure underinvestment.** The ecological condition of many of South Africa's main rivers has deteriorated. Wetlands have also

declined and a third of remaining wetlands are in poor condition. Around 44 percent of South Africa's treatment works are in poor condition; 11 percent of these are completely dysfunctional. The capital replacement value of the existing water and sanitation infrastructure is estimated at R 1,362 billion. Its current book value is R 584 billion: a 57 percent asset depreciation. Additionally, there is a significant underinvestment in infrastructure maintenance. This has resulted in an accumulated backlog in refurbishment of about R 53 billion. Around R33 billion of annual capital funding must be closed over the next 10 years if the country is to achieve water security.

**Underinvestment is driven by poor governance, non-payment and high levels of non-revenue water.** In 2017, municipalities owed the DWS R 10.7 billion for the delivery of bulk water services. Moreover, South Africa's budget allocations are geared towards new infrastructure projects at the expense of maintaining current infrastructure and incentives to new capital projects are larger than those for maintenance. South Africa has high levels of non-revenue water, in part due to municipal non-revenue water which is currently at 41 percent. The average physical losses in municipal systems are estimated to be around 35 percent, against a global best practice in the order of 15 percent. Industry, mining, power generation, livestock, watering and nature conservation and afforestation make up the remaining 12 percent of water use.

## Recent policy developments and recommendations

**Through the National Water and Sanitation Master Plan (NW&SMP), government has highlighted the need to optimize the water mix.** Supply is currently dominated by surface water. Groundwater will become increasingly important: it will not experience the increased evaporation that will hit surface water as the climate shifts and temperatures increase. The total nationally accessible groundwater potential is about 4,500 million cubic meters per year, of which between 2,000 and 3,000 million cubic meters per year is being utilized. With the cost of desalination decreasing due to advances in technology, desalinated water is increasingly economically viable. While the use of desalinated sea water is only financially feasible for coastal areas, it will

free up surface and groundwater for upstream and/or inland use where water is currently transferred or released for use in coastal areas.

**Various measures are in place to increase efficiency of use.** For instance, the DWS has reduced wastage by implementing the Water Administration System (WAS) Release Module at several irrigation schemes to facilitate the release of the correct amount of water from a source according to demand. Some municipalities have done well to achieve water demand targets, while others have lagged behind. In terms of domestic use, the government aims to reduce the average domestic consumption to 175 liters per person per day by 2025. Government has also highlighted the need for a focus on water use efficiency, the quality of water and sanitation fittings and the potential for rainwater harvesting in low income areas.

**South Africa should strengthen frameworks to facilitate trading water rights, particularly in the agricultural sector.** Lack of access to water is one of the key constraints for emerging farmers (Water

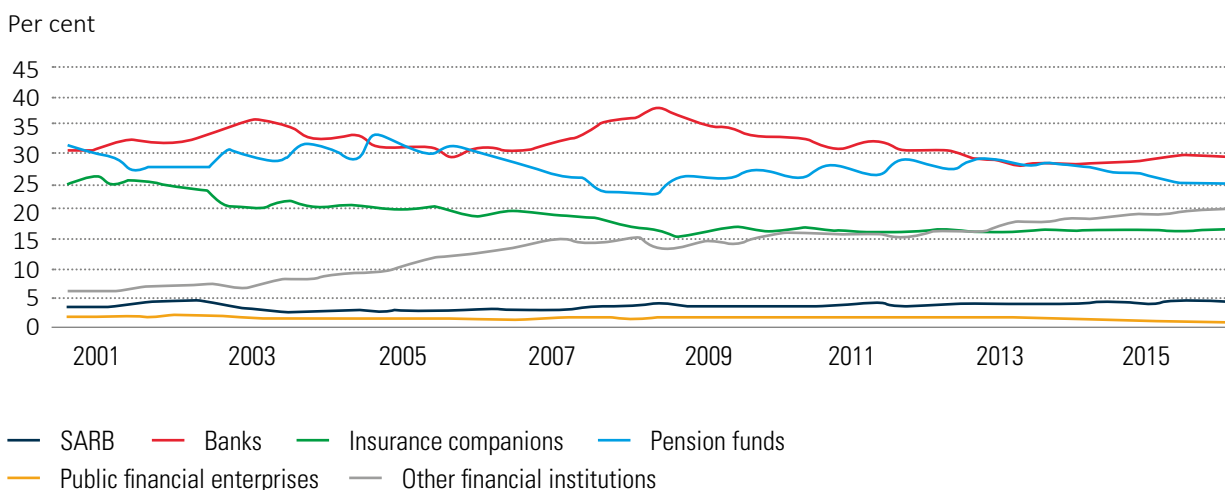
& Sanitation Masterplan 2018). Frameworks that facilitate trading water rights will allow users with surplus to trade with users with deficits and improve the equality of access to and efficiency of water use. These frameworks require buy in and capacity from local government. There are several cases that South Africa can explore and scale for national best practices.

#### 2.2.4. Leveraging Capital Markets to address the infrastructure gaps

##### Overview

**South Africa has a relatively well-developed and sophisticated financial sector.** Figure 14 below shows the financial assets distribution among various types of financial subsectors. In 2016, total financial sector assets amounted nearly 300 percent of GDP, and the market capitalization of the equity and bond markets stood at 322 percent and 55 percent of GDP, respectively, suggesting a financial depth in line with advanced economies.<sup>40</sup>

**FIGURE 14 DISTRIBUTION OF FINANCIAL ASSETS IN FINANCIAL INTERMEDIARIES IN SOUTH AFRICA**



Source: OECD, 2014.

**The level of market capitalization in South Africa is consistent with a high degree of sophistication of financial market intermediation in the country.** This has laid the ground for South Africa to consider becoming a regional financial hub. However, the Johannesburg Stock Exchange (JSE) stands behind developed markets in terms of value of traded equity

as a share of market capitalization (approximately 0.4 percent in 2013). Sovereign bonds accounts for nearly 50 percent of the total value of debt listed in JSE, while 48 percent accounts for private domestic debt, and the rest in foreign debt.

**Commercial banking remains the dominant source**

of funding in South Africa, despite non-bank financial institutions (NBFIs) holding the largest proportion of financial sector assets. NBFIs account for about twice the assets held by the banking sector—a higher level than in other emerging markets. Pension funds, long-term insurers, and other financial institutions (OFIs) such as Unit Trusts or Collective Investment Scheme, are the part of the NBFIs that contributes the most to the South African financial sector, accounting for two-thirds of total financial assets. This is unusually large for an emerging market.<sup>41</sup> In particular, pension funds and long-term insurers assets represent approximately 110 percent and 64 percent of GDP respectively, holding a large portion of market liquidity, as their funds accounted for approximately 41 percent of financial sector assets and 78 percent of NBFIs assets in 2016.<sup>42</sup> NBFIs hold a substantial portion of their assets in financial institutions through money-market funds, exposing banks to high liquidity risks in case of a sudden large withdrawal.

## Performance and key challenges

South Africa faces challenges in long-term finance, especially in the infrastructure sector. Weak economic growth is making it more challenging for public capital to address the substantial infrastructure financing gap. The falling sovereign credit rating, stricter BBBEE codes, capital pressure on banks because of Basel III implementation, and increasing policy uncertainties caused by the election cycle pose further challenges to long-term finance and the competitiveness of South Africa's capital markets in the near- to mid-term. Corporate bonds have decreased their importance in the bond market since 2009, accounting for only 12 percent of total bonds and notes outstanding in South Africa in 2015. In addition, with a significant exposure to contingent liabilities, and with government debt projected at 52.6 percent of GDP by the end of 2017, fiscal resources are less than sufficient to continue supporting infrastructure finance.

Most current infrastructure financing is conducted through the banking sector to project finance vehicles or directly to state-owned enterprises. The large exposure of banks to such projects has converted into a limitation, since banks can no longer carry this burden due to Basel III requirements regarding the net stable funding ratio (NSFR). Institutional investment in infrastructure so far has been limited in scale and scope, covering a relatively narrow range

of sectors and projects (dominated by the successful Renewable Energy Independent Power Producer Program, REIPPP), with financing provided by a handful of infrastructure funds and instruments. Furthermore, investments in the REIPPP sector to date have been largely confined to equity investments through specialized asset managers, as debt-financing has been dominated by the local banks which have relationships with sponsors and the highly technical project and infrastructure financing capabilities.

In a global context, institutional investors have increasingly emerged as ideal candidates for providing long-term debt financing given regulatory tightening and costly capital commitments for infrastructure finance for banks under Basel III, as well as the natural match for institutional investors in terms of their long-term liabilities.

## Recent policy developments and recommendations

The new Financial Sector Regulation Act (FSRA) approved in 2017 is one of the most important reforms in the last 30 years.<sup>43</sup> It aims at aligning the South African financial sector regulation to international best practices by establishing a Twin Peaks regulatory system for South Africa. The approved regulatory model assigns a formal financial stability mandate to the SARB and creates two separate regulatory bodies: Prudential Authority and Market Conduct Authority. The implementation of the Twin Peaks model will unleash additional regulation amendments (for example, the Financial Markets Act, Insurance bill, and so forth), and an intensive institutional strengthening agenda both for the public and private financial sectors. Likewise, reforms are expected to have a positive impact on financial stability as they reduce implicit contingent liabilities from the banking sector, moving towards international standards.

**Financial Markets Act review:** The National Treasury, with support from the World Bank, has developed a policy paper that will serve as baseline to prepare a Financial Markets Act Amendment Bill for submission to Parliament. The process is anchored in the need for harmonized frameworks that incorporate international standards and principles. One of the key findings from investor feedback—beyond the scope of legal considerations—was the lack of transparency and governance around debt issued by SOEs. Ongoing reform of critical SOEs, such as Eskom,

are complementary for the infrastructure component and could have a significant impact on capital market development, as many SOEs are listed and issue bonds.

**New governance and institutional frameworks are needed to implement the Infrastructure Fund initiative for large-scale, priority projects and to mobilize more private sector financing in infrastructure.** The World Bank is providing technical assistance to the National Treasury through donor trust funds to (a) design the most efficient institutional division of roles and responsibilities between the entities involved in infrastructure policy and implementation (Presidential Infrastructure Coordination Commission [PICC]), relevant departments in the National Treasury (NT), (b) strengthen the institutional capacity of the public sector entities involved, and (c) capacity building and development of methodologies to provide the

NT with the ability to assess fiscal commitments and risks and quantify the impact of infrastructure investments on the yearly budget and the MTEF.

**As evidenced by the REIPPP sector, the government is capable of rolling out a pipeline of well-structured infrastructure projects.** Efforts in this sector could be scaled up considerably and replicated in other sectors. However, investment guidelines and amendments to investment rules (Regulation 28) are key policy considerations. Although most of the pension sector is not currently restricted by Regulation 28 asset class limits, the largest funds are hitting up against unlisted or alternative investment exposure. Working with the FSCA, the report will explore the possibility of creating a specific asset class covering infrastructure investment. This would, in addition, provide direction and support for smaller funds to move into the asset class.

## In Summary

Factors affecting private investment	Policy options outlined in the report	World Bank Group role
<b>Enabling sectors</b>		
<p><b>Education and skills:</b> Enrolment and completion rates are low. Participation of the private sector is relatively low due to legal and administrative barriers. Raising quality of TVET education is challenging. Education infrastructure investment is backlogged.</p>	<ul style="list-style-type: none"> <li>■ Explore alternative ways to optimize resources allocation to higher education institutions such as performance contracts, research contracts, and encouraging fundraising.</li> <li>■ Reform the compliance framework for private institutions by reducing the number of regulatory bodies and relaxing stringent regulations.</li> <li>■ Encourage TVETs to partner with industry, to increase relevance to firm needs, and mobilize resources.</li> <li>■ Increase investment into education infrastructure through reforms to PPP framework.</li> </ul>	<ul style="list-style-type: none"> <li>■ <b>Advisory support</b> to reform TVET curriculum, strengthen management, improve governance, and develop framework regulations to encourage greater private sector participation.</li> <li>■ <b>Potential IFC investment</b> in private higher education institutions and student accommodation.</li> </ul>
<b>Infrastructure</b>		
<p><b>Energy:</b> Significant short-term supply risks result from technical vulnerabilities and limited generation capacity. New power connections are inefficient. Eskom's balance sheet is fragile, and its payments are in arrears. There is also a greater risk for anti-competitive outcomes due to the presence of dominant firms and</p>	<ul style="list-style-type: none"> <li>■ Continue to strengthen the governance and management of Eskom, including through unbundling.</li> <li>■ Bring in more IPPs and encourage embedded generation to leverage the decreasing cost of renewable energy (for example, in solar and wind) and diversify the energy mix.</li> <li>■ Improve payments through net metering and smart meters.</li> </ul>	<ul style="list-style-type: none"> <li>■ <b>Advisory support</b> to support cost minimization mechanisms for Eskom, embedded generation, and mobilization of a broad base of long-term domestic and institutional investors in IPPs, building on the REIPPP program.</li> <li>■ <b>Potential investment</b> into renewable energy and embedded</li> </ul>

Factors affecting private investment	Policy options outlined in the report	World Bank Group role
the high degree of vertical integration.	<ul style="list-style-type: none"> <li>■ Publication of refinancing guidelines for REIPPP program.</li> </ul>	generation.
<p><b>Transportation:</b> Infrastructure is deteriorating due to underinvestment, barriers to private investment, and poor management of SOEs. Sector regulation is also restrictive of competition, especially in rail and air transport. Regulatory and financial advantages are granted to SOEs through government bailouts, and regulatory functions.</p>	<ul style="list-style-type: none"> <li>■ Improve governance of SOEs such as Transnet and SAA.</li> <li>■ Introduce pro-competition rules and a framework for competitive neutrality between private firms and SOEs in markets where both compete.</li> <li>■ In the longer term, consider how SOE activities can be refocused to sectors where the private sector is unable to operate efficiently.</li> </ul>	<ul style="list-style-type: none"> <li>■ <b>Advisory support</b> to reform the governance of SOEs, improve pro-competition rules in segments where SOEs operate, ensure competitive neutrality between public and private firms, and foster PPPs.</li> </ul>
<p><b>Water:</b> Multiple institutions are involved in the sector, resulting in a complex and inefficient water supply chain. A supply deficit is expected because of technical and institutional factors and underinvestment. High levels of non-revenue water.</p>	<ul style="list-style-type: none"> <li>■ Reform the governance system to increase efficiency.</li> <li>■ Continue to strengthen efficiency of water use.</li> <li>■ Strengthen the framework for trading water rights.</li> <li>■ Diversify the use of water by bringing in more ground water and desalination.</li> <li>■ Foster more PPPs.</li> </ul>	<ul style="list-style-type: none"> <li>■ <b>Advisory support</b> to introduce international best practices for reducing non-revenue water, reforming the framework for governance, trading water rights, supporting more PPPs.</li> <li>■ <b>Possible IFC investment</b> in municipal water infrastructure projects.</li> </ul>
<p><b>Capital markets for infrastructure finance:</b> Challenges include limited competition, high costs, regulatory limits to adopting new technologies, lack of viable project pipelines, limited vehicles for co-investing, and opportunities confined to equity (local banks dominate debt financing).</p>	<ul style="list-style-type: none"> <li>■ Address regulatory constraints preventing new entrants in the domestic capital markets.</li> <li>■ Upstream policy reform to deliver infrastructure projects that are "market ready."</li> <li>■ Create opportunities for long-term domestic and international institutional investors.</li> </ul>	<ul style="list-style-type: none"> <li>■ <b>Advisory support</b> to modernize the Financial Markets Act, provide upstream support to ensure a viable and bankable project pipeline, identify pilot transactions, create capital market solutions to enable refinance for IPPs, and mobilize a broader base of long-term domestic and institutional investors into PPPs.</li> <li>■ <b>Potential IFC</b> demonstration transaction co-investing with domestic and international long-term institutional investors.</li> </ul>







## 03 DEEP DIVES

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### 3.1. Agriculture and agribusiness deep dive

Agricultural development is a priority sector because of its economic impact, particularly in rural areas, and backward and forward linkages to other industries.<sup>44</sup> Although agriculture accounts for only 2.5 percent of national GDP, it is an important source of jobs and incomes, especially in rural areas. According to South Africa's *National Development Plan* (NPC 2012), the government aims to create 1 million new jobs in the sector by 2030. The country is also a major food producer; exports of agricultural goods have increased from \$4.4 to \$9.9 billion per annum over the past decade. Agriculture and agri-processing have strong linkages with the manufacturing sector, which sources many of its intermediate inputs, indirectly creating up- and downstream employment opportunities (see CCRED 2018).

But the sector faces several vulnerabilities which are critical for inclusion. South Africa's agriculture sector is characterized by a strong dualism. Production and exports are driven by a small number of large, capital-intensive, commercial farms. Smaller amounts are produced by about 350,000 emerging farmers (that is, predominantly black farmers aiming to expand to larger-scale commercial farming). These are poorly integrated into the agribusiness value chain of corporate agri-food businesses. Moreover, production is still concentrated in lower-value and less labor-intensive crops despite substantial growth in exports of high-value fruit. As such, integrating more emerging farmers into value chains and creating better linkages for smaller agri-processing firms can create more jobs, particularly in rural areas where poverty and unemployment rates are higher.<sup>45</sup>

Challenges to smaller suppliers include the lack of economies of scale, a shortage of skills, an inability to consistently supply continuous, high-quality agricultural products, and limited access to finance (World Bank 2018a). Furthermore, there is a trend towards consolidation in the industry with several mergers taking place. This consolidation increases scale economies but may also lead to lower competition in the market.<sup>46</sup> With notable exceptions, especially in the fruit sector and for select products such as maize, the industry overall remains relatively poorly integrated into the global food supply chain; this is partly due to distance but also because it lacks phytosanitary certifications, which are necessary for exporting, for key markets.<sup>47</sup>

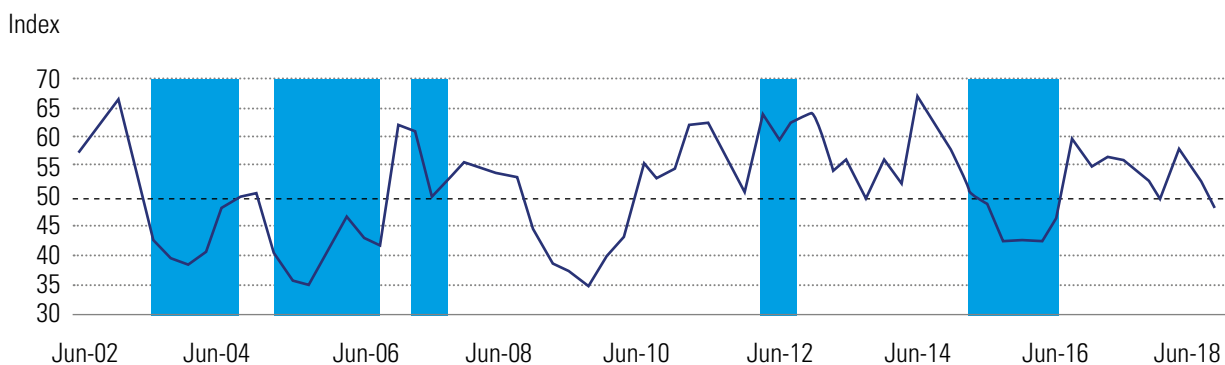
This deep dive shows how South Africa can create more and better opportunities—especially for smallholders and new entrants—that enable them to access competitive commercial value chains. Many of South Africa's core export products have substantial unmet potential. Although agribusiness is already one of South Africa's most dynamic sectors, addressing constraints could unlock additional investment. Tackling the decline in trust between the private sector and government will be central to this. Overall, business confidence has declined in the last year. This was in part driven by the renewed debate on amending Section 25 of the Constitution on property rights—which includes a clause allowing for expropriation without compensation—which was adopted by the National Assembly in December 2018.

This deep-dive is structured as follows: Section 2 provides an overview of the sector, including global trends and their implications for South Africa, key features of the South African agribusiness industry,

and a review of the policy and institutional framework for agriculture. Section 3 discusses six leading constraints to greater investment. These are: (a) an enabling governance framework, (b) more affordable access to finance, (c) a lack of relevant skills and capabilities, (d) uncertainty over land and water rights, (e) climate change and water scarcity, and (f) barriers to competition. Section 4 concludes with recommendations to help address these constraints, including what the World Bank Group can do to support South Africa. The analyses in Sections 3 and 4 are informed by background value chain studies

on citrus and yellow maize. A cross-cutting markets and competition diagnostic (Nyman 2018) and an assessment of impacts of the 2016–17 El Niño (Ukaejiofo 2018) were also carried out. Section 4 concludes with recommendations to help address these constraints, including what the World Bank Group can do to support South Africa. The analyses in Sections 3 and 4 are informed by background value chain studies on citrus and yellow maize.<sup>48</sup> A cross-cutting markets and competition diagnostic (Nyman 2018) and an assessment of impacts of the 2016–17 El Niño (Ukaejiofo 2018) were also carried out.

**FIGURE 15 AGRIBUSINESS CONFIDENCE INDEX**



Source: AgBiz.

## Sector overview

### Global trends and their implications for South Africa

Several broader trends are having a substantial impact on the development of South Africa's agribusiness sector. These include (a) population growth and urbanization (especially in sub-Saharan Africa), (b) innovation and increased mechanization in agriculture, and (c) increased trade and investment protectionism globally and resultant policy uncertainty.

First, the world's population is expected to grow to almost 10 billion by 2050, which will boost agricultural demand. Sub-Saharan Africa will experience the most rapid growth, particularly in cities: 71.3 percent of South Africa's population is expected to live in urban

areas by 2030, and nearly 80 percent by 2050. This will increase demand for food that can be easily stored and transported, for example, processed food and standardized agricultural output. However, this opportunity will further strain South Africa's food production systems (FAO 2017).

Second, recent years have seen an acceleration in technology and use of data analysis to supplement farmers' knowledge. This is having an impact on agricultural production. Moreover, global agricultural R&D spending is growing after years of decline; investment in agricultural capital formation is also increasing (FAO 2017). In line with the growing sophistication of this sector, agricultural production is becoming increasingly mechanized through automation, advanced robotics, and drones. This raises the demand for skills and requires highly complex distribution and transport services. Moreover, these changes are not always job-creating.

For example, the increased use of technology in precision agriculture has led to increased yields in maize but has resulted in reduced demand for farm labor and extension services.

**Third, for producers throughout the world—including South Africa—rising trade and investment protectionism is causing uncertainty.** A prolonged slowdown in the pace of trade reform is leaving widespread trade distortions and putting the strength and durability of the global economic recovery at risk. For South Africa and most of its trade partners, non-tariff trade barriers for agricultural goods are much higher than any remaining tariffs. This can have a cascading effect on trade costs because products often move across borders multiple times in agribusiness supply chains. Furthermore, in South Africa, variable tariff formulas are also in place for wheat, sugar, and maize, which raise the prices of inputs for processors and the prices of basic goods for consumers.

### Key features of agribusiness industry in South Africa

**A few characteristics distinguish the South African agribusiness sector.** First, it is still highly dualistic, characterized by a commercial sector in which a small number of large farms (between 35,000 and 40,000) produce most of the country's agricultural output. These operate in a competitive market system and are integrated with global markets. Most of these large farms have achieved scale economies, record high levels of productivity, and can access up-to-date business intelligence. Meanwhile, at least 350,000 emerging smallholder farmers—predominantly black-owned and located in former homeland areas—struggle under complex agricultural conditions involving security of tenure, poor infrastructure, skills development issues, droughts, and constrained access to finance, technology, and markets. South Africa must explore ways to create more and better opportunities for smallholders and new entrants to access competitive commercial value chains.

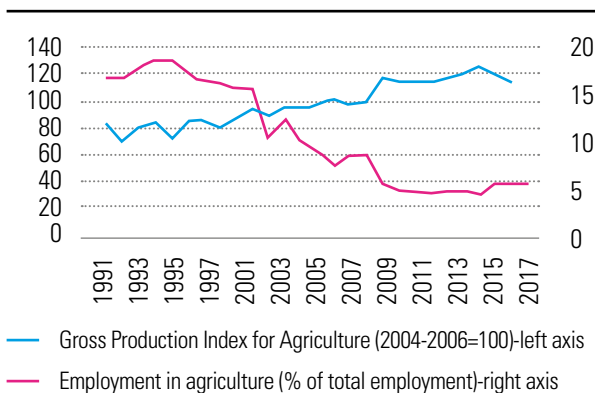
**Over the past two decades, global demand for South**

**African agro-food products has been increasing.** The country is a net exporter of agri-food products and exports of agricultural goods increased from \$4.4 to \$9.9 billion over the past decade with 24 of 36 crops as net exporters. Its agricultural trade surplus has increased significantly in recent years, driven by a surge of horticultural exports. Fruits and nuts have been the largest export sector, with coffee/tea and processed food products growing rapidly.

**In addition, the importance of the rest of Sub-Saharan Africa as an export market has grown substantially:** only 22 percent of exports went to the region in 2005, while 41 percent did so in 2017. The strength of the agro-food sector is central to South Africa's food security. According to the 2017 EIU's Global Food Security Index, South Africa's ranking has improved in recent years despite droughts—it is in first place in Africa. FDI inflows have been highly concentrated both in terms of sector and geography, with most inflows benefiting breweries and distilleries in Gauteng province.<sup>49</sup>

**Despite the sector's dynamism on several metrics, primary agricultural employment has been declining for many decades, depressing incomes in rural areas, while agribusiness employment is stable.** Currently the sector employs around 700,000 workers, making it one of the biggest and most labor-intensive in the country. However, over the past two decades its share of overall employment has declined from over 1.1 million (or 18 percent of labor force) while output has increased. Declines in employment have primarily hit semi- and low-skilled workers. Most of these jobs are concentrated in a few districts in the provinces of Western Cape, the North West, and Limpopo. While the NDP's employment goals are ambitious, there is still considerable growth potential in KwaZulu-Natal, the Eastern Cape, and Limpopo. These could be focal areas for expansion and growth in the agricultural sector. On the whole, employment in agribusiness remains more stable and employs more highly skilled workers than agriculture. It currently employs over 300,000 South Africans and, relative to agriculture, more of these jobs are skilled or semi-skilled.

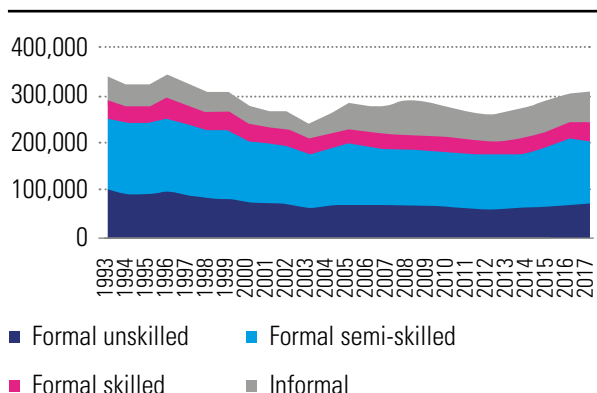
**FIGURE 16 PRODUCTION HAS INCREASED AS EMPLOYMENT HAS DECLINED**



Source: FAOSTAT and ILOSTAT.

Agriculture’s growth and employment impact varies significantly between different crops. Moreover, enterprises across and within different subsectors require various levels of capital investment and operating expenditure and offer different revenue-generating potential. This makes entry for small firms very challenging: margins increase rapidly as capital-intensity increases, while less capital-intensive sub-sectors struggle to remain profitable. These challenges are exemplified in the yellow maize sector. Thus, while large capital intense firms can link to export value chains, smaller ones can only link to local markets and retailers. These, however, are often uncompetitive and face substantial entry barriers.

**FIGURE 17 EMPLOYMENT IN FOOD, BEVERAGES, AND TOBACCO (1993-2017)**



Source: Quantec.

Overall the sector’s outlook is positive but subject to substantial fluctuations. Recent performance has been strong, though with significant variation—2017 was a record year while 2018 saw a sharp decline caused by drought in the Western Cape, Avian Influenza, listeriosis, and high carryover stock levels. In recent years, horticulture has been driving growth while production increases in field crops have lagged. The growth of citrus as an export crop is a particularly notable case in this regard (see Box 7). Sectoral growth is influenced by numerous factors, including the macro-economic environment, global agricultural and commodity markets, the evolution of demand, policy uncertainty (especially around land reform), weather stability, input costs and biosecurity.

**BOX 7 THE GROWTH OF THE CITRUS SECTOR - A SOUTH AFRICAN SUCCESS STORY**

**South Africa is a major international player in the world export market for fresh citrus and is the most competitive producer in the southern hemisphere.**

It is a profitable sector with a strong foreign exchange earning capacity, high employment-creating potential, and opportunities for facilitating the entry of emerging commercial farmers. South Africa produces four types of citrus: easy peelers and mandarins, lemons, oranges, and grapefruit. Among counter cyclical producers, citrus is a significant industry within the agricultural sector. It contributes about 40 percent of total fruit production by value and is a substantial employer, both on- and off-farm in upstream and downstream industries. There are

significant expansion opportunities in production that will drive investment in the cold chain and export infrastructure.

**South Africa is the third-largest exporter globally, producing about 2.34 million tons on 74,900 hectares, with a gross value of \$1.3 billion.** As an export market, the domestic and regional market are still small compared to the global market, but significant for balancing production and disposing of fruit for processing. They allow for new entrants not yet at the required technical level for meeting export standards. South African citrus is recognized as high quality, and in general, the country obtains good prices for exports.

Investment in the development of eCommerce web-based systems has significantly contributed to maintaining international market access and supporting the efficiency of interactions between the private sector and government agencies responsible for monitoring phytosanitary compliance. With further investment, the development of eCertification for phytosanitary compliance that is acceptable to international markets can bring further efficiencies and facilitate trade.

**Production is projected to grow 24 percent in the next three to five years, mainly because of expansion in easy peelers and lemons.** The number of jobs is estimated at 100,000 to 125,000 on-farm, with an additional 18,000 off-farm. There are 1,270 commercial exporting producers, of which 123 are emerging commercial. Major producing regions are Limpopo (43 percent), Eastern Cape (27 percent) and Western Cape (17 percent). There is potential to expand by between 15,000 and 27,000 hectares, but this is dependent on water availability. The expansion could generate an additional 25,000 to 45,000 jobs.

**The industry has a limited number of emerging commercial producers (10 percent of the total).** The Citrus Growers Association (CGA) is dedicated to helping these producers and other entrants become sustainable.

Source: Pringle (2018a), Nyman (2019).

However, these growers face challenges in accessing land, finance, skills, and water. Because it takes five years for newly-established growers to obtain meaningful yields, and 10 years to break even, effective government and private sector support will be necessary to develop emerging commercial farmers. Existing commercial growers are also expanding their engagement in the sector through joint ventures. They may also benefit from concessionary funding from government to increase their capacity.

**Considerable efforts are geared towards enabling black farmers to build successful farming businesses and participate in more profitable export markets.** Yet, despite land reform, the establishment of the CGA and a range of private and third-sector initiatives, black participation in the citrus export market is still low. The willingness of established actors to transform the industry appears limited. One of the main restrictions that black farmers face relates to financing and access to the export value chain. In response, exporter companies have started providing small farmers with equity programs or are entering strategic partnerships. However, there is an inherent risk in this, as the financing and partnership programs can come with conditions or contractual arrangements that limit the scope with which farmers can freely participate in the chain.

## **BOX 8** DESPITE STRUCTURAL CHALLENGES, YELLOW MAIZE HAS GROWTH POTENTIAL FOR SUBSISTENCE AND EMERGING FARMERS

**South Africa's yellow maize production (about \$915 million annually) is important as feedstock use in animal feeds and as contributor to protein production for human consumption.** It is commonly grown in the eastern production areas due in part to the proximity of export ports on the eastern seaboard. A major market is the local animal feeds industry. Human consumption of yellow maize is limited. The product is a competitively traded global commodity, where South Africa must compete with the dominant producers—the United States and Brazil—on international markets.

**Government removed controlled marketing arrangements in 1997. After considerable disruption in the immediate years thereafter, markets have**

**adjusted.** Pricing moves between export and import parity, depending on the aggregate volume produced relative to domestic consumption. The evolution from controlled marketing to a deregulated market was marked by some turmoil. The industry has adjusted, but at a cost: the area under production, the number of farmers, and employment fell. These adjustments have also had an impact up and down the chain, especially on the input side, where the waxing and waning of the fertilizer industry has followed trends in the maize sector.

**The economics of production is challenging, with small margins driving farmers to seek scale economies.** Due to improved technologies of production and



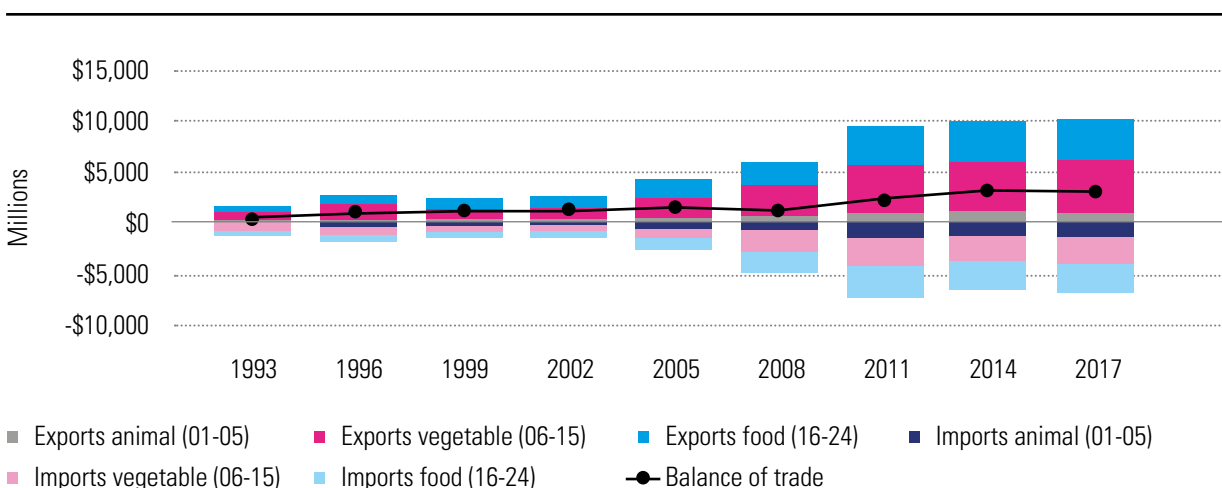
removal of marginal lands from production, average yields per hectare have increased significantly. Climatic variability does, however, make for a difficult production environment. Predictions based on increased demand from the feed sector indicate that there is an opportunity for expanded production. The single largest underutilized region for increased yellow maize production is that of the Transkei in the Eastern Cape.

**There is a sizable number of subsistence smallholders—the estimated number of total maize producers is between 314,000 and 628,000.** Emerging commercial farmer numbers could be above 10,000 based on available information, but due to the limitations in the

data sourced during this study, this figure is not entirely reliable. Integrating emerging commercial yellow maize producers and SME businesses into the value chain is challenging given the dominance of existing established businesses. Given the challenging local production environment, farmers need access to larger areas of land, technical support, skills development, and access to appropriately structured funding and crop insurance products. Furthermore, while large, commercial farmers in South Africa can produce yellow maize at close to import parity prices, further analysis is required to determine whether smallholders and emerging farmers in the country can stay under the import parity price threshold.

Source: Pringle (2018b).

**FIGURE 18 BALANCE OF TRADE, FOOD, AND AGRICULTURE PRODUCTS**



Source: Comtrade.

**Domestic demand, in particular for cereals, meat, and processed foods has increased as incomes have grown.** Compared with two decades ago, South Africans are consuming more kilojoules on average, drinking more sugary beverages, eating more processed and packaged food, more animal-sourced foods, more sugar, and fewer vegetables (Ronquest-Ross 2015). South African producers and retailers are well-placed to meet growing demand at home and beyond. Agribusiness, particularly food retail and food/beverage production/processing, is among South Africa’s largest and fastest growing sectors (Annex 6). Some firms, like retailer Shoprite, have

also made inroads throughout Africa.

**These chains continue to source most of their products from South Africa due to the proximity.** These supplier arrangements tend to be conducted through specialized procurement agents with strict product specifications, resulting in a shrinking base of preferred suppliers (das Nair and Dube 2016). With food production becoming more capital-intensive, vertically integrated, and concentrated in fewer hands, smaller producers will face greater challenges. Growing demand, while creating more opportunities, is also likely to lead to more

intense competition for natural resources, increased greenhouse gas emissions, further deforestation and land degradation. Predicted temperature increases under most scenarios could lead to dramatic declines in yields.

### Government policy and related regulations

**Agriculture development and successful land reform are key pillars of the strategy laid out by the NDP for integrated and inclusive rural development.** The primary institution responsible for the sector is the Department of Agriculture, Forestry, and Fisheries. The key policy areas include the following:

- **Agriculture policy:** The strategic direction was shaped by the Agricultural White Paper (1995), the Agricultural Policy (1998), and the Strategic Plan for Agriculture (2001).
- **Trade policy:** Governed by the WTO Agreements, as well as preferential trade agreements with SACU, SADC, the EU, and the United States via AGOA.
- **Rural development:** The NDP emphasizes the need to create employment with agriculture as the key sector with a focus on small-scale farmers, the agro-processing sector, land reform, and commercial farming.
- **Marketing policy:** The Marketing Act (No. 59), the Cooperative Societies Act, and industry-specific statutes for sugar and wine and spirits regulate marketing policy; much of this was deregulated under the Marketing of Agricultural Products Act of 1996.
- **Land reform:** Efforts focus on restitution (return of historical land rights), tenure reform (securing property rights) and redistribution (transformation of racially biased land ownership patterns).

However, DAFF has lost several core functions in recent years. These include farmer support (in the provincial sphere), Land Bank (with Treasury) and cooperatives (now with the Department of Trade and Industry [DTI]). DAFF also has little direct control over policies and programs related to food safety, food security, and the National School Nutrition Program. Firms in the sector must also comply with the Competition Act and trade policy. Overall, the agricultural sector receives very little government

financial, technical, or market access support with a few notable exceptions (for example the *Broadening Access to Agriculture Thrust* [BATAT]). As a result, producers feel they are at an unfair disadvantage in comparison with producers in other countries who receive generous subsidies.

More substantive government efforts have been made to address land reform (see Karaan and Vink 2014). These include:

- **Settlement/Land Access Grant (1995–99):** Means-tested grants (however, these were too small to support beneficiaries, while the structure of the means test made it almost impossible to access loans).
- **Land Reform for Agricultural Development (from 2001):** Scalable grants designed to establish a class of commercial black farmers.
- **Comprehensive Agricultural Support Program (from 2003):** Main program to coordinate and provide support services.
- **Proactive Land Acquisition Strategy (PLAS) (from 2006):** Program in which the state purchased land for prospective beneficiaries.
- **Settlement and Implementation Support (from 2008):** Supplemented PLAS.

**The recently launched Operation Phakisa provides a novel policy direction for the country.** Inspired by a similar approach in Malaysia, this program aims to drive transformation within the sector. It aims to contribute towards the achievement of the NDP vision and the *Revitalization of the Agriculture and Agro-Processing Value Chain* (RVAAC).<sup>50</sup> It comprises three commodity-based work streams and four sector enablers. Expected outputs include a farm worker skills development program, a farm workers' database, an extension recovery plan, and a skills audit of communal and small holder farmers.

**Finally, the new BBBEE code also is relevant for the agriculture sector.** The Amended Agri-BEE Sector Code of Good Practice (Agri-BEE Code) was published on December 8, 2017. It intends to strengthen the drive towards creating black suppliers, black commercial farmers, and black industrialists. The main changes include:

- The targets and point allocation of the first three scorecard elements under the Agri-BEE Code, namely ownership, management control, and skills development, are essentially identical to

those in the amended BEE codes. The ownership target remained at 25 percent plus one vote and 10 percent for black ownership and black women ownership, respectively. The skills development element, however, contains an additional requirement—that at least 85 percent of total recognized skills development expenditures must be for scarce and critical skills.

- Despite the socio-economic development not being a priority element, it has received additional emphasis under the Agri-BEE Code. Unlike the target of 1 percent of an entity's net profit after tax contained in the amended BEE codes, the Agri-BEE Code has a higher target of 1.5 percent of the entity's net profit after tax. This element also counts for 15 points on the Agri entity's BEE scorecard as opposed to only five points under the Amended BEE Codes scorecard.
- A major change relates to the target for supplier development, which has been increased to 3 percent of the entity's net profit after tax. The Minister of Trade and Industry has indicated that the aim of this is to create a pipeline of black suppliers and black industrialists within the value chain of the South African agricultural industry.

The government also recently established the AgriBEE Fund, which aims to increase the number of black entrepreneurs in the sector.

### Priority constraints to private sector development and investment

**For this study, six leading constraints to greater investment were identified:** These are (a) the sector's governance, (b) climate change and water scarcity, (c) access to financial services, (d) a lack of relevant skills and capabilities, (e) uncertainty over land and water rights, and (f) barriers to competition. This section unpacks these challenges by drawing on a review of existing sources, discussions with stakeholders, and background papers that include in-depth studies of the citrus and yellow maize value chains. The relevance of each constraint in the citrus and yellow maize value chains is outlined in Annex 7, which also focuses on the differing salience of these constraints for emerging and commercial farmers.

### Creating an enabling governance environment

**South Africa's agricultural policy and institutional apparatus is insufficient. This leads to policy uncertainty, incoherence, and fragmentation.** The main problems include: (a) a disjuncture between job creation and rural development objectives (especially in DLRRD), (b) the lack of a clear process for land reform beneficiaries to receive land titles and weak land tenure rights, reducing incentives for investment and making access to credit challenging, and (c) the failure to recognize the multi-generational nature of agriculture, obstacles, start-up costs for new farmers and need for extensive support and mentorship services to benefit emerging farmers (Cousins 2014).

**These governance failures manifest themselves in numerous ways, including farmers' access to inputs and tractors (Aliber 2018).** The government's main approach to farming inputs has been to give these away for free via group projects with few beneficiaries. In the case of supporting mechanization, interventions tend to poorly conceived and ineffective resulting in few tractors being available, with many of these in disrepair and contracting services unreliable.

**Current policymaking is spread across numerous ministries and departments with overlapping responsibilities and declining resources to meet their mandates.** New policies and programs are frequently announced, but there is limited implementation or follow-through. This has resulted in many producers coming to believe that the government sees them as the enemy. Karaan and Vink (2014) argue that DAFF become "little more than a regulatory agency for the commercial farming sector with few programs that provide support to emerging farmers." At the local level, administered prices and services such as electricity and bulk water provided through failing municipalities pose real risks to business continuity.

**They also become apparent in producers' challenges in accessing foreign markets.** For example, South Africa only has a few trade agreements with emerging and developed economies apart from the EU. Moreover, in the context of increased U.S. protectionism, South Africa also risks losing AGOA privileges.<sup>51</sup> As other countries are signing such agreements, South Africa is becoming less competitive. This can at times be compounded by administrative oversights—for example, specific export licensing agreements with

Asian countries were not renewed in time, resulting in containers remaining in ports until these issues were addressed.

**The lack of government support in concluding trade agreements and upgrading the trade-related infrastructure is a particular challenge for export crops like citrus** (Pringle 2018a). Cold store and ship-loading connectivity are inadequate for the increasing fruit volumes. Most products are trucked from processing centers to gateway ports due to an inadequate but cheaper rail service. Furthermore, producers have difficulty meeting standards (both private and official); there is insufficient coordination among the government bodies covering this area.<sup>52</sup> There are also key gaps in South Africa's logistics infrastructure, which hampers regional exports and remote producers. The role of producer organizations, which vary significantly in capacity, has been critical in bridging these gaps.

### Adapting to climate change and water scarcity

**Growing pressures resulting from a growing population, climate change, and resource scarcity are likely to have a profound impact on the sector.** Growing demand will create more opportunities, but is likely to lead to more intense competition for natural resources, increased greenhouse gas emissions, and further deforestation and land degradation. South Africa is one of the region's most arid countries and

spatial misallocations exacerbate water insecurity. The 2015/16 El Niño drought affected 14 million South Africans (25 percent of the population). Predicted temperature increases under most scenarios could lead to dramatic declines in yields.

**Climate change is expected to result not only in higher temperatures but also sporadic rainfall patterns and frequent droughts.** Even if "high mitigation" measures are implemented, average temperatures in the interior could increase by up to 4°C. Drylands areas will expand and shift because of climate change. Some zones might become incapable of sustaining livestock production and intensive agriculture. These varying weather scenarios are expected to increase food insecurity in South Africa and exacerbate poverty among the rural communities (FAO 2008). This will place additional strain on South Africa's food production systems.

**Furthermore, the government of South Africa plays a key role in providing water to emerging farmers.** As a result, adapting to climate change and water scarcity will become increasingly important. There is a clear link between agricultural GDP and the incidence of climatic shocks in South Africa (moderate El Niño in 2009–10 and strong El Niño in 2014–16). Moving forward, it will be necessary to take into account the geographically heterogeneous impacts of climate change in planning both what to grow and related infrastructure investments to support different value chains.

### BOX 9 PRODUCERS HAVE MOVED INTO SOYBEAN PRODUCTION TO REDUCE EXPOSURE TO SHOCKS

**Soybean development is one of South Africa's agricultural success stories.** This was stimulated by growing demand for soybean oilcake or meal by the animal feed industry. This, in turn, has been driven by an increase in the demand for high protein food, particularly poultry products. South Africa's per capita consumption of poultry meat almost doubled over the past 17 years, currently estimated at 41 kilograms, according to data from the Department of Agriculture, Forestry, and Fisheries. To service the growing demand, South African agribusinesses, supported by the government, made investments to increase domestic soybean processing capacity from roughly 860,000 tons in 2012 to a level in excess of 2.2 million tons. This was also aimed at stimulating domestic soybean production, as part of an import substitution strategy.

**South Africa imported more than 80 percent of the local consumption of soybean meal in 2006–07, but imports have since declined to less than 30 percent because of growing domestic production.** South Africa adopted genetically modified seeds (GM) in the early 2000s, which continue to spread across the country. In the 2016–17 production season, GM seed constituted roughly 95 percent of South Africa's soybean plantings. Coupled with an increase in the size of area planted, and technological improvements in the form of seeds, fertilizers and better farming practices, amongst others—soybean area increased 14-fold over the past 24 years to 787 200 hectares in the 2017–18 production season. The contribution of better farming practices and technological

advancements is apparent from improvements in yields, which increased by 60 percent from the 1993–94 production season to 1.97 tons per hectare this season.

**Economic considerations, such as the favorable soybean to maize price ratio (particularly in normal years, when South Africa was a net exporter of maize) and the magnitude of the investment in crushing facilities, meant that South African producers were unable to supply sufficient soybeans—even prior to the 2016 drought.**

Domestically produced beans were supplemented with imports in 2014 and 2015. Consequently, the demand for livestock products increased substantially, increasing the demand for protein meal as feed input to the growing livestock sectors. This growth encouraged significant investment in the soybean value chain and rapid growth in soybean production. Further benefits to producers include the crop nitrogen fixation properties when produced in rotation to maize and the opportunity to diversify income and reduce risk, which was witnessed when the El-Niño drought impacted maize.

### Increasing affordable access to financial services

South Africa has a strong financial sector, with substantial levels of rural lending and insurance. Its supply of agricultural credit is significant. Farming debt totaled R 116.6 billion (\$7.6 billion) in 2014, equal to 32 percent of the value of capital assets (DAFF 2015). Agricultural insurance also has a long history in South Africa, dating back to at least 1929 (Pringle et al. 2014). Premium volumes are the largest in Sub-Saharan Africa, averaging R 4.4 billion (\$310 million) each year (SAIIA 2016). However, agricultural insurance—even among the commercial farmer—is limited by the reinsurance market for South African agricultural risk, leading to limited capacity and higher premiums.

Access to financial services for emerging farmers is substantial, but does not necessarily translate to farmers being able to access affordable finance for agriculture. While access to finance for emerging farmers is increasing—partly due to efforts by the Land Bank—access to finance for smallholders remains challenging. Commercial banks primarily lend to agribusinesses. The Land Bank has been mandated to increase its share of lending to small farmers, which it mainly accomplishes through intermediaries. Emerging digital platforms could address gaps in access to finance and information, but this is a long-term prospect.

Access to credit among South African farmers is markedly different for commercial and small and medium scale producers. The current supply of agricultural finance to commercial farmers is significant. In 2014, DAFF statistics indicated

that farming debt in South Africa totaled R 116.6 billion (\$7.6 billion), which equals approximately 32 percent of the value of capital assets (DAFF 2015a), a significant proportion. Commercial banks provide the majority of agricultural credit, with 57 percent of farming debt, followed by the Land Bank with 31 percent (DAFF 2015a). Among the key commercial banks, however, agricultural lending is only a fraction of total lending, accounting for approximately 1 percent of their portfolio.<sup>53</sup> Interestingly, facing similar challenges with land rights, commercial banks are willing to extend access to commercial farmers without collateral on the condition that they purchase agriculture insurance to act as security (for commercial farmers the insurance product is multiple peril crop insurance, MPCI).

**Interviews with rural lending institutions point to several constraints to expanding access to agricultural credit to emerging farmers:**

- Perception of high risk of such farmers from the bank's perspective
- Limited collateral to back loans given land tenure practice of most smallholders
- Lack of bankable business plans
- On the supply side, commercial banks face few incentives to extend lending to the agricultural sector given the profitability of lending to other sectors
- Difficulties to access commercial financing for multi-year cropping (especially for fruit)

This disparity also exists for agricultural insurance where a vibrant market exists in South Africa to cater to commercial farmers. Agricultural insurance has been available in South Africa for close to a



century, starting with the launch of a mutual society-based hail insurance cover in 1929 (Pringle et al. 2014). Currently, the primary two agricultural insurance products sold in south Africa are MPCCI and hail cover. Both these products are catered for commercial producers, with international experience demonstrating that they are too costly to provide to small and emerging farmers. The premium volume for the MPCCI market peaked at R 309 million (about \$22 million) in 2012–13 and then declined to R 217 million (about \$16 million) in 2014–15. The reductions in premium volumes are due to the poor experience of the portfolio, with the long-term loss ratio for 2004–05 to 2014–15 at 114 percent. Of farmers who do have access to agricultural insurance products, most losses come from climatic shocks: 42 percent are due to drought (and this is increasing) and 57 percent are due to storms and floods.

**Constraints to agricultural insurance lie primarily in the lack of appropriate products to suit their needs.** Index-based insurance products have been in the market for about 15 years, which international experience has demonstrated can provide affordable insurance protection for small and emerging farmers. Indeed, countries such as India have actively supported the expansion of index-based insurance products, with the objective of de-risking agricultural production for small and emerging farmers, and thereby unlocking access to credit for said individuals. As stated above, there are no index-based insurance products available in South Africa, not even on a pilot basis.

**The existing levels of financial development and financial inclusion represent an opportunity to expand access to agriculture insurance to small and emerging farmers in South Africa.** Leveraging the well-developed network of commercial banks with extensive agribusiness-finance experience could have a major impact. This network includes the Land Bank, a DFI that is a key provider of agricultural finance, especially to historically disadvantaged emerging farmers. Furthermore, the levels of financial inclusion among emerging farmers in South Africa are noteworthy, with 34 percent of emerging farmers having access to transaction accounts, 52 percent having access to savings accounts, and 20 percent of emerging farmers having funeral cover (Finmark 2013). Support programs could take advantage of this financial inclusion to deepen the relationship between small and emerging farmers and agricultural

financial service providers. For example, insurance companies could partner with financial institutions and explore ways of bundling agriculture insurance with savings products to leverage this existing distribution channel.<sup>54</sup>

### Upgrading skills and improving labor productivity

**There is an urgent need to upgrade skills in the sector.** Emerging commercial farmers have limited own capital and skills and require appropriately structured finance and intensive technical and mentoring support. Recent analysis by Agri-SETA identified a range of scarce skills in agriculture, including farm management and entrepreneurship, resource management and record-keeping, financial planning and management, marketing, processing and packaging, transport, natural resources management, and mechanical and electrical knowledge. Beyond this, low education levels among many agricultural laborers require investments in adult basic education and life skills programs. Agricultural colleges remain in poor shape and there are gaps in some core areas, such as among agriculturalists, agricultural engineers and veterinaries.

**The situation is particularly acute for extension services.** In 2008 efforts were made to increase extension officers, but numbers remain inadequate, and in many cases, these are underutilized—for instance, extension officers in the Eastern Cape spend at least 40 percent of their time in their offices on administrative tasks (Aliber 2018). Furthermore, farmers tend to dislike their interactions with extension officers with most farmers generally learning best from other farmers and from family members. A recent review of select agribusiness operations found that a shortage of skills, experience, and knowledge is a central challenge for smaller suppliers. Here stronger incentives to lead firms to support smaller producers through, for mentorship programs, secured offtake agreements and training in areas such as better farming techniques, agronomics, food safety, and the creation of platforms for access to markets could make significant difference (World Bank 2018).

**There are some attempts to address these issues.** Under the National Skills Development Strategy III, the AgriSETA Strategic Plan (from 2015–16 to 2019–20) aims to “impact on the productivity and profitability of the agricultural sector and to

contribute to food security, vibrant entrepreneurship and self-reliance especially for rural economies” through skills development across three key sub-programs: (a) professional, vocational and workplace learning, (b) rural development, and (c) youth and career development. Such strategies also need to take account of the very different extent of provision by sub-sector. For example, industry associations in the citrus sector have been quite effective in providing technical support to farmers while for yellow maize support programs such the MFPP have not facilitated adequate training and skills transfer (Pringle 2018a and 2018b).

### Securing and managing land and water rights

**Land reform policy has failed to address historically skewed ownership patterns.** According to the Land Audit (2017), white South Africans make up around 10 percent of the population but own 75 percent of all agricultural land (Land Audit 2017). Several land reform policies implemented by the democratic government since 1994 have failed to address this.<sup>55</sup> The target of transferring 30 percent of arable land to black landholders by 2014 was not achieved, and there is limited information on the current level of transfer. Factors impeding effective land reform include inadequate resources—the average budget for land reform is 1 percent of the national budget and has been on a decline over the past decade—and limited administrative and management capacity. This has become inadequate amid a mandate that has expanded to include production support to agricultural beneficiaries (Kepe and Hall 2016). Moreover, restitution and redistribution proved to be expensive and were rife with legal complications, such as multiple claimants, burden of proof, price setting, and general implementation (Kepe and Hall 2016).

**Land markets have low volumes of transactions and large variations in prices across the nation—even across regions that have similar levels of economic development.** For instance, while the Western Cape is among South Africa’s agricultural hubs, only 5 percent of agricultural land was transacted in the province between 2003 and 2014 (Nowers, 2014). In 2011, Western Cape farm land prices were estimated to differ by more than four orders of magnitude, from \$15 per hectare to \$178 000 per hectare of farmland (Osano et al. 2011). And in 2014, the price for a hectare of land in Western Cape ranged anywhere between R 10,000 and R 70,000 for similar regions (Nowers 2014).

### Providing greater certainty in land and water rights has become an increasingly urgent growing policy priority.

The Land Restitution Act of 1994 was one of the first acts of the ANC government. Since 1994, ANC under the Reconstruction and Development Plan committed to: (a) restitution to restore land rights to those who were dispossessed of them under discriminatory laws, (b) redistribution to make land more accessible to those who had previously been denied access, and (c) tenure reform to give security of tenure to labor tenants, farm workers and other rural dwellers who lived on land without secure rights.

### Lands restitution and redistribution are intended to reallocate 30 percent of farmland to black households.

About 21 percent of the country’s total 83 million hectares of farmland has been transferred from white ownership since 1994 (Sihlobo and Kapuya 2018).<sup>56</sup> The resolution of the “land question” plays a central role in the post-apartheid social contract, and advancing land reform remains a critical priority. There is wide consensus on the need for reform in a manner that helps rectify historical injustices while still supporting the livelihood of rural South Africans and encouraging investment in the sector. However, there is still considerable uncertainty and debate on the outcome.

### Restitution and redistribution proved to be expensive and were saddled with legal complications, such as multiple claimants, burden of proof, price setting, and general implementation.

The land reform process has been constrained by: (a) inadequate Department of Rural Development and Land Reform (DRLDR) capacity and budget allocation, (b) insufficient decentralization of decision making, (c) inadequate land administration systems, and (d) insufficient post settlement support (access to finance, markets and technology and establishment of rural settlements) to farmers emerging from land reform to help ensure their success and failure to reallocate water rights in parallel with land rights. Furthermore, many redistributed farms fail. This has a number of causes: often the quality of restituted land is inferior, owners lack relevant farming experience, or government support is inadequate (World Bank 2018). Moreover, a lack of land tenure rights impedes emerging farmers from accessing finance and production support programs from government (Kepe and Hall 2016).<sup>57</sup> For example, many land reform beneficiaries of citrus estates have found it challenging to produce the quality and quantity required to service export markets, compounded by

an inability to secure finance due to the land tenure not enabling collateralization (Pringle 2018a).

**There are still substantial opportunities to increase land redistribution purely through market mechanisms.** However, this remains constrained because land tax incentives aren't in place to encourage sales. Another issue is that the land titling system is not designed to handle the number of applications arising from an expansion of the land market; restrictions on sub-divisions are also problematic. In terms of government-driven land redistribution, key issues include: (a) policy options (compulsory or voluntary), level and type of subsidization (which transaction costs should be subsidized to improve target beneficiaries' market access; what levels of land purchase subsidies would be needed to bring in different target groups); (b) the role of the state, especially in terms of post-settlement support; and (c) assessing economic impacts, especially in relation to business confidence and the financial sector.

**Equally important to reforming land rights and clarity in this area will be water rights—the lack of clear water rights substantially reduces the value of land and the incentives to invest.** Weak institutional frameworks for allocating and trading water rights are a constraint. Given the relative aridity of South Africa, water use is strictly regulated via the National Water Act of 1998, which ensures that the nation's water resources are protected, used, developed, conserved, managed and controlled to the benefit of all. However, insufficient water resources for farming remain a concern for many farmers involved in the land reform process, for whom rights remain are often not linked to land rights.<sup>58</sup>

**Growing impatience with the pace of progress has led the National Assembly to review Section 25 of the Constitution to potentially enable expropriation without compensation.** In addition to restitution and redistribution, ensuring the viability of new farmers will be central, especially given the high levels of debt farmers generally face. Many of these issues are now being clarified in a high-level report by the President's Advisory Panel on Land Reform which will support the Inter-Ministerial Committee (IMC) on Land Reform. The Panel, which has been mandated "to review, research, and suggest models for government to implement a fair and equitable land reform process that redressed the injustices of the past, increased agricultural output, promoted

economic growth, and protected food security," should issue its report in 2019.

### Barriers to competition

**The existence of previous anticompetitive regulation appears to have been a facilitating factor in a number of South Africa's cartels.**<sup>59</sup> All food and agriculture-related cartels found in South Africa were in markets previously characterized by control boards or with a history of price controls, with the exception of fish/fishing and poultry.

**Despite deregulation from 1998 onwards dissolving commodity boards and removing fixed prices, most food is still produced by commercial farmers and some of these structures persist.** Indeed, some markets appear to have privately "re-regulated" following deregulation—partly facilitated by the strong role currently played by industry associations in South Africa, which is in some cases supported by sector regulation. In around a third of all (non-construction) cartel cases detected in South Africa between 2005 and 2015, an industry association was explicitly found to have facilitated a collusive agreement (25 out of 76 cases). This is especially prevalent in the food sector, where six out of 12 cases involved a trade association. This is relevant for the way in which sector regulations are set for a number of agricultural markets: players are compelled by regulation to register with and provide detailed information to industry bodies.

**In several agricultural markets these associations take on the central role that the commodity board would have previously played (such as the setting of standards), which can result in anticompetitive outcomes.** There are still statutory measures in place that compel players to register with and provide information to an industry body (for example, wine, dried fruit, eggs, potatoes, milk, and sugar). While associations can perform valid roles in a market and a value chain, they can also serve as fora for information exchange and therefore can facilitate collusion. Associations need to be managed in a way that minimizes their distortive effect on the market. For example, mandatory membership and information provisions in sector regulation could be reviewed, and associations that comprise of incumbents should not be involved in making registration or licensing decisions for new entrants. As such it is important to monitor the effects of these associations since the functions of coordination and information exchange by industry associations can facilitate anticompetitive

outcomes. It is also important that associations are encouraged to consider new entrants and new products when for example setting standards or registration/entry requirements.<sup>60</sup>

**There has been significant consolidation in the commercial sector with the number of commercial farming units in primary agriculture declining steadily from almost 120,000 to around 39,000 between 1950 and 2014.**<sup>61</sup> This was accompanied by a commensurate increase in average farm size—this is perhaps not surprising given the evolution in farming technologies over that period with a move away from labor towards capital.

**South Africa's three largest field crops in terms of value: wheat, sugar and maize are subject to variable tariff formulas, benchmarked against a dollar-based floor price.**<sup>62</sup> The intention is to maintain prices of the commodities above a reference level with the aim of preventing a decline in local production levels. When the dollar price of imported wheat over a set period of time falls below the floor, import duties rise based on the difference between the two. This means that substantial depreciations in the value of the rand against the dollar can increase the value of import duties out of proportion with the value of non-U.S. dollar imports, leading to complaints of “over-protection” in rand terms.<sup>63</sup> A number of players in the processing industry and consumer groups have opposed these tariffs and have advocated for a switch to a rand-based system.<sup>64</sup>

**The variable tariff raises prices of inputs for processors and the prices of basic goods for consumers.** Bread and cereals prices have increased in line with increases in the floor price of wheat during the period from 2013 to 2016, over a period where international prices remained steady.<sup>65</sup> In the case of sugar, the tariff is part of a broader industry management scheme which aims at raising prices above the competitive level. And while the tariff on maize is zero, Grain SA,<sup>66</sup> an association of grain farmers, has made a number of applications to ITAC for an increase in the maize floor price. To date, this has been resisted because of the effect it would have on the poultry and livestock industries.<sup>67</sup>

**This has different impacts across different sub-sectors.** For yellow maize, emerging farmers face large high entry costs as maize production has become more and more mechanized. The market

is dominated by large commercial farmers who are vertically integrated and can source inputs cheaper due to economies of scale and networks. Furthermore, silos are a critical element of yellow maize marketing and access to silos is a crucial bottleneck in the market as the market for silos is dominated by large vertically integrated agribusinesses. Silos are prohibitively costly to construct and are seldom at full capacity, making it an imprudent investment for new entrants. In the citrus sector, quality is a main channel through which associations restrict market entry. Recent efforts by the CGA has seen a tendency to push for more stringent quality standards, which are naturally more difficult for new entrants to uphold, to gain market access. In turn, black participation in the citrus export market still appears to be low as the willingness of established actors to transform the industry appears limited. Many blended finance models (such as the Jobs Fund) are just in their early stages but showing great promise.

**Finally, the market power of actors up- and downstream puts smaller farmers at a disadvantage when entering into contracts.** Access to inputs, irrigation and, importantly, pack houses remains a main restriction for small farmers to enter the market. Assistance in negotiating with providers of those inputs or services is crucial to enabling market access. Some labor-intensive sub-sectors still have substantial growth potential (including berries, grapes, peaches and macadamias). This underlines the power structure along the chain and the potential for policy to increase competitiveness in inputs and to ultimately open market access.

## Recommendations

**South Africa's agriculture and agribusiness sector has potential for further growth and shows growing competitiveness on export markets. Compared to other sectors in South Africa's economy, it already has many efficient and highly profitable firms that are world-leading in some sub-sectors. The renewed focus on supporting emerging and subsistence farmers is timely and can play an important role in addressing high poverty rates, especially in rural areas. To succeed, it will require new approaches that directly leverage the strengths of the sector's value chains and encourage the roll out of financial products that can meet the needs of smaller producers, taking**

advantage of the high level of financial development and inclusion.

**Increased private sector investment and involvement will be integral to fulfilling the potential of the sector and address its duality.** There is likely to be increased space for PPPs in key trade-related services (trade information, certifications, veterinary services). Moreover, there is substantial demand for new agricultural financing products for lower-income customers. Finally, at the very end of the value chain, retailers can take various steps to increase inclusion by, for example, implement a sector code of conduct to encourage suppliers and retailers to offer fair prices and terms of supply to smaller players.<sup>68</sup>

**However, there is also a lot government could do differently to support private investment.** The sector's greatest potential is primarily around addressing its dualism and increasing inclusivity—which is primarily an issue of addressing policy constraints, sector governance, and improving access to finance. Increasing the capacity of DAFF and related agencies so they can effectively support private sector will build trust and ensure that the public goods needed by producers to start-up, grow, manage risks, and export are available. The recommendations are grouped into “general,” those which are specific to the two value chain analyses on citrus and yellow maize, and suggested interventions that the World Bank Group could roll out to support this sector building on the project with the Land Bank.

## General recommendations

### Increasing inclusivity

With respect to the debates on **land reform and access to land** there is considerable scope to:

- Develop a **comprehensive audit on land and irrigation water** and improve data to facilitate a shared understanding of what the scale of redistribution has been.
- **Review ongoing transformation and**

**redistribution programs** not only from a perspective of racial and socio-economic inclusiveness, but also gender. For example, because of their limited access to capital through credit and formal employment, women face difficulties in purchasing land in the market-assisted land redistribution program.

- Support and scale up investments in **improved water- and power-efficient irrigation** and irrigation management systems.

Finally, following the release on March 31, 2019 of the Final Report of the Presidential Advisory Panel on Land Reform, it will be important to urgently begin addressing its recommendations for fast-tracking land reform via the Inter-Ministerial Committee on Land Reform. In this context, there is scope for showcasing examples of the redistribution and restitution programs which have been effective and assessing the potential for transferring lessons to South Africa.

In the area of **access to finance**, recommendations include:

- Carry out an **agriculture finance diagnostic** in South Africa to understand the demand and supply side constraints of agricultural credit and investments, identify the key challenges to expanding access to financial services in the agricultural sector and key opportunities to further develop agriculture finance in South Africa.<sup>69</sup>
- Support **programs that improve the productivity** of emerging farmers and more effectively linking these to markets.<sup>70</sup>
- Identify the key market failures and public good challenges for agriculture insurance for emerging farmers through an **agricultural insurance solutions appraisal**. The findings of the appraisal would provide recommendations to the GoSA outlining options for public sector support to the market, with associated costings. Recognizing the challenges with access to credit for subsistence and emerging farmers, the analysis should investigate the potential of agriculture insurance to act as collateral for loans.

Finally, to address the country's **skills deficit**, the following options are advised:



- **Assess mentoring programs and technical colleges** to determine how to make them more attractive for instructors and mentors, and in turn increase retention.
- **Assess skills gaps in key areas** (health/SPS, extension services, entrepreneurial skills) to determine what kind of provision is viable.

### Supporting integration into local, regional, and global markets

Recommendations to help producers access regional and global markets include:

- Focus on **strengthening exporters and export associations** with direct links to producer organizations and producers to expand exports given DAFF's capacity constraints, with a particular focus on supporting the export competitiveness of emerging farmers.
- **Improving market access to key export markets** (especially EU but also emerging export destinations such as China, Vietnam and India) and clarifying risks related to losing market access to the United States under AGOA.
- **Address the inadequacy of rail transport services from remote areas** to Durban harbor and improve port infrastructure. Engage Transnet on the revitalization of the rail network in support of the agricultural sector.
- The greatest potential for increasing exports, especially for emerging farmers, most likely lies in Sub-Saharan Africa. Thus, **moving towards greater harmonization/mutual recognition on non-tariff barriers and standards within the SADC region** and via the African Continental Free Trade Area with a focus on developing regional value chains.

### Supporting competitiveness and investment

Recommendations to help producers access regional and global markets include:

- Focus on **strengthening exporters and export associations** with direct links to producer organizations and producers to expand exports given DAFF's capacity constraints, with a particular emphasis on supporting the export competitiveness of emerging farmers.
- **Improving market access to key export markets** (especially the EU, but also emerging export destinations such as China, Vietnam, and India)

and clarifying risks related to losing market access to the United States under AGOA.

- **Address the inadequacy of rail transport services from remote areas** to Durban harbor and improve port infrastructure. Engage Transnet on the revitalization of the rail network in support of the agricultural sector.
- **Move towards greater harmonization/mutual recognition on non-tariff barriers and standards within the SADC region** and through the African Continental Free Trade Area with a focus on developing regional value chains, as the greatest potential for increasing exports, especially for emerging farmers, most likely lies in Sub-Saharan Africa.

To address **barriers to competition**, recommendations include:

- **Review impact of tariff formulas for wheat, sugar, and maize** on consumer prices and contestability of markets, taking into account broader agricultural value chains.
- Facilitate **access to value chain facilities and logistics** (such as storage, pack house capacity, floor space in NFPMs) for emerging farmers.
- Consider the potential to **regulate enforcement of private standards**, for example, by establishing mandatory grace periods for small firms and new entrants to attain gradual compliance with private standards and ensure that small suppliers are represented in the establishment of public standards, for example, with representation on the South African Bureau of Standards.
- Develop and implement a voluntary or obligatory **code of conduct for the retail sector** to encourage retailers to offer fair prices and terms of supply to smaller players.<sup>71</sup>
- **Promote competition between retailers** (and provide suppliers with more outside options) to address imbalances in bargaining power between suppliers and retailers. For example, support buying groups that buy in bulk on behalf of independent retailers. Consider approaches to regulate exclusive lease arrangements between supermarkets and malls which may restrict entry by other retailers.<sup>72</sup>
- Following amendments to the Competition Act, **publish clear and transparent regulations/guidelines on assessing buyer power and price discrimination** by buying firms.
- **Assess the impact of supplier developer programs** implemented by large agro-processors and

retailers to understand how their impact on entry and expansion of new players can be enhanced.

### Supporting resilience to climate change

To address potential **climate-related risks and water scarcity**, recommendations include:

- Explore the potential to **expand access to agriculture insurance to emerging and commercial farmers** in South Africa, which can act as collateral for loans and develop a comprehensive approach to risk management approach where insurance products can complement agriculture risk management techniques, while facilitating access to credit for emerging farmers and remove parts of agricultural risk from farmers.
- **Addressing water rights with as much urgency as has been shown around land rights** and ensuring that secure rights are allocated rights to emerging commercial farmers falling within support programs.
- **Support and scale up investments in improved water- and power-efficient irrigation and irrigation management systems.**

### Sector-specific recommendations

#### Citrus

To drive forward the integration of emerging commercial farmers in the citrus sub-sector, the following is recommended:

- **Tenure security needs to be assured** over the long term. Short-term (three-year) leases on PLAS farms are inadequate.
- Poorly resourced farmers are reluctant to consider long-term crops with delayed returns due to short term financial needs. Appropriate **industry, technical, and mentoring support** is required in addition to appropriately structured financial products using matched government grant and commercial loans.

- Commercial producer associations are restricted from using land as collateral to raise finance. As community, group-owned entities based on democratic principles, these usually have weak institutional governance systems. **Governance support and strengthening is required.** Joint ventures between private companies and common property associations as land-owning entities can be successful if appropriately negotiated and structured.
- **Private joint ventures** between existing, large, financially strong, commercial growers and individual, emerging, commercial growers, where the commercial partner brings finance, expertise and access to a pack house and markets is another potentially sustainable model.
- Government use of **community governance development councils as implementing agents for grant funds** to support emerging commercial farmers, within clearly agreed project parameters to address critical success factors is proving successful. This could be scaled up.
- **Review target investments of the CGA and prioritize according to effectiveness for transformation** (investments in infrastructure, such as pack houses, might prove more useful to black farmers than skill-building activities). Increase transparency and reduce discretion in allocation of the industry levy by the CGA to boost transformation.
- Create a **permanent representation of black producers within the CGA**, and review the composition of the state-run export certification body, the Perishable Produce Export Certification Agency (PPBEC), given the role of large incumbents on the board.
- **Reduce the cost of inspection and certification for small producers**, for example with a fee structure that differentiates between small and large producers.

Potential areas for engagement are highlighted in **Figure 20** below.

**FIGURE 19 PUBLIC AND PRIVATE SECTOR ENGAGEMENT OPPORTUNITIES IN CITRUS SECTOR**

	SHORT TERM	LONG TERM
<b>PRIVATE SECTOR SOLUTIONS</b>	<ul style="list-style-type: none"> <li>Engage government for a sector-wide emerging farmer support program.</li> <li>Finalize the development and integration of e-commerce PhytClean system with government systems for ease of phytosanitary certification.</li> <li>Identify new markets for the future increased lemon and soft citrus (easy peeler) crops.</li> </ul>	<ul style="list-style-type: none"> <li>Investment in improved water efficient irrigation systems.</li> <li>Larger commercial producers consider partnering with emerging commercial neighbouring farmers within an appropriately designed support program to provide access to expertise, finance, pack house and markets.</li> </ul>
<b>POLICY SUPPORT &amp; MARKET FAILURES</b>	<ul style="list-style-type: none"> <li>Develop a clear program of support in partnership with CGA to assist emerging commercial farmers to address constraints.</li> <li>Support CGA in securing trade agreements and addressing phytosanitary protocols that are discriminatory and a threat to exports.</li> <li>Identify areas where water rights can be made available to emerging commercial farmers.</li> </ul>	<ul style="list-style-type: none"> <li>Ensure markets to EU are accessible, address trade protocols with Vietnam, China and India and other countries identified as potential export destinations.</li> <li>Allocate water rights to emerging commercial farmers that fall within a properly accredited CGA support program so as to ensure the best opportunity for success.</li> </ul>
<b>PUBLIC AND CONCESSIONAL FINANCING</b>	<ul style="list-style-type: none"> <li>Allocation of existing grant support programs to emerging commercial farmers identified through CGDC.</li> <li>Design a program of support of a full package of appropriately structured and blended. Grant commercial funding to enable the establishment of emerging commercial farmers.</li> </ul>	<ul style="list-style-type: none"> <li>Transport: Improve rail transport service from Limpopo to Durban.</li> <li>Port infrastructure: Address deficiencies in port cold room facilities and loading systems.</li> <li>Investment in emerging commercial farmer development projects.</li> </ul>

Source: Pringle (2018a).

**Yellow maize**

To drive forward the integration of emerging commercial farmers, the following is recommended:

- The Eastern Cape region offers an opportunity for significant expansion, potentially by 500,000-hectares, of which 360,000 hectares are unutilized—only about 11,000 hectares of commercial yellow maize are under cultivation. The high concentration of

subsistence farmers producing about 125,000 hectares of maize could be transformed to emerging commercial farmers.

- Institutional arrangements need to focus on commercial business development under business principles. Institutional rules should incentivize Good Agricultural Practice (GAP) and best business practice. **A clear route to market, with clearly-understood price-fixing arrangements is essential.** Organizational arrangements should

- ensure professional management by suitably skilled and qualified individuals selected on merit. Adequate scale economies of the production base need to be a consideration.
- A **structured, well-managed training and capacity development program**, including both technical farming and business management skills is required.
  - **Cost effective mechanization is critical.** Competitively-priced contracting services should be available with appropriate equipment.
  - **Lower the cost of accessing a silo by small farmers** and ensure adequate storage infrastructure is provided before the harvest season so that grains can be properly stored to maintain quality. Fencing in of arable lands will be required to ensure controlled access.
- Potential areas for engagement are highlighted in Figure 21 below.

**FIGURE 20 INVESTMENT CONSIDERATIONS FOR YELLOW MAIZE**

<b>Will additional investments in this subsector add value to South Africa?</b>		<b>IMPACT</b>
Potential Development Impact	The sector supports significant domestic earning and supply into related animal feeds value chain. It has low per ha employment creating capacity but it does so in deep rural areas. Significant additional production potential in Transkei region, would have a high developmental impact sub-regional level.	High ➔ <b>Medium</b> Low
<b>Does this subsector offer an attractive proposition for investors?</b>		<b>TARGETED MARKET</b>
Is the local/regional market attractive?	The regional market has attraction compared to global market due to proximity but neighboring countries becoming self-sufficient. Local market for feed is attractive with projected future growth.	Global Regional ➔ <b>Domestic</b>
Is the global market attractive?	Limited to markets (SE Asia) that require a good quality but international prices are significantly lower than domestic.	
<b>Does South Africa offer competitive supply conditions for investors in this sector?</b>		<b>COMPETITIVENESS</b>
Does South Africa have competitive natural endowments?	No - climatic variability from one season to the next creates challenging production conditions, but current production does satisfy domestic demand.	High ➔ <b>Medium</b> Low
Does South Africa have competitive inputs and support services?	Moderately - bulk inputs of fuel, fertilizer and chemicals are usually imported and exchange rate fluctuations create challenges. Support services from government are weak but technical support from input sector is good and information services good.	
Does South Africa offer a conducive business environment?	Moderately - uncertainty on land rights, legislated wage rates and high administered prices relative to service offering have negative impacts but a strong finance sector making production credit available, SAFEX as a risk mitigating mechanism and a strong private sector creates an environment incentivizing efficiency gains.	

Source: Pringle (2018b).

## How can the World Bank Group support this agenda?

The World Bank and IFC have substantial expertise in the agricultural and agribusiness sector. The World Bank is already providing support through the Land Bank Financial Intermediation Project. There are also advanced discussions with SECO

about a new program targeting water/energy use in the agro-processing industry. In this context, this CPSD may unlock opportunities in this sector by addressing some of the overarching constraints to its development, including on competition, fostering linkages to MSMEs, and larger agro-processing firms. Finally, this is an area where the IFC has a significant portfolio (up to four transactions and \$70–100 million per annum).

### In Summary

Factors affecting private investment	Policy options outlined in the report	World Bank Group role
<b>Agriculture and agribusiness</b>		
<p><b>Governance framework:</b> Policy is spread across numerous ministries and departments with overlapping responsibilities, while capabilities within ministries to meet mandates are declining. Efforts to monitor and evaluate past support programs (especially in terms of land reform and redistribution) are limited.</p>	<ul style="list-style-type: none"> <li>■ Increase space for PPPs in trade-related services (trade information, certifications, veterinary services).</li> <li>■ Improve access to key export markets (especially EU but also emerging export destinations).</li> <li>■ Address non-tariff barriers within the Southern African Development Community (SADC) region.</li> </ul>	<ul style="list-style-type: none"> <li>■ <b>Advisory support</b> to support an agriculture sector public expenditure review (including land reform spending), provide expertise to move towards PPP models in key trade-related services, develop new trade agreements for key export markets (especially in Asia), analyze the impact of trade barriers within SADC region, and support multi-country processes that enable harmonization of standards to facilitate intra-regional exports.</li> <li>■ <b>World Bank lending</b> for capacity building and financial support for producer organizations to provide support services (entry, exporting).</li> </ul>
<p><b>Access to finance for emerging farmers:</b> Subsistence and emerging farmers remain largely excluded from agricultural finance and insurance products. The lack of credit results in low investment, dampening yields and productivity. Increasing levels of financial inclusion have not led to a deepening of the relationship between emerging farmers and agricultural financial service providers. Most emerging farmers lack collateral and the capacity to develop bankable business plans.</p>	<ul style="list-style-type: none"> <li>■ Support development of agriculture insurance.</li> <li>■ Increase efforts to bring commercial banks into lending to emerging farmers, for example, by providing risk guarantees and facilitating access to collateral.</li> </ul>	<ul style="list-style-type: none"> <li>■ <b>Advisory support</b> on agricultural insurance markets, especially in the context of increased climate risks, and for an agriculture finance diagnostic to understand the demand and supply side constraints of agricultural credit and investments.</li> <li>■ <b>World Bank lending</b> to scale-up the Land Bank project supporting blended finance initiatives for emerging farmers.</li> <li>■ <b>Potential IFC investments</b> to direct funding to key players in chosen sectors to strengthen</li> </ul>



Factors affecting private investment	Policy options outlined in the report	World Bank Group role
		out-grower programs and risk sharing facilities with South African banks.
<p><b>Skills among emerging farmers:</b> Agricultural colleges remain in poor shape. In some core areas there are gaps leading to a shortage of agriculturalists, agricultural engineers, and veterinarians.</p>	<ul style="list-style-type: none"> <li>■ Enable greater skills transfers from larger commercial to emerging farmers through mentorship.</li> </ul>	<ul style="list-style-type: none"> <li>■ <b>Advisory support</b> to assess existing mentoring programs for emerging farmers to determine interventions that lead to retention and skills transfer.</li> <li>■ <b>Potential World Bank lending</b> to support skills programs in key deficit areas through extension programs, universities and TVETs, including potential direct funding to agricultural colleges.</li> </ul>
<p><b>Land and water rights:</b> Lack of secure land and water rights deter investment and limit scope for credit.</p>	<ul style="list-style-type: none"> <li>■ Bring certainty to investors by quickly finalizing the amendments to land reform and the framework for how this will be applied in practice.</li> <li>■ Consider performing a comprehensive land audit to improve shared understanding of redistribution to date.</li> </ul>	<ul style="list-style-type: none"> <li>■ <b>Advisory support</b> to assess the effectiveness of past restitution and redistribution programs, conduct a comprehensive land audit, and support exchange and lesson learning from other countries' land reform processes.</li> </ul>
<p><b>Climate change and water scarcity:</b> Growing demand is likely to lead to more intense competition for natural resources, increased greenhouse gas emissions, further deforestation, and land degradation. Substantial spatial misallocations that exacerbate water insecurity.</p>	<ul style="list-style-type: none"> <li>■ Increase preparation for El Nino by strengthening government insurance for disasters.</li> <li>■ Explore the potential to expand access to agriculture insurance to emerging farmers which can act as collateral for loans.</li> <li>■ Develop a comprehensive approach to risk management.</li> <li>■ Investing in improved water-efficient irrigation systems.</li> </ul>	<ul style="list-style-type: none"> <li>■ <b>Advisory support</b> to develop a Climate Smart agriculture strategy, develop risk management techniques to help emerging farmers access credit, conduct analytical work for an audit on water rights linked to restituted or redistributed land.</li> <li>■ <b>Potential World Bank lending</b> to develop improved and more water-efficient irrigation.</li> </ul>
<p><b>Barriers to competition:</b> Industry associations can perform valid roles in a market but can also serve as fora for information exchange and therefore facilitate collusion. The involvement of associations and large incumbents in channeling government support to emerging farmers may lead to conflicts of interest. The imbalance of market power between small suppliers and large buyers (such as retailers and</p>	<ul style="list-style-type: none"> <li>■ Assess the role and mandate of industry associations and consider how to minimize the potential for anticompetitive outcomes.</li> <li>■ Ensure effective implementation of new provisions of the Competition Law to tackle anticompetitive behavior by associations or abuse of dominance by large buyers.</li> <li>■ Advocate with large buyers to encourage fair dealing with small suppliers (for example, through codes of conduct).</li> <li>■ Build mechanisms and capacity for regulators and policy makers (such as SABS, ITAC, DAFF, dti)</li> </ul>	<ul style="list-style-type: none"> <li>■ <b>Advisory support</b> to the Competition Authorities' enforcement and advocacy work in the sector; embed competition principles in key value chains in the market framework for National Fresh Produce Markets and in the retail sector; implementation of the Competition Law (including clear and predictable regulations and guidelines); o rationalize the role of industry associations in the</li> </ul>

Factors affecting private investment	Policy options outlined in the report	World Bank Group role
processors) reduces incomes for small suppliers.	to embed competition principles in standards, market rules, and public policies. ■ Establish a pro-competition framework for the design and award of government support programs.	market; analyze the impact of existing tariff formulas for wheat, sugar, and maize on consumer prices and market contestability.

### 3.2. Automotive manufacturing deep dive

South Africa is a small player in the global automotive market but a leader in the Africa region (Figure 23). South Africa produced about 600,000 units in 2017, with an estimated share of global production of 0.63 percent, far behind other BRICS economies. South Africa is ranked 22 based on its global share of car production. A relatively small domestic market and long distance to key export markets—the United States, European Union, and Japan—puts South Africa at a disadvantage relative to many competitors. However, South Africa is a leading automotive producer on the continent, and accounts for 59 percent of total motor vehicle production in Africa. It is followed by Morocco, which accounts for 35 percent of total vehicle production with 376,286 units (Econometrix 2018).

The automotive industry is among South Africa’s leading manufacturing industries and has performed better in terms of investment, output, and exports. It accounts for 30.1 percent of the country’s manufacturing output and 13.9 percent of its total exports (Export Manual 2018). It also plays a significant role in employment and accounts for 8.6 percent of total formal jobs (when linkages with other industries are taken into consideration).<sup>73</sup> The automotive industry’s generally positive performance has persisted even against the backdrop of sluggish domestic demand and weak overall growth of manufacturing activity. Indeed, South Africa’s manufacturing sector performed poorly overall. Employment in the sector declined from 1.9 million in 2008 to 1.7 million in 2016 (dti) and manufacturing valued-added went down from 14 percent to 12 percent of GDP over the past decade (World Bank, WDI indicators).

These positive trends in the automotive industry have come on the back of expansion of the operations by

the original equipment manufacturers (OEMs) that assemble vehicles, whereas the component industry has performed below its potential. Component manufacturing firms struggle to compete with other emerging economies for a variety of reasons that we unpack later in this section. Future growth of the industry in South Africa will hinge on OEMs global strategies to address cyclical factors (saturated markets, overcapacity in automotive manufacturing globally) as well as South Africa’s ability to compete with other investment destinations. The latter would require opening up SOE-dominated sectors among other factors.

Supportive government policy played an important role in developing the automotive industry. The car industry enjoyed relative policy certainty provided by the Automotive Production Development Program (2013–20), which offers a combination of duty rebate schemes and cash grants for qualifying investments. Following in-depth consultations with private sector stakeholders and academia, the program was extended to 2035 (with some amendments), providing further confidence to industry players. The government is also engaged in dialogue with the industry to make the ownership requirements of the Broad-Based Black Economic Empowerment (BBBEE) legislation achievable for the OEMs. At the provincial level, there are also numerous initiatives to support the industry through infrastructure investments (such as Coega Special Economic Zone in Nelson Mandela Bay and the Automotive Supplier Park in Gauteng) as well as supplier development programs.

#### Global Trends in the Automotive Industry and Implications for South Africa

The global automotive industry is undergoing continuous change. This section focuses on three important trends with potential implications for South Africa:

1 *Trade wars and rise in protectionism can threaten access to South Africa's traditional export markets.* The Trump Administration has initiated an investigation under Section 232 of the Trade Expansion Act of 1962, as amended. The investigation will determine whether imports of automobiles, including SUVs, vans and light trucks, and automotive parts into the United States threaten to impair the national security. Given the timelines of the investigation, the status quo is likely to remain in place until May 2019. The potential negative impact from May 2019 would be mostly felt by the component industry. Even if the ongoing Section 232 investigation does not impact South Africa's access to the U.S. market, there is uncertainty about the post-AGOA trade regime and concerns that the planned NAFTA agreement between Mexico and the United States may serve as the new blueprint for trade deals with other countries. The agreement requires that cars have 75 percent of their content originate in the United States and Mexico, and that workers earn higher minimum salaries.

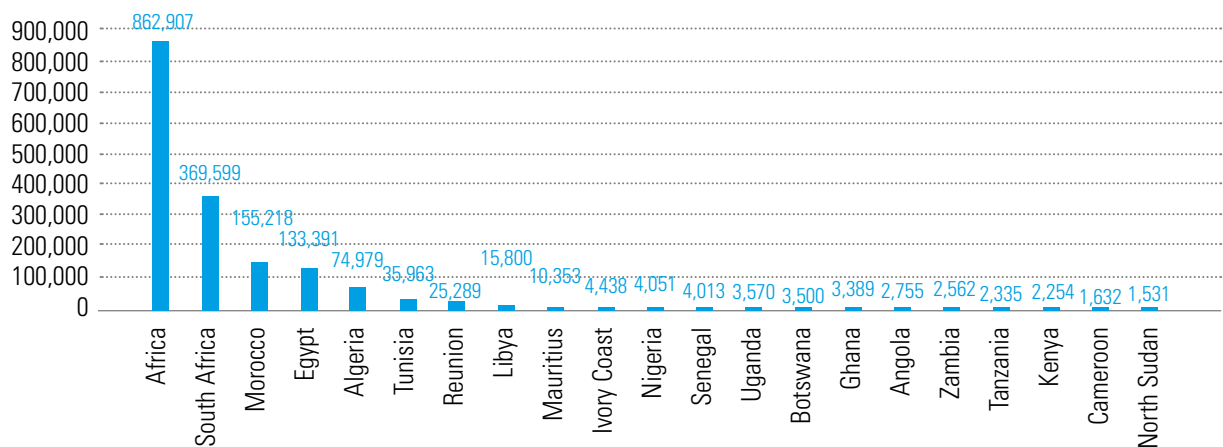
If the European companies are squeezed in the U.S. market, the EU can introduce protective measures as well. In addition, Brexit could lead to a worsening of South Africa's access

to the U.K. market until a new agreement between South Africa, SACU or SADC and the United Kingdom is negotiated to replace the current Economic Partnership Agreement (EPA) between the EU and SADC. Brexit could also result in the United Kingdom's economy worsening and reduce demand for vehicles and other goods.

2 *Increasing share of emerging markets in global automotive sales.* Emerging markets already contribute the bulk of growth in vehicle sales. The demand is particularly strong in Asia: sales in the region are projected to grow 4.7 percent in 2018 versus 3.6 percent of global sales growth.<sup>76</sup> Lack of free trade agreements with Asian economies disadvantages South African manufacturers relative to some competitors. Sub-Saharan Africa has the lowest vehicle ownership rate and demand for cars relative to other regions. Most markets on the African continent are small; vehicle sales are dominated by second-hand cars. Nevertheless, the regional market has good potential for growth, driven by growing populations and fast urbanization. Several governments such as Kenya, Nigeria, and Rwanda are also trying to develop assembly operations. These would create opportunities for South Africa's component manufacturers.

**FIGURE 21 MOST MARKETS ON THE AFRICAN CONTINENT ARE SMALL**

Provisional new passenger car registrations or sales on the African continent, 2017



Source: OICA.

3 *New disruptive technologies can impact demand for certain components and cars overall.* Tightening environmental standards and the move toward greener technologies (electric vehicles and hybrids) will have a major impact on engine production and may reduce demand for catalytic converters—a key export product of South Africa’s component industry. It will also expand the opportunities for manufacturing of certain components, such as batteries. A shift toward the use of lighter materials (for example, aluminum) and recyclable components also offers opportunities for the new players but requires partnerships with OEMs and Tier 1 suppliers as well as investments in R&D. Vehicle manufacturers also need to adapt

to the more demanding fuel standards. South Africa has Euro 2 fuel standards and OEMs operating in the country need to manufacture vehicles with different engine specifications for the domestic and international market, which increases their production cost. Lastly, software and infotainment components account for an increasing value of vehicles and are a source of innovation; South African suppliers are not yet active in this segment. In addition, increased emphasis on autonomous and semi-autonomous cars and connected vehicles, combined with the spread of mobility services can have a major impact on private car ownership—particularly in developed countries.

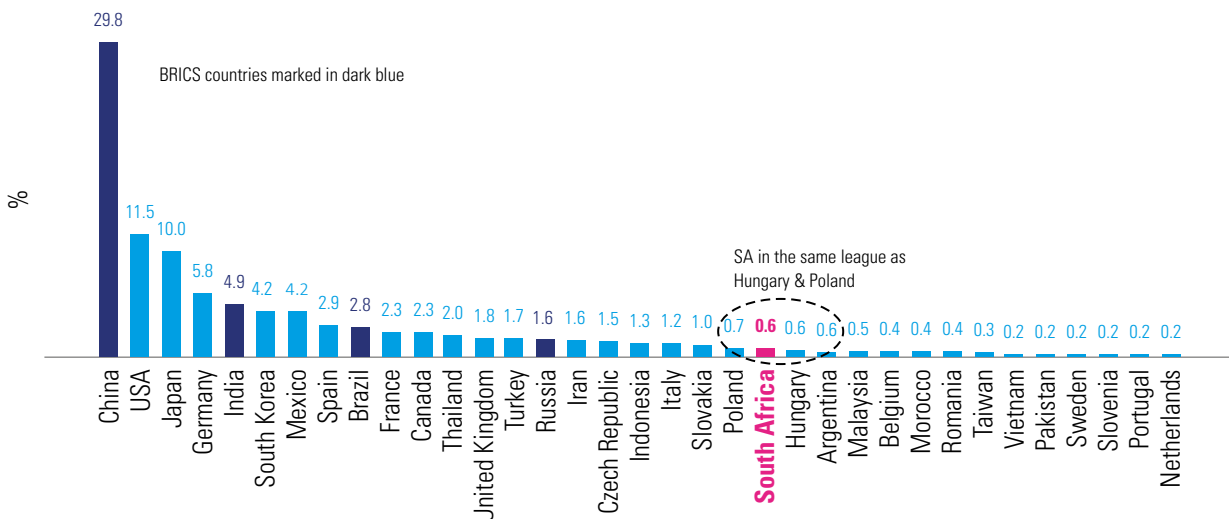
**Key features of automotive industry in South Africa**

South Africa is home to major global OEMs, some of which are expanding production. The country is home to seven light commercial vehicle (LCV) manufacturers and nine assemblers of medium and heavy commercial vehicles (MCVs and HCVs) and buses. There are no domestic car manufacturers; the industry is driven by OEMs. Some of the global manufacturers with established operations in South Africa have recently expanded production or announced plans to do so, the total investment would reach almost 20 billion

Rand. The OEMs are clustered in three provinces—the Eastern Cape, Gauteng, and Kwazulu-Natal.

Car manufacturers from emerging markets also see South Africa as an attractive investment destination. Two investments underway by manufacturing companies from China and India would be located in Port Elizabeth (at the Coega Special Economic Zone) and in Durban. Although these are small operations, currently focused on semi-knockdown (SKD) assembly, they have the potential to grow into export-oriented enterprises with a focus on the regional market where lower cost models are in strong demand.

**FIGURE 22 SHARE IN TOTAL WORLD MOTOR VEHICLE PRODUCTION, 2017**



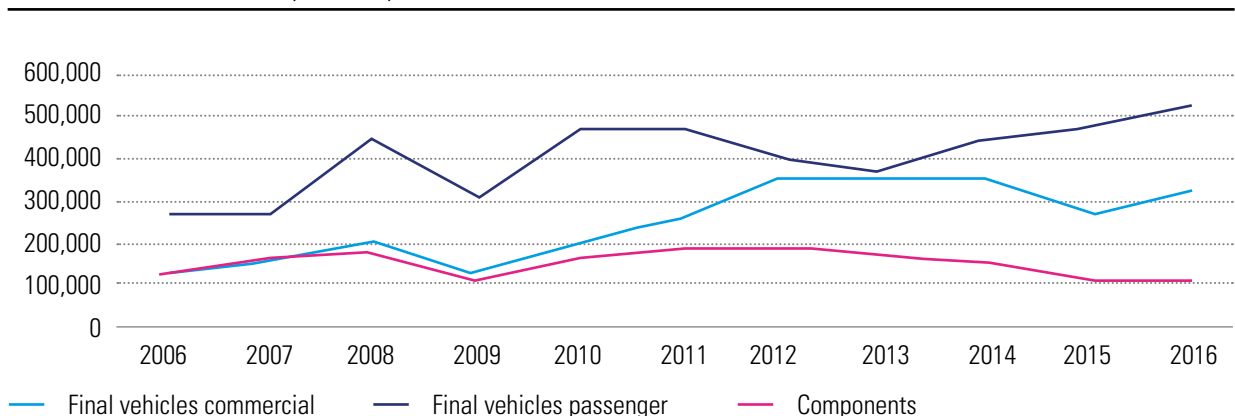
Source: Econometrix based on OICA.

The industry's relatively small size is one of the factors that impedes components' localization. Component manufacturing is a low margin industry and economies of scale are essential for profitability. Fewer than 40 percent of the components used in vehicles manufactured in South Africa are of local origin. Relatively low volumes of local vehicle production, distance to other large automotive producing countries and lack of a regional value chain constrain development of the South African component industry. These factors impede both the entry of new Tier 1 suppliers and the growth of the local component industry; only a quarter of the 150 Tier 1 suppliers operating in South Africa are local companies. Besides Tier 1 suppliers, South Africa counts with over 350

tier 2 and tier 3 suppliers that produce parts for the sub-assembly phase as well as basic products. Most of these are local companies and SMMEs.

South Africa increased exports of both passenger and commercial vehicles over the past decade. However, exports of components declined (Figure 24). South Africa registered the highest export growth rate in commercial vehicles (pickup trucks) of all comparator economies and doubled its global market share in this segment over the past decade (Annex 9A); similarly, global market share for passenger vehicles showed a positive trend (Annex 9B). However, global market share in components declined by over a third during the same time (Annex 9C).

**FIGURE 23 EXPORTS OF CARS INCREASED WHILE EXPORTS OF COMPONENTS DECLINED OVER THE PAST DECADE**  
Vehicle and Component Exports (US\$ 1,000)



Source: UNCOMTRADE.

Component exports comprise mostly basic products and are quite concentrated (Annex 9). Catalytic converters (which incorporate platinum mined in South Africa) constitute over a third of all component exports and the top three products account for almost half of all exports. There are opportunities to localize other components, particularly at the Tier 2 and 3 levels building on South Africa's large mineral deposits, but these are yet to be realized.

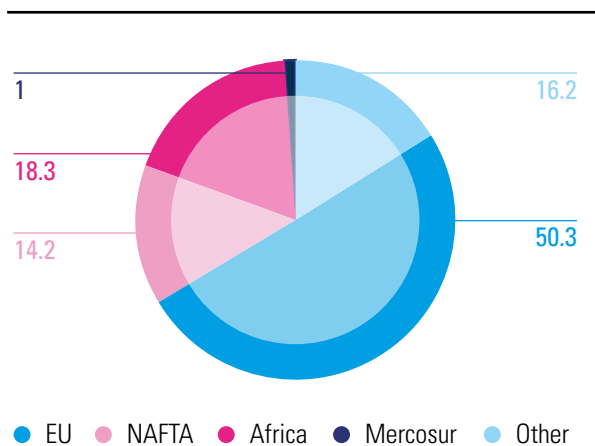
Most of South Africa's exports are destined for developed countries. South Africa benefits from free

trade agreements with the EU, the United States (under AGOA) as well as with SADC and SACU. South Africa exported cars and components to 154 countries in 2016; however, about half of all exports are destined for the EU (Figure 25). This is also the region where South Africa has achieved the most impressive growth over time (Figure 26). The United States is also an important market, although exports have stagnated in recent years. Exports to the Africa region accounted for 18 percent of the total in 2017. SADC countries comprise 86 percent of exports to Sub-Saharan Africa, indicating the importance of free trade agreements.



**FIGURE 24 THE EU AND THE US ACCOUNT FOR OVER HALF OF THE AUTOMOTIVE EXPORTS**

Share of regions in SA automotive exports, 2016



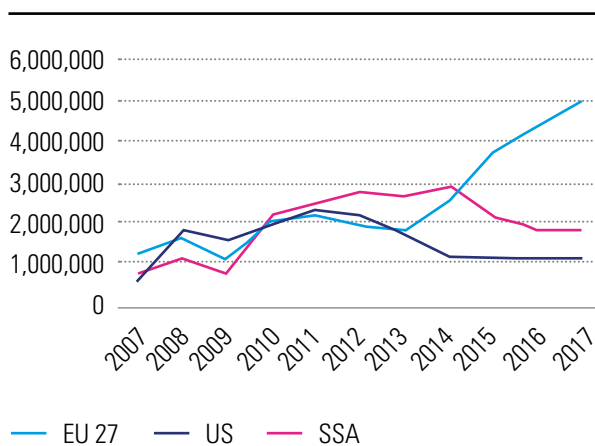
Source: Econometrix 2018.

**Government policy and related regulations**

The automotive industry has a long track record in South Africa and government policy has always played an important role in its development. The South African motor industry dates back to 1924 when the first US car maker set up an assembly operation in a Port Elizabeth wool-packing shed. Although the industry has developed under protectionism, it managed to integrate with the global market after 1994 thanks to the government’s industrial policy and export subsidies under the Motor Industry Development Program (MIDP). The latter was replaced with the Automotive Production Development Program (APDP) in 2013 to bring the incentive package in line with WTO requirements and to grow production

**FIGURE 25 SA ACHIEVED THE MOST IMPRESSIVE EXPORT GROWTH TO THE EU**

Exports of cars and components (HS 87) in US\$, thousands



Source: UNCOMTRADE

and localization of light vehicles. Importantly, imports of used cars are not allowed in South Africa, which differs from many countries in the region.

The APDP has several elements and its main objective has been to increase production. The APDP’s main objective was to increase South Africa’s vehicle production to 1.2 million units by 2020 (with associated deepening of the components industry and increase in employment). APDP has several elements, including tariffs, duty rebate schemes and a cash grant scheme (Table 3). The duty rebate schemes were introduced to compensate OEMs for the need to import certain components that are unlikely to be produced in South Africa in the short- to medium-term.

TABLE 1 SUMMARY OF APDP

Type of incentive	APDP elements (2013–20)
<b>Tariffs</b>	<b>Import duties</b> on vehicles and automotive components remain at 2012 levels (25 percent on light vehicles and 20 percent on original equipment components) through to 2020. A preferential agreement results in imported vehicles from the EU paying 18 percent duty.
<b>Duty rebate Applicable to OEMs only</b>	<b>Vehicle Assembly Allowance:</b> 18 percent of the locally assembled vehicle's wholesale price is rebated against the duty payable on imported components used in the production of vehicles (the rebate was 20 percent in 2013 and went down to 10 percent in 2014 and 18 percent in 2015). This represented 4 percent of the ex-factory vehicle price in 2013, reduced to 3,6 percent in 2015. From 2016 the VAA is calculated on a sliding scale based on total plant production, commencing at 10 percent for 10,000 units to 18 percent for 50,000 units annually (Before 2016, only vehicle assemblers producing at least 50,000 vehicles qualified for the incentive).
<b>Duty rebate applicable to both the OEMs and component manufacturers</b>	<b>Production Incentive (PI):</b> calculated as a percent of value addition and given in the form of duty-free import credits. In 2013, this support started at 55 percent of the designated local value addition, reducing by 1 percent annually to 50 percent for 2018–20. Vulnerable products earn a higher PI. The exact level of benefit from the PI is dependent on the actual levels of value addition and can vary significantly by applicant.
<b>Cash grant applicable to OEMs and component manufacturers</b>	<b>Automotive Investment Scheme (AIS):</b> non-taxable cash grant of 20–35 percent of qualifying investment in productive assets. The benefit is payable over three-years. Vehicle manufacturers must demonstrate that they have achieved or will achieve a minimum of 50,000 annual units of production within a period of three years to be eligible for the AIS. Qualifying component manufacturers must be part of the OEM supply chain (should be able to provide a contract or a letter of intent issued by the OEM).

Source: Adapted from Barnes et al. 2017.

Although the APDP initially aimed to support light vehicle production, some of its provisions were extended to the MCV/HCV sector: (a) production incentive (PI) can also be earned for components produced for trucks/HCVs (however, it is earned by the component manufacturer and not passed through to the heavy commercial vehicle manufacturer as is done on light vehicles), and (b) the AIS scheme for the MCV/HCV has been available since 2014.

Interviews with industry stakeholders reveal that APDP was essential for maintaining OEM operations in South Africa and encouraging new investments. The key results of the APDP could be summarized as follows: (a) investment by OEMs and aggregate vehicle production has increased (however, the government's target of increasing production to 1.2 million units by 2020 will not be achieved as it was over-ambitious for a seven-year period, particularly in the context of the weak global economy and overcapacity in the global automotive industry); (b)

absolute local content increased thanks to increased assembly but local content levels as a percentage of sales declined since the start of APDP; (c) there was a marginal increase in employment levels, despite the drive towards automation (Barnes et al/ 2017).<sup>74</sup> These results were accomplished against the backdrop of the overall decline in manufacturing activity in South Africa, weak domestic demand, and stagnant demand in South Africa's main export markets. The APDP may have also incentivized capital intensive production (despite the government's objective to create labor intensive jobs) and production of expensive/luxury vehicles (that have higher margins but will be harder to sell in the domestic and regional market).

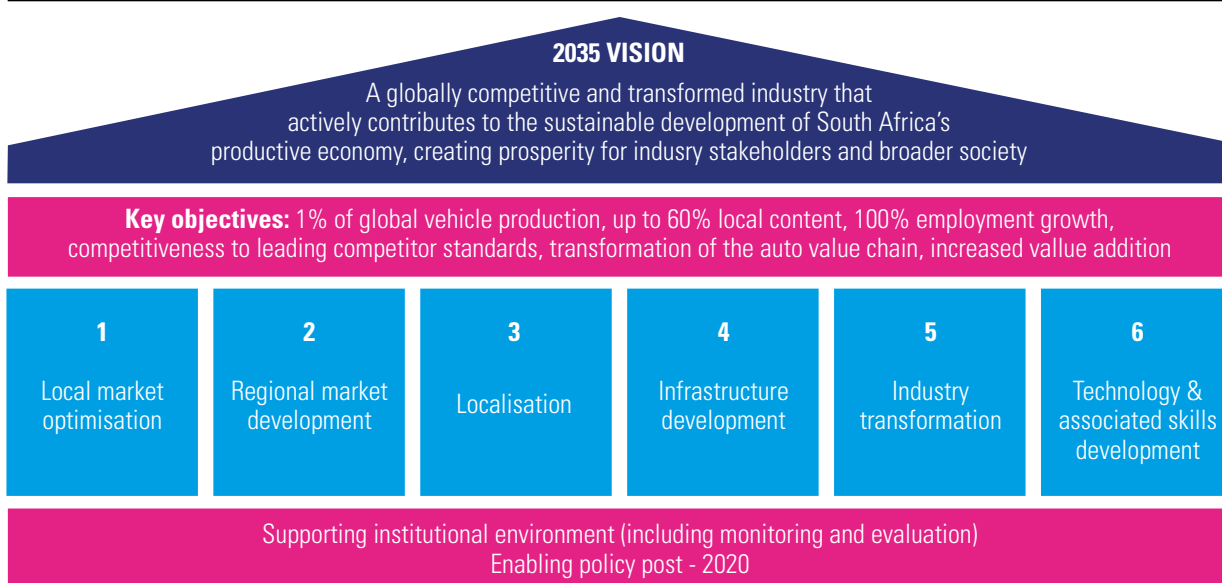
Going forward, OEMs believe that preserving APDP incentives is essential for further growth of production in the country. Based on the interview with The National Association of Automobile Manufacturers of South Africa (NAAMSA), if the level of future support is equivalent to the APDP,

the OEMs consider it realistic to grow production to 1 million units per annum by 2035, with the local content level estimated at 39–50 percent.<sup>75</sup>

The government has approved the South African Automotive Master (SAAM) Plan 2035 as the main instrument to continue supporting development of the automotive industry. The SAAM Vision and summary of objectives were announced by the DTI Minister on November 23, 2018 and the work on implementation guidelines and action plans to achieve the vision is about to commence.<sup>76</sup> The SAAM vision was developed through a consultative

process, involving industry associations representing both the OEMs and component manufacturers as well as technical experts and academia. The SAAM sets ambitious targets of reaching 1 percent of the global production, increasing local content to 60 percent and achieving a 100 percent employment growth (Figure 27). It also places increased emphasis on localization and development of strategic linkages between South Africa’s materials base (particularly platinum group metals, aluminum and certain grades of steel), and emerging automotive technology. The SAAM Vision also prioritizes development of lower Tier majority black owned suppliers.

**FIGURE 26 MASTER PLAN VISION, OBJECTIVES, AND PILLARS**



Source: Barnes et al. 2017b.

APDP incentives were extended to 2035 with amendments to support achievement of SAAM objectives and to place a greater emphasis on localization. The main change is the replacement of VAA with a Volume Assembly Localization Allowance (VALA), which will

be earned based on local value addition rather than manufacturing sales value. It will be implemented in a phased manner over the period 2021 to 2026 to protect existing OEM volume investments. Table 4 provides a summary of APDP amendments.

**TABLE 2 SUMMARY OF KEY ADPD AMENDMENTS**

Current APDP (2013–2020)	APDP Policy amendments (2021–2035)
<b>Tariffs</b>	No change in the overall tariffs; subject to engagement with the EU, the duties on EU products will be aligned with duties on products imported from other countries.
<b>Vehicle Assembly Allowance</b>	To be replaced with Volume Assembly Localization Allowance (VALA) set at 35 percent of local value add for OEM volumes above 10,000 units annually from 2026. Transition set at 40 percent in 2021 and reducing annually.
<b>Production Incentive (PI)</b>	PI to increase from 10 percent to 12.5 percent of value addition; vulnerable status benefits will be removed, so that all components earn the same benefits to eliminate any distortions in localization decisions.
<b>AIS</b>	AIS is maintained but it will be reduced by 5 percent if non-South African tooling and machinery are used.

Source: DTI, 2018 APDP Policy Amendments 202–2035.

Note: MCV/HCV manufacturers will benefit from PI and AIS incentives in the same as light vehicle manufacturers.

To qualify for current and future incentives, the industry must comply with the Broad-Based Black Economic Empowerment (BBBEE) legislation. The BBBEE program was introduced in 2003 to empower the previously disadvantaged population groups and grow the economy. The BBBEE scorecard currently has five key components: (a) ownership, (b) management and control, (c) skills development, (d) enterprise and supplier development, and (e) socio-economic development. The regulation was amended in 2016. One of the significant changes was the increase in the weight of the ownership requirements. Furthermore, penalties were introduced for non-compliance with priority areas (ownership, enterprise development, and supplier development), which result in downgrading by one level. In particular, black ownership must reach 40 percent of the net value to avoid a downgrade. Companies with an annual turnover of R 10 million or less (previously R 5 million or less) now qualify as Exempt Micro Enterprises (EMEs) and are awarded automatic Level 4 status.

The ownership requirement is hard to reach for the OEMs and international companies that cannot dilute ownership due to host governments' requirements. As a result, OEMs' compliance declined from Level 5 in 2015 to Level 8 in 2016 and 18. International Tier 1 suppliers also struggle to achieve the ownership requirement and it may discourage joint ventures between international

component manufacturers and local companies (limiting the potential of technology transfer).

OEMs have come up with an initiative to create a black-managed (equity equivalent) venture capital fund to satisfy ownership requirements. The program would allow multinationals to earn ownership credit without selling shares to black shareholders. The goal of the fund would be to drive black supplier development, upstream dealer initiatives and job creation. As a result of this initiative, OEMs could move from Level 8 to Level 4. The size and scope of the program as well as the contributions by OEMs are currently under discussion.

### Priority constraints to private sector development and investment

Further growth of the industry and achievement of government targets is constrained by several factors. Some of these, like the small domestic market and lack of the regional value chain are external constraints that are hard to act on in the short-medium term. The key constraint to achieving the government's targets on growing employment, value-added and localization is relatively weak capacity of local suppliers, linked to deficiencies of the education system and low prevalence of R&D in South Africa. While OEMs can overcome some of the skills constraints by large investments

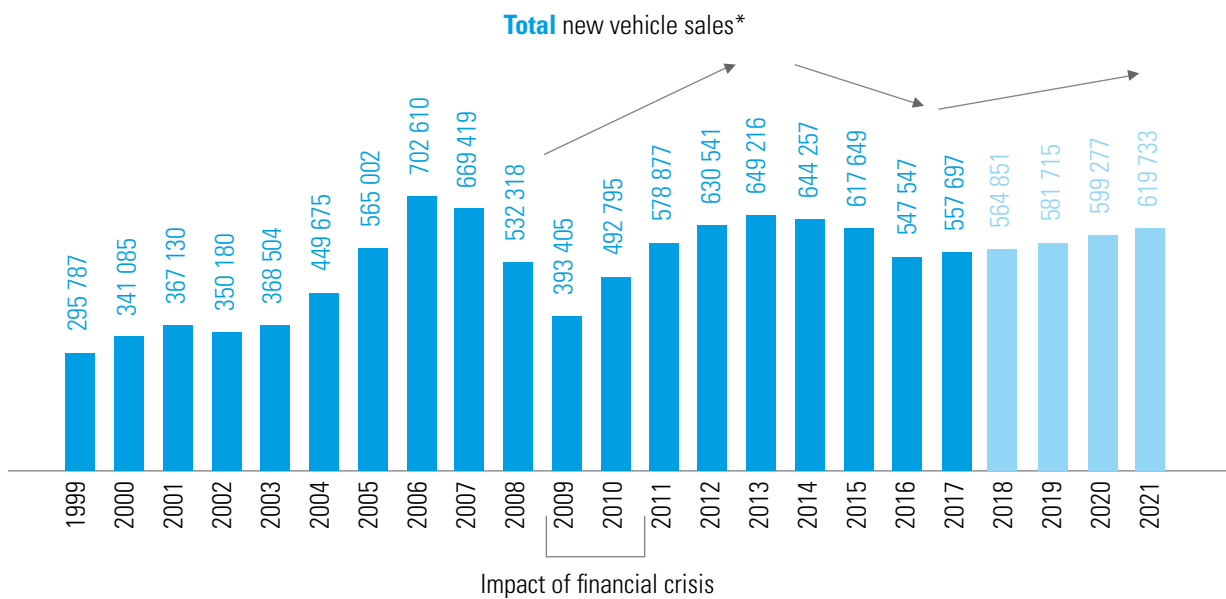
in in-house training and sending employees to their global excellence centers, the local component industry is struggling to compete with rivals from other developing countries that have access to stronger talent pools. Investing in upgrading supplier capabilities and identifying further opportunities for component localization would thus be the key measure to increase industry competitiveness, which could be acted upon in the short-medium term. Lastly, deficiencies in the investment climate and high logistics costs increase the costs of doing business for all firms in the industry and reduce the attractiveness of South Africa as an investment destination for the manufacturing industry.

**Small domestic market and weak regional integration—impede production growth**

South Africa has a small domestic market with stagnant

**demand due to slow economic growth and high poverty and inequality.** South Africa’s local market is small compared to other BRICS countries and a large share of cars is imported: 73 percent of passenger vehicles are imported compared to 20 percent of LCVs (the LCV market is much smaller, however, relative to the passenger market) (Barnes et al. 2017b). The regional market is also relatively small and highly fragmented; new car sales in SSA countries are below 30,000 units a year. Used vehicles imports (mostly from Japan and the United States) present strong competition for potential South African exports; this is because only the elites are able to afford new passenger cars, often in the luxury segment. There is also no regional value chain that feeds the automotive industries in ASEAN, NAFTA, and Central Europe/Turkey. The resulting lack of economies of scale discourages the growth of the components industry.

**FIGURE 27 SOUTH AFRICA’S DOMESTIC MARKET IS RELATIVELY SMALL**



Source: Lightstone Auto, Econometrix.  
Excluding re-exported imports

**Shortages of skills and labor costs increase production costs, which has a negative impact on component manufacturers**

As is the case with other knowledge intensive industries, skills shortages are a challenge in the automotive industry. Local component manufacturers were more likely to identify skills as a constraint

during interviews than OEMs. Domestic MSMEs find it hard to afford large in-house training programs, similar to MSMEs in other countries. Product development and component manufacturing often also involve higher skill levels than mere assembly. Skills shortages therefore have a strong negative impact on component localization and domestic value addition.



Lack of skills combined with the rigid wage setting mechanisms also contribute to the relatively high labor cost provides the average wages in the industry.

Salaries are typically negotiated at the subsector level every three years. This rigidity hurts small and medium suppliers.

**TABLE 3 AVERAGE SALARIES IN THE AUTOMOTIVE INDUSTRY**

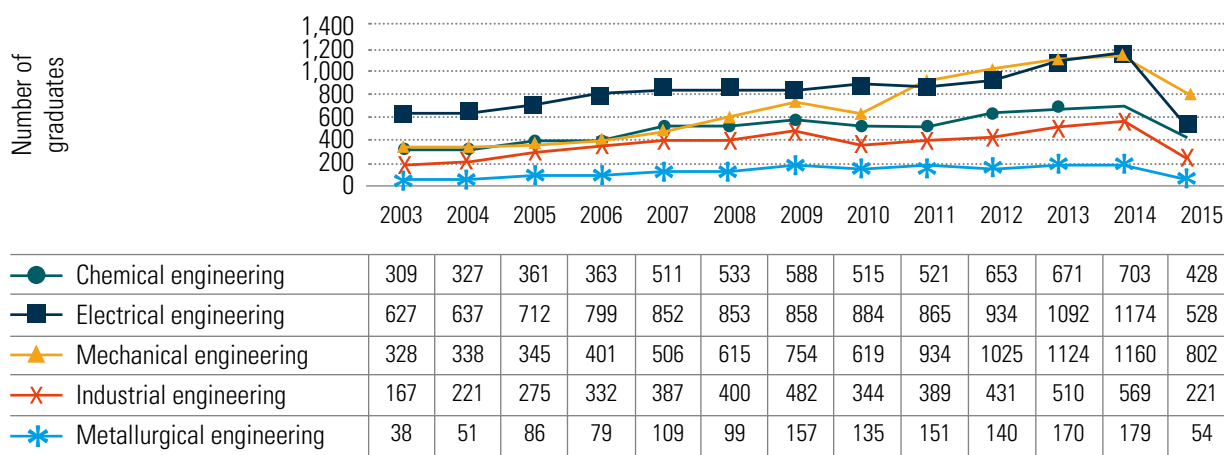
	Total employment	Share of formal employment	Average annual wage per employee 2017
Manufacturer of motor vehicles	39 335	100 %	R 377 406
Manufacture of bodies (coachwork) for motor vehicles	7 980	91,6 %	R 172 730
Manufacture of vehicles components	43 081	96,1%	R 234 911
Motor trade, maintenance and repair	401 203	56.2%	R 180 820

Source: Adapted from Econometrix 2018, based on STATsSA data.

Employees with engineering, management and select artisanal skills are in high demand but the supply of graduates with these qualifications has lagged. In particular, there is strong demand for engineers, especially with degrees in mechatronics. Furthermore, there is significant variation in the quality of university education. While some universities offer world class curricula, the degrees awarded by others

are barely recognized by the industry. In addition, completion rates in engineering fields have been low (Figure 29). Many of the skills in high demand by the industry can also be acquired through vocational training. For example, merSETA's list of skills in high demand, compiled with inputs from the industry, show over 1000 vacancies for motor mechanics and welders (Table 6).

**FIGURE 28 FIRST DEGREES AWARDED IN SELECTED ENGINEERING FIELDS, 2013-16**



Source: merSeta. 2017.

**TABLE 4 MANY OF THE TOP TEN SKILLS REQUIRED BY THE INDUSTRY CAN BE ACQUIRED THROUGH VOCATIONAL TRAINING**

Rank	OFO Code	Occupation	Relative demand
1	2015-653101	Automotive Motor Mechanic	1305
2	2015-651202	Welder	1285
3	2015-312201	Production/Operations Supervisor (Manufacturing)	1261
4	2015-832901	Metal Engineering Process Worker	904
5	2015-651302	Boiler Maker	783
6	2015-671101	Electrician	771
7	2015-721901	Product Assembler	689
8	2015-653306	Diesel Mechanic	624
9	2015-653303	Mechanical Fitter	618
10	2015-214101	Industrial Engineer	574

Source: merSeta 2017.

**The TVET institutions suffer from several weaknesses, including an outdated curriculum with poor links to industry needs, a lack of qualified professors and a lack of industry exposure for students and lecturers.** Traditionally, TVET college programs in engineering had a narrow content and were designed to meet the demands of manual low skill industries. Today, the main fields of studies offered by TVETs in manufacturing include: electrical engineering, boilermaker, diesel mechanics and engineering-related design. The importance of TVET education for skills development and youth employability has been recognized by the government. In particular, merSETA has partnered with 39 TVETs across the country and offers: (a) bursary support for TVET lecturers to strengthen qualifications through university training, (b) on-the-job training for TVET learners, and (c) funding for TVET lecturers who are not trade-certified artisans to spend 18 months in the workplace (with the option of the trade test after the intervention). The latter program had a low uptake, however: some colleges could not release lecturers (due to difficulties in finding

replacements) and some lecturers demanded additional remuneration to their college salary for industry exposure (merSETA 2017).

**Apprenticeships can provide useful industry exposure and have a positive impact on employment, but completion rates are low.** Apprenticeship programs are aimed primarily at entry level employees with high school degrees. merSETA data shows that about 84 percent of those who completed the program were employed. Despite good employment prospects, on average about a third of participants who registered for apprenticeships in the past three years did not complete the program (merSETA 2017).

**The industry responded to skills shortages through heavy investments in in-house training.** A recent merSETA report shows that even small firms in the automotive (“motor”) industry provide training to over a third of their employees while all workers benefit from training in large firms (Figure 30). The OEMs are also making significant investments in training and have collectively spent R 1.5 billion in training and development during 2015–17 (Econometrix 2017).

**FIGURE 29 TRAINING TO WORKERS IN THE AUTOMOTIVE RELATED INDUSTRIES**

Training intensity (percent of employees who are trained by size of business in each subsector)

Firm size	Auto	Metal	Motor	New tyre	Plastics
Small firm	80.2	47.4	41.3	38.0	36.0
Medium-sized firm	65.0	73.4	53.4	-	100.0
Large firm		45.8	100.0	0.0	94.8

Source: merSETA 2018, based on Borat and Naidoo, 2016.

Note: Auto refers to the after-market segment.

**merSETA programs address some skills gaps but the impact seems to be uneven.** merSETA (similar to other SETAs) is funded through a levy paid by employers. Employers whose total annual salaries to employees exceed R 500,000 have to pay a 1 percent levy of the total amount paid in salaries (including bonus payments). merSETA conducts a survey of employers on a regular basis to identify key skills gaps and facilitates access to training through grants. Some interviewed stakeholders believed that merSETA offers useful services and expressed appreciation for its work. However, others felt that the type of training offered was too general and did not respond to the needs of specific sectors or enterprises. Some of the component firms felt that OEMs benefit disproportionately from the training opportunities and that the perceived bureaucracy of accessing merSETA funding discourages small firms to apply. These issues were also recognized in the recent merSETA report. Lastly, some interviewees felt that firms would spend more on training if they did not have to contribute the 1 percent levy (that is, if a firm has paid the levy and did not benefit from it, they would not allocate additional resources for skills development).

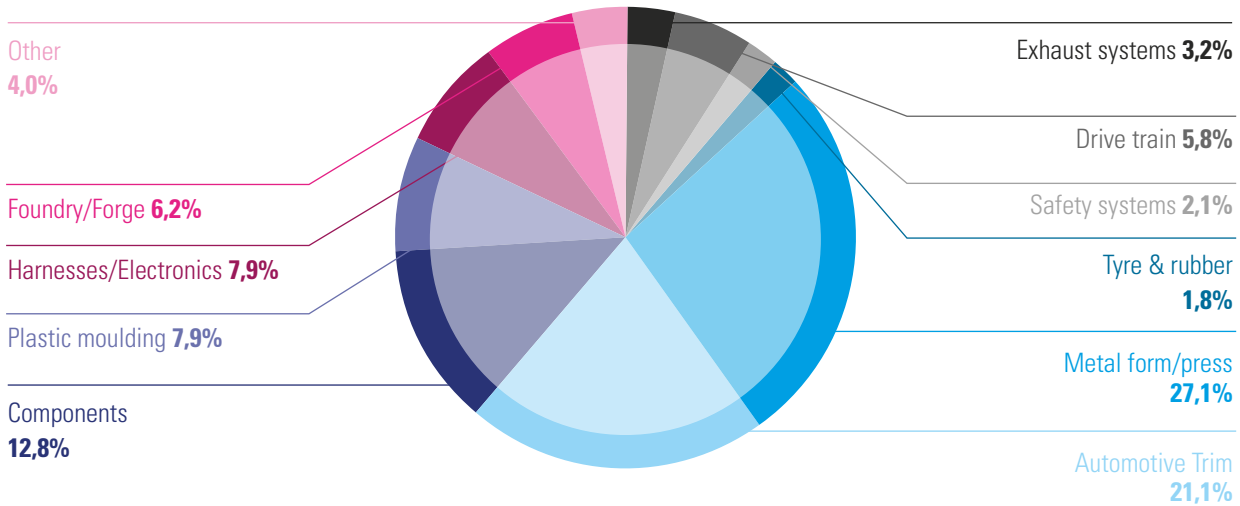
#### Weak capabilities of suppliers and low localization limit the value added of the industry

**The global automotive component industry is characterized by high barriers to entry, low margins and transactional relations with OEMs.** The automotive component industry is knowledge and capital-intensive (particularly at the Tier 1 level) and suppliers have to meet strict quality

and safety standards along with tight production deadlines. Profitability trends are correlated with company size: firms with over €10 billion revenues have higher margins than smaller suppliers (Berger 2017). Relations with OEMs are often transactional (OEMs change models every seven to eight years, making it hard to have a long-term plan for suppliers. Component manufacturers for new models are selected through global competition and typically are not changed in the middle of the cycle. Furthermore, physical proximity to OEMs is also often important due to the expectation of no defects and pressure to reduce working capital cost by reducing inventories. In fact, the agglomeration effects are so strong that South African suppliers often need to operate in four locations. Thus, distance to automotive manufacturers in other regions disadvantages South African suppliers.

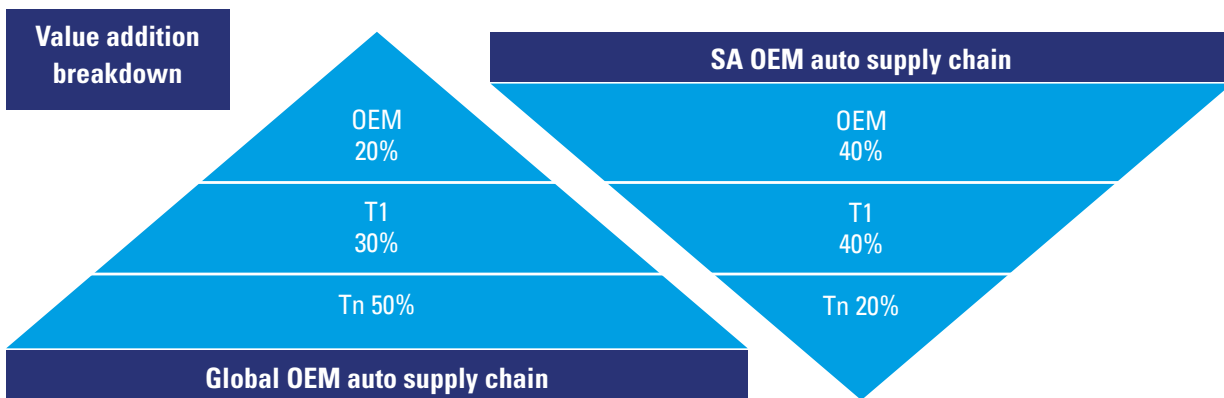
**Weak capabilities in component manufacturing limit the spillovers from OEM investment, value added and employment in the industry.** This also weakens South Africa's position as an automotive investment destination due to the time and costs associated with importing components. Most of the components sourced locally are basic products (Figure 32). The value-addition in the supply chain is also skewed toward OEMs, which is different from the situation in the global OEM supply chain (Black and Barnes 2018, Figure 32). Technology transfer could happen through joint ventures between the established foreign suppliers and local firms (as in Eastern Europe), yet the BBBEE requirements on equity transfer discourage this arrangement.

**FIGURE 30 BREAKDOWN OF LOCAL CONTENT WITHIN COMPONENT SUPPLY TO SIX OF SOUTH AFRICA'S SEVEN OEMs, JANUARY-MARCH, 2017**



Source: Black and Barnes. 2018.

**FIGURE 31 OEMs IN SOUTH AFRICA ACCOUNT FOR DISPROPORTIONATE SHARE OF VALUE ADDITION**



Source: Black and Barnes. 2018.

The government has recognized the problem and several supplier development programs were put in place in collaboration with the private sector. Some of these programs are of world class quality. South Africa has a broad range of SME support programs and incubators open to all sectors. In addition, the automotive industry benefits from several sector-specific programs implemented at the national and provincial levels. For example, the Automotive Supply Chain Competitiveness Initiative (ASCCI) was established in December 2013 to (a)

coordinate supply chain development activities at the national level, (b) improve supplier capabilities and efficiency of production; and (c) promote localization (including through the identification of opportunities for raw materials beneficiation). ASCCI is supported by dti, the two industry associations (NAAMSA and NAACAM), and labor.

**ASCCI had a positive impact on suppliers' productivity while achieving progress in localization proved to be more challenging.** ASCCI's World Class

Manufacturing Program initially focused on improving productivity of Tier 1 companies, but later also incorporated Tier 2 and aftermarket firms. The first two phases of the program implemented during 2015–16 and 2016–17 benefited 33 suppliers. As a result of the program’s intervention, customer return rates improved by 39 percent, time lost due to machine breakdowns improved by 40 percent and time lost due to machine changeovers improved by 39 percent. The average manufacturing value added (MVA) growth per firm increased by R 2.5 million and average productivity (MVA per rand employee cost) increased by 3.5 percent (ASCCI Annual Report 2018). Despite ASCCI’s best efforts, increasing localization proved difficult.<sup>77</sup> Indeed, localizing components requires advanced planning (for example, several years before a new model is launched, collaboration with OEMs and Tier 1s and often pre-existing supplier capabilities).

There is only one promising case to date. ASCCI identified an opportunity to localize drive shafts using domestically available technology and

facilitated the linkages between an OEM and a potential supplier. As a result, Ford will be localizing drive shaft production with Dana Spicer Axle South Africa for its next model, which will bring in a combined investment of R 51 million across Tier 1 and 2 suppliers and about 40 new jobs (ASCCI Annual Report 2018). Localization of other potential components identified by ASCCI has not materialized yet.

**There are also provincial government programs that aim to improve supplier capabilities with a particular focus on black-owned companies:** Gauteng Automotive Industry Development Center (AIDC), Durban Automotive Cluster and Eastern Cape Automotive Industry Forum. Although the scope and type of support programs differs by province, each of the provinces has interventions to nurture black owned suppliers and runs some productivity improvement initiatives. Box 10 summarizes the activities of Gauteng’s AIDC Center.

#### BOX 10 SPOTLIGHT ON GAUTENG AUTOMOTIVE INDUSTRY DEVELOPMENT CENTER (AIDC)

AIDC provides comprehensive support to development of the automotive industry in South Africa. It has three key initiatives to promote supplier development, nurture black owned startups and encourage knowledge sharing and technology transfer: an automotive supplier park, two incubation programs and a learning center.

**The Automotive Supplier Park** spans 130 hectares and houses multiple Tier 1 companies as well as local component manufacturers supplying BMW, Ford, and Nissan. Factories are developed to tenant specifications. Suppliers benefit from shared infrastructure and services, including centralized security, logistics, conference facilities, canteen, and healthcare facilities. The ASP also provides a wide range of ICT services, including broadband internet, server access, back up, and data recovery. Furthermore, tenants benefit from warehousing and distribution services offered by independent service providers and a container depot which handles in and outbound container traffic. There are plans to further expand the infrastructure through the establishment of the Tshwane Automotive City, which in addition to production

facilities will incorporate a university, a school, a hotel, a shopping center, houses, and apartments.

**Incubation programs** with two OEMs provide broad ranging support to beneficiaries and are implemented in close partnership with the private sector. Each AIDC program is managed by experienced industry experts, housed at the OEM facilities and run in close collaboration with Tier 1 suppliers. The program is targeted to black engineers with at least five years of management experience. In addition to technical skills, the applicants must pass a psychometric test. Participants are selected in collaboration with Tier 1 companies and work with them closely throughout the five-year incubation period. Only six participants take part in the program at a time. Incubatees supply components directly into the OEM production lines under the technical guidance and supervision of Tier 1 firms. AIDC provides mentorship, human resources, finance and payroll services at a nominal fee to incubatees. The OEMs cover the utility costs as the facilities are located on their premises. The income earned by incubatees over the five-year period is accumulated in their bank accounts and they receive it



after graduation from the program, which provides them with start-up capital. Only one round of participants has completed the program. Based on the interviews with AIDC staff, all are running their businesses, although not necessarily serving the same OEM.

**Automotive Learning Centre** established in partnership

with an OEM provides state of the art equipment and training for staff of the OEMs, component manufacturers and dealer networks. It offers computer assisted component design and a simulation line where one can practice vehicle assembly, along with a welding simulator and a spray simulator. The Centre was recently accredited by the U.K.-based Institute of the Motor Industry (IMI),

Sources: Interviews with AIDC staff and AIDC website <http://www.aidc.co.za/>.

**Industry support programs may have contributed to the improving performance of South African suppliers, yet they remain behind competitors from the emerging economies on sales growth, profitability, and value-added.** The analysis recently carried out by B&M Analysts examines the performance of the South African component manufacturers during 2015–17 and compares it to that of suppliers from other developing countries. The study shows positive

trends in supplier performance on such important parameters as changeover time and customer return rate (Table 7). Yet, capital expenditure has been stagnating and is almost twice as low than for the average suppliers in comparator emerging economies (Table 7 and Table 8). Operating profitability and average sales during 2015–17 have been improving but are lower than in comparator economies (Table 8) (B&M Analysts 2018).

**TABLE 5 SOUTH AFRICAN SUPPLIERS IMPROVED THEIR PERFORMANCE ON MANY INDICATORS**

Indicator	2015	2017
Changeover time (% of production time lost)	4.49	3.38
Customer return rate (parts per million)	424	150
Operating profitability (% of sales)	5.64	7.2
Absenteeism rate (%)	3.5	3
Spending on training (%)	1.24	1.5
Capital expenditure (% of sales)	3.62	3.58

Source: Adapted from B&M Analysts, 2018.

**TABLE 6 COMPARATIVE PERFORMANCE OF SA SUPPLIERS RELATIVE TO OTHER EMERGING MARKETS, 2017**

Indicator	South Africa	Emerging economies
Growth in average sales adjusted for inflation (2015–17)	13%	18%
Employment growth (2015-2017)	8.7%	5.9%
Operating profitability (% of sales)	7.2%	15.9%
Capital expenditure	3.5%	6.7%
Absenteeism rate	3%	6.8%
Spending on training %	1.5%	1.44%
VA per unit of total employee cost (including capital expenditure)	2.69%	4.32%

Source: B&M Analysts 2018.

The top quartile of South African suppliers perform below the average for emerging economies on capital expenditure and value-added per unit of employee cost. At the same time their record on sales growth and operating profitability approaches the average for emerging economies. This shows that even the best South African suppliers need to catch up with their competitors on productivity. There are also significant differences in profitability between the lowest quartile of South African suppliers, whose profitability reaches 1 percent of sales, and the upper quartile, whose profitability reached almost 15 percent of sales (B&M Analysts 2018). Similarly, sales growth was 0.15 percent among the lowest quartile of suppliers versus 15.75 percent among the top quartile during 2016–17 (B&M Analysts 2018). A great deal can be learned from the good practices already available in the country.

### Weak R&D and metrology limit opportunities to move up the value chain

South African firms invest little in R&D and the automotive industry is no exception. About 6 percent of medium and large South African manufacturing firms invest in R&D compared to 3 percent of firms in the automotive industry (Annex 12). This is in sharp contrast with the global trends; the global automotive industry is one of the most R&D intensive. For example, the automotive industry ranks first in Europe in terms of R&D expenditure, well ahead of pharmaceuticals, aviation, or engineering goods.<sup>78</sup> Unlike other emerging economies (such as India, Turkey, Czech Republic), there are no private automotive R&D and product development centers in South Africa. Although product design and R&D centers are often located close to the OEM's headquarters, several emerging economies have managed to break into this space (see Box 11 on Turkey).

#### BOX 11 AUTOMOTIVE R&D IN TURKEY

Turkey has nine automotive R&D centers, which support not only local operations but also production in other plants belonging to parent companies. Some Tier 1 suppliers and local component manufacturers are also engaged in product development and there are international firms specialized in R&D consulting, testing, and certification for the automotive industry. Over 4,000 specialists were employed in the automotive

R&D sector in 2015, and 1,325 patent applications were filed. Several factors may have contributed to Turkey's success in developing R&D capabilities: (a) relatively large production volumes (1.7 million units as of 2017) and the fact that Turkey is the leading manufacturer for some of the models; (b) a large pool of engineers (over 47,000 university graduates in the automotive fields); and (c) government support programs.

Source: Republic of Turkey Prime Ministry Investment Support and Promotion Agency. <http://www.invest.gov.tr/en-US/infocenter/publications/Documents/AUTOMOTIVE.INDUSTRY.pdf>.

The government offers R&D incentives to the industry, but the selection criteria and bureaucracy associated with the application process may be discouraging applications from the component suppliers. Similar to OECD economies, the government offers R&D incentives but they tend to prioritize new-to-the-world products and services

and are skewed towards product rather than process innovation. Furthermore, the long and cumbersome application process discourages applications from MSMEs. Box 12 discusses the experience of one of the local Tier 1 firms supplying coils, leaf springs, torsion and stabilizer bars for the OEMs based in South Africa in obtaining the R&D incentive.

**BOX 12 INTERVIEW WITH A COMPONENT SUPPLIER**

The company developed a new method of applying paint, which reduces waste and results in environmental and cost benefits. The firm succeeded in receiving the R&D incentive but had to go through a long and cumbersome process and in the words of the firm “submit a thesis rather than an application form.” It took 16 months to obtain the approval. The head of the firm’s R&D department felt that while the DST officer had a good background in chemistry and

science, the government official had little understanding of the automotive industry’s technological requirements, including the fact that most R&D in the automotive industry is process rather than product focused (OEMs dictate which products they need and what materials/steel grades to use). The DST officer initially requested that the firm apply for a patent to receive the government incentive although the requirement was eventually abandoned.

**Several South African universities are doing relevant research but there is little collaboration with industry.** Nelson Mandela University is known for its research on batteries and electric vehicles, Stellenbosch university for work on connected vehicles and University of Pretoria for research on vehicle dynamics and safety. While these universities collaborate with international researchers, there is insufficient cooperation with the domestic industry.

**Furthermore, lack of certified metrology institutions disadvantages South African suppliers that need to incur high costs for testing, which is usually done abroad.** Although some testing is OEM specific and will not be feasible to localize, many general tests could be done in South Africa but are not currently available. The Bureau of Standards provides a limited number of general tests. Its ISO testing is not recognized by the OEMs. Although some universities have well equipped laboratories (for example, Nelson Mandela Bay, University of Pretoria) and offer testing services, not all industry players (particularly MSMEs) are aware of these opportunities. A few of the interviewed component manufacturers that have done testing at the universities were happy with the quality of service but felt that the process took too long. A specialized vehicle testing facility operates in Gauteng but it is mostly targeted to the OEMs.

**South Africa’s unique climate and good public roads offer potential to turn South Africa into a global center for hot weather car testing.** Upington—a town in the Northern Cape Province—is already a prominent place on the global map of vehicle testing. Most major international manufacturers test new car models in this town during the European winter (South African summer) due to its extremely hot climate and good-quality roads. Volkswagen has constructed its own testing facility while other

manufacturers test their vehicles on public roads. Development of a common testing facility could potentially strengthen South Africa’s position as an automotive investment destination and create additional jobs, including in the tourism industry.

**Deficiencies in the investment climate increase operating cost**

**The general deficiencies in the investment climate, including red tape, unreliable electricity supply and high trade logistics costs, have an adverse impact both on the automotive industry and other manufacturing industries.** Although South Africa has some SEZs that perform well (such as Coega), most manufacturing firms are located outside the zones. Firms face administrative costs related to compliance with government regulations and obtaining permits. Reliability of electricity supply is also an issue in some places, to the extent that it influences suppliers’ location. For example, some of the interviewed suppliers chose to locate close to an OEM to be on the same grid, so that if there is an interruption in the electricity service, it impacts both the supplier and the OEM.

**South Africa compares poorly to other emerging economies on the time and cost of getting electricity.** It takes on average 114.2 days and costs 391.5 percent of income per capita to connect a business to the grid, which is a month longer and three times costlier than in the BRIC economies (Brazil, the Russian Federation, India and China), where it takes 84.1 days and costs 137.2 percent of income per capita on average (World Bank 2018b). South Africa also performs worse than the BRIC economies on the reliability of electricity supply as measured by the World Bank Doing Business report. Indeed, the country scores

1.6 points on a (0–8 scale) on the Doing Business reliability of electricity supply and transparency of tariffs index, compared to 6.6 points for BRIC and 7.4 points for high income OECD economies. There are significant differences in performance

among South African cities. For example, it takes 91 days to obtain electricity connection in Cape Town compared to 190 days in Nelson Mandela Bay. The costs of obtaining electricity connection and monthly electricity consumption.

**TABLE 7 SOUTH AFRICA HAS THE HIGHEST EXPORT COSTS RELATIVE TO COMPARATOR ECONOMIES**

Country	Cost to export (US\$), Border Compliance	Cost to import (US\$), Border Compliance
Argentina	150	1,200
Brazil	958.7	969.6
Colombia	545	545
Czech Republic	0	0
Hungary	0	0
Indonesia	253.7	382.6
Malaysia	321	321
Morocco	156	228
Poland	0	0
Slovak Republic	0	0
Turkey	376	655
Thailand	223	233
<b>South Africa (Durban)</b>	<b>1,257</b>	<b>676</b>

Source: World Bank. 2018 b for South Africa and World Bank 2018 a for other countries.

Note: The costs include cargo dues levied by Transnet Ports Authority, terminal handling charges imposed by Transnet port terminals, and other port service fees charged by the shipping lines.

## Recommendations

**Government efforts to increase the industry's competitiveness could focus on four priorities:**

(a) expanding exports to the Africa region and maintaining market access to the United States and the European Union, (b) strengthening skills and supplier development (building on good practices that already exist in the country), (c) strengthening R&D and metrology, and (d) improving the business climate.

**Expand exports to the Africa region and grow market share in the United States and the EU**

The Africa region presents a good opportunity for export growth, but it is not a low-hanging fruit. Indeed, the African market offers opportunities

for growth given the continent's rising population, growing urban middle class, the new continental free trade agreement and the fact that this market has not yet been actively targeted by manufacturers from other major automotive destinations. Geographic proximity and experience of South Africa's investors in the region also gives the country a competitive edge. It will be important to build on the African Continental Free Trade Area (CFTA) to reduce tariff and non-tariff barriers to trade, particularly with economies that are trying to develop their own automotive industries—such as Nigeria, Rwanda, and Kenya. Furthermore, supporting university-industry collaboration on adapting vehicles to African road conditions can help South Africa become a preferred supplier for the African market.

**Proactive engagement in trade diplomacy with the United States and the European Union will be important to maintain and grow exports in South Africa's traditional markets.** It will be important to continue policy dialogue with the United States over the post-AGOA trade regime, maintain the Economic Partnership Agreement with the EU and negotiate a post-Brexit deal with the United Kingdom.

### Strengthening skills and supplier development

**Skills development is a long-term agenda that involves increasing the quantity and quality of labor.** It will involve strengthening primary and secondary education to equip school graduates with better skills and to increase the availability of qualified university applicants. It will also entail development of incentives for students to major in technical and engineering fields that are in high demand in South Africa.

**In the medium term, the government can consider strengthening the quality and relevance of TVET education, particularly in locations close to the four automotive clusters.** Private operators can expand the course offering, improve the relevance of curriculum and create some competitive pressures on the public TVETs to improve the quality of teaching. merSETA's ongoing initiatives to provide TVET lecturers and students with industry exposure are a step in the right direction and should be continued. At the same time, merSETA's outreach and impact on strengthening skills in Tier 2–3 suppliers could be improved by simplifying the application process and providing training that is better tailored to individual companies' needs.

**Evaluating and scaling up good practices in supplier development programs is another important priority.** Each of the provinces is currently running a supplier development program with the support of the provincial government. Distilling and scaling up some of the good practices (such as AIDC's incubation program) across the three provinces could support the government's drive to promote localization and transformation. ASCCI's initiative to identify the materials, which could be used in the automotive industry (such as aluminum, chrome) and develop Tier 3 suppliers is also worth exploring further, along with ASCCI's current efforts to localize certain parts based on the interest of OEMs and availability of local expertise. Lastly, given the upcoming Carbon Tax Bill, and high energy costs in some locations, it will be worthwhile incorporating green manufacturing

modules into the supplier development programs.

**The establishment of the Venture Capital Fund can provide additional opportunities for skills and supplier development.** The resources could be used to incentivize development of components with higher value added, co-fund university-industry collaboration, and develop technical partnerships with other African economies.

### Improve R&D and metrology

**The government may consider building on pockets of excellence at some universities to support research on adapting vehicles to African countries' conditions and incentivizing universities to offer testing services to component manufacturers.** Several universities are already doing research in areas relevant to the industry and have quality labs and equipment to do testing. However, university staff focus mostly on teaching and research while work with the industry, particularly local MSMEs, is not necessarily their priority. Creating incentives for industry-university collaboration could help increase the economic benefits of the expertise already available in the country. Furthermore, it will be important to strengthen the capacity of the Bureau of Standards to expand the range and quality of services it offers to the industry.

**The government may also consider reforming R&D tax incentives to better account for the needs of the industry and the economy at large.** Extending the eligibility criteria to allow for investments in technology absorption and incremental R&D as opposed to new-to-the-world innovation will make the incentive more relevant for a large number of domestic firms. Simplifying the application process for the R&D tax incentive can encourage greater uptake by MSMEs. It is good practice to limit the time for government officials to issue decisions on applications and for this period not to exceed a year. Some OECD countries provide an option for an immediate refund to small companies that tend to be more financially constrained (World Bank 2017).

### Improve the business climate

**Regulatory reforms aimed at reducing the time and cost of regulatory compliance will benefit all businesses.** The government's reform agenda can be informed by some of the good practices already available in select municipalities (see World Bank



2018 b for more information). Improving reliability of electricity supply and reducing the costs associated with getting electricity will be important to sustain the competitiveness of manufacturing industries. Similarly, it will be important to reduce trade logistics costs, given South Africa's distance to major markets as well as its aspirations for becoming the gateway of manufacturing exports to other parts of Africa.

**Several measures can be implemented to improve the ease and cost of obtaining electricity connection.** Specifically, the government can consider streamlining and fully automating the approval process for obtaining the electricity connection and reducing the time limits for connecting customers to the grid by at least 30 percent to optimize utilities' performance. To reduce the costs of getting electricity connection, utilities may consider lessening the burden of the security deposit. For example, the deposit could be returned after one or two years if the customer is current on its payments rather than at the end of the contract. The government can also strengthen efforts to measure power interruptions and their duration more effectively by installing an advanced distribution management system or an outage management system. Significant improvements in the quality of power supply require substantial investment to reduce transmission losses and increase generation capacity (World Bank 2018b).

**Reducing trade logistics costs will entail infrastructure upgrades, increasing the use of electronic transaction systems and strengthening regional cooperation.** Durban is South Africa's most congested port and improving its performance will require expanding investment in infrastructure and equipment (Durban's key export products are vehicles and components, so improving its performance is particularly important for the automotive industry). South Africa may also consider introducing an electronic single window concept to link all relevant government departments electronically. Lastly, as a leading economy in the region, South Africa can play a stronger role in regional integration through leadership in harmonization of necessary documents and procedures and establishment of customs

interconnectivity and data exchange. Several pilot initiatives on interconnectivity of customs systems with a few countries in the region are under way, but more can be done in this regard (World Bank 2018b).

## How the World Bank Group can help

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**The focus on the automotive industry is relevant for the World Bank Group program given its importance for the South African economy, current engagements in the country and World Bank Group's experience in designing support programs for the automotive industry in other countries.** Given the linkages of the automotive industry, particularly component manufacturing, with other sectors of the economy, its growth can serve as a springboard for manufacturing. Increasing the competitiveness of South Africa's automotive industry will require a multi-pronged approach and results will depend not only on addressing sector specific challenges—skills, supplier capabilities and investment climate issues—but also on maintaining duty free access to key markets and decisions by OEMs to grow production volumes. The latter is of fundamental importance for component localization. In supporting the growth of the South Africa's automotive industry, the World Bank Group can build on IFC's recent investment in in the automotive sector and the ongoing work with the Department of Trade and Industry on investment policy and promotion.

**The World Bank Group can offer a menu of interventions to support the growth of the automotive industry in South Africa.** Possible options include: advisory work on improving supplier capabilities and potential IFC investment in promising component manufacturers; TVET reform; support in development of regional value chains (given the strong interest of other SADC countries) and fostering technical partnerships with African economies that wish to develop their automotive industries; investment climate reforms and development of special economic zones; and support in structuring the programs of the Venture Capital Fund.

## In Summary

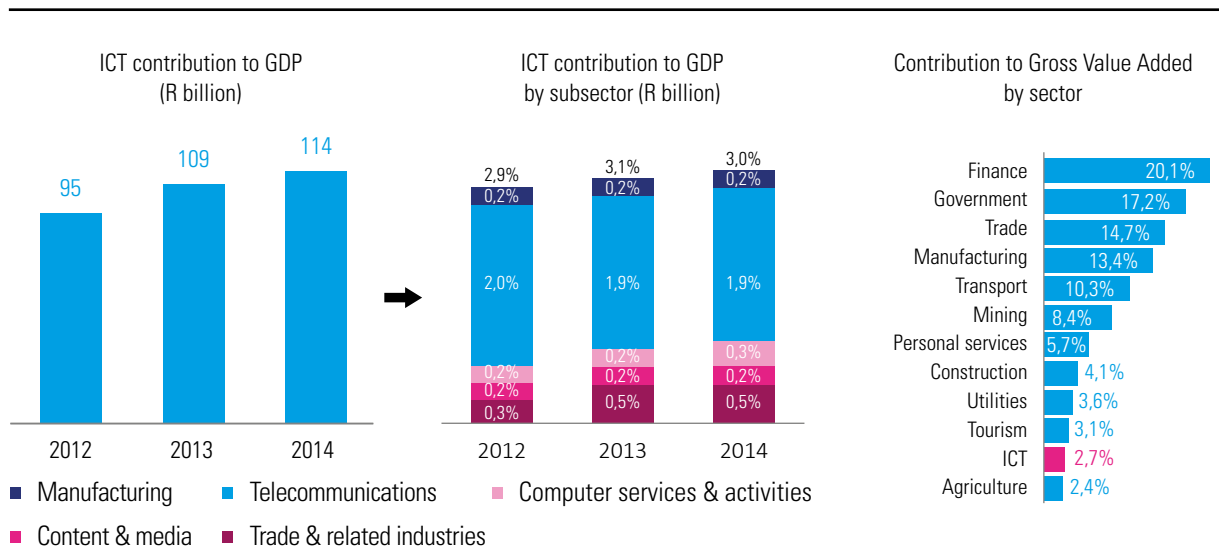
Factors affecting private investment	Policy options outlined in the report	World Bank Group role
<b>Automotive:</b>		
<p><b>Size of the domestic market and regional integration:</b> The domestic market is small and imports account for a significant share. There is no regional value chain.</p>	<ul style="list-style-type: none"> <li>■ Assess the impact and cost-benefits of the Automotive Masterplan to ensure that it can meet volume and localization targets.</li> <li>■ Enable expansion of exports to the Africa region through trade negotiations; university-industry collaboration to adapt vehicles to African roads.</li> <li>■ Trade diplomacy with the United States and the EU to maintain South Africa's exports in its current markets.</li> </ul>	<ul style="list-style-type: none"> <li>■ <b>Advisory support</b> to develop regional value chains and cross-border trade in components.</li> </ul>
<p><b>Skills and supplier development:</b> Skills are in short supply in the engineering, management and select artisanal professions. TVET institutions suffer from outdated curriculum with poor links to industry needs. Capabilities are weak in component manufacturing.</p>	<ul style="list-style-type: none"> <li>■ Improve merSETA's outreach and the impact of training to suppliers.</li> <li>■ Evaluate and scale-up good practices in existing supplier development programs.</li> <li>■ Continue ASCCI's initiatives to localize certain parts based on the interest of OEMs and availability of local expertise.</li> <li>■ Incorporate skills and supplier development programs into the activities eligible for support from the planned Venture Capital Fund.</li> </ul>	<ul style="list-style-type: none"> <li>■ <b>Advisory support</b> to upgrade TVETs, assess and strengthen supplier development programs and localization potential, share expertise in structuring, management and deployment of the planned Venture Capital Fund.</li> <li>■ <b>Potential IFC investment</b> in private TVET schools, instruments for short-term and long-term financing needs of suppliers, equity finance for existing and new JVs/M&amp;As; Capex for expansion, modernization, greenfield investment, corporate finance, and working capital; support establishment of pooled funds and blended finance facilities.</li> </ul>
<p><b>R&amp;D and metrology:</b> Firms in the automotive industry are less likely to invest in R&amp;D than other manufacturing firms. Domestic suppliers incur high costs of testing abroad due to lack of accredited metrology institutions. R&amp;D tax incentives prioritize new to the world innovation and involve a long application process.</p>	<ul style="list-style-type: none"> <li>■ Create incentives for industry-university collaboration, with a focus on MSMEs.</li> <li>■ Incentivize universities to offer testing services to component manufacturers.</li> <li>■ Strengthen the capacity of the Bureau of Standards.</li> <li>■ Reform R&amp;D tax incentives to encourage OEMs and domestic suppliers to invest in innovation.</li> </ul>	<ul style="list-style-type: none"> <li>■ <b>Advisory support</b> to support industry-university collaboration programs, R&amp;D incentives policy, strengthen public metrology institution.</li> </ul>
<p><b>Investment climate:</b> Deficiencies exist in the investment climate, including red tape, unreliable electricity supply, and high trade logistics costs, and scope to strengthen the design of support programs to minimize market distortions.</p>	<ul style="list-style-type: none"> <li>■ Reduce the costs of obtaining electricity connection and improve reliability of supply.</li> <li>■ Improve trade logistics by introducing electronic single window and further harmonization of documents and procedures.</li> </ul>	<ul style="list-style-type: none"> <li>■ <b>Advisory support</b> to improve the investment climate at the local level, upgrade SEZs based on the best local practices, improve interconnectivity of customs systems; and improve the design of support programs to minimize market distortions.</li> </ul>

### 3.3. Information and Communication Technologies deep dive

South Africa is well-positioned to profit from a vibrant digital economy and to become a regional digital hub. It enjoys several strengths from a regional perspective: a relatively strong manufacturing base, deep and diversified financial and capital markets, competence in research & development, and internationally recognized universities. Already the sector’s impact is growing: ICT contributes about 17 percent of service

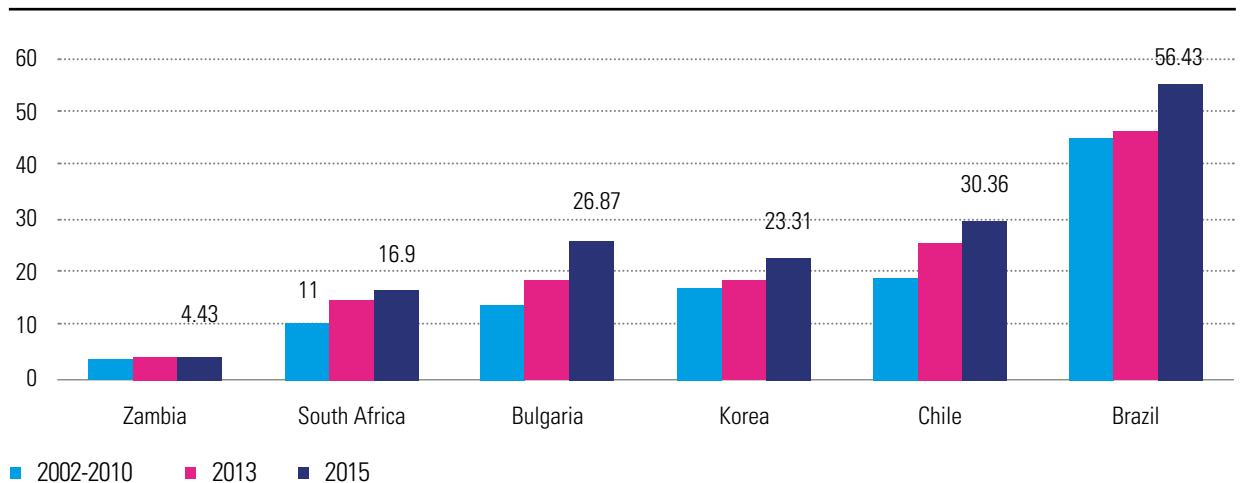
exports and investments in ICT are close to 3 percent of GDP (StatsSA 2017). An assessment using a digitization index shows that a relatively conservative broadband investment figure of R 65 billion in the next 10 years could result in the creation of more than 400,000 jobs and more than R 130 billion being contributed to GDP in South Africa. Attracting further investment would allow South Africa to bring more reliable and affordable internet services to its citizens and to reap the full benefits of the digital economy in terms of employment, productivity, exports, and service delivery.

FIGURE 32 ICT CONTRIBUTION TO GDP



Source: STATS SA ICT Satellite account. 2017.

FIGURE 33 ICT AS A PERCENTAGE OF SERVICE EXPORTS



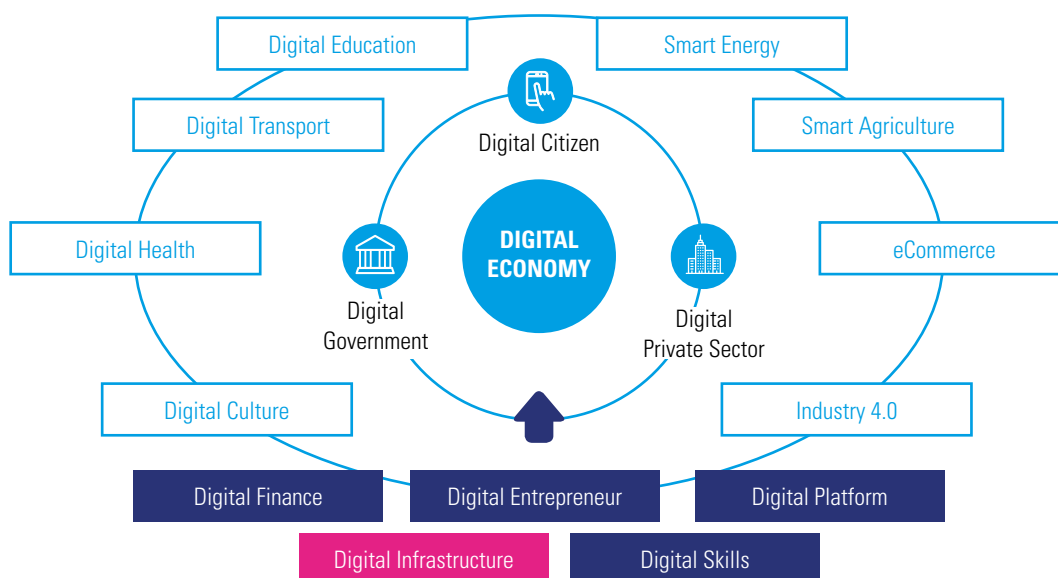
Source: World Bank Group. 2018.

However, policy and skills constraints impede private sector participation and investment—particularly delays in adopting critical policies and legal reforms, and problems in the design and implementation of new regulations. Policies and regulations are very important to advance the economy’s digitalization and enable the introduction of new technologies. South Africa suffers from a persistent digital divide, with almost half the country still not using the internet on a regular basis and supply-side constraints in the provision of skills make it difficult to close this divide or move into higher value-

added ICT segments. President Ramaphosa announced that his government will work closely with the private sector to implement relevant ICT reforms. Despite some progress, much remains to be done.

To return to a regional leader position, South Africa will have to accelerate the pace of policy decisions to match the speed of industry and technology change. Policies should ensure competitive broadband and data markets, allocate broadband spectrum, and improve network performance.

**FIGURE 34 THE DIGITAL ECONOMY**



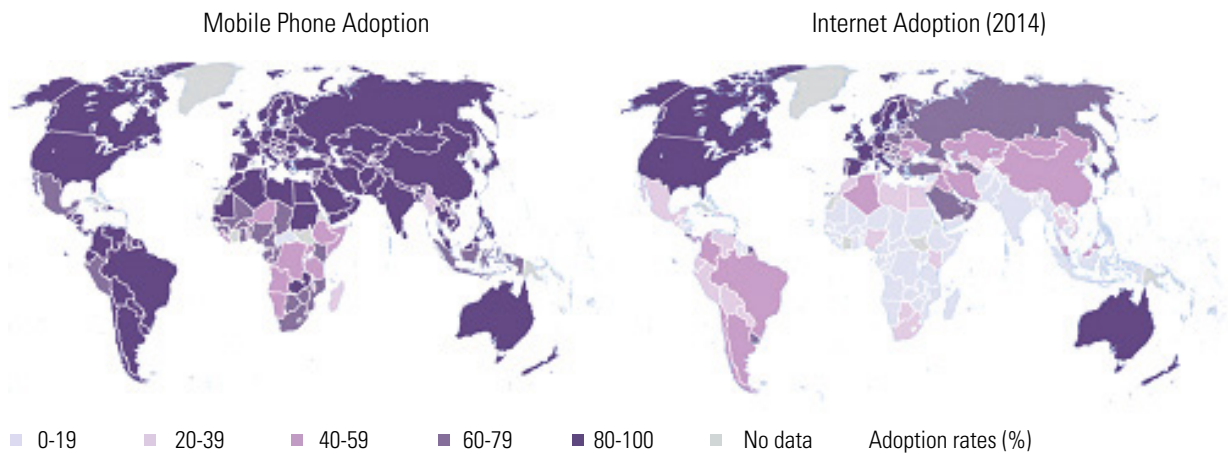
Source: World Bank Group. 2018.

## Global trends in ICT and implications for South Africa

In a growing world, connectedness is becoming increasingly vital. Of the 7.4 billion people in the world, 4 billion still do not have access to the internet. The people locked out of this connectedness are disproportionately rural, elderly, illiterate, female, and do not earn much.

Mobile phones are the main source of connectivity in the developing world. But large gaps remain

in internet access due to a variety of reasons. These include (a) regulation, (b) infrastructure, (c) affordability, (d) consumer readiness, and (e) content. In South Africa, the internet access gap has spatial and demographic dimensions. For instance, in rural South Africa, female access to internet lags male access by 14 percent. Africa is where the impact from closing the digital divide will be greatest—and South Africa should be leading the charge. It is estimated that every \$1 invested in ICT infrastructure between 2016 and 2018 could yield \$5 in GDP growth by 2025.

**FIGURE 35 MOBILE PHONE AND INTERNET ADOPTION (2014)**

Source: WDR, 2016.

### BOX 13 WHERE THE WORLD IS HEADED

Worldwide, technologies are emerging that will affect people's lives in ways we cannot imagine. This emerging fourth industrial revolution will be characterized by a fusion of technologies that blurs the line between the physical, digital, and biological spheres.

- 1. Leapfrogging:** Rapid development of ICT allows countries that were behind in technological infrastructure to "leapfrog" by skipping the previous technical phase and implementing only newer technologies. Kenya is a prime example of a country that has taken advantage of leapfrogging.
- 2. Mobile expansion:** Mobile data traffic is expected to continue its surge, so 5G is becoming a crucial development. While the world is discussing 5G development and deployment, South Africa is still arguing about how to assign spectrum for 4G services. This is keeping the country locked in the past.
- 3. Digital services:** Rapid disruption of traditional services continues. Technology has already replaced traditional instruments such as GPS, standalone cameras, pulse oximeters, etc. Disruption of healthcare, transportation, shopping, and other services is expected to continue at a rapid pace.
- 4. Digital finance:** Cash payments are on the decline around the world. Digital, mobile, and crypto payments have led the charge in providing more secure, connected, and inclusive finance options.
- 5. Education:** The emergence of online universities has made getting an education easier than before. With a vast array of top-shelf institutions offering free courses, it is easier for individuals to upskill themselves and stay on top of the rapidly changing mix of demand for skills.
- 6. Cloud computing:** The pace of cloud computing is continuing to accelerate. In offering stronger solutions for the processing of big data, and complicated algorithms, cloud computing is a major driver in technological growth. Microsoft has opened cloud operations in South Africa, with Amazon announcing a similar venture for the new future.
- 7. Edge computing:** Edge computing provides information processing and content collection delivery devices that are located close to the source of data, rather than at extremities. It is an approach that reduces latency and improves productivity. Amazon has already opened two Edge servers in South Africa.

**8. Internet of things:** The increasing interconnectivity of devices around the world continues to drive change, create solutions, and transform the way we work,

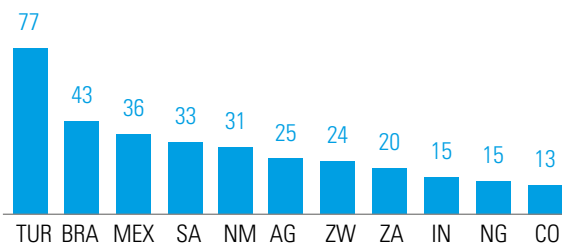
live, and play. The effects of the internet of things can already be seen in everyday life from general transportation, to healthcare, and other areas.

### The state of South Africa's digital infrastructure

South Africa has the potential to recapture its regional front-runner status and achieve the “Digital Moonshot,” putting everybody into the digital space by 2030.<sup>79</sup> While it has slipped from

78 in the 2002 ITU ICT Development Index to 92 in 2018, it remains ahead of its regional peers. However, the country is trailing behind emerging market competition such as Brazil, Mexico, Turkey, and India. The figures below unpack how South Africa fares on some of the dimensions of digital development.

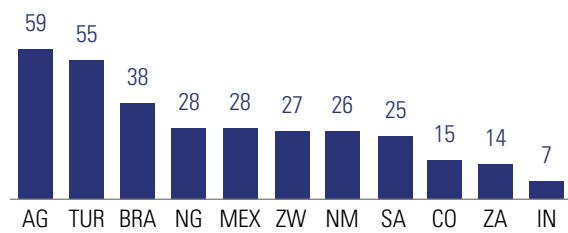
**FIGURE 36 NETWORK PERFORMANCE<sup>80</sup>**



*Definition: Mobile latencies, download speeds and upload speeds*

This is one the poorest performing metrics in South Africa due to the issues with spectrum allocation.

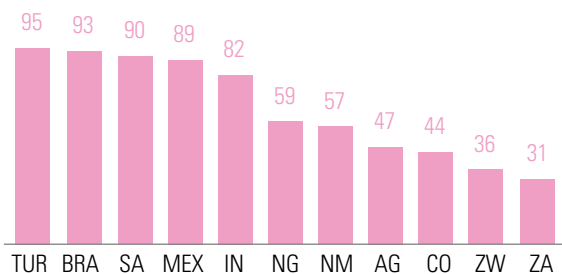
**FIGURE 37 SPECTRUM**



*Definition: Spectrum digital dividend and allocation per operator*

Spectrum remains one of the worst performing metric in the Mobile Connectivity Index (MCI).

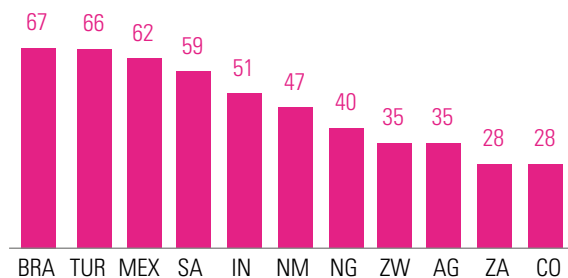
**FIGURE 38 NETWORK COVERAGE**



*Definition: Extent of 2G, 3G and 4G coverage.*

South Africa has adequate network coverage, but there is room for improvement to higher bandwidths.

**FIGURE 39 OTHER ENABLING INFRASTRUCTURE**



*Definition: Access to electricity, international internet bandwidth per user, servers per million of population.*

The enabling infrastructure of South Africa is on par with other emerging market competitors.



The South African broadband market is the most mature in sub-Saharan Africa; it has many large operators when compared with other markets in the region. The market has become more competitive over time as more competitors find inroads to a previously high-barrier market. Rivalry within the internet access market is intensified by large players benefitting from economies of scale. The fact that many market players offer internet access as part of a diverse range of communication services means rivalry is moderate. Customers within this market range from individuals to large corporations.

Entering the market can involve significant capital outlay, necessary to build infrastructure that covers the geographic area of interest. Gaining permissions from local governments and public utilities to deploy new broadband infrastructure is expensive and complex. A potentially lower cost mode of entry is to buy access to telecom networks. This reduces the capital requirements for market entry, although customer demand for ever-increasing bandwidth may mean that investment in infrastructure will be needed for future growth.

The South African broadband market is comprised of two basic arms: (a) the fixed-line market, and (b) the mobile market. Both offer a similar purpose in terms of connectivity. But their constraints and possibilities are fundamentally different.

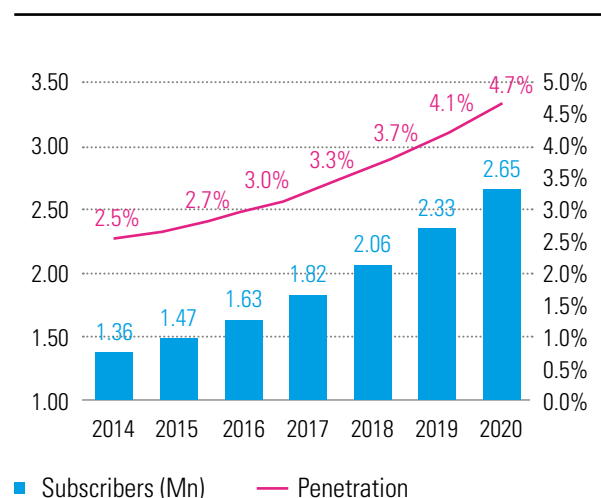
South Africa's fixed-line broadband market has recently taken off after years of being held back by an expensive operating environment. South Africa has the largest fiber footprint in sub-Saharan Africa (with about 180,000 kilometers deployed). However, fiber infrastructure is largely concentrated in already-connected areas in large cities. Until recently, there was a quasi-monopolistic position in the market with one major provider of transmission services for the entire voice and broadband transmission value chain. In the last five years alternative networks have been established and there are now several private companies as well as an SOE operating in the fixed-line broadband market. Certain municipalities in South Africa also provide wholesale broadband services.

South Africa's vibrant mobile broadband market has grown rapidly since competition was introduced to the sector in the 1990s. SIM card penetration by

mid-2015 was above 150 percent, driven by the popularity of multiple card use, in the wake of the launch of third generation (3G) and 4G LTE services. Two operators have South African roots and have dominated the country's mobile landscape for many years. Both companies secured as many new users as possible before the government awarded the third mobile license in 2001. In 2003 the government assessed the feasibility of licensing a fourth mobile operator. Instead of an infrastructure-based fourth operator, Virgin Mobile entered the market as a Mobile Virtual Network Operator (MVNO) in 2006, using network infrastructure. In 2008, in response to declining demand for fixed voice services and in preparation for a long-term shift towards convergence, the wireline incumbent sought to gain traction in the mobile market and became the fourth mobile operator.

The introduction of broadband based on 3G, HSPA, and LTE technologies has elevated the mobile operators as the leading providers of broadband services. Under the new service-neutral regulatory framework, MNOs are branching into fixed-lines, fiber networks, international connectivity, mobile banking and entertainment. However, delays in spectrum auction have limited the operators' ability to expand their LTE networks and provide faster speeds on existing networks. As a result, a large share of users need to connect with 2G and 3G technologies rather than LTE.

**FIGURE 40 FIXED BROADBAND PENETRATION AND GROWTH**



Source: World Bank Group. 2018.

## Priority constraints to private sector development and investment

Several factors are holding South Africa back in its bid to become a regional digital leader. These include its regulatory environment, a lack of incentives for investment and innovation—exemplified in the country’s troubled attempts to allocate spectrum—and issues of affordability and access. This lack of affordability and access exacerbates inequality and keeps the poorest members of society locked out of technological advancements in financial inclusion, healthcare, education, and other platforms. A lack of digital skills is another area of concern.

### Regulation and competition

**There is a consensus that the regulatory environment has slowed the development of South Africa’s ICT sector, and the government is defining steps to resolve this.** Indicators as shown in Figures 41–43 above suggest that South Africa has not yet converted a favorable legal environment into network readiness or into impact to the same extent as other competing, developing nations. However, there have been new efforts on behalf of government to improve the ICT space—the most notable developments being the study conducted on spectrum (CSIR 2018), and the introduction of the ECA Amendments.

**As a network industry, South African ICT is subject to extensive regulation.** The network sector is subject to the Electronic Communications Act (2005) under the regulator, the Independent Communications Authority of South Africa (ICASA). The authority was established in 2000 by the ICASA Act to regulate both the telecommunications and broadcasting sectors. The act compels it to work in the public interest. ICASA’s autonomy is protected by the South African Constitution, although telecom observers contend that the regulator’s independence and capacity has weakened for a variety of reasons over the past few years. The sector is also subject to the Competition Act, which prevents anticompetitive behavior and controls anticompetitive mergers. In some areas, the two sets of regulators have overlapping powers and mandates, requiring coordination mechanisms to manage concurrency.<sup>81</sup>

**The government is taking steps to improve the overall institutional framework to promote faster decision making and clear mandates for each stakeholder.**

The Department of Telecommunications and Postal Services (DTPS) and the Department of Communications had important areas of authority, which has led to a fragmented regulatory framework. The merger of the two departments that will be implemented in 2019 should create a better environment for the private sector.

**One major consequence of the fragmented regulatory environment has been the delay in agreeing on the mechanism for assigning high-demand spectrum, which is critical to the expansion and lowering of costs of telecommunications networks.** For over a decade, network operators have been requesting an auction of high demand spectrum, which is one of the established ways to assign spectrum globally. The shortage of spectrum has had two main effects, namely: (a) creating challenges for new network operators looking to enter the market, and (b) imposing tight capacity constraints on operators (contributing to higher prices and lower speeds). However, the South African government has concerns that auctioning spectrum to private companies would result in existing operators becoming more entrenched and lead to the duplication of infrastructure.

**In 2018, as part of the amendments to the Electronic Communications Amendment Bill published by the DTPS, the proposal for a wholesale open-access network (WOAN) was put forward.** The proposal was approved by the cabinet as part of the National Integrated ICT Policy, a white paper that provides direction for the development of electronic communications in South Africa, including the alignment of existing legislation. The Bill itself This listed more detail about the roll-out and implementation of a WOAN, which would have made use of the high-demand spectrum that currently remains unassigned. The WOAN would have been an instrument to facilitate a transition towards a new paradigm of services-based competition. The proposal of the WOAN was opened for public comment in late 2018 and was met with a mixed-to-negative sentiment from private industry players. Subsequently, the ECA bill was withdrawn in early February 2019.

**The ECA bill will now be subject to further deliberations between both public and private industry.** These deliberations will take place parallel to an assessment of what is required to drive the fourth industrial revolution in South Africa in terms

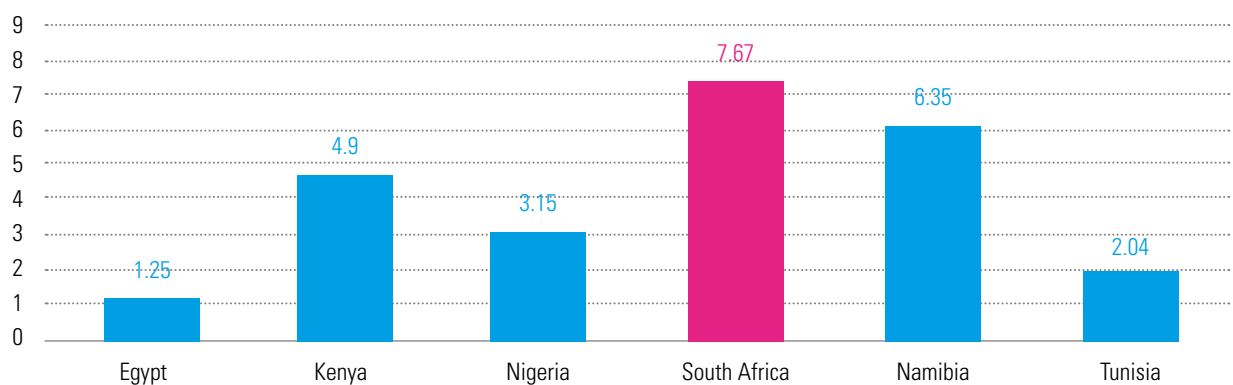
of both policy and regulations. This new approach seems to indicate that government is relying more heavily on the private sector to drive the advances in telecommunications and will only focus its efforts on regulatory and policy matters—a move which has been lauded by private industry experts. Finally, this move gives rise to hope that the telecommunications sector will become more investor-friendly, promoting innovation and competition.

### Affordability and access

Affordability of ICT services and data prices has emerged as a major concern. According to global

comparisons, South Africa ranks 111 out of 196 countries for having the most expensive broadband packages, with the cheapest one-gigabyte mobile broadband product costing \$7.67. This lag is significant when compared to developing countries elsewhere in the world and in the region, such as Kenya. But the comparison of prices across companies and countries is not straightforward in the ICT space, as services are often bundle. It is also important to consider issues such as the speed and quality of connections, the time before data will expire following purchase, the difference between pay-as-you-go and long-term contracts, and adjustments for inflation over time.

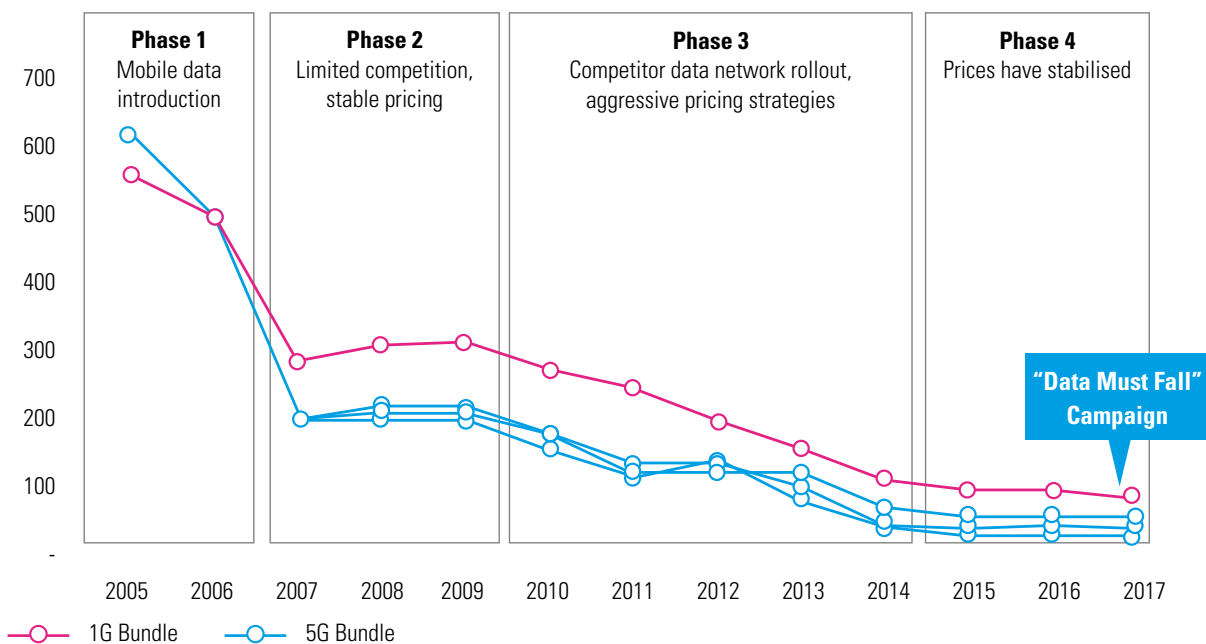
**FIGURE 41 CHEAPEST 1GB MOBILE BROADBAND PRODUCT Q2 2017 (US\$)**



Source: Broadband League Price Table.

While pricing has stabilized in nominal terms, and have come down in inflation-adjusted terms, significant reductions in package costs have yet to be seen. Since the launch of mobile data, competition in this space has increased. The entry of two additional operators

to the market has affected data prices, for instance. In the years that have followed, mobile data pricing has stabilized. With the entry of one more mobile network operator, it can be expected that there will be an impact on prices—but what form this will take is not yet clear.

**FIGURE 42 SOUTH AFRICAN DATA PRICING OVER TIME**

Source: Published operator data price points, 2005–17.

In August 2017, the Competition Commission announced that it was launching an investigation into alleged competition issues in the market for data services. ICASA also introduced new rules in April 2018 that required telecoms operators to send usage notifications to consumers when data usage reaches various intervals. The regulation also specifies that operators will not be allowed to charge consumers out-of-bundle rates for data when their data has run out, without consumers' prior consent. In the same period ICASA backed down on a previous proposal suggesting that unused data bundles should not expire for a period of three years and is now proposing that a rollover be offered to consumers. The decision on rolling over data bundles now rests with the National Consumer Commission.

The relatively high mobile broadband tariffs by local purchasing power standards, low fixed broadband penetration, and slow Internet speed directly affect the poorest households. It makes it more difficult and costlier for citizens to access e-government, education, and e-health services, and these effects are more pronounced for the poorer segments of the economy. This inefficiency has been noted by the South African public. Public campaigns such as Data Must Fall have reinvigorated the pricing

argument. There is also a Catch-22 in that (a) there is limited incentive for private investment in infrastructure in areas where individuals cannot afford data services, and (b) the areas that cannot afford data services have to pay a higher cost to access, as the infrastructure is not available.

**Lower access and affordability has a knock-on effect on private investment in other segments.** By having poorer households and regions left behind in the digital divide, other digital opportunities such as eCommerce, digital finance, and digital platforms cannot prosper. This dampens private investment in these services, particularly in areas that already suffer from inequality and disproportionate service delivery. This effect is not limited to an individual level, but also affects public institutions in less wealthy areas—thus government has to pay for the connection of hospitals, schools, and other institutions where the private sector would typically expand if the opportunities and incentives were large enough.

### Digital skills

South Africa is far from making optimal use of its human capital potential and is under-prepared for the impending disruption to jobs and skills

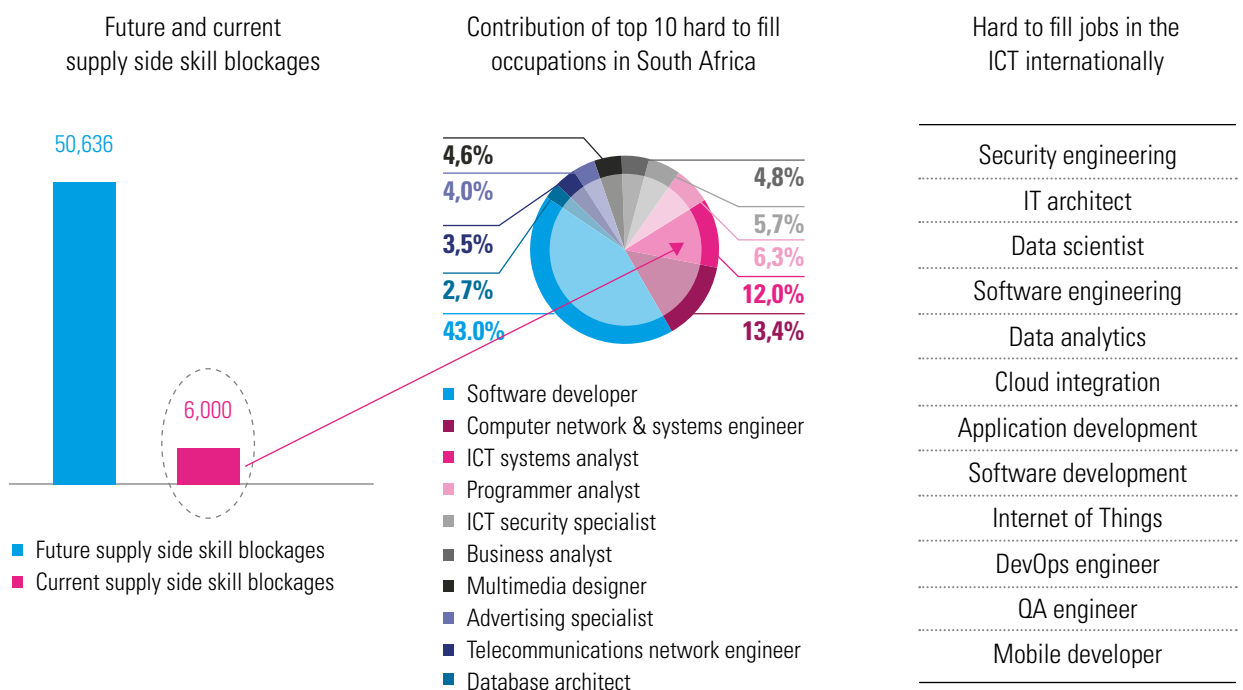
brought by the Fourth Industrial Revolution. The World Bank Group Human Capital Project placed South Africa towards the bottom globally and close to the average for the region. Similarly, the WEF’s Human Capital Index, which measures the extent to which countries and economies optimize their human capital through education and skills development and its deployment throughout the life-course, finds that South Africa currently only captures 49 percent of its full human capital potential. This compares unfavorably to a global average of 65 percent.

**There is an acute shortage of a skilled workforce in ICT in South Africa.** This has been acknowledged by the South African government in its annual critical skills list. Based on the LinkedIn Digital Data For Development that was analyzed in a recent World Bank Group study, the top five most in-demand ICT skills are currently (a) Java development, (b) Microsoft application development, (c) data engineering and data warehousing, (d) database management, and (e) web programming. With most skills in demand falling into the ICT sector, ICT and

other related fields have been recognized as priority areas for skills development.

**Many jobs in South Africa are becoming more intense in their use of digital technologies, but at the same time there are risks of job losses due to automation.** Average ICT intensity of jobs in South Africa increased by 26 percent over the last decade; currently trending professions in the country include the creative industries, software and IT services, agriculture, and finance workers, according to LinkedIn Digital Data For Development. In the longer term, there is strong job growth potential in hard and soft infrastructure, green jobs, and the ICT sector through new work formats. The South African government is aware of this. Roles in areas such as *VR, Robotics, Internet of Things, Cyber Security, and Big Data* are being placed on the skills prioritization list by institutions such as MICT SETA. At the same time, it is predicted that 41 percent of all work activities in South Africa are susceptible to automation, although this is likely moderated by comparatively low labor costs and offset by new job creation.

**FIGURE 43 SECTOR SKILLS BY MICT SETA**



Source: MICT SETA. 2017. Sector Skills Plan 2018–2023; MICT SETA. 2016. Sector Skills Plan 2017–2022; The CIO. 2018. *Amazon Web Services; Forbes*. 2017. “In-demand Tech Jobs Employers are Struggling to Fill.”

The lack of digital skills is explained by several factors. It will be hard to find a one-size-fits-all solution. The most notable failing is the access to high-quality education in South Africa as a whole, as outlined in the enabling sectors. This gives rise to a lack of digital skills by not having enough graduates with skills in the science, technology, engineering, and mathematics (STEM) fields. Secondly, the curricula taught at most public institutions is outdated—the skills supplied by these institutions do not match those that are being demanded by the private sector. This lack of curricula coordination is driven partially by a lack of experts with the ability to teach, as well as the lengthy times that are required to change curricula due to regulatory burdens.

In the short term, public-private partnerships have emerged as a solution to of the ICT skills shortage. A large number of public, public-private and private skills development initiatives exist, with significant investment from the private sector including several multinationals. Boosting and expanding these partnerships is key. It is essential that the South African government continues to explore opportunities for universities,

science councils, government, and the private sector to participate in open collaboration platforms—and the barriers that prevent participation.

## Recommendations

In the ICT space, there are quick wins that could boost investment and growth, but also a long-term agenda around the provision of digital skills. The recommendations will be laid out in accordance with the three main constraints that have been identified by this report.

- 1 **Further discussions on the policy directions and specific provisions of the ECA bill is positive, but there is a need to move faster to address policy uncertainty.** It has been acknowledged that more analysis and public-private dialogue is needed to develop a WOAN given limited number of success stories around the world. There are several alternative measures which could contribute to achieving the South African government's policy goals (see Box 14).

### BOX 14 POTENTIAL ALTERNATIVES

**South Africa could aim to strengthen the capacity and enforcement of the country's existing infrastructure regime.** MNOs can pool the different components of their networks, whether these are passive or active. This can reduce costs and barriers, allowing smaller players to enter and penetrate the market. However, since infrastructure sharing rules can be hard to enforce and there is a risk that larger incumbents will avoid entering into such types of agreements, strong enforcement of regulatory obligations on sharing is often required. South Africa already has a regulatory framework in place with infrastructure sharing obligations, but there have been challenges in enforcement.

**The government could implement alternative regulatory measures such as the adoption of spectrum caps or spectrum set asides that encourage market entry by operators with lower access to capital,** and the setting of coverage requirements by existing MNOs, which may be the object of government subsidies. Concurrently, the government could also push for the development of networks

using unlicensed spectrum as a means to boost downstream innovation and lower barriers to entry and expansion in the ICT sector.

**Market entry can be actively promoted in wireless communications through widely tested measures.**

Instruments that foster market entry include spectrum set-asides, caps and band plans, which hinder the aggregation of spectrum rights by incumbents:

- **Set-asides remove the incumbent from the bidding process and one or more blocks of spectrum are reserved for a specific type of bidder such as a new entrant, a smaller operator or a designated entity or group (such as minorities, SMMEs, and so forth).** This approach has been widely used in the United States and Canada. It is generally highly effective in attracting participation in the auction because it guarantees that a new entrant will win at least the set aside block. However, this approach can



also result in market entry by operators with higher costs and less attractive offerings than incumbents.

- **Spectrum caps limit the maximum quantity of spectrum that can be held in a specific geographic area.** Caps can be applied either to an individual auction or, in more general terms, to a category of radio frequencies. In the EU, most Member States capped the number of blocks that could be won by an individual firm during 3G auctions. Spectrum caps allow entrants to bid for larger quantities of newly available spectrum, and limit “excessive” concentration of spectrum by

incumbents. But this approach can also be conducive to an inefficient aggregation of spectrum by incumbents.

- **Band plans partition spectrum by geographic areas and block size.** Band plans slice radio spectrum into blocks and divide it by geographical areas. Risks to be aware of include that if auctioned areas are too broad, smaller and local operators may be excluded; if the areas are too narrow, it becomes more difficult for larger operators to aggregate all the licenses necessary to develop more expansive and transformative business plans.

- 2 **Clearer mandates, better coordination, and more technical capacity of the government departments and sector regulator are needed.** There may be value in allowing for stronger ex ante regulation. It is not uncommon in regulated sectors in other countries for a competition authority to, at times, play what could be seen as an ex-ante role, for instance mandating access to certain facilities. Normally, competition authorities would only become involved when a gap in ex-ante regulation arises because technology moves faster than regulation—the rest should be left up to of the sector regulator, ICASA—allowing them to be well-resourced and empowered.

**Specifically, ensuring the regulator’s independence and confirming its field of play should help expedite stalled actions such as 4G licensing.** Ultimately, ICT’s importance lies in its role in facilitating innovation in the economy. Clear directions for spectrum assignment would be an important step to support these objectives. A further complication is the absence of local loop unbundling. This could create incentives to upgrade the speed of the existing fixed-line network and secure third-party access to the new fiber networks.

**Further investment in broadband infrastructure to create more network connections, upgrade technologies, and create more competition is an important part of the story.** By solving some of the regulation and competition issues, it is possible that the affordability and access issue South Africa faces may rectify itself, however, there are additional measures that can be taken to speed up the process.

There is also a need to ensure broadband access also in rural areas by working with non-profits and public organizations. Subsidized programs could be used to get coverage at decent speeds in areas of economic exclusion, such as townships. Infrastructure sharing could be key to expanding decent network coverage, without the doubling of efforts and investment.

**Developing basic and vocational curricula that deepen the digital fluency and ICT literacy skills is critical.** This can be done in a multitude of ways, both at a public and private level. As discussed above, TVETs (and public institutions in general) need to be better aligned with industry needs. Curricula are often outdated or incorrectly focused. This could be fixed through better dialogue between industry and the TVETs, as well as by making it easier for institutions to update said curricula.

**PPPs are turning out to be essential tools for the fostering of digital skills and should be encouraged, together with initiatives that focus on inclusion.** Private institutions know what skillsets they need; PPPs are one way of providing these. An NPC focused on youth and technology, mLab, has a variety of programs aimed at up-skilling young people, particularly in digital skills. One of mLab’s programs, *CodeTribe*, has already trained 217 programmers; those of whom have entered the workforce have reported an increase in household income of 250 percent, which has lifted them out of poverty. By working with both the public and private sectors, mLab has managed to secure the funding it requires while being able to properly align itself with the skills needed by companies looking to hire. There

are an increasing number of programs training young people with digital skills, but these are mainly in key urban areas and not in rural or other provinces, where there are limited interventions.

**The focus on the ICT industry is relevant for the World Bank Group program given its importance and high impact on the South African economy.** Not only is the ICT sector crucially important when considered in isolation, but the cross-cutting effects of the industry are also pronounced and spill over into other sectors. For the purposes of this report, ICT will be discussed mainly in terms of (a) regulatory and competition issues that hinder infrastructure deployment, as this foundation is critical and because there are potential quick wins, and (b) digital skills, a crucial agenda to catalyze the benefits for the whole population and sustain long-term growth of the sector. Additional topics, such as digital finance, digital platforms, and digital entrepreneurship will be covered by a forthcoming World Bank Group project, the *Digital Economy for Africa Diagnostic*.

**The World Bank Group can offer a suite of interventions and advisory services to support the growth of the ICT industry in South Africa and unlock its potential.** Restoring policy certainty and trust with the private sector are a necessary condition for the ICT sector to attract investment in larger volumes. The World Bank Group is well-equipped to provide technical advice to the line departments and regulators responsible for ICT, especially with regards to spectrum regulation, competition framework—all of which have direct

bearing of the affordability and access of ICT services within the country. On the skills agenda, introducing programs that expand the availability of specific digital skills demanded in the market would be a way to generate ICT employment in the short term—this can be achieved through public-private partnership programs, letting the private sector lead the development of the skills it demands. As a long-term goal, the reform of the South African education system with a larger focus being placed on skills that are needed in the fourth industrial revolution, has been acknowledged by the government and will require investments in areas such as school infrastructure and teacher training.

### How can the World Bank Group support this agenda?

**The government has recognized the sector’s potential as an enabler for productivity and growth.** South Africa’s National Development Plan notes that the ICT sector underpins “the development of a dynamic and connected information society and a vibrant knowledge economy that is more inclusive and prosperous” by 2030. It is broadly recognized that the digital economy has enormous potential to enhance productivity, incomes and well-being. The digital economy intersects with an unlimited number of Global Value Chain (GVC) linkages within the global economy, impacting manufacturing and service sectors. The South African Department of Trade and Industry has identified ICT and electronics among 11 priority sectors that have the highest growth and investment potential.

## In Summary

Factors affecting private investment	Policy options outlined in the report	World Bank Group role
<b>Information and communication technologies:</b>		
<p><b>Infrastructure development:</b> Policy uncertainty holds back investment.</p>	<ul style="list-style-type: none"> <li>■ Different regulatory approaches would encourage better use of existing fiber infrastructure, for example, facilities sharing regulation.</li> <li>■ Programs to get coverage at decent speeds in areas of economic exclusion could be implemented, for example, in townships using the Universal Service Fund (USF).</li> </ul>	<ul style="list-style-type: none"> <li>■ <b>Advisory support</b> on the regulatory environment and implementation based on WBG experience in other countries.</li> <li>■ <b>Potential IFC investment</b> to mobile network operators (MNOs) with funding needs at their various</li> </ul>

Factors affecting private investment	Policy options outlined in the report	World Bank Group role
		<p>subsidiaries, potential acquisitions or deployment in both the wholesale and retail broadband markets, support MNOs as they position themselves as consolidators in the FTHH space, acquisition of towers in the market, selectively available in the market, selectively support data center operators in South Africa that need funding for deployment and expansion project into the rest of Africa.</p>
<p><b>Price of data and quality of service:</b> Gaps in the legal and regulatory framework has been a critical bottleneck, and a major reason for the limited availability of high-demand spectrum to upgrade broadband networks to 4G and 5G.</p>	<ul style="list-style-type: none"> <li>■ Clarify the policy direction and develop a plan on the assignment of high-demand spectrum to gives certainty to the industry.</li> <li>■ Accelerate the digital migration by providing a policy directive on the process.</li> <li>■ Strengthen the independence and capacity of ICASA, the regulator responsible for ICT, and implement pro-competition provisions in the ECA Bill.</li> <li>■ Explore regulatory approaches to promote data affordability for example, through more innovative use of the USF.</li> </ul>	<ul style="list-style-type: none"> <li>■ <b>Advisory support</b> on methods for spectrum assignment in light of the World Bank Group's experience in countries such as Mexico; review the regulatory framework and options for accelerating digital access and promoting competition.</li> </ul>
<p><b>Digital skills:</b> Low basic literacy and numeracy skills among large segment of students which are necessary for acquiring the digital skills. Inadequate and insufficient digital literary programs and curriculum which are not aligned with labor market/industry needs.</p>	<ul style="list-style-type: none"> <li>■ Promote digital literacy at schools.</li> <li>■ Foster PPPs as a tool to deliver digital skills that are directly needed within the private sector.</li> <li>■ Reform TVET system (programs, curriculums, labs/workshops, professional development of instructors) to better align with industry needs.</li> <li>■ Explore possibility of PPPs for development of Digital Skills at basic education and TVET institutions.</li> <li>■ Continue to attract students into STEM subjects.</li> </ul>	<ul style="list-style-type: none"> <li>■ <b>Advisory support</b> to conduct a Digital Economy for Africa (DE4A) diagnostic to identify interventions in areas such as digital financial services, digital skills, and digital platforms; scale up XLAfrica, a pan-African accelerator for digital startups, and mLab on digital skills; conduct a Digital Economy for Africa (DE4A) diagnostic to identify interventions in areas such as digital financial services, digital skills, and digital platforms.</li> <li>■ <b>Potential IFC investment</b> to increase investment in digital skills PPPs: scaling up state of the art rapid skills development models, for example, through competitive processes and blended finance.</li> </ul>

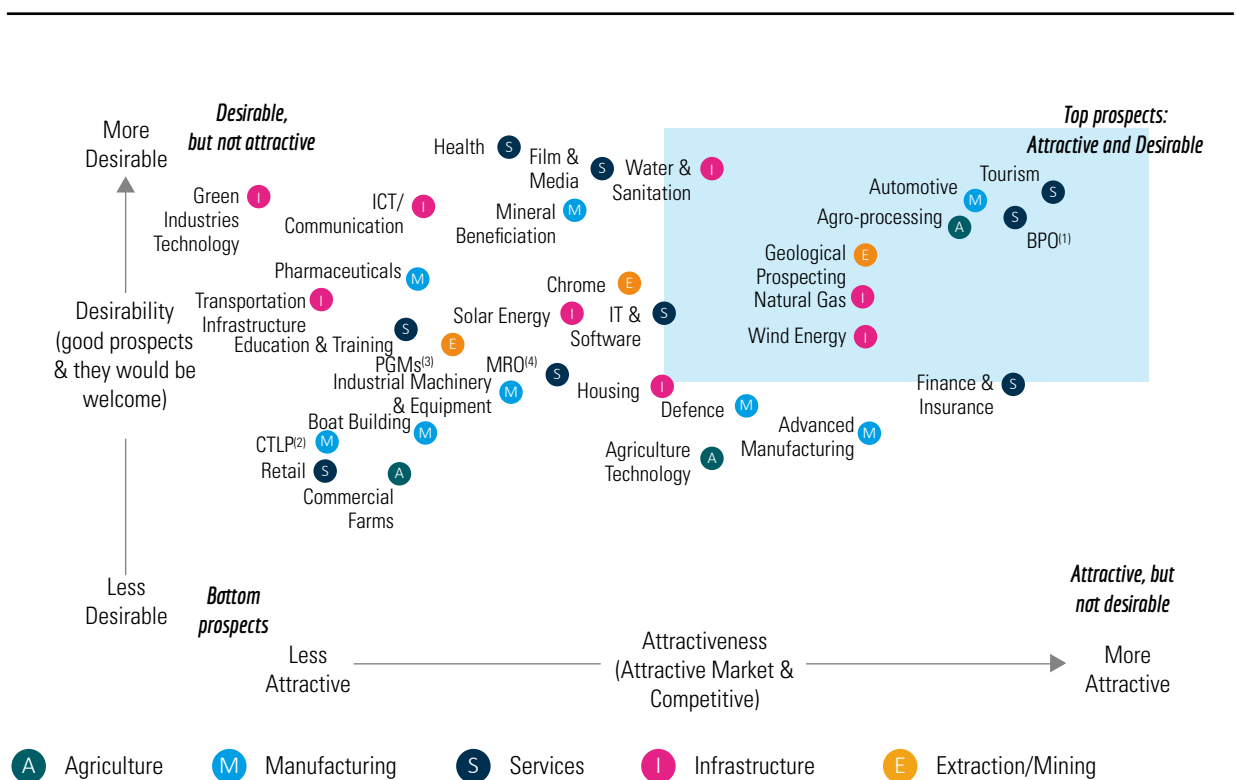
# **APPENDIXES**

# APPENDIX A

## SECTOR SCAN

Many sectors in South Africa exhibit both a high degree of potential development impact (“desirability”) and “attractiveness” for investors based on WBG analysis with FeverTree Consulting:

**FIGURE 44 SECTOR PRIORITISATION**



Source: WBG sector scan, 2019.

Note: (1) BPO - Business Process Outsourcing; (2) CTLF - Clothing, textiles, leather & footwear; (3) PGM's - Platinum Group Metals; (4) MRO - Maintenance, repair and Overhaul

# APPENDIX B

## REVIEW OF SOUTH AFRICA'S LAND MARKETS

### Overview

**South Africa is the 25<sup>th</sup> largest country in the world with 122 million hectares of land. Land has a variety of uses, with a concentration in the agricultural sector.** Around 25 percent of South Africa's land is used for urbanization, industry, mining, privately and publicly owned conservation areas and national parks. Agricultural land in South Africa today represents approximately 76 percent of the total land use, declining from 79 percent on the back of the expansion of urban areas, conservation areas, forestry and mining (Agri SA 2017).

**Land in South Africa is mostly privately owned.** According to the Land Audit (2017), 94 percent (114 million hectares) of South Africa's land is registered with the Deeds Office. Around 90 percent of this registered land is privately owned. The remaining 6 percent is owned by the state through trusts. The total for privately owned land is made up of individuals, constituting 39 percent of ownership, while trusts and companies own 31 percent and 25 percent respectively (Land Audit 2017).

**Land reform policy has failed to address historically skewed ownership patterns.** According to the 2017 Land Audit, white South Africans make up around 10 percent of the population but own 75 percent of all agricultural land. Land reform policies implemented by the democratic government since 1994 have failed to address this. The target of transferring 30 percent of arable land to black landholders by 2014 was not achieved, and there is limited information on the current level of transfer. Factors impeding effective land reform include inadequate resources—the average budget for land reform is 1 percent of the national budget and has been on a decline over the past decade (Kepe and Hall

2016)—and limited administrative and management capacity. This has become inadequate amid a mandate that has expanded to include production support to agricultural beneficiaries (Kepe and Hall 2016). Moreover, restitution and redistribution proved to be expensive and were rife with legal complications, such as multiple claimants, burden of proof, price setting, and general implementation (Kepe and Hall 2016).

### Performance and key challenges

**South Africa's land administration is inefficient.** The Doing Business 2018 report ranks South Africa at 107 out of 190 countries for the efficiency of registering property. It takes seven procedures and 23 days to register property at an average cost of 7.6 percent of the value of the property. The report gives South Africa a score of 13.5 out of 30 on the quality of land administration.

**Land markets have low volumes of transactions and large variations in prices across the nation—even across regions that have similar levels of economic development.** For instance, while the Western Cape is among South Africa's agricultural hubs, only 5 percent of agricultural land was transacted in the province between 2003 and 2014 (Nowers, 2014). In 2011, Western Cape farm land prices were estimated to differ by more than four orders of magnitude, from \$15 per hectare to \$178,000 per hectare of farmland (Osano et. al. 2011). And in 2014, the price for a hectare of land in Western Cape ranged anywhere between R 10,000 and R 70,000 for similar regions (Nowers 2014).

**South Africa has a strong constitution, but property rights are weak. Weak property rights also extend to land tenure, where security of tenure in the former**



**homelands is fragile.** Tenure security is still governed by the Interim Protection of Informal Land Rights Act (IPILRA). This stop-gap legislation has been in place since 1996. The act aims to secure the rights of people occupying land without formal documentary rights, such as rights to household plots, fields, grazing land, or other shared resources. Yet its effectiveness is limited because there is no land administration system underpinning it. This means there are no proper processes for clarifying and documenting rights or resolving disputes (World Bank 2018a). As a result, even where the poor hold land, the value of these assets is limited. Moreover, this lack of land tenure rights impedes emerging farmers from accessing finance and production support programs from government (Kepe and Hall 2016).

Additionally, the IPILRA requires proper community consultation in cases where external investors wish to access communal land. However, some external investors violate these provisions, while other potential external investors decline to invest either because they are unsure how to negotiate leases of communal land or are anxious about whether the arrangements will be respected (World Bank 2018a).

### Recent policy developments and recommendations

**Government is currently discussing new approaches to land reform.** Until now, land reform policy has largely been based on the “willing buyer, willing seller” model.

In November 2018, the Joint Constitutional Review Committee recommended that Section 25 of the South African Constitution be amended to allow for land expropriation without compensation.

**Whatever the outcome of these constitutional and parliamentary discussions, there are several ways for South Africa to increase its capacity for land reform.** At the same time, it must strengthen extension services, financing, training, access to inputs and capital equipment, and marketing and transport infrastructure for small-scale and emerging farmers. Quickly resolving issues around land reform in a way that redresses historical injustices without undermining livelihoods of rural communities is a critical challenge for South Africa—both to reconcile with past injustices and to promote greater certainty around ownership so as to encourage much-needed investment in agriculture.

**South Africa should strengthen property rights with regards to RDP houses and land tenure.** Assignment of RDP deeds should be fast tracked, and the general property registration and transaction processes should be improved. eGovernment platforms can be used in this regard. Legislation and institutions to strengthen tenure security in the former homelands is urgently needed, but the 2004 Communal Land Rights Act was annulled by the Constitutional Court, and the current Communal Tenure Bill may suffer a similar fate. At the heart of the long-standing stalemate regarding tenure reform in communal areas is the significant power given to traditional leaders.

# APPENDIX C

## REVIEW OF SOUTH AFRICA'S HEALTH SECTOR<sup>82</sup>

### Overview

South Africa has what has been termed a two-tier health system fractured along socio-economic lines. There is a private sector, predominantly financed through medical schemes, which covers 8.8 million people, or 16.2 percent of the population; the public sector covers the rest. Total health expenditures are evenly split between both populations, indicating substantial inequity in both access and financing of health care (National Department of Health 2017). The National Development Plan comments that the health system's overall performance since 1994 has been poor, notwithstanding development of good policy and relatively high spending as a proportion of GDP.

Despite spending 8.5 percent of GDP on health, South Africa has an excessive burden of preventable illness and premature death. Over the last two decades some significant improvements have occurred in maternal and child health and HIV/AIDS testing and treatment. But health indicators remain poor and are not on par with South Africa's levels of socio-economic development and health expenditure. Life expectancy is approximately 62 years, lower than the average for lower middle-income countries.

In terms of disease burden, South Africa is affected by the simultaneous occurrence of infectious diseases and non-communicable diseases. In addition, there is still a heavy burden of perinatal and maternal disorders and trauma. While the leading cause of death in South Africa is tuberculosis—mostly associated with the HIV/AIDS epidemic and affecting over 7.2 million people—there is an increasing dominance of illnesses that have conventionally been classified as diseases of affluence among the

determinants of mortality. Diseases such as diabetes, hypertension, and cardiovascular diseases, among others, are increasingly affecting poor and vulnerable groups. A study by Bradshaw et al. (2008) estimated that overall, HIV accounted for 39 percent of the total number of years of life lost in South Africa; trauma (violence and road accidents) for 10.5 percent; tuberculosis for 4.7 percent, and diarrheal diseases for 4.2 percent.

### Performance and key challenges

The bimodal health system has entrenched stark inequalities. The inevitable result is that socio-economic status becomes the main determinant of access to quality health care services. A key cause of disparities in access to health care services is the fragmentation of health financing, with poor and rich utilizing separate revenue collection and pooling mechanisms. Even though such fragmentation is a common feature in low-middle income countries, it is more starkly pronounced in South Africa.

While primary health care is provided free of charge in the public sector, public hospitals levy user fees that can be onerous for low-income employees to cover on an out-of-pocket basis. In terms of the patient payment policy, patients who are South African citizens are eligible to receive care free at the point of care, subject to them proving their status as destitute. They need to satisfy a means test criteria, contained in the Uniform Patient Fee Schedule (UPFS).

Per capita health expenditure among those who have medical aid scheme coverage is more than five times larger than among those who exclusively rely on the public sector. The unequal distribution of finances translates to a highly unequal distribution of medical

assets and personnel. Approximately 6 out of 10 general doctors, two thirds of specialists, and 9 out of 10 dentists and pharmacists practice in the private sector. This means they cater for only the privately insured population or the very small minority of uninsured patients who pay on an out-of-pocket basis.

**Affordability is the main barrier to medical scheme membership for poor households.** As in other countries, private medical aid premiums are based on expected health costs rather than income, which tends to be positively correlated with age, but loosely correlated with income. As a result, lower income earners need to spend a significantly larger proportion of their income on premiums to become part of a private medical scheme. Most poor households cannot afford this. Premium payments account for over 6 percent of all household incomes, as compared to general tax which accounts for about 5 percent (Ataguba et al. 2017).

**Because of higher income groups enjoy and can afford higher coverage, expenditure on medical aid schemes overall is progressive** (higher income quintile households spending over 8 percent of their total incomes on medical scheme premiums, as opposed to a negligible expenditure by the two lowest income groups). It is estimated that the sub-population which voluntarily enrolls in one of the private medical schemes has an income roughly 2.7 times the average population's income (Discovery Health 2016), equivalent to a GDP per capita of approximately \$35,000 (PPP).

**Consumption of healthcare is characterized by market failures.** These often stem from asymmetries of information between patients and health providers, which lead to suboptimal market equilibria (Mooney & Ryan 1993). The imperfections extend to the market for health insurance, where behaviors such as adverse and risk selection limit the number of people who purchase health insurance—for any given level of the premiums—to those who have higher self-perceived risk of using health services.

**Adverse selection is somewhat mitigated since those with medical scheme coverage mainly get it through their place of employment and not on an individual basis,** but can be seen, for example, in the age structure of those privately insured, which tends to underrepresent youth. In turn, medical scheme providers counteract potential adverse selection by structuring their marketing and product

design strategies to attract good risks: those who are healthy and less likely to utilize health services. Another shortcoming of medical scheme membership is that health coverage is often lost when people leave employment or retire and can no longer afford to make contributions. It is thus possible for people to make substantial private contributions while employed, but then be left without access to private health care when they are much older.

**Market failures in the private health care sector have led to a cost spiral. This can be attributed to moral hazard and excessive concentration in the market for hospital services.** A working paper published by the OECD in 2016 concluded that private hospitals in South Africa are more expensive than in other OECD countries, in relation to the country's income. The study blamed the high concentration and the barriers to access in the hospital industry as key contributors to high hospital care prices escalation. However, the OECD results have been contested by the industry, which claims that the OECD article reached flawed conclusions based on a non-representative sample. They argue that most of the cost escalation of privately financed health services in South Africa is due to the evolution of demand side factors (adverse selection and progressive aging of the insurance pools), and to the depreciation of the rand, because most medicines and medical equipment used in South Africa are imported.

### Recent policy developments and recommendations

**Several plans to reform the health sector in South Africa have not been implemented.** One of the key focus areas of policies enacted over the past 25 years has been to redress the disparities in health outcomes and access to quality health services described above. The ANC Health Plan released in 1994 emphasized development of a publicly funded, publicly-provided and decentralized health system. The idea of creating a universal National Health Insurance first emerged in this document. The Taylor Committee, which published its report in 2002, and the Ministerial Task Team on Social Health Insurance created thereafter, also proposed a radical reshaping of both the public sector and the medical schemes environment. The NDP acknowledged the role of universal health access in driving inclusive growth. The plan also pointed out that access to healthcare services is among the key determinants of health, alongside social determinants such as poverty and poor sanitation, lack of education, and others.

**In 2018, the National Health Insurance Bill was prepared, but the approval and implementation is delayed.** The introduction of the NHI bill was followed by a three-month comment period, which allowed key stakeholders and the public to provide input. After consideration of the input, a further revised bill will be published. The process is currently ongoing but there are indications that the revised bill will once again envisage a substantially reduced role for medical schemes—a contentious issue. The Cabinet sent the NHI bill back to the Department of

Health for further review in December.

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# APPENDIX D

## REVIEW OF SOUTH AFRICA'S MINING SECTOR

### Overview

South Africa's mining sector has historically played a pivotal role in the country's economic development. But over the past few decades the sector has been in decline. In 2017, the mining sector's real GDP was 3.9 percent lower than in 1994 (Chamber of Mines 2017). In 2016, mining's contribution to GDP was 7.3 percent (World Bank 2018b). The contribution to government revenue declined from a peak of nearly 29 percent in 1981 to just 2.5 percent in 2014 (World Bank 2018b). Nevertheless, mining continues to play a major role in South Africa's balance of payments. Between 2007 and 2016, total mining exports increased from R 160 billion to R 294 billion, which represented 23.8 percent of South Africa's total export basket over this period (ibid). Mining is a relatively capital-intensive industry and has low employment multipliers.

The sector employs 464,667 workers representing only 3 percent of total employment in South Africa's formal sector (Chamber of Mines 2017). However, employment is partially based in areas where there isn't much economic activity: mining provides jobs in areas where opportunities are thin.

Mining in South Africa is comprised of privately-owned mining companies and a state-owned mining company with a small market share. As of 2016, there were a total of 53 mining companies listed on the Johannesburg Stock Exchange (JSE), down from 160 in 1994 (FTI Consulting 2017). Of these listed companies, 29 have a market capitalization of more than R200 million (PWC 2017). In 2017, these companies had a combined market capitalization

of R 420 billion (PWC 2017). JSE listed mining companies' revenue from ordinary mining activities was R 371 billion while the net profit was R 17 billion in 2017. The African Exploration & Mining Finance Corporation (AEMFC) is a state-owned mining company and a subsidiary of the Central Energy Fund. In 2017–18, the AMFC made revenues of R 458 million and a net profit of R 64.9 million.

Investment into the mining sector has been on a decline since 2007. It reached a historical low of R 60.7 billion in 2016 but improved to R 80.9 billion in 2017. Low investment was in part driven by infrastructure issues in energy, water and logistics, weak demand and policy uncertainty. South Africa has a rich mineral wealth, and the mining sector is thus driven by a wide range of commodities. This has helped South Africa in smoothing the effect of global demand and supply in specific sectors. At a combined contribution of 63 percent, coal, PGMs and gold are the three largest contributors to mining output in South Africa.<sup>83</sup> In three key sectors the following dynamics are impacting on investment and output:

- **Platinum Group Metals:** Slowing global demand and rebalancing of supply to align with demand has resulted in lower platinum prices (in U.S. dollar terms), while the cost of production has been increasing rapidly in South Africa. Without firmer global Platinum prices, recovery may be muted.
- **Coal:** Almost 50 percent of the sector's output is sold locally (mostly to Eskom), so increases in the cost of production are likely to be passed onto Eskom internally. However, international sales are placed in the context of falling global demand for coal.
- **Gold:** The gold sector has been under threat for

a number of years due to declining yields, deeper seams, and rapidly increasing production costs.

### Performance and key challenges

**The Fraser Institute’s annual survey of mining companies shows the attractiveness of South Africa’s mining sector has been on the decline.** The survey assesses how mineral endowments and public policy factors such as taxation and regulatory uncertainty affect exploration investment. Under this measure, South Africa ranks relatively poorly, at 74 overall, down from 64 (out of 122 jurisdictions) in 2014 and 60 (out of 79 jurisdictions) in 2010. The poor rank is partly due to policy uncertainty, and a lack of publicly available information about South Africa’s mining sector impairs transparency and accountability.

**Indeed, while South Africa has a favorable tax regime, survey evidence suggests that mining companies do not generally view the country’s investment climate positively compared to other jurisdictions.** Between 2000 and 2010, mining investment was more responsive to changes in commodity prices, with a 1 percent increase in prices resulting in a 3 percent uptick in investment (after accounting for depreciation) (World Bank 2018b). However, between 2010 and 2016, mining investment was far less responsive to changes in commodity prices, increasing by only 1 percent with every 1 percent increase in prices. Since 2010, South Africa has underperformed relative to its peers in investment, both overall GFCF and in exploration, and following this, in output (ibid).

**Since being introduced in 2010, the Mining Charter has created policy uncertainty which has in part led to underinvestment in the sector. This was exacerbated by the draft of the third Mining Charter in 2018.** The initial draft of the third mining charter outlined more stringent targets for which, it is proposed, will be legally enforceable for the first time. Moreover, as discussed below, the initial draft had a range of areas which were uncertain in nature and difficult to measure. The new charter could have an impact on emerging sectors, such as manganese, and the revitalization and further growth of others such as chrome could be limited. The initial draft of the new charter would have a higher cost of compliance particularly, from the following provisions:

- Increased Broad-Based Black Economic Empowerment (BBBEE) shareholding (which may have to be funded by the current owners of

capital in the sector).

- The rejection of the “once-empowered, always-empowered” principle.
- A proposed dividend of 1 percent of turnover to be paid out to BBBEE shareholders annually.
- Increased socio-economic investment requirements (such as the requirement to spend a minimum of 70 percent of total mining goods procurement spent on goods manufactured in South Africa, with at least 21 percent from Black Owned Companies) as well as various enterprise development requirements.

**Policy uncertainty has also been exacerbated by the Mineral and Petroleum Resources Development Amendment (MPRDA) bill.** For instance, the bill requires any person who intends to export “designated” minerals to be granted written consent from the Minister subject to “conditions” that the Minister may determine. However, these designated minerals are not clearly defined, and it is not clear whether it applies to both raw or value-added minerals, what the “conditions” are and whether this applies to current exporters. Other concerns relate to compulsory beneficiation even when it is not economically viable, doing away with the first come-first assed principle in processing applications for mining rights and a lack of clarity around the “free-carried interest” that government would be entitled from oil and gas operations. In 2012, the Cabinet approved the draft MPRDA Bill, but it was not signed into law. Industry also raised concerns over the constitutionality of the Bill and suggested a court challenge was possible as there had not been sufficient consultation with industry and affected communities. The MPRDA Bill has since been withdrawn.

### Recent policy developments and recommendations

**President Cyril Ramaphosa’s administration has committed to addressing policy uncertainty.** After being disputed and suspended in court, the third Mining Charter has been revised and the most recent version (released in August 2018) considered some of the industry’s concerns. For instance, the minimum black ownership for existing mine rights has not been increased and will stay at 26 percent, preserving the “once-empowered always-empowered” principle and abandoning the requirement for companies to pay BBBEE shareholders an annual dividend of 1 percent of turnover. The final Mining Charter was gazetted in September 2018, after a long engagement process



with stakeholders, thereby providing a greater degree of policy certainty to the industry.

**As the World Bank (2018b) report argues, South Africa should consider joining the Extractive Industry Transparency Initiative (EITI).** The EITI is a global standard with a robust yet flexible methodology for disclosing company payments and government revenues from oil, gas, and mining at the country level as well as other information about the extractive sector. This includes the legal framework and fiscal regime, contracts, licensing practices, state-owned companies, production, exports and so on (World Bank 2018b). When the data disclosed through the initiative is properly leveraged, it can be used to

facilitate a transition from increased transparency to improved accountability by bolstering a number of governance measures. These range from measures to increase public and private accountability, corporate compliance with sector laws, improved mineral tax administration, as well as improving the investment climate (World Bank 2018b).

**Because of its tripartite (government, industry, and civil society) representative model, the EITI can be leveraged to build trust** and inform more constructive debates about the management of a country's natural resources (ibid). To date 51 countries have joined the EITI; they are part of a growing consensus that have all recognized the being part of the EITI provides benefits.

# APPENDIX E

## REVIEW OF SOUTH AFRICA'S TOURISM SECTOR<sup>84</sup>

### Overview

South Africa is regarded as a regional leader for the tourism sector but is in danger of stagnation. As a relatively mature destination it welcomed 10.3 million foreign tourists in 2017, nearly 8 million more than Sub Saharan Africa's second most-popular destination, Zimbabwe. Most of these international arrivals (7.6 million) come from the Africa region. A further 17.2 million trips were taken domestically. In 2017, the sector directly contributed 2.9 percent to GDP.<sup>85</sup> Direct contribution reflects economic activity generated by, for example, hotels, travel agents, airlines and transportation services and restaurants. The total direct and indirect contribution 8.9 percent of GDP in 2017 and could reach 10.1 percent by 2028.

Tourism employed 4.5 percent of South Africa's workforce<sup>86</sup> in 2017, with a high proportion of women. If direct and indirect jobs are counted, the sector supported about 1.5 million jobs in 2017—9.5 percent of total employment. There is potential to grow employment in the sector to 2.1 million jobs by 2028.<sup>87</sup> The tourism sector also plays a larger role in job creation than other major industries. Between 2014 and 2017, tourism created just over 64,000 net new jobs, outperforming larger industries such as transport and communication, mining, utilities, and manufacturing.

The market is made up of many diverse products and services, driven by the private sector. Products and services capitalize on the country's strong physical and cultural endowments (landscape, mountains, cities, wildlife, climate, and gastronomy). Almost all products and services are owned and operated by the private sector. South African Airways, however,

is government-owned and has long been in crisis. The other major state-dominated tourism product is the protected areas network, which comprises 19 national parks and hundreds of public nature reserves managed by national and local government.

### Performance and key challenges

#### Demand-side performance:

Growth in international arrivals is modest, and domestic trips are falling. Growth in foreign arrivals has been consistent but low over the last 10 years, averaging around 2 percent (compared to the sub-Saharan average of 4 to 5 percent). The year 2015 saw a 6.8 percent decline, but the sector is resilient and has now recovered its modest growth trajectory. All domestic trips, however, have been in steady decline; overnight trips have fallen dramatically by 41 percent between 2016 and 2017.<sup>88</sup> This is primarily due to economic decline at the national level and less disposable income for travel.

This pattern is reflected in almost all the other indicators used by SA Tourism to measure demand-side performance of the sector: spend, length of stay, bed nights, seasonality, and geographic spread. Inbound tourism direct spend (or tourism receipts) reached \$5.73 billion in 2017, a 6.9 percent increase on the previous year.<sup>89</sup> This contrasts with a domestic spend decline of 16.6 percent in 2017, to \$1.57 billion. Average length of stay for internationals was 12.2 nights in 2017 (up from 9.2 nights in 2016), compared to just 4.1 nights for domestic travelers (down from 4.3 in 2016). Bed nights increased by 36.7 percent in 2017 to reach 120.6 million for

international tourists and declined by 32.2 percent to reach 70.1 million for locals.

### Supply-side performance:

The National Department of Tourism tracks supply side indicators which focus on the performance of the hotel industry, air travel and meetings industry. While some products are performing better than others (for example, income generated by the food and beverage industry was up 7.8 percent first quarter of 2018 compared to Q1 2017), overall business performance in the sector has reached a record low, according to the Tourism Business Council of South Africa (TBCSA). TBCSA has been surveying tourism businesses since 2001 for their Tourism Business Index, and the first half of 2018 reveals an index score of 57.9 (against an index of 100). This is much lower than the 72.4 forecast and is notably lower than the 71.4 experienced in the last half of 2017.

**Business respondents are pessimistic about performance for the year ahead**, particularly the accommodation sector where 66 percent of respondents anticipated worsening performance.<sup>90</sup> This is backed up by National Statistics data that show a 0.3 percent decline in income for accommodation in the first quarter of this year compared to Q1 of 2017, and weakening hotel occupancy rates across the country (tracked by the STR Hotel Performance Index).<sup>91</sup>

**In 2018, South Africa had the third largest hotel investment pipeline in SSA.** Despite concerns over sector performance, branded hotel investment (a proxy for private sector investment in the sector) is still coming in, albeit behind the smaller tourism economies of Nigeria and Ethiopia. The pipeline amounts to 37 hotels (4,311 rooms) and an average size of 117 rooms per hotel (smaller than regional average). The pipeline is 12 per cent up on 2017, and 335 per cent up from 2012,<sup>92</sup> indicating longer term confidence in the country. Brand penetration in South Africa, however, is relatively low compared to leading destinations worldwide, with many growing European or Asian brands avoiding Africa altogether.

**Overall, South Africa has a relatively strong competitive position for tourism.** It leads the region in terms of competitiveness and ranks 53 globally (out of 136 countries).<sup>93</sup> It continues to rely on cultural resources (19), strong natural resources

(23), and a conducive business environment (21), characterized by minimal red tape and a modest administrative burden.

**Despite these strengths, sector growth is dependent on demand factors which are severely under strain.** “Insufficient demand” was cited as the primary driver of poor performance by over 50 percent of tourism business respondents in the TBI 2018.<sup>94</sup> The weak economy is destroying domestic demand, while simultaneously providing a small competitive advantage to the international market. This international demand is fragile, however, and is being eroded by the following failures:

- **Visa policy:** The private sector has highlighted stringent laws introduced in 2015 to combat child trafficking and terrorism as deterring international arrivals. The government is in the process of reforming these requirements, including more visa waiver agreements, and installing a biometric movement-control system at busy ports of entry.
- **Air transport:** Poor connectivity and expensive fares limit demand, particularly from the region. Liberalizing air access through an ‘Open Skies’ policy could mean a 30 percent drop in airfares on the continent.<sup>95</sup> South Africa has integrated the principles of the “Open Skies” Yamoussoukro Decision in its National Civil Aviation policy but implementation has been slow and should be complemented by proactive route development. The Cape Town Air Access Initiative is one example of such route development. Seen as global best practice, this is a public private sector initiative, established in 2015, and has so far established 13 new routes leading to more than 20 percent international passenger increase in 2017. In 2018 the success continued with the connection of four more destinations and the expansion of seven routes. For domestic air transport, low economic growth, coupled with the weakening rand and an oversupply of seats on domestic routes, has continued to put pressure on already squeezed airline margins.
- **Safety:** South Africa ranks 120 out of 136 countries for safety and security on WEF’s 2018 Tourism Competitiveness Index, and 28 percent of TBI tourism business respondents indicated this as a negative factor contributing to poor business performance.

- **Image and product development:** The image or brand of South Africa has not significantly evolved over the last decade and is still seen as a value-for-money, soft adventure “Gateway to Africa” destination. This is backed up by products that reflect this image. This lack of innovation and brand positioning affects market demand over time.

**Further coordination, government and market failures are affecting the supply side.**

- **Cost of inputs:** The private sector cites cost of labor and cost of energy as contributing to the sector’s negative performance. Fuel taxes were increased in 2018 to 52 cents per liter.
- **Skills/labor:** Skills shortages appear to apply to the accommodation sector more acutely than the wider sector.<sup>96</sup> The hospitality sector is dominated by small businesses which are owner-operated and not affiliated with a chain. With high seasonality and demands on staff, plus limited human resource infrastructure, workers typically experience minimum training investments, long working hours and poor compensation. A career in the sector is not considered aspirational (except in branded or high-end properties) and there is high turnover.
- **Environmental sustainability:** this competitiveness indicator ranks South Africa at 117 out of 136 countries globally and is deteriorating.<sup>97</sup> Deforestation and loss of habitat in South Africa have proceeded at a rapid rate since 2000. Global demand for South Africa’s natural resources is increasing, but insufficient habitat preservation could prevent the country from benefitting from this growing source of tourist attraction.

**Future threats, failures, and opportunities:**

If not addressed, the following factors could have an impact on the sector’s growth and performance.

- **Growth and distribution is not even:** While overall the picture of tourism in South Africa is one of modest growth with a risk of stagnation, this story is not uniformly accurate. Some markets are doing better than others, and some destinations are doing exceptionally well. Cape Town, for example, is booming: with arrivals to Cape Town

International Airport are experiencing 25 year-on-year growth, and the monthly occupancy rate for accommodation is increasing every month of 2017 despite new supply (notably 15,000 Airbnb properties).<sup>98</sup> This contrasts to other provinces in the country where tourism is almost non-existent. Geographic spread is a key performance indicator tracked by the government and should be encouraged to avoid “over-tourism” pressure on resources (Cape Town water crisis) and to spread the benefits of tourism more equitably. This inclusion agenda goes beyond spatial geography and extends also to socio-economic disparity.

- **Latent domestic and regional demand:** With domestic demand in decline and the vast potential for greater regional demand largely unmet,<sup>99</sup> there is an opportunity for South Africa to address its precarious demand base through greater diversification and orientation to these markets.
- **Regional competition: Zimbabwe,** the region’s second most popular destination, has remained resilient in the face of its own challenges, recording arrivals of over 2.4 million in 2017. With new leadership and potential re-engagement of the international community, the country is already positioning itself (through Victoria Falls and its new airport) as a new tourism gateway to the region. There is strong regional competition (Namibia, Botswana, Zimbabwe) to South Africa in the main product categories (wildlife, culture, nature-based tourism, adventure). South Africa will need to consider its future development in light of new competitors and tourism hub development. The country’s loss of gateway status is being compounded by the visa and air access issues mentioned above.
- **Land resource and benefit structure:** Land use/ownership and resource allocation across the country does and will play an increasing role in shaping the sector—especially the segments that rely on land-based resource use (for example, wildlife and nature-based tourism). Control over these assets is complex and intertwined with the broader political economy; more equitable benefit structuring and land rights for local communities will have a significant impact on inclusion for tourism and is particularly relevant in conservation areas (for example, National Parks) where there are many pending land claims.

New tools and approaches for addressing such claims, and which go further in providing access to finance for MSMEs, training, or risk sharing facilities may support greater benefit sharing and are a good opportunity to be explored by the World Bank Group.

- **Digital divide:** With much of the industry moving online and consumer decision-making becoming heavily disrupted by the digital economy, the tourism sector in South Africa needs to remain competitive. This means also investing in infrastructure and capacity building to ensure that potential service providers are able to maintain and expand market access, including in remote or marginalized areas and parts of society.

### Recent policy developments and recommendations

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The National Development Plan (2030 Vision) recognizes tourism as one of the main drivers of employment and economic growth, and the New

Growth Path (NGP) includes tourism as one of the six pillars of economic growth. The revised National Tourism Sector Strategy (2017) seeks to make international and domestic marketing more effective, facilitate easier travel to South Africa, improve the visitor experience, better manage the destination, and spread the benefits of tourism to more South Africans (black people, women, youth and rural communities). SA Tourism—the national tourism board—received an 8 percent budget increase in 2018 from \$90 million to \$97.3 million.

**There are opportunities for World Bank Group to support the enabling environment for growth of the sector and better inclusion.** The Environment and Natural Resources Global Practice is developing a GEF-funded program to support communities around selected Protected Areas (for example, Kruger Park), and FCI is piloting a partnership with Airbnb to promote livelihood opportunities for underserved communities. Through collaboration with the Natural Sector Strategy, World Bank Group interventions could be considered to overcome several of the main challenges and failures identified.

# APPENDIX F

## SOUTH AFRICAN LISTED FIRMS THAT OPERATE IN THE AGRICULTURE AND AGRIBUSINESS SPACE HAVE BEEN PERFORMING WELL IN RECENT YEARS

Name of firm	Revenue (R, millions) 2017	Profit (R, millions) 2017	Revenue growth (percent, (avg. of 2015–17))	Profitability (percent, (avg. of 2015–17))
<b>Primary</b>				
<b>Astral Foods</b>	12 351	2 570	8.33	123
<b>Clover Industries</b>	10 058.6	314.5	5.8	80.3
<b>Crookes Brothers</b>	664	261.8	15	30
<b>RCL Food Group</b>	24 950.7	1 747.6	8.9	105.4
<b>Quantum Foods</b>	4 052	794.1	4.4	130.7
<b>Secondary</b>				
<b>AH-Vest Limited</b>	165.5	56.8	10.5	50.8
<b>Entyce Beverages</b>	3 757.1	735.1	11.1	18.6
<b>Rhodes Food Group</b>	3 680	358	29.5	14.1
<b>Tiger Brands</b>	31 298	10 442	-0.1	6
<b>Tongaat</b>	17 915	2 333	4.5	4.8
<b>Snackworks</b>	3 956.2	666.4	9.1	12
<b>Tertiary</b>				
<b>Pick n Pay</b>	<b>83 504.8</b>	<b>15 250.3</b>	<b>6.5</b>	<b>19.7</b>
<b>Shoprite</b>	141 000	33 826	11.2	9.3
<b>SPAR</b>	65 074.4	2 005.3	16.4	4.7

Source: WBG estimates based on JSE annual reports.



## APPENDIX G

# REVELANCE OF CORE CONSTRAINTS FOR CITRUS AND YELLOW MAIZE

	Yellow maize	Citrus
<b>Emerging farmers</b>	Exports are subject to WTO set protocols and generally SPS matters are not obstacles except in the case of China, which requires certain inspection, even in-field during production, whereas in South Africa, quality and health inspections take place from when the grain leaves the silo. This issue with China is seen more of a technical barrier, the resolution of which is dependent on DAFF capacity.	Government has a number of support programs but officials that interface at farmer development level have limited capacity.  Access to international markets is heavily influenced by SPS requirements and the limited capacity of the failure of DAFF to provide the public goods that emerging farmers need to meet SPS requirements limits access to foreign markets.
<b>Commercial farmers</b>	As Africa becomes more self-sufficient in yellow maize, alternate viable export markets are required.	Large commercial farmers account for a majority of South Africa citrus exports. The Citrus Growers Association invests in research and supports farmers in meeting the SPS requirements to access the U.S., EU, and far-east Asian markets.

### Adapting to climate change and water security

	Yellow maize	Citrus
<b>Emerging farmers</b>	There is a longer route to becoming a scalable commercial farmer in yellow and climate change leads to production variability and compounds the challenges.  Institutional weaknesses in getting water rights and trading water rights also limit growth.	Larger, well-established commercial farmers are exploring the concept of a JV with an emerging commercial farmer on the basis of a 51/49 percent shareholding on an area of about 200 hectares, where each partner provides 100 hectares and the commercial farmer provides the development capital and management expertise. In this arrangement the water rights would be more easily accessed as the business would be a level 1

	Yellow maize	Citrus
<b>Commercial farmers</b>	Production declined on the back of the EL Nino drought. A projected water deficit on the back expected droughts and limited water infrastructure and investment pose downside risks to production.	BEE company. If six such growers were to be assisted a pack house investment would also ultimately be required with the six growers plus commercial farmer as shareholders.  Exporters need to ensure they are always able to achieve a high pack-out of first-grade fruit. Pack houses have a fixed capacity but climatic variability impacts daily production yields and the start and end of a season; factors that are not always aligned to pack house capacity, especially if shared with other producers.

### Increasing affordable access to finance

	Yellow maize	Citrus
<b>Emerging farmers</b>	Government support has been limited. Commercial banks typically require farmers to have access to land and water rights. Financial support programs by industry associations have had limited access due to design. For instance, the Maximum Food Production Programme was launched in 2003 to support emerging maize farmers in the Eastern Cape but had limited success because of no formal training being offered to farmers and weaknesses in the input procurement system that government was suing in the program.	Emerging farmers in citrus can take up to 10 years of financial support before they break even. Access to bank debt is dependent on the collateral security value land and equipment, as asset classes can offer the financier. Thus, many emerging farmers cannot secure finance due to land tenure not enabling collateralization.  Emerging commercial farmers need specially structured finance products for long-term orchard crops. In 2016, the banking sector, through its representative body, BASA, proposed a blended fund between commercial debts and government grants to provide a financial product that is affordable to emerging commercial farmers. Only in 2018 were discussions re-opened between BASA and government on the proposal.
<b>Commercial farmers</b>	Large commercial farmers typically have access to finance, particularly from commercial banks.	Finance for the industry is based on own capital through accumulation of investors over long periods plus bank debt.  Banks can borrow farmers up to 50 percent or 60 percent of total assets, thus commercial farmers who hold land typically have access to finance from commercial banks and own capital accumulation of investors over long periods.

## Skills and capabilities

	Yellow maize	Citrus
<b>Emerging farmers</b>	Emerging farmers lack critical skills particularly with regards to management functions. Support programs such the MFPP have not facilitated adequate training and skills transfer.	Emerging farmers account for 10 percent of citrus production. Skills transfer is required to bring in more emerging farmers. Industry associations such as the CGA provide technical support to farmers.
<b>Commercial farmers</b>	Commercial farmers have a long history of farming, particularly white maize which is a staple food for South Africa, and thus have skills and capabilities in yellow maize derived from experience.	Industry associations such as the CGA provide technical support to farmers

## Land and water rights

	Yellow maize	Citrus
<b>Emerging farmers</b>	Emerging commercial farmers are generally located on land that was either part of, or earmarked for inclusion into the apartheid-era homelands. The land within these homelands or self-governing states are either communally held, with rights conferred by the traditional leader or are either leased from the state or in some cases leases have had title conferred. Refer to the case study of the North West Province in what was once Bophuthatswana.	Many land reform beneficiaries of citrus estates have found it challenging to produce the quality and quantity required to service export markets, compounded by an inability to secure finance due to the land tenure not enabling collateralization.
<b>Commercial farmers</b>	<p>Large commercial farmers hold substantial land that enables them to not only produce at efficient scales but also enables them to borrow using land as collateral. Policy uncertainty regarding land reform might impact land prices negatively and reduce the value of land as a collateral.</p> <p>Weak institutional frameworks for allocating and trading water rights are a constraint.</p>	<p>Similar to citrus, policy uncertainty due to land reform might have a negative impact on land prices and reduce the value of land as collateral.</p> <p>Again, a weak water framework is constraining growth. In Limpopo province for instance, Letsitele users haven't received more than 50 percent of their allocation for the past 15 years.</p>

## Barriers to competition

	Yellow maize	Citrus
<b>Emerging farmers</b>	<p>Emerging farmers face large high entry costs as maize production has become increasingly mechanized. The market is dominated by large commercial farmers who are vertically integrated and can source inputs cheaper due to economies of scale and networks.</p> <p>Silos are a critical element of yellow maize marketing and access to silos is a crucial bottleneck in the market as the market for silos is dominated by large vertically integrated agribusinesses. Silos are prohibitively costly to construct and are seldom at full capacity, making it an imprudent investment for new entrants.</p>	<p>Quality is a main channel through which associations restrict market entry. Recent efforts by the CGA has seen a tendency to push for more stringent quality standards, which are naturally more difficult for new entrants to uphold, to gain market access. Both the CGA and the FPEF have close professional and personal ties to the PPECB, the main regulator for export fruit standards.</p> <p>Despite land reform, the establishment of the CGA-GDC and a range of private and third-sector initiatives, black participation in the citrus export market still appears to be low as the willingness of established actors to transform the industry appears limited.</p> <p>The market power of actors up- and downstream puts smaller farmers at a disadvantage when entering into contracts.</p>
<b>Commercial farmers</b>	<p>Often integrated into poultry/broiler production and silos. There are industry associations that may have re-regulated the sub-sector and the sub-sector has been found to have a history of uncompetitive behavior through collusive practices.</p> <p>Competition may be impeded by high degree of vertical integration, multimarket contact of large silo operators and joint ventures.</p>	<p>Agricultural co-operatives enjoy a range of privileges in the years before deregulation, which enabled large regional players in citrus (for example for processing) to emerge.</p> <p>Vertical relationships, especially among firms involved in exports, are a common feature in the citrus value chain. In a similar spirit, long-term contracts are often in place where vertical integration is not possible. Both vertical integration and long-term contracts can make it more difficult for new entrants to find business partners or access pack house or storage facilities, along the value chain.</p>

## APPENDIX H

# AUTOMOTIVE MANUFACTURING IS SPREAD ACROSS THREE PROVINCES

The Eastern Cape has the largest concentration of automotive manufacturing in South Africa:

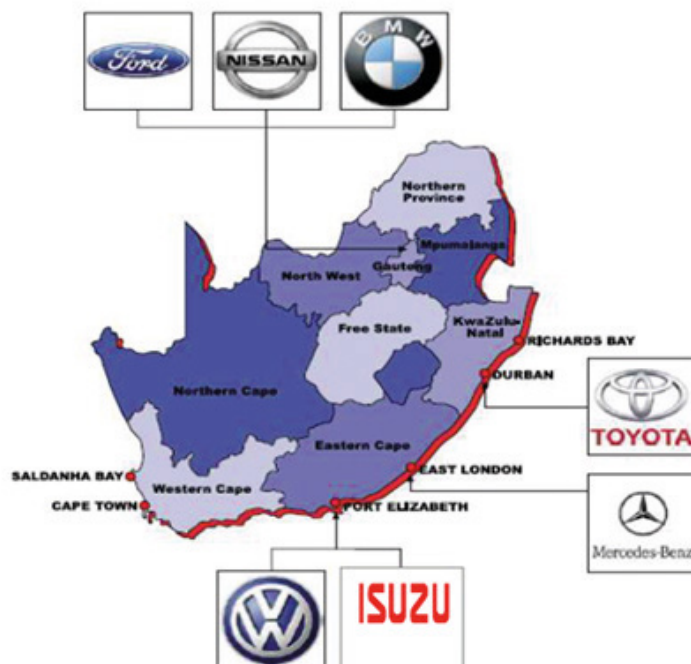
- Port Elizabeth/Uitenhage: First Automotive Works, Ford, Volkswagen, Isuzu and about 30 percent of the automotive components industry
- East London: Mercedes-Benz's assembly plant and roughly 6 percent of the components industry

Gauteng (Rosslyn, Silverton and Ekurhuleni) has the

second-largest concentration of the automotive industry:

- 3 OEMs and approximately 40 percent of the South African automotive components industry

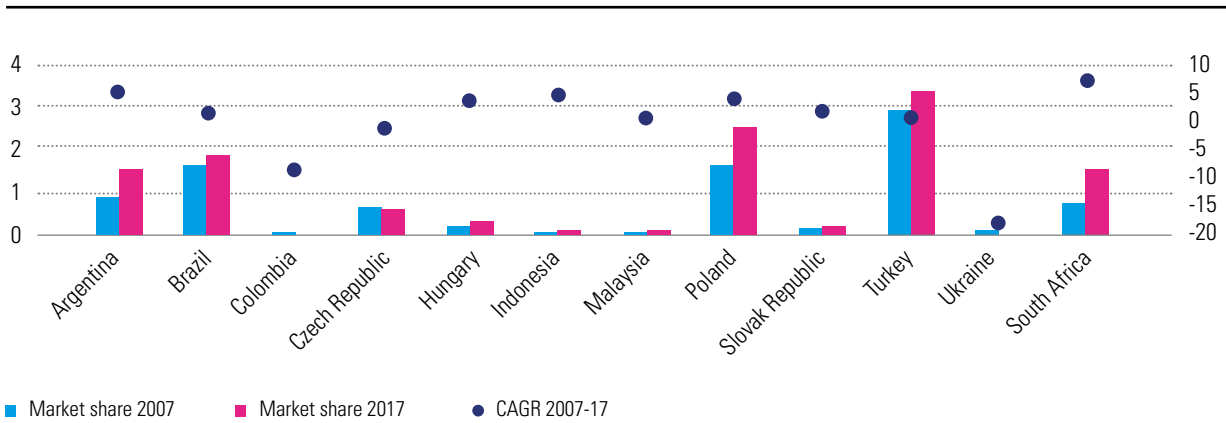
KwaZulu-Natal (primarily Durban, but also Pietermaritzburg) is home to Toyota's assembly plant, South Africa's largest producer of vehicles, and approximately 20 percent of the automotive components industry.



# APPENDIX I

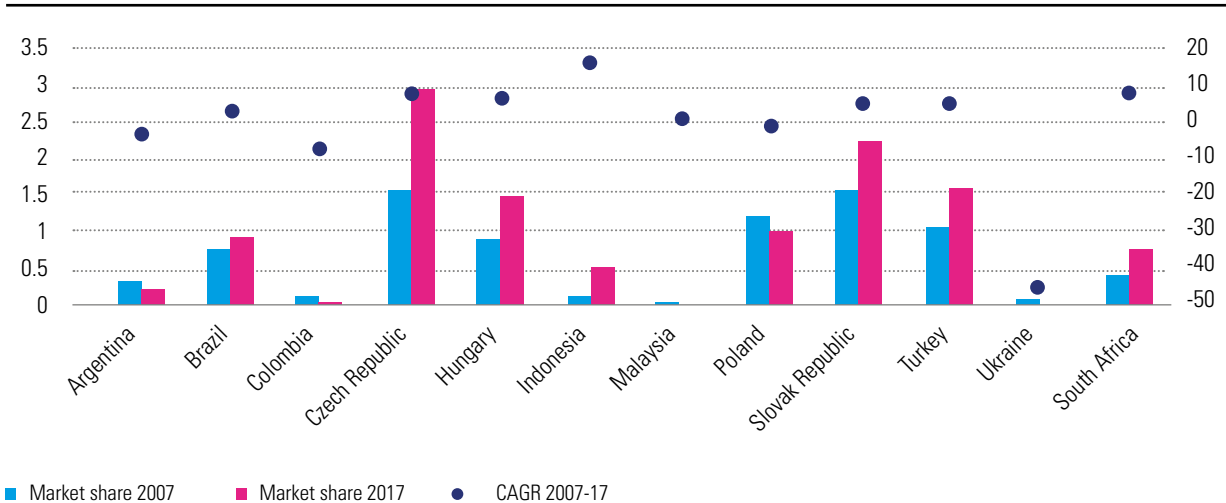
## SOUTH AFRICA'S GLOBAL MARKET SHARE IN VEHICLES BUT DECLINED FOR COMPONENTS

**FIGURE 45 SA DOUBLED ITS GLOBAL MARKET SHARE IN COMMERCIAL VEHICLES OVER THE PAST DECADE**  
Final vehicles (Commercial)



Source: UNCOMTRADE GVC database.

**FIGURE 46 GLOBAL MARKET SHARE FOR PASSENGER VEHICLES INCREASED BY 86 PERCENT DURING THE PAST DECADE**  
Final vehicles (Passenger)

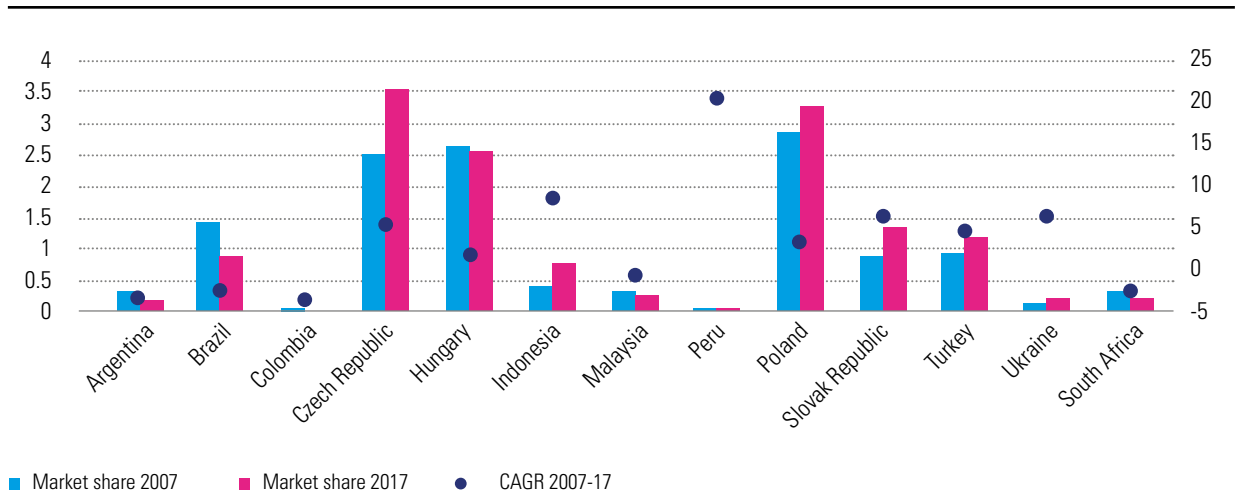


Source: UNCOMTRADE GVC database.



**FIGURE 47 GLOBAL MARKET SHARE IN COMPONENTS DECLINED BY OVER A THIRD DURING THE PAST DECADE**

Intermediate vehicle parts



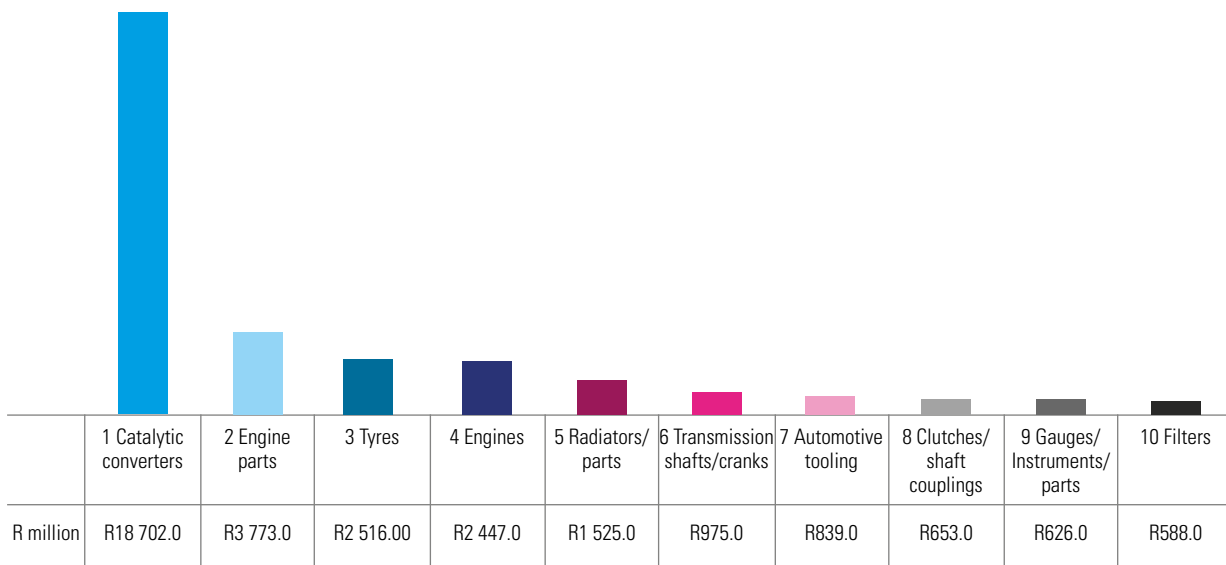
Source: UNCOMTRADE GVC database.

# APPENDIX J

## AUTOMOTIVE EXPORTS ARE CONCENTRATED IN PARTS WITH LOW VALUE ADDED

**FIGURE 48 TOP AUTOMOTIVE COMPONENT EXPORTS BY VALUE - 2017 (R MILLION)**

Catalytic converters account of 37.2% of total exports

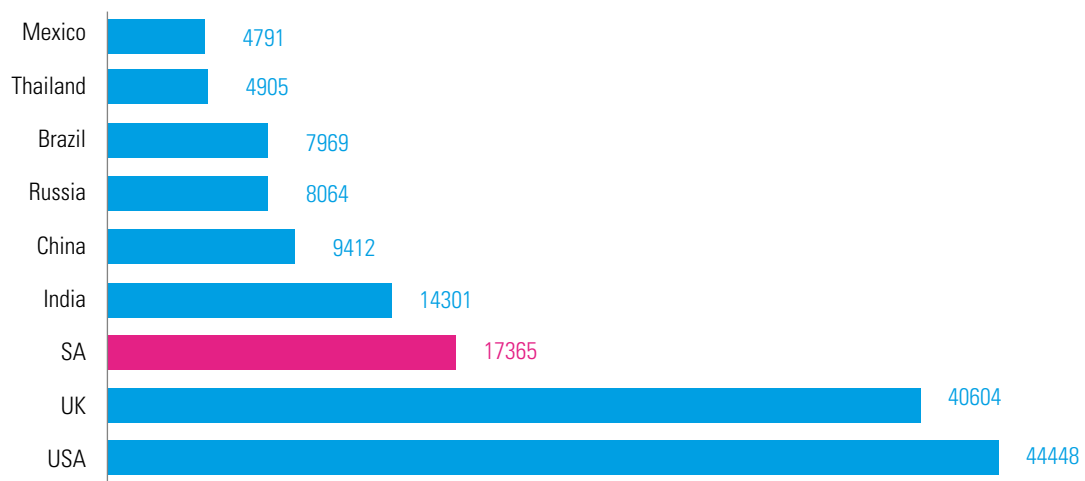


Source: Automotive Export Manual 2018.

## APPENDIX K

# SOUTH AFRICA'S LABOR COST IS HIGHER RELATIVE TO COMPARATOR ECONOMIES

**FIGURE 49 ANNUAL AVERAGE WAGES IN THE MANUFACTURING SECTOR - GLOBAL COMPARISON**



Source: Automotive Export Manual 2018.

# APPENDIX L

## FIRMS IN THE AUTOMOTIVE INDUSTRY ARE LESS LIKELY TO INVEST IN R&D COMPARED TO FIRMS IN OTHER MANUFACTURING INDUSTRIES

**TABLE 8 R&D EXPENDITURE AND INTENSITY BY SECTOR (MEDIUM AND LARGE FIRMS)**

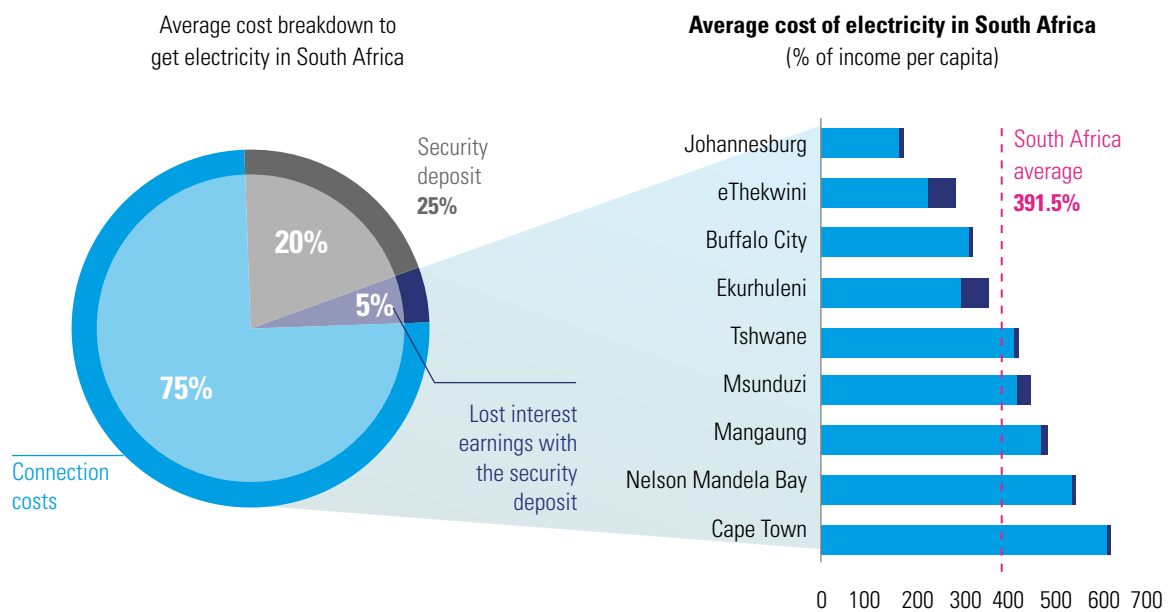
Sector	South Africa (2009–14)	
	Percent of Firms with R&D expenditure by sector	Weighted mean R&D to sales ratio
Paper and Printing	3.47	0.16
Chemicals	11.19	0.29
Rubber	6.41	0.19
Wood and Miscellaneous	7.15	0.48
Primary metals	5.51	0.19
Fabricated metals	4.88	0.33
Machinery	5.67	0.88
Electrical Machinery	9.78	0.27
<b>Autos</b>	<b>3.04</b>	<b>0.37</b>
Aircraft and boats	3.9	4.22
Textiles and leather	3.94	0.33
Pharmaceuticals	17.24	1.57
Food products	7.83	0.22
Computers and instruments	9.01	0.82
Oil products	4.05	<b>0.45</b>
<b>Manufacturing</b>	<b>6.02</b>	<b>0.39</b>

Source: World Bank. 2017. South Africa Economic Update: Innovation for Productivity and Inclusiveness.

# APPENDIX M

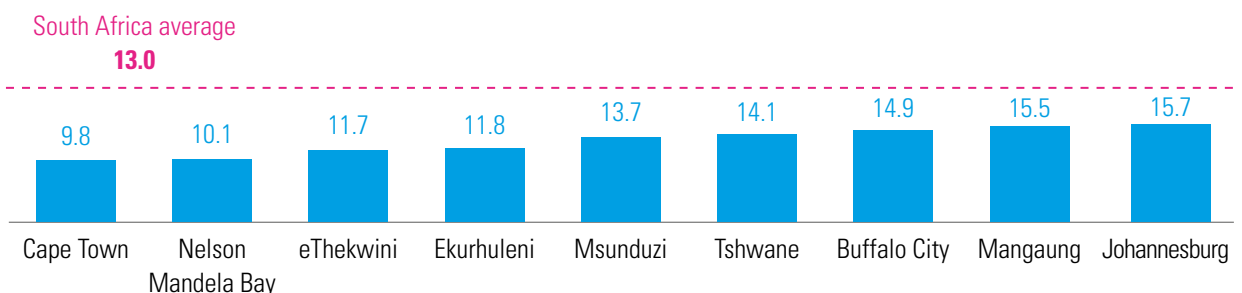
## THE COSTS OF OBTAINING ELECTRICITY CONNECTION AND ELECTRICITY CONSUMPTION DIFFER SIGNIFICANTLY BY LOCATION

**FIGURE 50** A FIRM PAYS FOUR TIMES MORE TO CONNECT TO THE GRID IN CAPE TOWN THAN IN JOHANNESBURG



**FIGURE 51** A FIRM IN JOHANNESBURG PAYS NEARLY TWO-THIRDS MORE FOR MONTHLY CONSUMPTION THAN A FIRM IN CAPE TOWN

Price of electricity (U.S. cents per kilowatt-hour)



Source: Subnational Doing Business 2018.

## Notes

1. SIMODISA. Accelerating the growth of SMEs in South Africa.
2. Recommendations relating to challenges in logistics have not been covered in this table; see transport recommendations below.
3. Relevant publications include the Doing Business reports from 2015 and 2018, and the World Bank's South Africa Economic Updates (see references).
4. Due to the high degree of capital intensiveness (a reflection of capital-intensive industries such as mining, commercial agriculture, and heavy manufacturing; industrial policy; and capital substitution driven by rising labor costs), 12 percent of GDP is used to replace depreciating assets, reducing the extent to which savings can drive new investment.
5. South Africa's credit rating has also declined in recent years. As of April 2019, Moody was the only rating agencies among the three main that had South Africa's credit rating at investment grade. A downgrade by Moody's could trigger severe consequences for South Africa, causing the outflow of money by overseas investors and raising the cost of borrowing.
6. For instance, the male unemployment rate is 25.1 percent while the female unemployment rate is 29.5 percent.
7. For instance, MSMEs in some industries may be disadvantaged by the fact that wage negotiations have been done at the sectoral level through bargaining councils and may not reflect productivity levels of young or small firms. President Ramaphosa signed the National Minimum Wage Bill into law, making it effective on January 1st, 2019. At a minimum hourly wage at R20, the Bill will benefit over 6 million workers earning below R3,700 per month but excluding domestic and farm workers, who are expected to be covered at a later stage. Exemptions will also be made for employers facing business constraints. A commission will be set up to review the minimum wage bill and make annual adjustments. While unions have welcomed the announcement, critics of the bill have raised concerns about the fact that it may lead to job cuts due to employers having to pay higher wages, adding to the cost of doing business and have unintended negative consequences on inequality, such as raising the prices of goods consumed by poor households.
8. For example, cartel cases in the cement and bitumen markets were partially the result of firms continuing old patterns of behavior after legal cartels in these markets were abolished Bitumen: <http://www.compcom.co.za/wp-content/uploads/2014/09/Bitumen-price-collusion-in-South-Africa-23Aug.pdf>; Cement: See SAEU 8, 2016.
9. Manufacturing output remained constant in real terms but declined as a percentage of GDP, as other sectors have outgrown it.
10. Underlying these trends, South Africa's applied tariffs have come down substantially in recent years, from a trade-weighted average of 16 percent in 2000 to under 7 percent in 2015. Overall, tariff levels however remain above the sample of comparator middle-income countries (except for Brazil). They are significantly above those set by most high-income countries and there is significant heterogeneity depending on product type. For example, for consumer goods, only Brazil, Colombia, and Egypt have higher trade-weighted applied tariffs. However, since the establishment of the Southern African Development Community (SADC) free trade area, applied tariffs for other SADC members are almost at zero.
11. The divergence in productivity puts the rand on a depreciating trajectory in real terms, making imports more expensive for both consumers and firms. World Bank research suggests that the real exchange rate is persistently undervalued.
12. For instance, while the Western Cape is among South Africa's agricultural hubs, only 5 percent of agricultural land was transacted in the province between 2003 and 2014 (Nowers 2014). Moreover, land prices vary substantially even across similar regions. For instance, in 2011, Western Cape farm land prices were estimated to differ by more than four orders of magnitude, from \$15 per hectare to \$178,000 per hectare of farmland (Osano et. al. 2011). And in 2014, the price for a hectare of land in Western Cape ranged anywhere between R10,000 and R 70,000 for similar regions (Nowers, 2014).
13. MSME Finance Gap Report: Assessment of the Shortfalls and Opportunities in Financing Micro, Small and Medium Enterprises in Emerging Markets.
14. According to estimates, the revenue of major SOEs is equivalent to 8.7 percent of GDP. <https://www.gov.za/sites/default/files/presreview.pdf>, p. 2\_50; not specified what constitutes a "major SOE", but only says: "major SOES such as Eskom; South African Airways; Transnet; the Industrial Development Corporation; the Central Energy Fund; PetroSA; and the Airports Company of South Africa."
15. Here, enterprises are understood to be SOEs if (i) the government holds significant shares and/or has significant control over decisions made by the enterprises and (ii) the enterprise carries out commercial functions, i.e. functions that are remunerated through sales and fees.
16. Nyman and Koschorke, 2019 forthcoming. The criteria for the primary SOEs (i.e. those that are not a subsidiary of another SOE) chosen for this analysis was that they must carry out commercial activities. SOEs related to defence were excluded due to the strategic nature of the sector. Subsidiaries are defined in the Public Finance and Management Act (PFMA).
17. Nyman and Koschorke, 2019 forthcoming.
18. Cassim, Dauda, Nyman and Koschorke, 2019 forthcoming.
19. Nyman and Koschorke, 2019 forthcoming.
20. 44 percent of schemes do not make eligibility criteria, contact details, approval procedures and application forms available online. Recipient lists appear not to be disclosed for any incentive scheme. See Nyman and Koschorke, 2019 forthcoming.
21. A 2014 review of one incentive scheme found that smaller enterprises incur significantly greater costs than larger ones in applying for the incentive because of the use of consultants in the application process. See Genesis Analytics. 2014. *Implementation/impact evaluation of the Support Programme for Industrial Innovation*. Presentation to the DTI Executive Board of 28 August 2014, p. 11.
22. Cassim, Dauda, Nyman and Koschorke, 2019 forthcoming.
23. For instance, see Delgado, M., Ketels, C., Porter, M. E., & Stern, S. (2012). *The determinants of national competitiveness* (No. w18249). National Bureau of Economic Research.
24. Launched in October 2018, the HCI measures the amount of human capital that a child born today can expect to attain by age 18. It conveys the productivity of the next generation of workers compared to a benchmark of complete education and full health, through the combination of 5 indicators: (a) the probability of survival to age five, (b) a child's expected years of schooling, (c) harmonized test scores as a measure of quality of learning, (d) adult survival rate (fraction of 15-year-old that will survive to age 60), and (e) the proportion of children who are not stunted.



25. Montenegro and Patrinos. 2014.
26. Based on the narrow definition.
27. <http://www.worldbank.org/en/country/southafrica/publication/south-africa-economic-update-increasing-south-africas-tertiary-enrollment-requires-rebalancing-resources>.
28. In 2008, there were around 22,000 ECD institutions in South Africa, 17 percent were school based, 49 percent community based, and 34 percent home based.
29. Of the 10,661 schools needing sanitary intervention, the Department of Basic Education has started implementation in 2,175. Funds for the remaining facilities are yet to be mobilized. While the unit cost of R 44,000 per toilet seat is high, there are estimates that actual cost at sites is even higher at around R 100,000 per seat. Thus, the total funds required to provide facilities may be even higher than the current cost estimate of R 6.8 billion.
30. Another challenge to note in public tertiary education is the limited success of the SETA model in improving the skills landscape in South Africa. SETAs are funded through the skills levy and are responsible for rolling out skills programs, learnerships, internships and apprenticeships. R 15.2 billion in 2015–16 SETA funds amounted to R 15.2 billion but only around 180,000 people were trained (Education Year Book 2017).
31. These include the Council on Higher Education, the Council for Quality Assurance in General and Further Education and Training (UMALUSI), the Quality Council for Trades and Occupations (QCTO), the South African Qualifications Authority (SAQA), and SETAs.
32. In 2017, then-President Jacob Zuma announced that students from poor and working-class families would be entitled to fee-free higher education from 2018. In his announcement, the threshold of financial eligibility was raised from a maximum family income level of R 122,000 previously under the National Student Financial Aid Scheme (NSFAS) to R 350,000 to cover the “missing middle.” It also converted support from loans to grants. However, low-income students enrolled in private institutions are not eligible for government subsidies available under the new tuition free policy.
33. World Bank estimates that these power cuts cost 0.12 and 0.06 percentage points of headline growth respectively.
34. Load shedding is a process of temporarily cutting out electricity supply to some regions to manage capacity constraints. Stage 2 and stage 4 load shedding reduces national electricity supply by 1,000 and 4,000 megawatts respectively. Estimates are that load shedding may have cost the South African economy \$2 billion a day. Communicating a day-ahead of load shedding mitigated the negative impacts.
35. Afrox, Easigas, Totalgaz and Oryx.
36. The cost of solar photovoltaic (PV) dropped from R3.65/kWh in bidding window 1 to R0.62/kWh in bidding window 4 expedited. Wind power dropped from R1.51 to R0.62 per kWh over the same timeframe. See <https://www.itweb.co.za/content/YKzQenvjVLyvZd2r>
37. Eskom argues, among other things that the IPPs resulted in higher cost than can be recovered through tariffs paid by its customers.
38. <http://www.competition.org.za/review/2015/5/25/muted-battle-for-the-regions-skies-competition-in-the-airline-industry>.
39. The Air Services Agreement Projector (ASAP) is an analytical tool devised by the WTO that analyses bilateral Air Services Agreements (ASAs) in terms of i) ownership restrictions, ii) Fifth Freedom rights and iii) designations of carriers by the state in order to assess their level of liberalisation. The Air Liberalization Index (WALI) measures the level of liberalisation of the air transport policy of a given country by calculating the average of the indices of all the air service agreements concluded by that country, weighted by the respective traffic they cover. It ranges between zero for the most restrictive, and fifty, for the most open.
40. World Bank databank.
41. National Treasury.
42. South Africa Reserve Bank.
43. Act No.9 of 2017.
44. For the purposes of this section, we are focusing on the entirety of the agro-food system including “the ecosystems and all of the activities required for the production, processing, transportation and consumption of food, including the inputs needed and outputs generated by each of these activities” (FAO 2017). This includes broadly (a) the agriculture, forestry, and fisheries sector and (b) the food, beverage, and tobacco sectors according to most standard classifications or HS Chapters 1–24.
45. Agriculture has the potential to absorb many excluded population groups such as females. As it stands, females only account for a third of employment in South Africa’s agricultural sector.
46. In principle, a merger would not be allowed if it significantly lessened competition without counteracting efficiencies. However, this is not necessarily always the case in practice.
47. These relate to measures for the control of plant diseases, particularly in agricultural crops.
48. The aim in selecting these two crops was not to focus on the two most promising sub-sectors, but rather to highlight the heterogenous issues within the agribusiness sector, with citrus primarily an export crop and yellow maize generally for domestic consumption and processing. This in turn should provide a cross-section of sector constraints and opportunities for integrating emerging farmers.
49. The concentration of FDI is most likely in part a result of the fact that headquarters of FDI-receiving firms tend to be located in in Gauteng even if the actual investments take place in other provinces.
50. RVAAC has emerged (or “is emerging”) as a tool for implementation, expanding on the high impact indicators to speed progress.
51. Strikingly in this regard, India just had its access to the U.S. Generalized System of Preferences suspended.
52. Based on import refusals data from the EU and the United States, however, South Africa South has a low unit rejection rate compared to other middle-income agriculture exporting countries and this rate has been in decline since 2012. Thus, the domestic standards compliance system appears to be sufficiently robust to ensure that exported goods meet EU and U.S. SPS requirements.
53. Anecdotal evidence from expert interviews.
54. In most countries where agriculture insurance programs have reached scale and insure a large number of small-holder farmers, the insurance has been “bundled” with other services / products to increase the value proposition to the farmer and drive up volumes of premium. In India, under the national agriculture insurance program (PMFBY), the area yield index insurance is bundled with agricultural credit for farmers.
55. The causes of this have been the focus of an enormous

body of research, including by the World Bank (see Deininger 1999 and van der Brink et al. 2006). In a more recent analysis, Binswanger-Mkhize 2014 see the primary cause of the lack of success as attributed to the use group or co-operative farming; inadequate participation of beneficiaries; the absence, late arrival or poor quality of post-settlement support, and capacity problems in the civil service.

56. This figure is, however, contested. Aliber (2018) estimates that as of 2016–17, about 8.1 million hectares (ca. 9.9 percent of total commercial farmland) had been made available via land reform, of which 58 percent was through the redistribution programme. Sihlobo and Kapuya's 21 percent also include the equivalent area of land for which beneficiaries of restitution and redistribution programs chose financial compensation, about 4 million hectares purchased by the state and approximately 4.8 million hectares purchased by black buyers from white sellers through private transactions.

57. Tenure security is still governed by the Interim Protection of Informal Land Rights Act (IPILRA). This stop-gap legislation has been in place since 1996. The act aims to secure the rights of people occupying land without formal documentary rights, such as rights to household plots, fields, grazing land, or other shared resources. Yet its effectiveness is limited because there is no land administration system underpinning it. This means there are no proper processes for clarifying and documenting rights or resolving disputes (World Bank 2018a).

58. On a related note, this situation of water scarcity and the need for effective management has a particular impact on efforts to expand irrigation. For example, the total water allocated to irrigation nationally has been capped in the National Water Resource Strategy 2 (NWRS-2) at 60 percent of the total renewable resource, providing for water for a further 82,000 hectares of irrigation expansion nationally. However, this expansion target conflicts with the long-term political vision of irrigation as a central instrument of rural development defined in the National Development Plan (NDP) of 500,000 hectares.

59. SAEU 8, 2016.

60. This can happen through several mechanisms. First, obligations to register with and provide timely information to associations can constitute an extra cost for new entrants, particularly new firms. While regulations obligate associations to collect information which is "deemed crucial for the development of the industry," if the exchange of information between market players at a disaggregated level can facilitate collusion by making it easier to reach and maintain collusive agreements. Finally, given that the role of associations is to protect their members' interests, they tend to by their very nature primarily represent the interest of incumbents.

61. Agricultural Policy Action Plan (APAP), 2015.

62. The three largest contributors towards the gross value of field crops in South Africa (with their proportionate value over five seasons prior to and until 2014) are maize (48 percent), followed by sugar cane (13.2 percent), wheat (9.7 percent) (APAP 2015).

63. See, for example: <http://www.saflii.org/za/cases/ZAWCHC/2017/110.pdf>. In 2016/17, South Africa mainly imported wheat from Germany (231,000 tons), Russia (184,184 tons) and the Czech Republic (150,378 tons). [https://gain.fas.usda.gov/Recent%20GAIN%20Publications/South%20Africa's%20wheat%20import%20tariff%20decrease\\_Pretoria\\_South%20Africa%20-%20Republic%20of\\_9-19-2017.pdf](https://gain.fas.usda.gov/Recent%20GAIN%20Publications/South%20Africa's%20wheat%20import%20tariff%20decrease_Pretoria_South%20Africa%20-%20Republic%20of_9-19-2017.pdf).

64. In early 2016, ITAC conducted a review of the system. To address issues of over-protection, when there was an extreme

fall or appreciation in the value of the currency, it recommended that a new variable should be introduced into the formula viz the Real Effective Exchange Rate (REER) Index. Prior to this, in 2005, ITAC had recommended that a switch be made to ad valorem tariffs. However, subsequent to representations made by the National Chamber of Milling, Grain SA, and the DTI in 2008, ITAC recommended a return to the variable tariff formula.

65. ITAC Wheat Tariff Review, 2016. [http://www.itac.org.za/upload/document\\_files/20170623102216\\_Report-538.pdf](http://www.itac.org.za/upload/document_files/20170623102216_Report-538.pdf).

66. The tariff on maize has always been set at zero since the reference price set for maize in 1999 (\$110 per ton) was set at a level at which the costs of maize production make it unlikely the tariff will be triggered.

67. <https://www.agrisa.co.za/import-tariff-maize-can-devastating-effect-livestock-industry/>.

68. For example, in Australia retailers and wholesalers sign a written notice to the competition authority which binds them to write down their supply agreements, act in good faith and prohibit retailers from threatening suppliers with termination of contracts without reasonable grounds. The Australian code sets guidelines with regard to how retailers and suppliers ought to conduct business and stipulates that this information should be made available to all suppliers at all times. In South Africa, the Competition Commission has advocated for supermarket chains to facilitate entry of small suppliers by for example reviewing their procurement policies and proactively disclosing information on entry requirements.

69. This could include issues such as improved design of blended finance facilities, supporting Land Bank in its strategy for reaching emerging farmers, risk sharing of commercial bank lending to strategic partnerships supporting emerging farmers and distinguish between potential IFC and IBRD support. It should also address the dualistic nature of South African agriculture and services with the view of identifying specific private sector opportunities in agricultural finance outside the scope of the key players (commercial banks). Here smaller regional private banks could play a role.

70. This could build on previous study carried out by the World Bank on the agriculture insurance market in South Africa ("South Africa—Toward a National Agricultural Insurance Program").

71. For example, in Australia retailers and wholesalers sign a written notice to the competition authority which binds them to write down their supply agreements, act in good faith and prohibit retailers from threatening suppliers with termination of contracts without reasonable grounds. The Australian code sets guidelines on how retailers and suppliers ought to conduct business and stipulates that this information should be made available to all suppliers at all times. In the United Kingdom, following a retail market inquiry, a fair dealing provisions was included in the formal industry code of conduct and an adjudicator was established to enforce the code through administrative law mechanisms (particularly relating to dealings with retailers above a certain size). In South Africa, the Competition Commission has advocated for supermarket chains to facilitate entry of small suppliers by for example reviewing their procurement policies and proactively disclosing information on entry requirements.

72. Note: such arrangements may also hold efficiencies in that they incentivize investment by both the supermarket and the property manager. There is therefore a need for enforcers to consider the balance between the anticompetitive and pro-investment effects.

73. Econometrix.

74. Estimates for employment differ depending on the source. Data on employment provided by both industry associations show a small increase in employment over the APDP period. StatsSA data shows a decline in employment in the component industry (Barnes et al 2017).

75. Interview with NAAMSA and NAAMSA PPT “South Africa: Competitive Global Supplier of Automotive Products.”

76. <https://www.gov.za/speeches/minister-rob-davies-media-statement-south-african-automotive-masterplan-2035-and-extension>.

77. There is only one promising case to date. ASCCI identified an opportunity to localize drive shafts using domestically available technology and facilitated the linkages between an OEM and a potential supplier. As a result, Ford will be localizing drive shaft production with Dana Spicer Axle South Africa for its next model, which will bring in a combined investment of R 51 million across Tier 1 and 2 suppliers and about 40 new jobs (ASCCI Annual Report 2018). Localization of other potential components identified by ASCCI has not materialized yet.

78. <https://home.kpmg.com/pl/en/home/insights/2018/03/r-and-d-in-the-automotive-sector.html>.

79. Digital Moonshot refers to the objective set out by the World Bank Group to ensure that all citizens and firms can be digitally enabled by 2030.

80. Figures 57–60 are based on the Mobile Connectivity Index. A score of 100 would imply no room for improvement, while a score of 1 would be the worst performance attainable.

81. Sectoral regulators normally focus on ex ante regulation to promote competition; competition authorities have a law for enforcing competition law after a transgression has been committed.

82. Prepared by Thulani Matsebula, Senior Health Economist, in the Health, Nutrition, and Population Global Practice.

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84. Prepared by Hermione Neville, Senior Tourism Specialist, in the Finance, Competitiveness, and Innovation Global Practice.

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