

TERTIARY EDUCATION ENROLLMENTS MUST RISE



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The 12th South Africa Economic Update was produced by a World Bank team comprising Marek Hanusch, Victor Sulla, Precious Zikhali, Vincent Dadam, Nomsa Mkhize, Kobina Daniel, Rudibert Steinbach, Alain Ntumba Kabundi, Ayanda Mokgolo, Yoko Nagashima, Jamil Salmi, Servaas van der Berg, Reynold Duncan, Phemelo Kekana, Paolo Belli, Gert van Linde and Zandile Ratshitanga, led by Sébastien Dessus. It was internally peer reviewed by Roberta Bassett and Jacques Morisset. It benefited from comments and inputs from John Krueger (Department of Planning, Monitoring and Evaluation), Sacha Backes, Alejandro Caballero, Rajeev Gopal and Ken Osei (International Finance Corporation), Alejandro Simone (International Monetary Fund) and overall guidance from Mathew Verghis (Practice Manager, Macroeconomics, Trade and Investment) and Paul Noumba Um (Country Director for South Africa).

The report was edited by Sharon Chetty and designed by Cybil Maradza.

FOREWORD

I am pleased to launch this 12th South Africa Economic Update, which offers a review of the country's recent economic and social developments and its outlook in the context of global economic prospects.

In the second half of 2018, the World Bank released two important global reports on the changing nature of work, and on a new measure of countries' human capital – the Human Capital Index (HCI). Both reports underlined the criticality and urgency for societies to equip their population, and their youth in particular, with a new set of high-order cognitive and non-cognitive skills that are needed to prosper in a world that is constantly being reshaped by technological progress.

These global recommendations surely apply to South Africa, which ranks 126th on the HCI out of the 157 countries for which data exist – highlighting the *human capital crisis* that the World Bank President Kim urged global citizens to tackle at the Johannesburg Festival in December. They strongly echo the main conclusion of the World Bank Systematic Country Diagnostic of South Africa also conducted in 2018: the insufficiency of skills is the key constraint to reducing poverty and inequality, and eventually overcoming a legacy of exclusion.

Authorities are cognizant of the challenge, and have, among other things, decided to accelerate the expansion of the Post School Education and Training (PSET) sector – university and Technical and Vocational Education and Training (TVET) – through devoting more budgetary resource to it (an additional 1.1% of GDP). Nevertheless, South Africa's tight fiscal situation means the right balance has to be found between supply (expanding PSET admission capacity) and demand (encouraging students to enroll with financial support) interventions, to protect fiscal and debt sustainability without compromising education quality. In this regard, this Update discusses options successfully tested internationally to sustainably increase PSET enrollments through (i) diversifying the PSET sector from a mostly government funded-university centric model; (ii) encouraging private sector participation; (iii) strengthening quality assurance mechanisms; (iv) improving resource mobilization; and (v) ensuring greater equity in supporting students. It argues that South Africa could reduce inequality faster by rebalancing budgetary resources towards interventions that improve the quality of education, notably in TVET and community colleges, and expand PSET admission capacity. This would be made fiscally possible by limiting financial aid to poorest students while extending income-contingent loans to more affluent students.

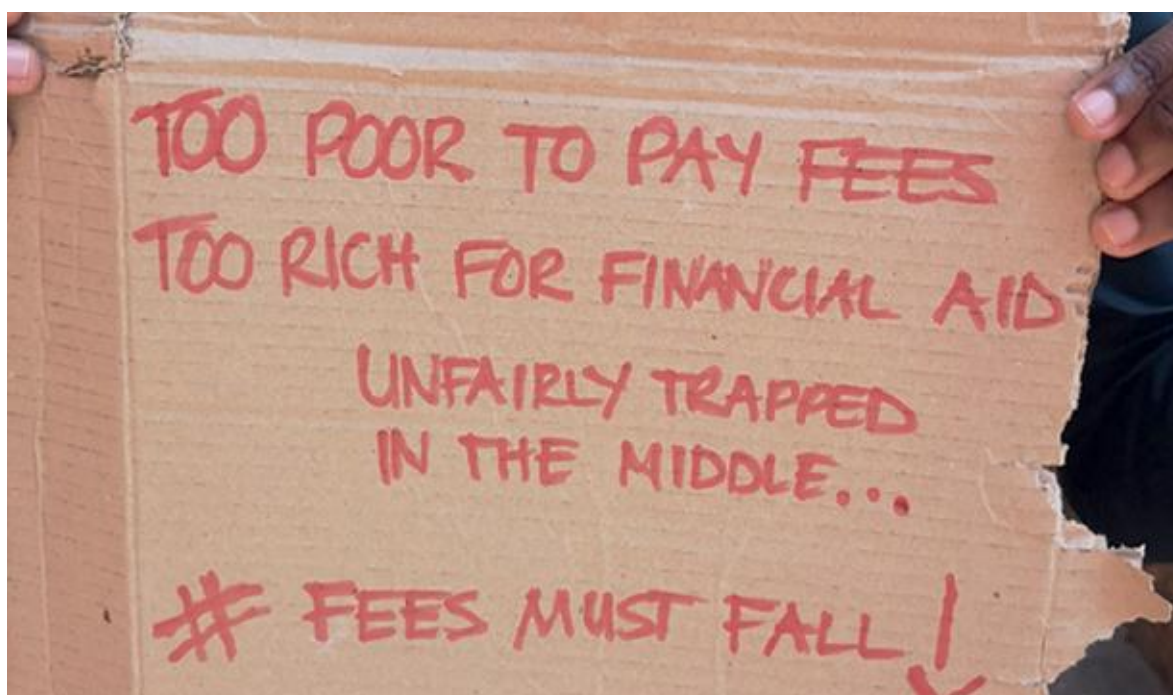
This Update builds on our solid partnerships with the National Treasury, the Department of Planning, Monitoring and Evaluation, the Department of Higher Education and Training, and various public and private PSET institutions. As the World Bank, we stand ready to work with all stakeholders and support South Africa to fulfill its development agenda and contribute to ending extreme poverty and promoting shared prosperity. It is our hope that the country will continue to use the World Bank's knowledge, global experience, and convening power as a platform for peer-to-peer learning to identify evidenced-based, pragmatic solutions that contribute to the National Development Plan's goals of eradicating poverty and reducing inequality.

Paul Nomba Um
World Bank Country Director for South Africa



ABBREVIATIONS

BBEE	Broad-based black economic empowerment	PMI	Purchasing Managers' Index
DHET	Department of Higher Education & Training	PSET	Post-school education and training
EMDEs	Emerging markets & developing economies	R	South African rand
ERPT	Exchange rate pass-through	SACU	Southern African Customs Union
EWC	Expropriation without compensation	SARB	South African Reserve Bank
GDP	Gross domestic product	SETA	Sector education and training authority
HCI	Human Capital Index	SME	Small and medium-sized enterprise
MOOC	Massive Open Online Course	SOE	State-owned enterprise
MTBPS	Medium Term Budget Policy Statement	StatsSA	Statistics South Africa
NEET	Not in employment, education or training	TVET	Technical and vocational education & training
NIDS	National Income Dynamics Study	UNISA	University of South Africa
NSFAS	National Student Financial Aid Scheme	US\$	United States dollar
OECD	Organization for Economic Co-operation and Development	WDR	World Development Report





EXECUTIVE SUMMARY

South Africa's much anticipated economic rebound in 2018 did not occur. While substantial efforts by the authorities to strengthen governance of public resources and stabilize the fiscal situation helped the economy to not contract further, economic growth remained tepid with a technical recession (two successive quarters of negative economic growth) in the first half of 2018. GDP growth is expected at below 1% in 2018, down from an already low 1.3% in 2017.

A number of exogenous factors contributed to this poor growth performance. Domestically, climate variations such as a prolonged drought in the Western Cape where harvests were delayed exerted a huge toll on agricultural production. Externally, mounting trade tensions between the United States and China, and tightening global financial conditions contributed to slowing the pace of foreign financial inflows to South Africa while lessening the demand for its exports. Rising world oil prices also exerted strong pressure on the balance of payments and domestic prices, depressing private consumption.

These negative developments, however, do not conceal the fact that South Africa's growth challenge is deep-seated and largely structural. To grow faster and sustainably, the economy will need to be more inclusive, requiring the participation of a greater share of the population mainly through job creation. Furthermore, persistent inequality of income and of opportunity will continue to raise pressures for redistribution of limited resources that are drawn from a small tax base. Radical policy demands are more likely in a stagnant economy, fuel policy uncertainty and deter private investment. At the Presidential Jobs Summit and the South African Investment Conference held in October 2018 agreements were made on actions that are expected to enable job creation and to attract higher levels of investment, including *inter alia*, education and skills interventions, and initiatives

to reduce policy uncertainty on land reform, mining and black economic empowerment.

The financing of structural reforms and projects to promote greater economic and social inclusion is nonetheless rendered difficult by South Africa's tight fiscal and debt situation, itself mainly the consequence of slow growth and strong spending pressures. As in most previous budget speeches, the commitment to public debt stabilization was reaffirmed in the October 2018 Medium Term Budget Policy Statement (MTBPS), but the target date for debt stabilization was shifted yet again, this time to 2023/24, and at a higher level, to 59.6% of GDP against 56.1% in the 2018 *Budget Review*. Though in a significant departure from previous statements, there was clear recognition of the greater role the private sector, development finance institutions, and multilateral development banks could play in complementing scarce public finances for infrastructure. Regulatory reforms, lowering the risk of financial instruments to facilitate private sector investment, and a clearer delineation between commercially viable and socially desirable interventions were identified as instrumental to breaking a vicious cycle of low inclusiveness coupled with limited public resources to speedily address the challenge.

The policy agenda of expanding the Post School Education and Training (PSET) sector clearly illustrates the trade-off between maintaining fiscal restraint and addressing key structural constraints that may be costly to the fiscus. In South Africa, acquiring skills through PSET is the best guarantee of escaping poverty. Indeed, income inequality continues to be mostly driven by labor market developments that demand the skills that South Africa's poor currently lack. Notwithstanding the longer-term need to fundamentally improve the basic education system, rapidly enrolling more students in university and Technical and Vocational Education and Training (TVET) institutions has become a major political



imperative in the face of the growing frustration among youth unable to access economic opportunities. Yet, the decision announced in December 2017 entitling all students from poor and working-class families to free higher education may actually aggravate frustration and discontent among youth and may not necessarily supply more skills to the economy.

Quantitative analysis in this Update based on administrative and household survey data suggests that the financial cost of studies can be a major barrier to enrolling poor students in PSET institutions. This barrier was only partially lowered through the extension of loans from the National Student Financial Aid Scheme (NSFAS) to the poorest students, as the financial assistance covered only part of the costs of studying, leaving the risk of not reaping the benefit of studying, whether they drop out, fail to graduate or remain unemployed after graduation, entirely to the students. But it also suggests that the quality of education, in TVET notably, is very poor and is not meeting labor markets' demand – making private returns from TVET very low, likely discouraging enrollments. The low take-up rate of 40% of NSFAS loans, and the high rate of default on these loans reflect such shortcomings.

Converting loans to grants and covering the entire financial cost of studying beyond tuition fees (e.g. accommodation, transport and books) will encourage many academically eligible poor students to enroll in PSET while receiving financial aid. And extending this opportunity to students from working-class families would multiply demand for education several times.

Indeed, the threshold for financial eligibility under the new policy – parental income of less than R 350,000 per year – entitles more than 9 out of 10 prospective students to receive support.

However, implementing this policy would have a substantial impact on the budget. Projections undertaken in this Update suggest that public resources allocated to PSET would need to increase from 1.4% to 2.5% of GDP in 4 years, to finance increased student aid, while keeping total enrollments, and expenditure per student (thus the low quality of education at TVET) unchanged. A 10% increase in PSET enrollments (i. e. an additional 45,000 first time students) under the new aid scheme would cost an additional 0.15 percentage points of GDP.

While the scheme would lead to a slightly higher proportion of students from poor and working-class families being enrolled, its very high cost would likely make the target of doubling enrollments in PSET by 2030 elusive. This would inevitably create frustration among youth who would be barred from entering PSET institutions even though they would be academically eligible and qualify for financial support. Employers would not be able to find the skills they need to stay competitive; and the government and Small and Medium-sized Enterprises (SMEs) would be at a particular disadvantage as they are less able to attract skilled workers compared to larger private companies.

International experience offers some options for South Africa to solve the trade-off between supporting more students and encouraging higher enrollment. This includes diversifying PSET from the publicly-funded contact university-centric model towards:

➤ **A PSET sector more centered around technical, vocational and lifelong training.**

Expected matric results of school students is such that demand for PSET education in the next decade will be directed mostly towards TVET. This will make students more employable, given their academic capacity at entry in PSET and be more affordable for government as the unit costs are lower than that of a university. However, this will require much higher investment per student, more effective links with private employers, better quality assurance and the strengthening of the incentives framework to improve the quality of education before rapid increases in enrollments can be envisaged. Furthermore, community colleges, which offer more flexibility to accommodate the demand for education along the full life cycle and pathways to university for its brightest students, should receive the same level of attention for improvement as TVET. This will be instrumental to avoid fueling the perception that TVET and community colleges are for the poor only, and universities for the rich.

➤ **A revamped distance-learning model.**

Distance learning makes eminent sense in South Africa, where the lack of spatial integration remains a key developmental issue. Yet, the University of South Africa (UNISA), the most prominent institution offering such programs and training most school teachers, suffers from massive inefficiencies and losses on investment as dropout rates exceed 85% for 3 to 4-year degrees. International experience suggests that moving from the traditional model of integrated courses towards individualized coursework strongly supported by mentorship is more cost effective, as completion rates and the employability of graduates are likely to improve significantly.

More private sector participation.

The Sub-Saharan Africa region ranks last in terms of private PSET enrollments as well as enrollments overall, and South Africa is not an outlier in the region. Under the premise that it would provide a means of expanding enrollments at a lower cost to the state while protecting the quality of education, greater private sector participation could be encouraged through the adoption of simpler accreditation rules similar to that for public institutions. The possibility of private institutions receiving performance-based subsidies, employing public university professors, and for its students to receive financial aid, could also be explored. As a first step, the establishment of non-profit institutions could be encouraged. As they have contributed most to the expansion of PSET enrollments in other continents, the non-profits could offer an alternative to for-profit institutions and address the concern that poorly regulated for-profit institutions may be inclined to compromise on education quality even though their fees may be high, proving costly for both students and the government.

Stronger controls and incentives to encourage better quality.

Reducing the dropout rate and raising the employability of graduates will help to improve the fiscal rate of return of subsidizing PSET. To improve quality, South Africa could consider three complementary measures: (i) strengthening quality assurance mechanisms by emphasizing learning outcomes and employability; (ii) forging closer links to the productive sectors of the economy and the labor market, notably through cooperative programs; and (iii) promoting performance-based funding through stable, output-based funding formulas, performance contracts and competitive funds.

Greater reliance on labor market observatories to guide students and PSET institutions in their selection of curricula.

In order to ensure that students enroll in programs that prepare them for meaningful employment and that PSET institutions adapt their programs to the changing needs of the labor market, one of the more effective tools that the government could use is a labor market observatory. A well-functioning observatory could monitor the skills needed for the labor market, channeling students towards them instead of encouraging students to follow prescribed programs.

More fiscal incentives to mobilizing resources.

Government should not penalize the most entrepreneurial PSET institutions by reducing their budgets when they become more adept at mobilizing resources beyond tuition fees and subsidies through fundraising and savings by sharing resources. Penalties are self-defeating as they remove the incentives to generate additional income.

A larger use of risk sharing mechanisms.

South Africa could consider extending income-contingent loans to students from affluent households while confining grants to highly vulnerable and underprivileged students. This would free public financial resources to expand PSET admission capacity and improve the quality of education while protecting poor and working-class students who are at risk of defaulting.

Better regulation of tuition fees.

The higher demand for PSET arising out of the new student financial aid system may result in tuition fees rising. Potential trade-offs between the necessary economic autonomy and viability of PSET institutions, and the effectiveness of the NSFAS in promoting equity could be mitigated by making tuition fee increases that are above inflation conditional on the meeting of PSET performance indicators, such as teaching quality.

CHAPTER 1

Recent Economic Developments



Chapter 1 aims to convey the following key messages:

- ✓ Global economic growth is losing steam, and risks of macroeconomic disruption in emerging economies are mounting.
- ✓ South Africa's anticipated economic rebound in 2018 did not occur, confirming the deep-seated nature of its growth challenges, and its vulnerability to climate change and commodity price variations.
- ✓ The government maintained its commitment to fiscal and debt sustainability and price stability, emphasizing structural reforms and greater private sector participation to address South Africa's development challenges.

Global Economic Developments

📉 Global economic activity is losing momentum.

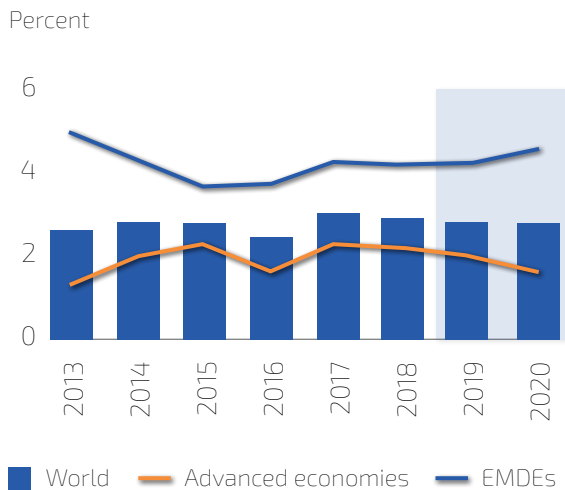
At 3.0%, global GDP growth in 2018 was slower than expected (Figure 1.1.A). While economic activity in the United States was supported by fiscal stimulus, growth in the Euro Area and Japan decelerated, partly reflecting weaker manufacturing activity as global goods trade slowed. Moreover, growth in several emerging and developing economies (EMDEs) was weighed down by substantial financial market stress, as investors became risk averse, turning their focus toward country-specific vulnerabilities amid tightening global financial conditions.

Weakening manufacturing activity is weighing on global goods trade. Growth in global goods trade slowed in 2018 (Figure 1.1.B). The deceleration

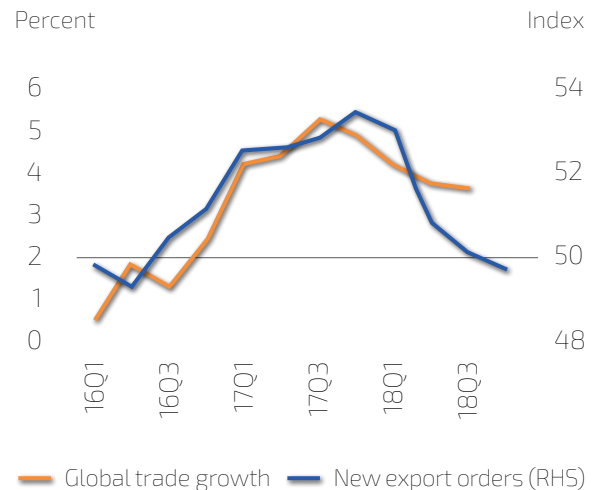
was underpinned by slowing export orders and weakening global manufacturing activity, as capital goods production moderated in many economies, specifically in developing Asia and Europe – two tightly interconnected manufacturing hubs. Accordingly, the global manufacturing Purchasing Managers' Index (PMI) declined to 51.5 index points in December 2018, from 54.5 a year earlier, as new export orders fell below 50 – the level that separates expansion from contraction. In addition, trade activity was further weighed down by new tariffs that were introduced by the United States and China during 2018, which affected around 2.5 percent of global goods trade.

Figure 1.1: Global activity indicators

A. Global growth



B. Global trade in goods growth and manufacturing export orders



Sources: A. World Bank staff calculations. B. CPB Netherlands Bureau for Economic Policy Analysis, Haver Analytics, World Bank staff calculations.

Global financial conditions tightened. Inflation forecasts of many advanced-economy central banks have been converging on target levels. As a result, bond purchases have been tapered in the Euro Area and Japan while in the United States interest rates were increased by a further 100 basis points in 2018. Accordingly, the dollar strengthened and U.S. 10-year yields rose to a 7-year high of 3.2%, before moderating in recent weeks.

Reduced appetite for EMDE assets fueled capital outflows in many countries. In the context of heightened global policy uncertainty, trade tensions, and deteriorating growth prospects, investors' search for high-yielding safe assets – such as U.S. Treasuries – gained momentum and their appetite toward many EMDEs waned. In particular, EMDEs with large external vulnerabilities and domestic fragilities experienced substantial capital outflows and

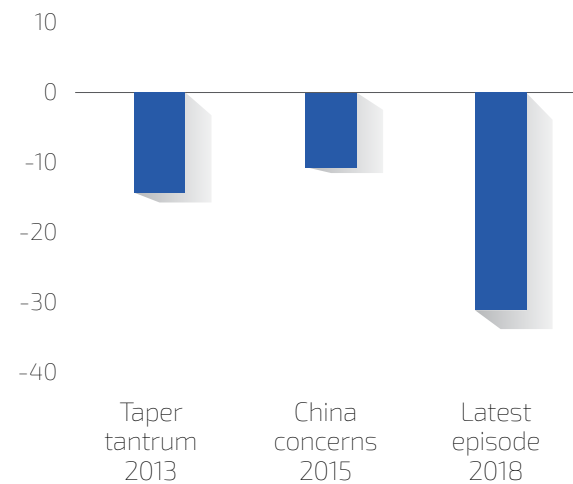
sharp currency depreciations. Since US\$ strength started in April 2018, EMDE currencies have depreciated by around 10% - the most significant sustained depreciation

since early 2016. Moreover, cumulative portfolio outflows from EMDEs have surpassed the outflows observed at that time (Figure 1.2.A).

Figure 1.2: Portfolio flows and commodity prices

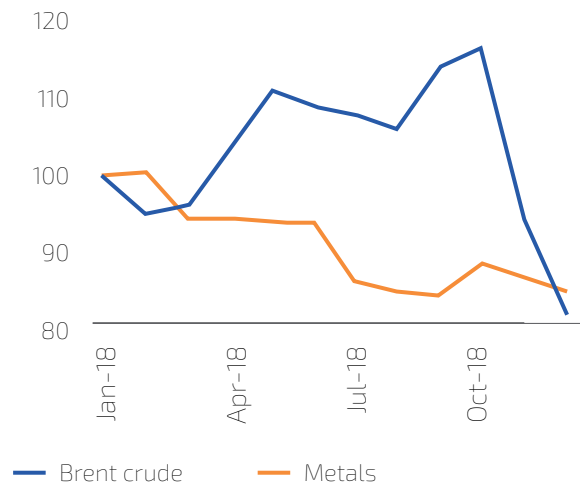
A. EMDE portfolio flows during recent stress episodes

US\$ billions, cumulative daily flows



B. Brent crude oil and metal prices

Index, 100=January 2018



Sources: Institute of International Finance and World Bank staff calculations. Notes: A: Cumulative flows to major EMDEs, excluding China, for the 236 days following the start of the stress episode. The start dates for the stress episodes are: taper tantrum: May 23, 2013; China concerns: June 12, 2015; U.S. presidential election in 2016: November 9, 2016; latest episode: April 15, 2018. B: Metals prices represent the average price in US\$ of aluminum, copper, iron ore and zinc.

While supply concerns kept oil prices elevated for most of 2018, fears of weaker demand have weighed on metals prices. Oil prices increased by 32% in 2018, averaging US\$ 69 per barrel. Supply concerns owing to the continued decline of oil production in Venezuela and the reintroduction of sanctions on Iran by the United States contributed to prices peaking at US\$ 86 per barrel in October. However, in early November oil prices fell rapidly toward US\$ 60 per barrel as the United States granted eight countries temporary waivers to the sanctions on Iran. In addition, oil prices were helped lower by rising production in the United States and increased output by the Organization of the Petroleum Exporting Countries. In contrast to the supply-driven volatility of oil prices, several metals prices weakened in 2018 (Figure 1.2.B), especially during the second half of the year as the imposition of broad-based tariffs by the United States on Chinese imports fueled market concerns about the impact of a slowdown in global trade on commodity demand. As a metals exporter and net-oil importer, South Africa's terms of trade was adversely affected by these opposing commodity price dynamics.

Growth in advanced economies has diverged.

United States growth accelerated from 2.2% in 2017 to an estimated 2.9% in 2018, as fiscal stimulus was accompanied by strong domestic demand, especially investment. Moreover, the labor market remains robust, with non-farm payrolls averaging nearly 220,000 workers per month in 2018 and the unemployment rate reaching an almost 50-year low of 3.7% during the year, before rising slightly to 3.9% in December. At the same time, average hourly earnings rose 3.2% - the strongest annual gain in nearly a decade. In the Euro Area, however, growth is estimated to have slowed to 1.9% in 2018, from 2.4% in 2017, largely owing to moderating net exports. Manufacturing PMIs corroborate the loss of momentum in Euro Area growth, falling from a peak of 60.6 in December 2017 to 51.4 by December 2018. Moderating net exports also contributed to slower growth in Japan, which decelerated to an estimated 0.8% in 2018, from 1.9% in 2017.

Private consumption in China remains resilient, but export growth is decelerating.

Growth in China has slowed to an estimated 6.5% in 2018, from 6.9% in

2017. While robust consumption growth and improving private investment have supported economic activity, slowing global manufacturing activity has contributed to moderating industrial production and export growth. Moreover, growth in imports has also been decelerating. However, it still outpaced exports, and contributed to a current account deficit in early 2018 – China's first in two decades. Recent manufacturing PMIs have been lackluster, remaining near 50 index points since mid-2018, while the subcategory for new export orders has declined to 48.3 in December and underscores weakening global demand.

The recovery in other major emerging markets and developing economies is facing headwinds. In Argentina, the economy contracted by an estimated 2.8% in 2018, amid a crisis of confidence that induced substantial financial market stress, halved the peso's purchasing power in US\$, and necessitated an increase in the policy interest rate of around 40 percentage points. The Turkish lira depreciated almost 30% in 2018, as heightened policy uncertainty exacerbated investors' concerns about rising inflation, a deteriorating current account deficit, and elevated foreign-currency denominated private sector debt. The

manufacturing PMI fell to 44.2 in December, from a multi-year high of 55.7 in January 2018. Growth in Brazil is estimated to have improved slightly to 1.2% in 2018, from 1.1% in 2017. Economic activity remains lackluster amid political uncertainty and fragile investor confidence. In contrast, growth in Russia has been underpinned by record-high oil production and strong private consumption, and remained steady in 2018, despite a tightening of sanctions by the United States. Private consumption was also a major contributor to growth in India, which is estimated to have accelerated to 7.3% in the 2018/19 fiscal year (April to March), from 6.7% the year before. Economic activity in India has recovered from the temporary disruptions caused by demonetization and the harmonization of many state-level taxes into a federal Goods and Services Tax. In Nigeria, growth has risen to an estimated 1.9% in 2018, from 0.8% in the previous year. However, growth in the oil sector was hampered by pipeline closures, while agricultural activity was interrupted by escalating conflict between farmers and herdsmen. In Angola, falling oil production has weighed on growth during 2018, as GDP contracted by an estimated 1.8%. However, new oil fields that are coming on stream are expected to support a recovery in Angola's oil sector.

Global outlook is deteriorating

Global growth should moderate in 2019 and 2020. Global growth is expected to decelerate from a downwardly revised 3% in 2018 to 2.9% in 2019 and 2.8% in 2020, as the projected slowdown in advanced economies outweighs the gradual improvement foreseen in EMDEs (Figure 1.1.A). In advanced economies, monetary policy normalization, weakening investment growth, and dissipating excess capacity will prompt a gradual slowdown from an estimated 2.2% in 2018 to 1.6% by 2020 – broadly in line with estimates of potential growth. Growth in EMDEs is expected to rise from 4.2% in 2018 to 4.5% by 2020, as the cyclical recovery in commodity-exporting countries matures. However, the projected slowdown in advanced-economy growth, weakening trade, and

a reduced appetite for EMDE assets will impede any further acceleration in EMDE growth.

Risks to the global outlook are significant. An abrupt and unexpected tightening of global financial conditions could trigger significant capital outflows and cause disorderly currency depreciations in many EMDEs, particularly in countries with large external vulnerabilities. In addition, escalating trade tensions involving major economies could weigh heavily on investment and exports, leading to reduced global trade growth. Moreover, a sudden slowdown in China's growth could induce sharp declines in commodity prices – adversely affecting many commodity-exporting EMDEs.



Real Sector Developments in South Africa

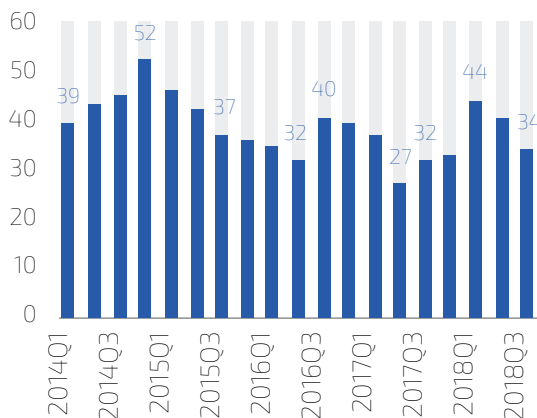
📈 *South Africa's growth challenges are deep-seated and structural*

The wave of optimism that started at the beginning of 2018 did not last. In December 2017, the African National Congress elected Cyril Ramaphosa as president of the party. He became president of the country in February 2018. As he was the preferred candidate by the markets, business and consumer confidence indices hit new heights, analysts revised their growth projections significantly upwards, and the rand appreciated, reflecting increased investor appetite for South African assets (Figure 1.3, various panels). As expected, President Ramaphosa quickly moved to address allegations of widespread corruption, focusing on selected cabinet positions, the boards and management of state-owned enterprises (SOEs), and

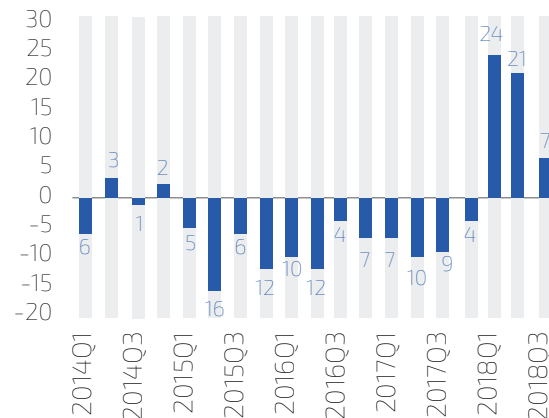
senior positions in law enforcement agencies and the South African Revenue Service. A Judicial Commission of Inquiry into allegations of State Capture chaired by the Deputy Chief Justice Raymond Zondo, put in place a transparent process to judiciously examine the extent to which SOEs and departments had been "captured" by corrupt elements within the government for the benefit of private companies and individuals. Another commission of inquiry chaired by a retired judge examined tax administration and governance at the South African Revenue Service. Yet the initial optimism did not result in growth, with South Africa dipping into technical recession in the first half of 2018. Over the course of the year the wave of optimism ebbed.

Figure 1.3: Confidence indicators and growth estimates

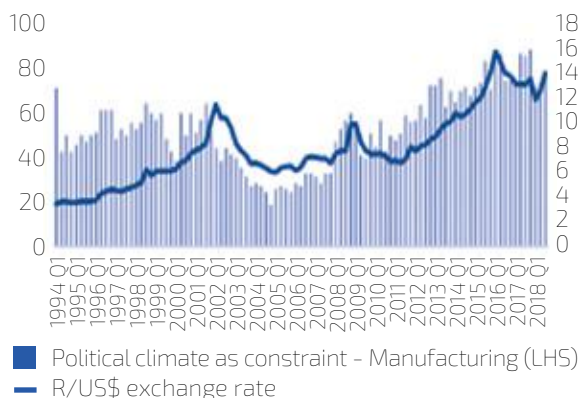
A. Business confidence index (%)



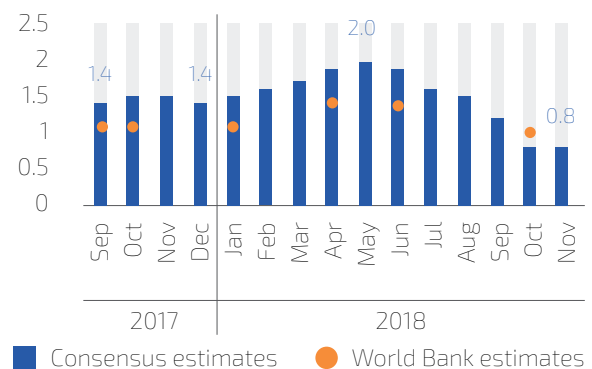
B. Consumer confidence index (%)



C. Political constraints and exchange rate



D. Growth forecasts for the year 2018 (%)



Sources: Bureau for Economic Research, Haver Analytics, Consensus Economics and World Bank staff calculations. Notes: A: percentage of respondents indicating that prevailing conditions are satisfactory; B: percentage of respondents expecting an improvement less the percentage expecting a deterioration; C: respondents identifying the political climate as a constraint in manufacturing (LHS).

South Africa's deep-seated structural challenges thwarted a rapid economic takeoff. One critical constraint is poor human capital. World Bank (2018c) argues that South Africa's legacy of exclusion constrains growth, meaning that a rapid, sustainable acceleration of growth will require significant reforms. For example, too many South Africans do not contribute to national output as they are out of work: labor force participation averaged 58.8% and unemployment 26.4% in the past five years. One critical reason for this

is that despite significant efforts since 1994, outcomes in health and education (South Africa's human capital) remain low (Box 1.1) among the historically disadvantaged who make up the country's majority. Chapter 2 looks at one area, higher education, which can help ensure that more South Africans participate in the skills-hungry economy. Although it requires significant fiscal commitments, Chapter 2 shows that *investing in people* is a sustainable investment in long-term, inclusive growth in South Africa.

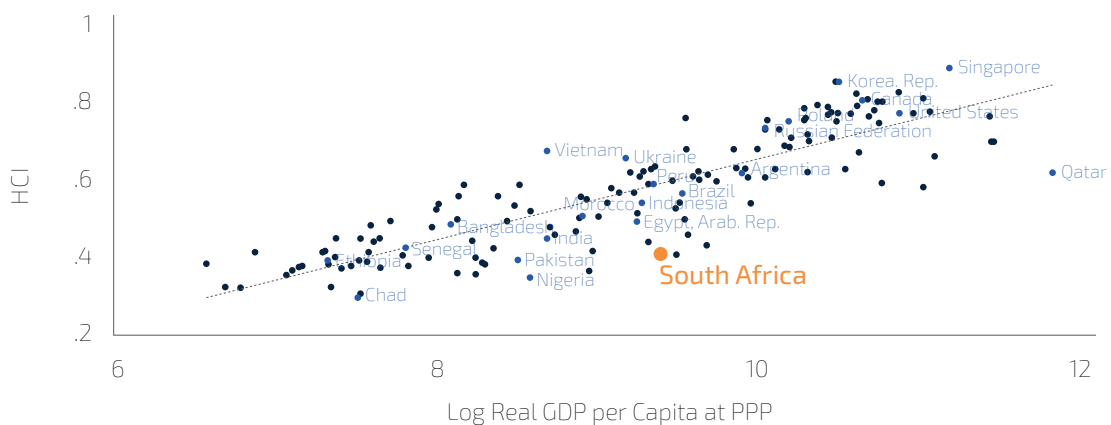
Box 1.1: What is the state of human capital in South Africa?

In October 2018 the World Bank (World Bank, 2018e) unveiled its new global Human Capital Index (HCI). 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 against a benchmark of complete education and full health, through the combination of 5 indicators: (i) the probability of survival to age five; (ii) a child's expected years of schooling; (iii) harmonized test scores as a measure of quality of learning; (iv) adult survival rate: the number of 15-year-olds that will survive to age 60; and (v) the proportion of children who are not stunted.

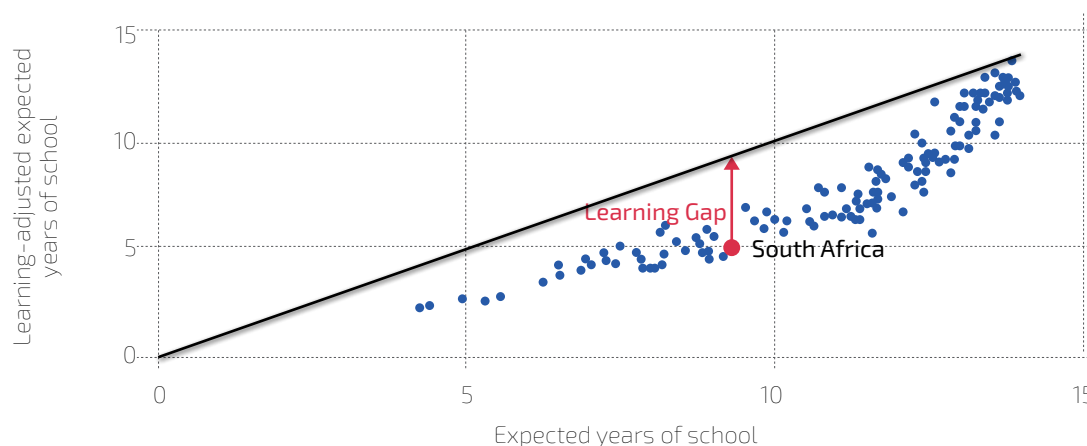
South Africa does not fare well against these metrics. It ranks 126th out of the 157 countries for which data is available, below neighboring Namibia, Malawi, Zimbabwe, Eswatini or Botswana, and far below what is expected from its per-capita income (GDP) level. This can be attributed mainly to the poor quality of learning: children in South Africa can expect to complete 9.3 years of preprimary, primary and secondary school by age 18. However, when years of schooling are adjusted for quality of learning, this is equivalent to only 5.1 years – a learning gap of 4.2 years. Other components of the index related to child mortality, stunting and adult survival, are more in line with peers.

Box 1.1 Figure 1: South Africa's Human Capital Index

A. HCI versus per capita GDP



B. Quality-adjusted years of schooling



Source: World Bank (2018e).

The poor quality of learning in South Africa resonates with the key messages of the World Development Report (WDR) 2018 — *Learning to Realize Education's Promise*. The WDR emphasizes that schooling is not the same as learning; schooling without learning is not just a wasted opportunity, but a great injustice; and there is nothing inevitable about low learning in low- and middle-income countries (World Bank, 2018f).

What are the dimensions of the learning crisis in South Africa? They are: the poor learning outcomes themselves; immediate causes such as teachers often lacking the skills or motivation to teach effectively and inputs that often fail to reach classrooms or to affect learning; and that poor management and governance such as ineffective school leadership and lack of community engagement, often undermine schooling quality; and deeper systemic causes.

Together with key stakeholders, the Department of Basic Education led the discussion on the WDR and sought ways to strengthen policy implementation and strategies by adopting three policy actions to address the crisis: (i) assess learning quality by promoting the integration of formal assessments in teaching and learning, utilizing pre- and post-test strategies while improving the quality assurance of summative school-based assessments; (ii) act on evidence that will make schools work for all learners by improving teachers' skills and motivation through professional development programs and continuous support such as coaching and mentoring and by creating an inspiring work environment, as teachers are the key to learning; and (iii) align the entire system, making it suitable for learning through salient methods by focusing on how information on learning outcomes can be used to align the stakeholders and forge coalitions for learning.

A weak human capital foundation is but one of the legacies that constrains South Africa's growth and social progress. Uncertainty over the future of land reform is another. World Bank (2018c) identifies slow progress in land reform since 1994 as a source of social fragility and the risk that it could undermine property rights if not managed carefully. In December 2018, South African lawmakers voted for a constitutional amendment enabling a greater degree of expropriation of land without compensation to speed up the process of land reform. Even though assurances have been given by the government that expropriation without compensation (EWC) was not expected to affect agricultural production or investment in agriculture, uncertainty over the constitutional amendment contributed to a moderation

in optimism over the year. Confidence relating to capital investments in agriculture plummeted in the third quarter of 2018 but recovered somewhat in the fourth quarter. There is little evidence that this has translated into a moderation in moveable investment in the sector (tractors, for example), yet there appears to be less appetite to invest in land upgrades.

President Ramaphosa has undertaken several initiatives to reduce policy uncertainty and boost the economy. In a divided society like South Africa's, building consensus among social partners is critical (World Bank, 2018c) and President Ramaphosa prioritized a consensus-building process through two separate summits on jobs and investment (Box 1.2).



Box 1.2: Presidential jobs summit and investment conference

Against the backdrop of low economic growth and a stubbornly high unemployment rate, in October 2018 President Ramaphosa chaired two summits: one addressing the unemployment challenge and the other the need to boost investment in the economy. The investment conference was part of government's ambitious drive to raise US\$100 billion worth of new investment over the next five years. The conjunction of the two summits comes from the realization that job creation requires investment, and that investment necessitates skills.

More than 70 interventions to protect existing jobs and create new ones were identified. They were informed by the need to address the pillars of South Africa's growth strategy that include: (i) ensuring sound and responsive government that prioritizes inclusive growth; (ii) investment promotion and the upgrading of industrial capacity; (iii) holistic support for township and rural enterprises; (iv) increased workplace equality; (v) upgrading skills and education; (vi) infrastructure development; (vii) maintaining and strengthening the social safety net; and (viii) innovative measures to assist businesses facing challenges.

The commitments to increase access to employment include:

- Education and skills interventions to build competencies needed for employment and self-employment (where TVETs and community colleges play a critical role); expanding public and private sector skills commitments for youth employment, including capacity building; and finding solutions to accelerate the transition of NEETs (a young person not in education, employment or training) towards earning an income.
- Interventions to boost domestic demand, to identify and pursue import replacement opportunities and to grow exports.
- Assisting small businesses by leveraging procurement for small firms and cooperatives, large-scale youth entrepreneurship programs, and support to the informal sector.

- Inclusive growth interventions through improved workplace collaboration, reporting by businesses on executive pay ratios in annual reports, addressing the gender pay gap, addressing customs fraud and illegal imports, and enhancing socio-economic impact assessments.
- Public and social interventions through strengthening expanded works programs, social audits as part of the monitoring and evaluation of the Expanded Public Works Program, and anti-corruption strategies.
- For effective monitoring, a Presidential Jobs Committee was created to receive quarterly progress reports on the implementation of action plans, monitor employment and take remedial actions when required.

The South African Investment Conference aimed to restore confidence not just among foreign investors but also domestic investors, who in recent years were described as being on an investment strike as businesses have been reluctant to invest in the economy given the high levels of policy uncertainty. It was a milestone in the President's quest to raise at least US\$100bn in new investment over the next five years. Addressing EWC and broad-based black economic empowerment (BBBEE) elements of the Mining Charter, the President assured investors that policies meant to transform the economy and to empower the previously disadvantaged would be executed in a deliberative manner that would respect the rights of all investors. Efforts to improve the investment environment were broadly welcomed and include initiatives to boost tourism. By all accounts the conference was successful in altering perceptions about South Africa as an investment destination. Early results included pledges of R290 billion (over US\$20 billion) in investment over the next five years (adding to prior pledges of US\$10 billion each from Saudi Arabia and the United Arab Emirates, and US\$14 billion from China). They encompass a combination of new and pipelined commitments in the mining, ICT, and manufacturing sectors. The US\$100 billion target represents a stepping up in the government's engagement with investors and will require a well-resourced institutional and operational framework to deliver on it.

The new administration managed to fast-track a number of reforms in labor and mining legislation. In May 2018 Parliament approved the National Minimum Wage Bill together with the Basic Conditions of Employment Amendment Bill and the

Labour Relations Amendment Bill. In mining, the controversial third Mining Charter was renegotiated and gazetted in September 2018 (Box 1.3). The Minerals and Petroleum Resources Development Amendment Bill, which had long contributed to policy uncertainty

in the mining sector, was withdrawn. Although some commitments were not new, investment pledges from mining companies were prominent at the investment

conference. Though the extent to which the pledges will translate into actual investment remains to be seen, there is clearly a new mood among businesses.

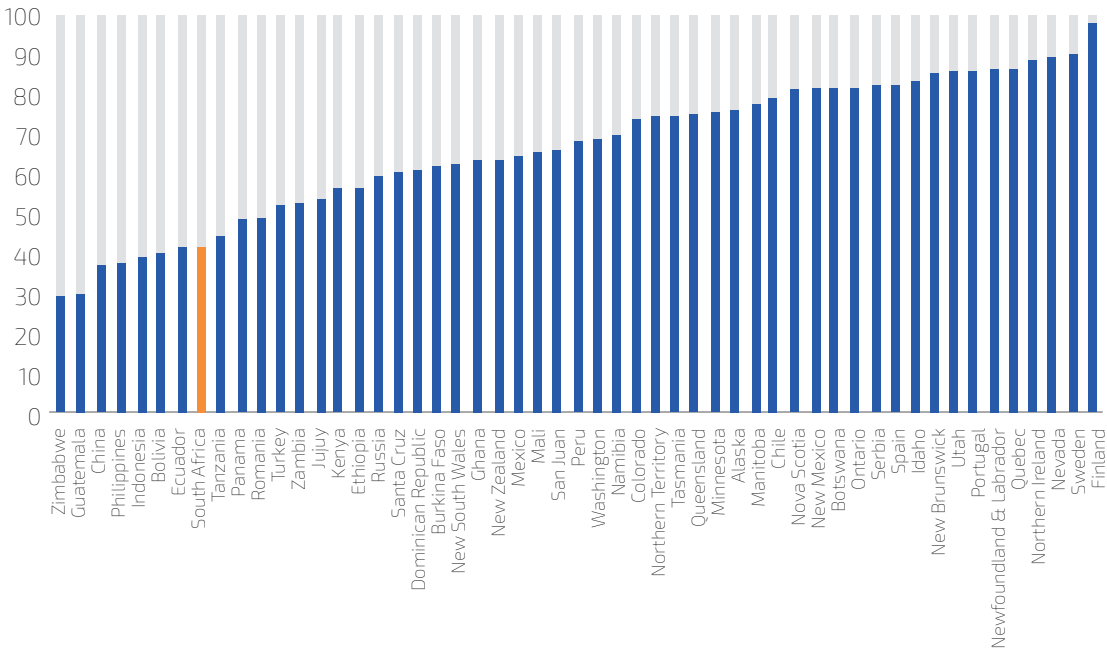
Box 1.3 Figure 1: Policy perception index (100 = most attractive)

According to the Fraser Institute, in 2017 South Africa ranked 81st out of 91 global jurisdictions in terms of the perceived attractiveness of mining policies. The third Mining Charter of 2017 aimed to raise transformation requirements but was strongly opposed for being too stringent with critics saying it offered little incentive to invest in the sector. The revised version gazetted in September 2018 was based on a consensus that emerged from extensive consultations.

Key elements include: (i) minimum 30% black economic empowerment ownership – increased from 26% previously – for new mining rights, renewals and certain ownership changes. Companies that complied with the previous requirement but had their black ownership diluted, won't have to increase black ownership now; (ii) the 30% black ownership will be made up of 5% non-transferable interests – or an

equity-equivalent beneficiary – each for communities and mine workers, the costs of which can be recouped by companies through the mining operations. Black entrepreneurs are expected to hold a 20% stake. There is thus a move away from “freely” carried interests though it is unclear how companies will be able to recoup the costs associated with the non-transferable interests; (iii) the 1% of Earnings Before Interest, Tax, Depreciation and Amortization that was included in the previous version of the charter has been abandoned; (iv) procurement and employment equity targets have largely remained the same as in the previous draft of the charter, though there are increased gender requirements; and (v) junior miners are exempt from black equity requirements if they have turnovers of less than R150 million, but companies with turnovers of more than R10 million have to comply with the requirements.

Box 1.3 Figure 1: Policy perception index (100=most attractive)



Source: Fraser Institute. Note: The policy perception index assesses the attractiveness of mining policies. A score of 100 indicates maximum attractiveness.

According to World Bank (2018b and 2018c), an amicable resolution of the dispute around the third Mining Charter could result in investment increasing by 25% in the sector, based on historical performance. Whether this investment materializes will depend

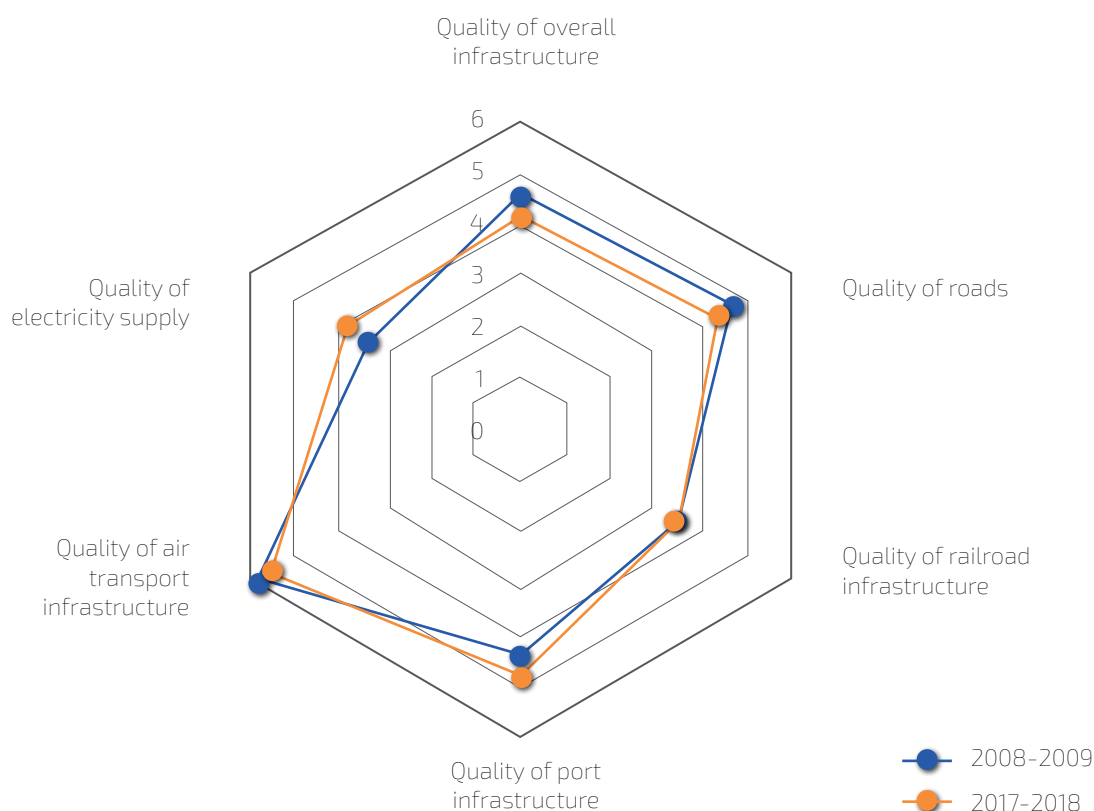
on how competitive the charter makes South Africa relative to other mining jurisdictions. In addition, relatively pessimistic price forecasts for many of South Africa's commodities may mean that a significant increase in mining investment will require more time.

Another critical constraint to growth is inadequate infrastructure. South Africa urgently needs to strengthen the competitiveness of its infrastructure, which has deteriorated in some key areas (Figure 1.4). Load shedding resumed in November 2018 and could again constrain growth. Even though generation capacity has caught up with demand and Eskom's reserve margins have increased to comfortable levels, maintenance disruptions resulting from recent industrial action, particularly in August 2018 which resulted in some damage at Kendal Power Station, and loss of the powerline from Mozambique (which delivers 1200 MW to Eskom), have been significant. The resultant load shedding is reminiscent of the

2007 and 2015 periods when South Africa experienced significant demand-supply gaps which by World Bank estimates cost 0.12 and 0.06 percentage points of headline growth respectively. As a result, Eskom has had to implement up to Stage 2 load shedding, resulting in up to 2000 MW of demand being disconnected during peak periods. Eskom's weak financial situation has contributed to a backlog in the refurbishment of its mid-life generation plants, further constraining power supply. Eskom expected to address short-term issues soon. Over the next two years, Eskom expects to increase the energy availability factor (which should be above 80%) from below 70% at present to at least 76%.

Figure 1.4: Infrastructure quality 2008-2009 vs. 2017-2018

(Index: 1 = underdeveloped, 7 = meets international standards)



Source: World Economic Forum



Accelerating public investment is critical. Weak public investment in SOEs and local government has been a major drag on growth in recent years. SOEs account for about half of the total public-sector capital budget and their structural reform will likely translate into investment that can be expected to have a positive impact on growth and on South Africa's competitiveness. Provincial and municipal governments provide many key public services, including infrastructure. However, capacity constraints have resulted in underspending on vital infrastructure. The national government is cognizant of capacity constraints in other spheres of government: for example, in May 2018, the North West province was placed under administration in terms of section 100 of the Constitution. Municipal finances yet again came under scrutiny when it appeared that some municipalities violated the Municipal Finance Management Act by depositing funds in a mutual bank that had to be placed under curatorship in 2018 due to accounting irregularities. According to the National Treasury, 113 municipalities adopted unfunded budgets in 2018/19, up from 83 the previous year, while municipalities are more than R23 billion in arrears to Eskom and water boards.¹ The government spends R2.5 billion per year on municipal capacity building, but improving service and infrastructure delivery in local government, especially in councils serving South Africa's poorest communities, remains a critical challenge.

In response to stagnant growth and a technical recession, President Ramaphosa announced an

economic stimulus and recovery plan. The technical recession dampened hopes of a quick economic takeoff, necessitating a concerted response. The economic stimulus and recovery plan addresses some of the constraints on the economy. Reforms include the easing of visa regulations (partly to help address South Africa's skills shortage, but also to attract more tourists); gazetting the third Mining Charter; and the assignment of spectrum for ICT expansion. The plan also calls for more efficient spending and includes fiscal reallocations instead of new commitments, mindful of South Africa's elevated public debt level and the structural, rather than financial nature of the country's growth challenges. The plan can thus be seen as a *confidence and efficiency* stimulus, prioritizing solutions to South Africa's structural constraints.

The plan includes a focus on removing South Africa's infrastructure bottlenecks. Through an Infrastructure Fund, the new administration is hoping to leverage a coalition of partners including the private sector, development finance institutions and multilateral development banks to improve and accelerate infrastructure delivery, within the existing budget envelope. Infrastructure and service delivery at the local level is a priority, with 57 pilot municipalities identified and the focus placed on water and sanitation, electricity and refuse disposal.

South Africa emerged from recession in the third quarter of 2018

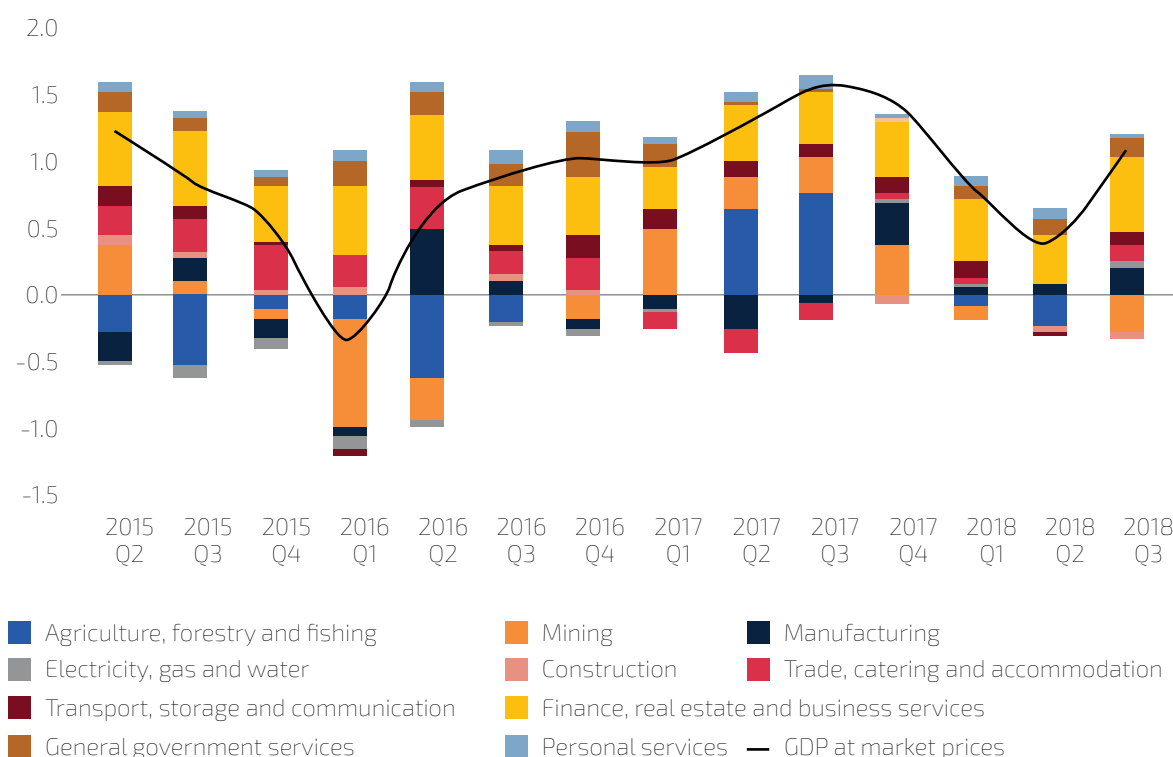
In spite of the technical recession, South Africa's economy grew by 0.8% in the first three quarters of 2018. While the quarter-on-quarter contraction in the first two quarters of 2018 means that South Africa experienced a technical recession, the economy continued to grow throughout 2018 when compared to the previous year (Figure 1.5). In the third quarter, the economy grew by 2.2% compared

to the previous quarter (seasonally adjusted and annualized), which was stronger than expected. However, this should not distract from the major concern that the economy grows at a slower pace than the population. This means that South African income per person declines, reducing individual spending power and the scope to lift more people out of poverty.

¹ National Treasury (2018).

Figure 1.5: Contributions to GDP (supply side)

(Percentage point contributions to year-on-year growth)



Source: StatSA and World Bank staff calculations

Agriculture was the main reason for the technical recession. Agriculture contracted by an average 5% in the first half of the year, compared to the same period in the previous year. Although agriculture accounts for less than 3% of GDP, large swings in production have recently had significant impacts on economic growth. Without the poor performance of agriculture, the technical recession would have been avoided. Poor weather conditions in western parts of South Africa were among the main factors for low agricultural output. Conditions improved over the course of the year, and agriculture recovered in the third quarter of 2018.

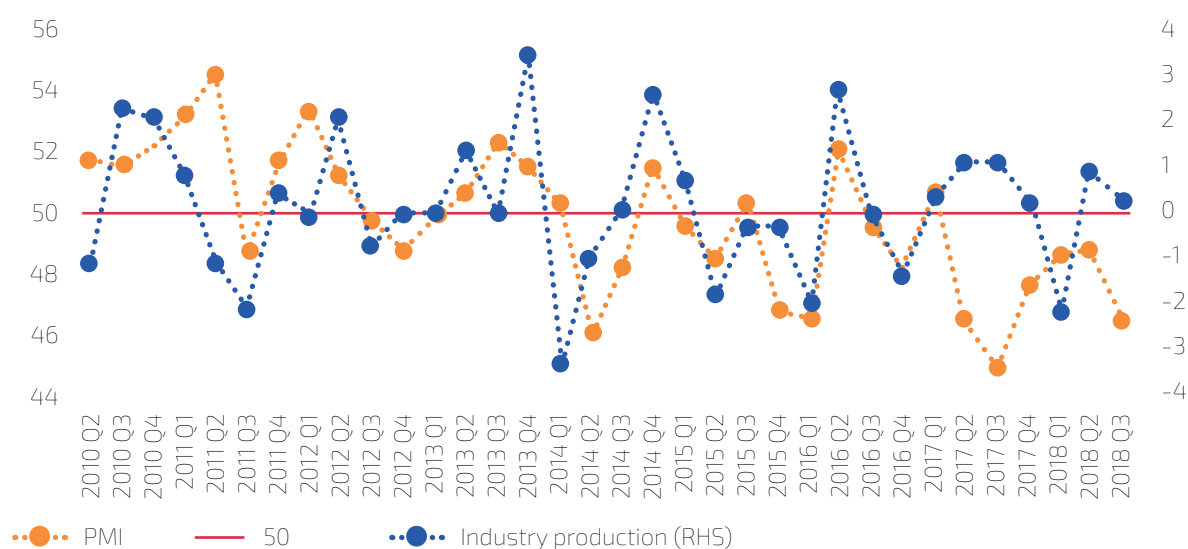
Mining and construction also subtracted from growth. Compared to the previous year, mining fell by an average 1.4% and construction by 1.2% in the first three quarters of 2018. On a quarter-on-quarter basis, mining shaved 0.7 percentage points off GDP growth due to low production in subcategories including platinum, iron ore, gold, copper and nickel. Decreases in non-residential building and construction works activities were chiefly responsible for the contraction in the construction industry in the third quarter of 2018. The sector's negative contribution to GDP growth was

however lower than mining production, shaving off 0.1% off GDP growth.

Some momentum emerged in manufacturing. The sector grew at an average 0.9% in the first three quarters, faster than the overall economy. The third quarter was particularly strong, with main contributions from basic iron and steel, metal products and machinery, wood, paper and publishing, petroleum, chemical products, rubber and plastic products, and motor vehicles, parts and accessories and other transport equipment. The past investments in car manufacturing are yielding results, with the number of cars produced in South Africa expected to increase by 8.6% in 2018, largely due to new production coming onstream from Chinese car manufacturer BAIC Group. Improving momentum in manufacturing is also reflected in the latest readings on the manufacturing PMI. In November 2018, the index climbed to 49.5, thus approaching readings that point to expansion (Figure 1.6). Finally, investment and import data indicate that businesses have been acquiring more machinery, suggesting that they are preparing for expansion.

Figure 1.6: Industry production and Purchasing Managers' Index (PMI)

(index: readings of 50 or higher point to expansion)



Source: StatSA, HaverAnalytics and World Bank staff calculations. Note: Industry production combines mining and manufacturing output. The growth rate is seasonally adjusted and annualized.

Finance, real estate, and business services remain South Africa's main engine of growth.

The sector grew by an average 2.2% in the first three quarters of 2018, the strongest performance across productive sectors in South Africa. Momentum accelerated over the course of the year. In the third quarter, the main reasons for strong performance in the sector were financial intermediation (which is consistent with a modest acceleration of credit growth) and trading in

international markets (which is consistent with the high volatility in emerging markets in August 2018, led by the plummeting of the Turkish lira). Insurance, real estate activity, and business services also supported growth in the sector in the third quarter. While the growth in consumer credit is good news for many South Africans, South African banks can do more to ensure that customers are treated fairly to fully benefit from the country's financial system (Box 1.4).



Box 1.4: Treating customers fairly in relation to transactional accounts and fixed deposits

At the request of the National Treasury the World Bank Group undertook a Retail Banking Diagnostic focusing on the provision of consumer transactional accounts and fixed deposits by retail banks in South Africa. The report was released for public comment in September 2018 by the National Treasury and the Financial Sector Conduct Authority (World Bank, 2018d). The Diagnostic aimed to assess the fairness of banks' treatment of consumers with transactional accounts and fixed deposits and to identify potential improvements that could be achieved through regulatory reforms. The focus was on accounts offered to low-income customers.

Each phase of the product life cycle, from design, offer, and sale through to operation, administration, and closure, was reviewed. Current practices in South Africa were assessed against international good practices and the policies promoted by South Africa's financial sector authorities through their Treating Customers Fairly program. Fair treatment in this context includes the appropriate design of products and services that meet customers' needs and the provision of clear information to customers at the point of sale; ensuring that products perform as customers have been led to believe; and that customers are able to submit complaints and disputes and have these resolved.

Yet, the diagnosis found that product pricing is complex and acts as a potential barrier to the effective use of transactional accounts by low-income customers, making it difficult for customers to compare and assess different products. It also found that terms and conditions, as well as charges, could be potentially unfair. Against these findings, the diagnostic suggests that transactional accounts that cater for low-income customers in terms of

cost and value be provided; an effective regime that prohibits unfair terms and fees be established; the implementation of an improved disclosure regime to ensure that all institutions provide customers with timely, clear and comparable information; and that reporting requirements on financial access targets be strengthened. These reforms would facilitate the adoption of the outcomes-based regulation model currently under consideration.

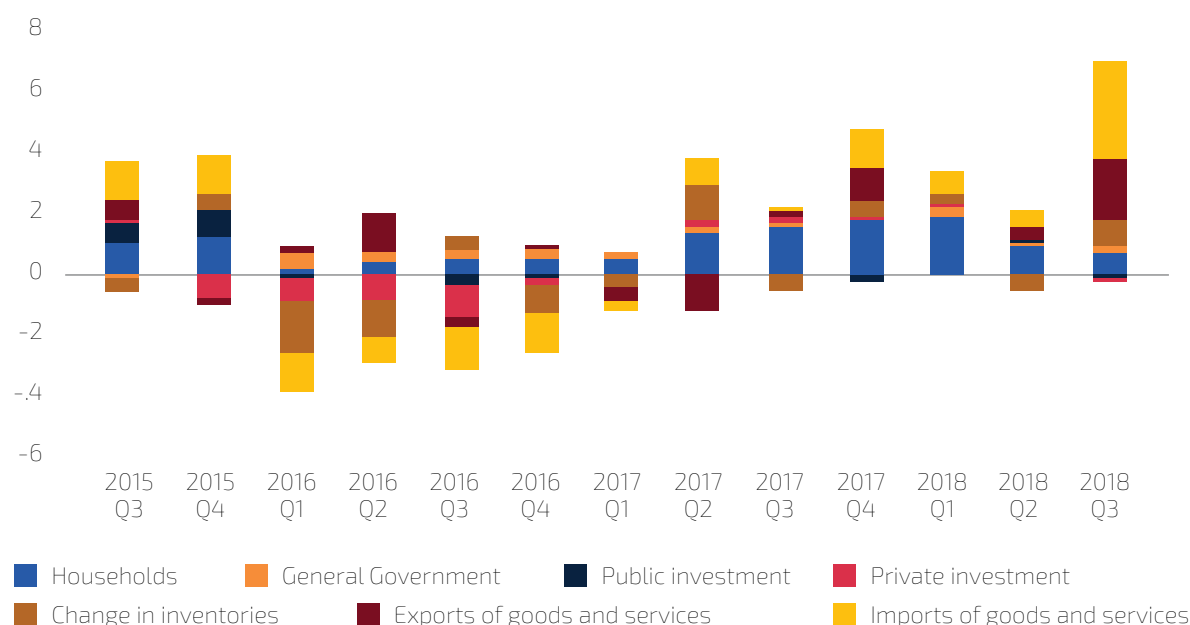
On the expenditure side, household consumption remained an important domestic driver of growth.

However, household spending was affected by higher Value-Added Tax, higher fuel levies, and other fiscal measures that came into effect in April 2018. Tighter monetary policy raised the cost of credit. Yet lower inflation, notably from food prices and a stronger rand, spelt some relief for household budgets in the first

three quarters of 2018 and household consumption grew by 1.9% compared to the previous year (Figure 1.7). In spite of the government's intentions to consolidate the budget, general government consumption still grew by 1.2%, a consequence of the most recent wage settlements in the civil service as well as higher spending on goods and services.

Figure 1.7: Contributions to GDP (demand side)

(Percentage point contributions to year-on-year growth)



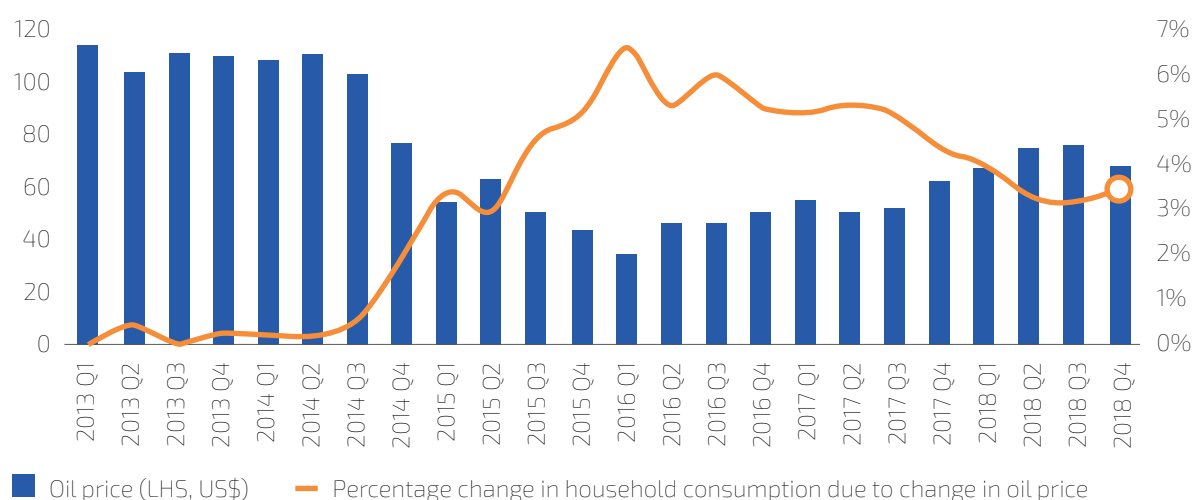
Source: StatSA and World Bank staff calculations

Oil prices put pressure on consumers in 2018, although they dropped in November.

Low oil prices had supported household consumption in South Africa since declining from a peak in 2013 (Figure 1.8). Oil prices picked up again in 2016, putting pressure on household consumption in subsequent years. In 2018, the oil price put pressure on motorists until November,

when international oil prices declined substantially. The World Bank estimates that a 100% increase in oil prices reduces South African household consumption by about 5%, and vice versa. Comparing 2018 and 2017, the increase in oil prices is estimated to have reduced household consumption by about 1.5%.

Figure 1.8: Oil prices and estimated impact on household consumption
(Oil price (LHS) and percentage change in consumption relative to highest recent oil price (Q1 2013))



Source: StatSA and World Bank staff calculations

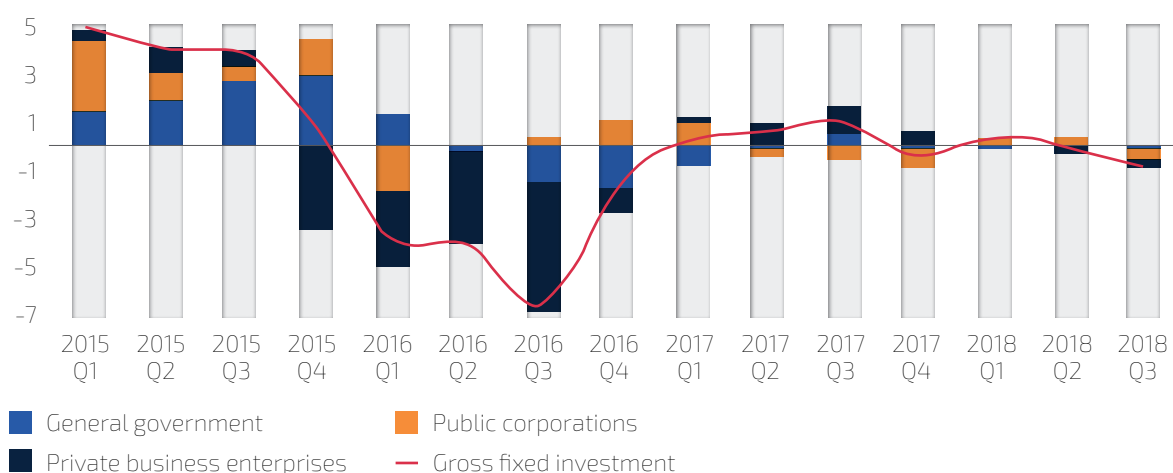
Fixed investment remains stuck in low gear.

Notably, SOEs were responsible for the greatest drag on investment growth in 2017, while private sector investment subtracted from growth in the first three quarters of 2018 (Figure 1.9). The construction sector continues its slump from 2017. Investment in non-residential buildings was also weak in Q3. Overall,

investment momentum has been soft since 2015 and declined by an average 0.3% year-on-year between the third quarters of 2015 and 2018. Inventory build-up is responsible for an overall positive contribution of gross capital formation to GDP growth in the first three quarters of 2018 (Figure 1.9).

Figure 1.9: Contributions to gross fixed capital formation

(Percentage point contributions to year-on-year growth, by type of organization)



Source: StatSA and World Bank staff calculations.

International trade subtracted from growth (Figure 1.10). Exports stepped up over the course of 2018 with a strong third quarter, driven by exports of vehicles and transport equipment, base metals, vegetable products

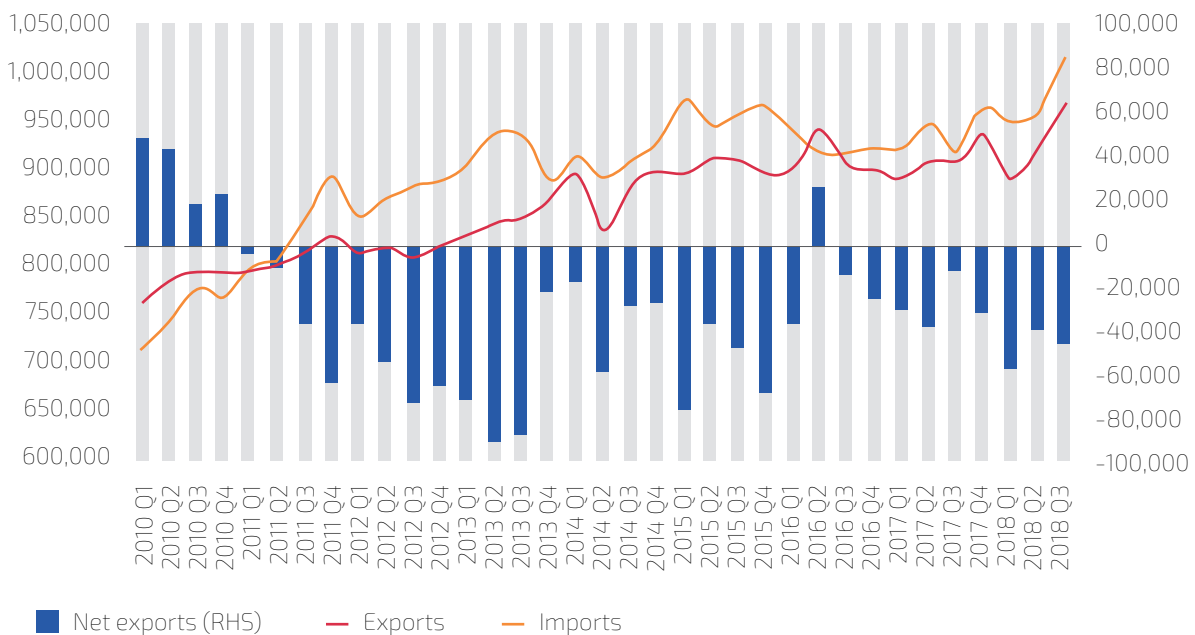
and precious metals. Imports outgrew exports, with a strong increase in the third quarter driven by machinery and electrical equipment, vehicles and transport equipment, chemical products and mineral

products, again supporting the narrative of improving momentum in manufacturing. Overall, net exports subtracted 0.7 percentage points from year-on-year growth in the first three quarters of 2018. The trade

performance once more highlights the importance of the government's structural reforms which can be expected to make South Africa more competitive in global markets.

Figure 1.10: Exports and imports of goods and services

(imports, exports (LHS), and net exports (RHS) in 2010 constant rand, million, seasonally adjusted and annualized)



Source: StatSA and World Bank staff calculations

Labor Market Developments in South Africa

Unemployment remains high

Little progress in reducing unemployment is consistent with the weak economy. In the first three quarters of 2018, unemployment averaged 27.1%, slightly lower than an average 27.7% in the same period in 2017. Respectively, for 2018 and 2017, broad unemployment (i.e. including discouraged workers) averaged 37.1% and 36.6%. Although this suggests an improvement in the labor market, outcomes deteriorated over the course of the year: unemployment stood at 26.7% in Q1 2018, climbing to 27.5% by Q3. The main reason for this deterioration over the year is that employment grew more slowly in the first three quarters (0.4% average) than the labor force (0.8% average), demonstrating the difficulty of absorbing new entrants into the labor market (also see Chapter 2). Youth unemployment remains high at an average 53.0% in the first three quarters of 2018.

President Ramaphosa signed the National Minimum Wage Bill into law, making it effective on January 1st, 2019. The bill was formulated by the National Economic Development and Labour Council and has been in the works since 2015. The parties agreed to set the minimum hourly wage at R20, benefiting 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.

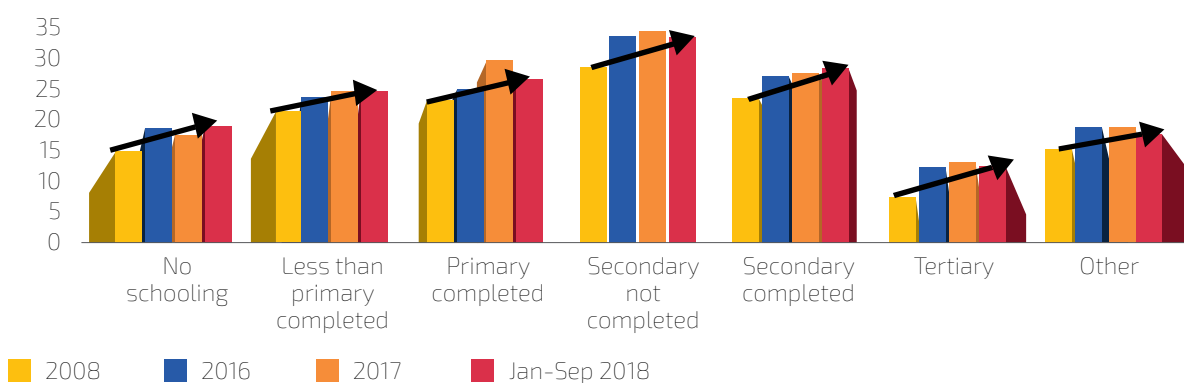
Unemployment, even among those with tertiary education, has been steadily rising since 2008

Only three out of ten sectors contributed to the lift in employment in the third quarter of 2018. The finance, trade and construction sectors added 215,000 jobs, enough to offset losses in the other sectors. However, formal employment decreased in the third quarter with manufacturing, mining, transport and construction chiefly responsible for the dip. A year-on-year comparison shows that fewer jobs were created in the first three quarters of 2018, with 105,000 added against 117,000 in 2017. This is mainly due to dismal performances in the mining, manufacturing and community and social services sectors in 2018. With regards to remuneration, between the first and the third quarter of 2018, total wage per worker has increased by 6.7% with the highest increase recorded in the manufacturing sector

(13.7%) followed by the transport sector (10.8%) and the community and social services sector (10.4%).

Education remains an important factor in the labor market. The proportion of jobless is the highest among South Africans that haven't passed the matric exam (secondary not completed, Figure 1.11), amounting to 34.8% in 2017 and 33.6% between January and September 2018. Of concern is that unemployment among those with a tertiary level of education has been on a steady rise in the last decade from 7.6% in 2008 to 12.7% in 2018. Despite the general deterioration in employment conditions, these numbers emphasize the importance of education in accessing job opportunities.

 **Figure 1.11: Unemployment by education level**



Source: StatsSA

Fiscal Developments in South Africa

The government remains committed to fiscal and debt sustainability

The 2018 Medium Term-Budget Policy Statement (MTBPS) reflects priorities communicated by President Ramaphosa in his state of the nation address in February. The themes of strengthening institutions and the acceleration of infrastructure and service delivery for economic growth, job creation, and poverty reduction were prominent. A stronger emphasis on partnerships with the private sector was evident and aligned with the presidential imperative to attract private investment of US\$100 billion over the next five years. The MTBPS also reflected the president's announcement of an Infrastructure Fund, which is intended to unblock the delivery and maintenance of infrastructure by leveraging

partnerships with development finance institutions, multilateral development banks and the private sector. The MTBPS also slashed the growth forecast in the National Treasury's macro-framework; over-optimism in growth forecasts, both by the government and markets, has historically added to pressure on fiscal sustainability (Box 1.5). As was announced by President Ramaphosa and reflected in the MTBPS, the economic stimulus and recovery plan will be implemented within existing budget resources, which in light of high public indebtedness, is itself critical for investor confidence. As such, the 2018 MTBPS was a candid and realistic fiscal policy pronouncement.



Box 1.5: When the cycle becomes the trend: the impact of the super cycle on South Africa

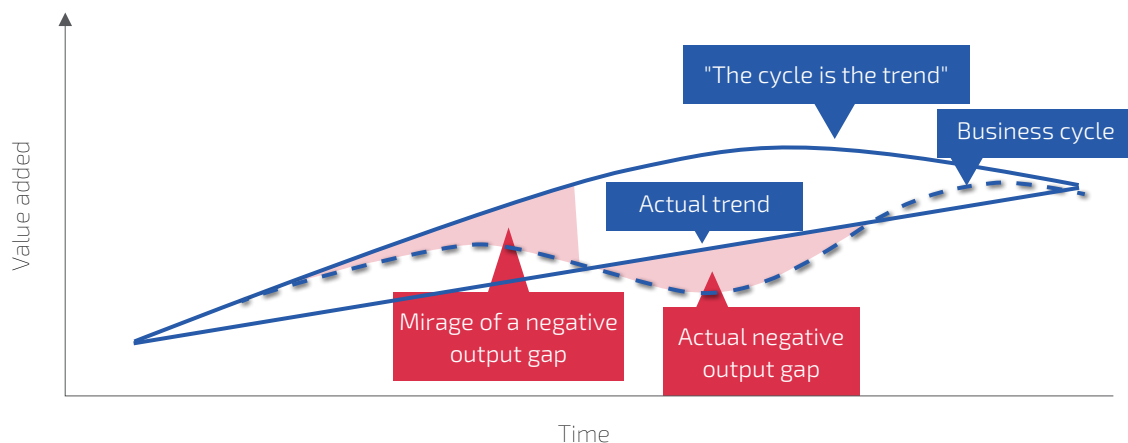
As in many emerging markets, South Africa's fiscal buffers are depleted. The latest National Treasury projections in the October 2018 MTBPS see gross debt stabilizing at 59.6% of GDP by 2023/24 following several upward revisions. Why did South Africa's fiscal position weaken so dramatically since the global financial crisis? After all, South Africa had managed to significantly reduce the public debt burden between the dawn of democracy in 1994 and the mid-2000s.

Although there are various factors that explain the increase in public debt, one possible reason lies in the long commodity super cycle, which lasted from 2000 to 2015. The unusual length of a boost from

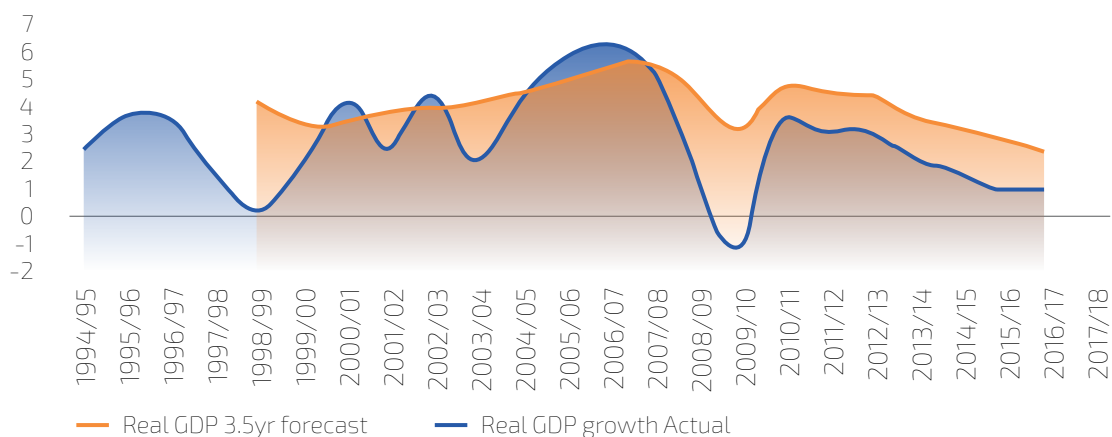
elevated commodity prices for commodity exporters like South Africa could easily create the impression that this was not a temporary effect: the commodity super cycle extended the business cycle to the point where a "mirage" of higher trend growth was created. The long cycle was mistaken for the trend (Box Figure 1). When the commodity super cycle ended, it became clear that growth had been sustained by commodity prices and trend growth had been lower than anticipated. Indeed, after 2009, three-year growth forecasts by the National Treasury tended to be overly optimistic (Box Figure 2) — but the National Treasury was not alone in doing this, as the market consensus forecasts tended to be optimistic too.



Box 1.5 Figure 1: How the commodity super cycle created the impression of higher trend growth



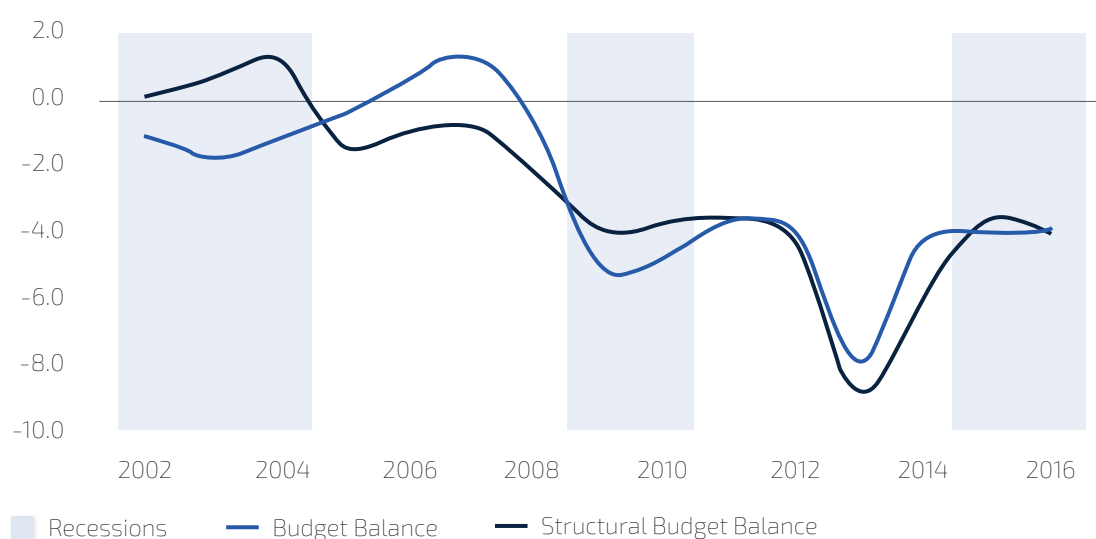
Box 1.5 Figure 2: National Treasury growth forecasts vs. actual growth (%)



Overestimating growth potential can adversely affect policymaking. Prudent fiscal policy is countercyclical, meaning a fiscal expansion when growth falls below potential (or trend) and fiscal restraint when growth exceeds potential. While the South African government has been committed to counter-cyclical fiscal policy, the commodity super cycle may have inadvertently turned

fiscal policy pro-cyclical: weakening growth would be perceived as moving the economy below potential, warranting fiscal support; yet as potential was overestimated, the economy received fiscal support even though it was still above potential. This can help explain why South Africa's brief structural surplus of the mid-2000s did not last long (Box Figure 3).

 **Box 1.5 Figure 3: Estimates of South Africa's budget balances (%)**



In essence, this means that South Africa did not save as much as it should have in good times to prepare for bad times. South Africa's high debt levels now make it difficult to counter a recession, such as the one in the first half of 2018, through fiscal stimulus measures. When fiscal space is limited, boosting growth through

structural reforms becomes even more important. In this context, an economic stimulus and recovery plan that focuses on boosting growth by acting as a confidence stimulus, accelerating structural reforms, and increasing the quality of spending, instead of a traditional fiscal stimulus, is a prudent choice.

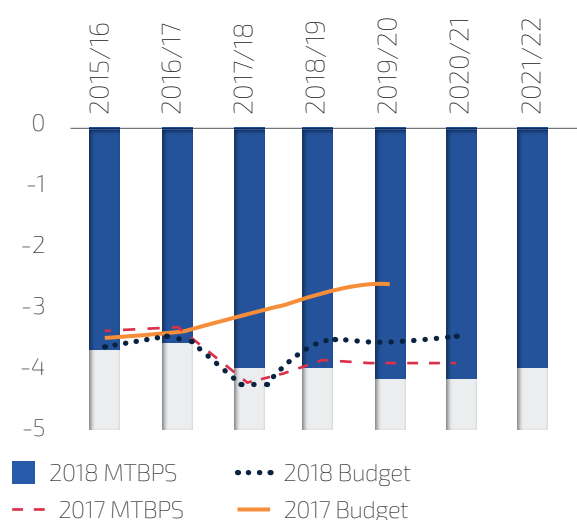
Source: Amra et al. (2019).

The MTBPS estimates the consolidated budget deficit at 4% of GDP in 2018/19, with consolidated expenditure expected at 33.1% of GDP and revenue at 29.1% in 2018/19. The 2018/19 deficit estimated in the MTBPS is 0.4 percentage points higher than projected in the 2018 Budget (Figure 1.12A). The budget deficit is expected to widen to 4.2% of GDP in 2019/20, with a cumulative slippage in deficit of 1.3 percentage

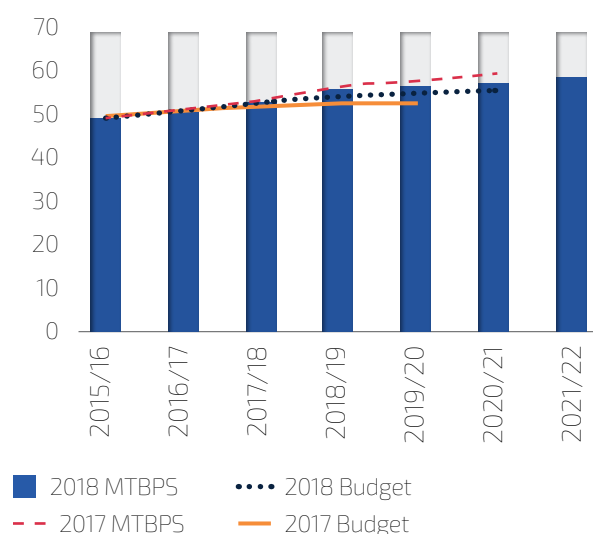
points in the 2018/19 and 2020/21 fiscal years. This is due to lower than anticipated revenue collections coupled with weak economic activity. Consequently, government debt is expected to rise at a rate higher than projected in the 2018 Budget Review, to stabilize at 59.6% of GDP in 2023/24, 3.5 percentage points higher than projected (Figure 1.12B).

Figure 1.12: Fiscal consolidation objectives, 2016-18

A. Budget balance (% of GDP)



B. Gross public debt (% of GDP)



Source: World Bank Staff calculations based on National Treasury data

Higher-than-expected Value-Added Tax refunds resulted in revenue underperformance in 2018.

Corporate and personal income tax underperformed slightly relative to what was expected in the 2018 Budget. Weak economic growth and soft activity in wholesale and retail trade, manufacturing and transport were responsible for lower than anticipated corporate tax collection, while personal income tax was impacted by job losses, moderate wage settlements (except in the public sector) and slower-than-anticipated growth in public sector employment. Corporate income tax collection is expected to fall short by 2.5% and personal income tax by 0.3% in 2018/2019. Despite the rate hike from 14 to 15% implemented at the beginning of the 2018/19 fiscal year on 1 April 2018, Value-Added Tax collections are expected to come in 5.8% below the budget target — largely due to an expedited clearance of the backlog in Value-Added Tax refunds. The MTBPS commits the government to limiting tax increases in future, paying more attention to living within the constraints of the existing budget.

The government stays committed to its expenditure ceiling.

Two major sources of pressure on expenditure stand out, with the wage bill the most important. Minister of Finance Tito Mboweni stated in the MTBPS that no additional fiscal resources would be made available for the portion of the recent public-sector wage settlement that exceeds the allocation that had already been budgeted. National and provincial departments were enjoined to identify savings that would allow them to continue operating within their original appropriations.

The second spending pressure continues to come from SOEs.

According to the Auditor-General, state entities are responsible for irregular expenditure of R27 billion. Despite changes to corporate governance, mistakes of the past (and other pressures, such as the refusal by some municipalities to pay Eskom) continue to negatively affect SOE performance. Additional bailouts in 2018/19 are penciled in for South African Airways (R5 billion), South African Express Airways (R1.2 billion) and the South African Post Office (R2.9 billion). The MTBPS commits the government to reforming loss-making SOEs. Further upward revisions to expenditure were made to provide for the Judicial Commission of Inquiry into State Capture and the Commission of Inquiry into tax administration and governance in the South African Revenue Service (R409 million in total), school infrastructure backlogs (R800 million), drought relief (R3.4 billion), and the operationalization of the Budget Facility for Infrastructure (R870 million). As in previous years, this was partly compensated with adjustments from unspent funds and departmental underspending as well as by tapping into the R8 billion contingency reserve. Overall, adjustments to expenditure compared to the 2018 Budget are minimal.

Public expenditure is expected to continue growing in real terms, with a focus on education, healthcare and social development.

Over the medium-term expenditure period, government projects spending R5.9 trillion, 56.2% of which will be allocated to education, health, the provision of water and electricity services, and social grants. Education is then the fastest-growing expenditure segment after debt-service costs, which reflects the widening budget deficit. Health comes

third. The rapid growth in education appropriations was prompted by the increase in financial aid for poor and working-class students pursuing PSET, (see Chapter 2). Other priorities in education spending concentrate on

early-grade reading and mathematics in basic education. In addition, existing school infrastructure budgets are to be reprioritized to focus on improvements to sanitation.

Inflation and Monetary Policy in South Africa

📈 *Growing external and domestic inflation pressures have been contained so far*

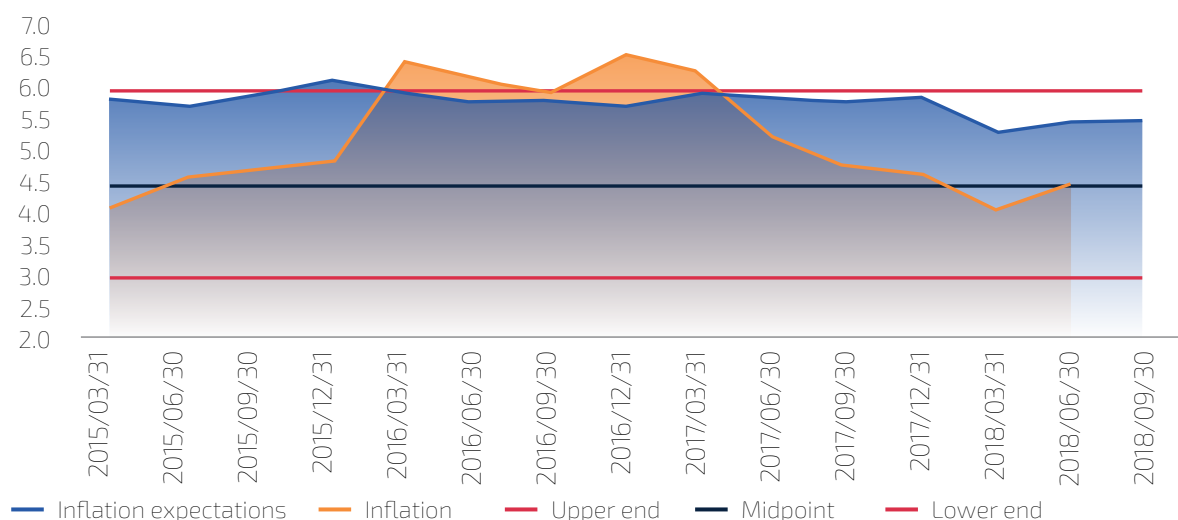
Although lower than in 2017, inflation picked up over the course of the year 2018, partly driven by a depreciating exchange rate and higher oil prices (until November when oil prices dropped). Inflation accelerated from 4.1% in the Q1 2018 to 4.9% in Q3 and averaging 5.2% in November. During the last meeting of the Monetary Policy Committee (MPC) in November 2018, the South African Reserve Bank (SARB) announced that it would expect inflation to accelerate from an average 4.7% in 2018 to 5.5% in 2019. For core inflation – which excludes food, fuel and electricity prices, the SARB now expects it to be 5.3% in 2019. Inflation expectations (Figure 1.13) of market analysts for 2019 are broadly in line with SARB estimates.

The SARB explicitly expressed the intention to keep inflation expectations anchored near 4.5% but there are both global and domestic risks to this objective. At a global level, tighter global financial conditions, financial market volatility, rising oil prices and shifting investor sentiment towards emerging markets are projected to have an impact on the path of inflation. Domestic factors

include the rand, with the SARB expecting volatility in the exchange rate over the medium term. Monetary policy tightening in the US coupled with the expectation that in late 2019 the European Central Bank will start an interest rate-hiking cycle, present additional upside risks to inflation prospects. Domestically, the SARB expects higher wage growth, combined with rising electricity, water and fuel tariffs to exert upward inflation pressures, despite continuously weak aggregate domestic demand.

Over the years, the Monetary Policy Committee has emphasized the need to act on the second-round effects of supply-side shocks. However, the task of disentangling first and second-round effects has been made difficult by several factors, including extended periods of exchange rate depreciation, higher electricity and water prices and rising fuel prices due to higher international oil prices. These factors have contributed to the economy facing shocks of a more persistent nature. As a result, a delayed monetary policy adjustment could keep inflation expectations away from the target and may require a stronger monetary policy response in the future.

Figure 1.13: Actual and forward inflation expectations
(actual and expected inflation)



Source: StatSA and Bureau for Economic Research

Robust monetary policy is serving South Africa well.

Guaranteeing the independence of the SARB was a major achievement under South Africa's Constitution of 1996. Adherence to an inflation target and strong communication around its intentions to maintain inflation within the target range has helped build the credibility of the SARB. This credibility is a hard-

earned asset that serves South Africans well, by, for instance, limiting the impact, or "pass-through" of the volatile currency on inflation (Box 1.6). Keeping inflation manageable is important for all South Africans, especially the poor, as it helps to maintain their purchasing power.

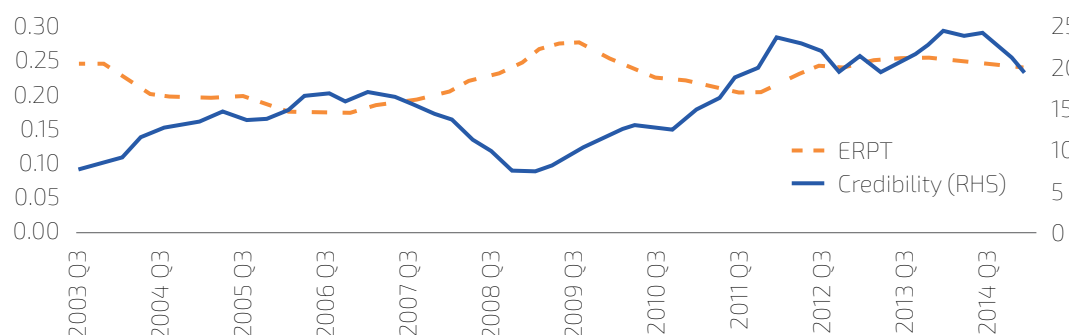
Box 1.6: Credible monetary policy cushions the impact of exchange rate volatility on inflation

What have been the key drivers behind a decline in the exchange rate to inflation pass-through in South Africa over the past two decades? Monetary policy credibility stands out as the main factor. A central bank is considered credible if it successfully manages the level of inflation, inflation volatility, and provides certainty about monetary policy. The SARB has successfully managed to stabilize all three factors since 2009. As a result, inflation expectations have been well anchored, in line with its objective. All agents, including price setters, have become forward looking in setting their expectations. The decline in inflation from 2004 to 2006 was followed by a decrease in expectations of all agents. However, expectations remain anchored at 6% even after a decrease from 6.4% in the second quarter of 2014 to 4.1% in the second quarter of 2015. Credibility was enhanced by improved communications by the SARB. These include the systematic publication of macroeconomic assumptions and forecasts after each Monetary Policy Committee meeting and a press conference, complemented by a detailed analysis of prevailing macroeconomic conditions in its six-monthly monetary policy review. A further improvement has been the publication of its core Quarterly Projection Model in 2017,² which gives the projected interest rate

path. Unlike many other central banks, especially in emerging market economies, the SARB still enjoys a constitutionally-enshrined independence.

Consequently, periods of high monetary policy credibility are mirrored by a decline in the exchange rate pass-through (ERPT). It is apparent from Box 1.6 Figure 1 that the two series are negatively correlated. The relatively high pass-through observed at the beginning of the sample coincides with instances of low credibility. It is followed by a downward trend in the ERPT while at the same time credibility improves, reaching the peak in 2006 before starting its decline in the second quarter of 2007. Notice that this decline is mirrored by an upward trend in the ERPT, which rises to 27% in the third quarter of 2009, whereas the monetary policy credibility reaches the trough two quarters earlier. Again, the two series portray a negative relationship from 2009 to 2012, where credibility increases sharply, then remains high and stable until the end of the sample period. It is worth mentioning that the period of high and stable monetary policy credibility coincides with stable inflation and inflation expectations, albeit at the upper end of the official target range.

Box 1.6 Figure 1: Cumulative credibility and exchange rate pass-through



Source: Kabundi and Mlachila (2018).

² See Botha et al. (2017).

The External Sector in South Africa

✓ *External vulnerabilities remain heightened*

In August 2018 emerging market currencies, particularly the Turkish lira and the Argentinian peso, suffered dramatic losses that negatively affected investor sentiment towards this group of economies. The ripple effect dragged down the South African rand and the gains stemming from the election of President Ramaphosa were reversed. Further pressures on the rand emanated from the normalization of monetary policy in the United States, the strengthening of the US\$, and higher oil prices. Compared to some other emerging markets, South Africa is relatively resilient (Box 1.7). Yet external shocks continue to pose potential risks to the South African economy.

Both exports and imports experienced a strong third quarter in 2018. Robust car manufacturing in 2018 translated into export growth (Figure 1.14A). Other support for exports came from stone, plaster and cement, base metals, mineral products, and machinery and agricultural products. On the import side (Figure 1.14B), fuel dominated growth throughout the first three quarters of 2018. In local currency terms, the merchandise trade balance remained positive. Coupled with services trade, and income and current transfer payments, the current account deficit continued to remain negative, a consequence of South Africa's structural savings-investment gap. By the third quarter of 2018, the current account deficit stood at 2.3% of GDP, little changed from the previous quarter (2.4%).





Box 1.7: South Africa's vulnerability and resilience in emerging market storms

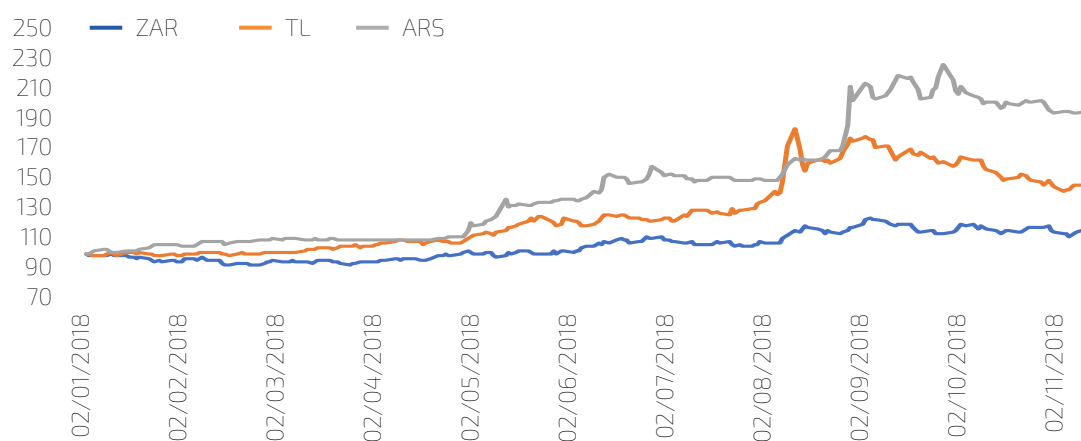
The South African rand depreciated by almost 10% against the dollar in August 2018 and was temporarily trading at a two-year low. This fueled concern that South Africa was vulnerable to a crisis from an emerging markets sell-off originating in Turkey. Pressure on the rand came from foreign investors retreating from both debt and equity markets because of a general sell-off in emerging markets, as well as from domestic events such as investor concerns about

a constitutional amendment on land. The depreciation of the exchange rate was as marked as in Turkey (Box Figure 1a). The share of foreign holdings of domestic bonds fell from a high of 43% in March to about 40% currently (Box Figure 1b). However, those levels are not far from historical levels and the retreat followed a build-up in foreign ownership following the election of President Ramaphosa.

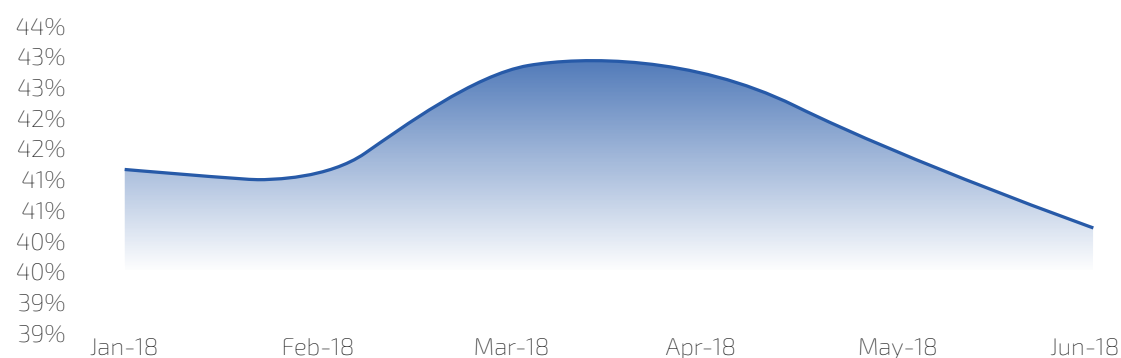


Box 1.7 Figure 1: Exchange rates and foreigners' bonds holdings

A. Exchange rates



B. Share of foreign holdings of domestic bonds



Source: Haver Analytics and Bank staff calculations

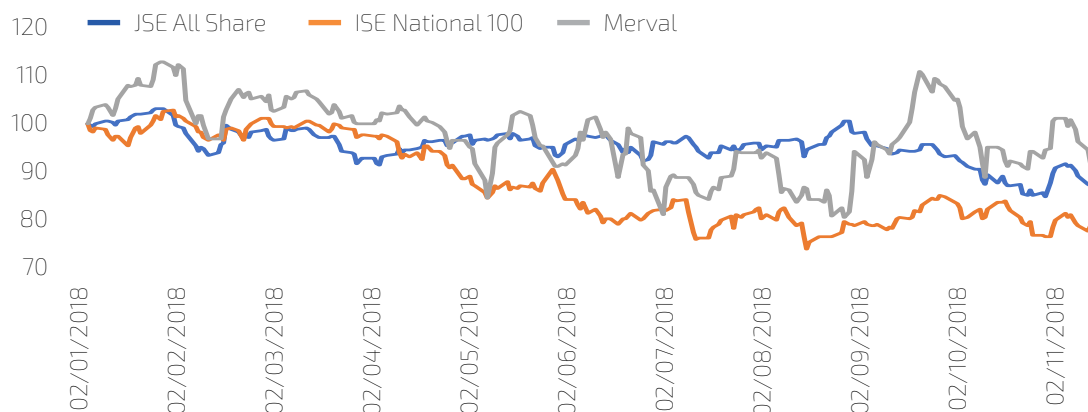
Debt and equity markets remain resilient. The Johannesburg stock exchange's All Share Index fell by 5% since the beginning of the year, and the yield on the benchmark 10-year bond stayed relatively flat (Box Figures 2a and 2b). It appears that domestic

purchases compensate for portfolio flow reversals, so that bond prices have held steady and the fall in the stock market has been relatively contained. This reflects South Africa's liquid and deep financial market that provides a buffer against capital flow reversals.

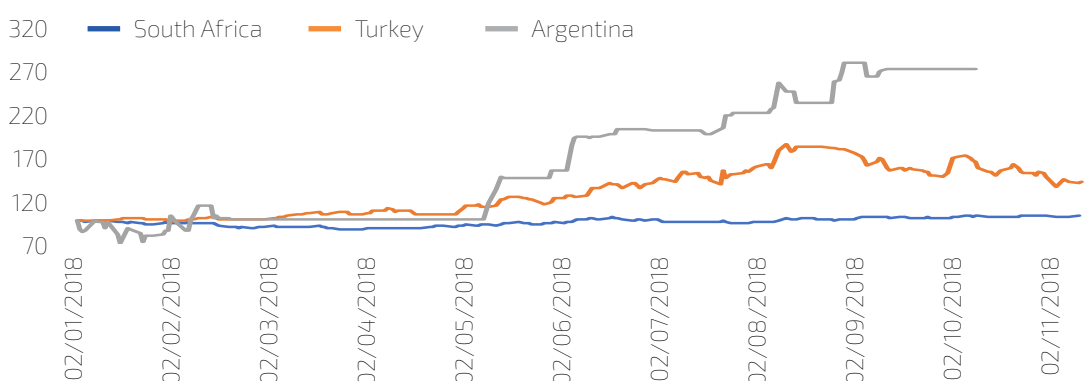


Box 1.7 Figure 2: Stock markets' indexes and 10-year bonds' yields

A. Stock market index Johannesburg, Istanbul and Buenos Aires



B. 10-year bond yields: South Africa, Turkey and Argentina



Source: Haver Analytics and Bank staff calculations

Foreign currency borrowings have been high. The private sector has significant foreign exchange-denominated debt, raising concern about the effects of continued foreign exchange depreciation. Though individual companies may be vulnerable, the macroeconomic risks appear to be contained. The exchange rate has historically been volatile and both state-owned companies and corporates either have natural hedges against export earnings or are

actively hedging in financial markets. In addition, South African firms have been investing abroad, providing a further hedge against exchange rate risk. Overall, macroeconomic fundamentals – the current account deficit, the fiscal deficit, and inflation – are sound and gross foreign exchange reserves are at \$47 billion. And while South Africa's growth prospects are poor, requiring structural reforms, the economy appears to be fairly resilient to contagion risks.

Both exports and imports experienced a strong third quarter in 2018. Robust car manufacturing in 2018 translated into export growth (Figure 1.14A). Other support for exports came from stone, plaster and cement, base metals, mineral products, and machinery and agricultural products. On the import

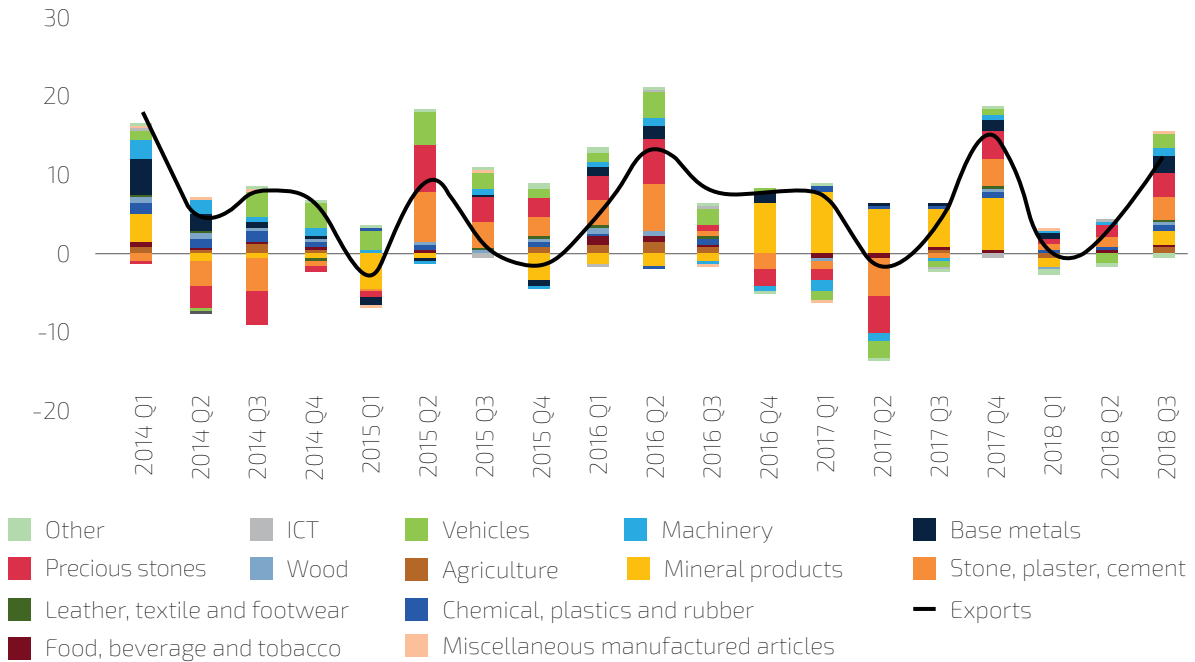
side (Figure 1.14B), fuel dominated growth throughout the first three quarters of 2018. In local currency terms, the merchandise trade balance remained positive. Coupled with services trade, and income and current transfer payments, the current account deficit continued to remain negative, a consequence

of South Africa's structural savings-investment gap. By the third quarter of 2018, the current account

deficit stood at 2.3% of GDP, little changed from the previous quarter (2.4%).

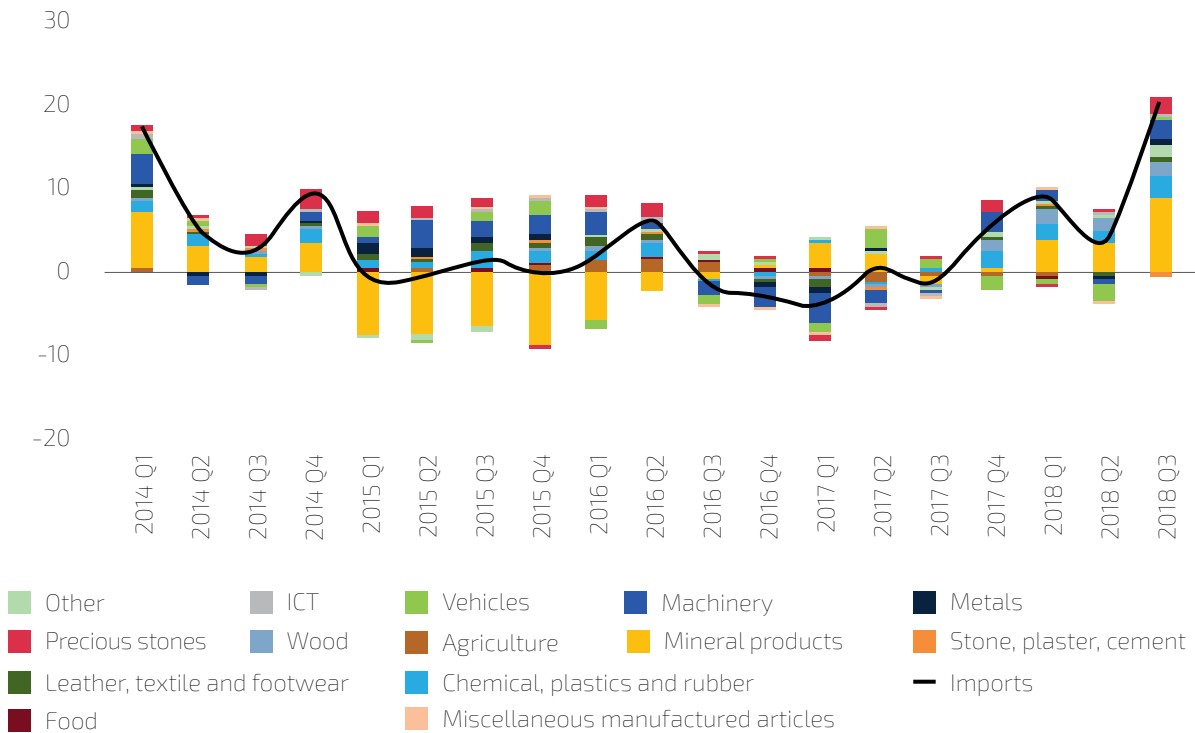
Figure 1.14: South African exports and imports

A. Percentage point contributions to year-on-year exports growth



Source: Haver Analytics and World Bank staff calculations

B. Percentage point contributions to year-on-year imports growth



Source: Haver Analytics and World Bank staff calculations

The Outlook for South Africa

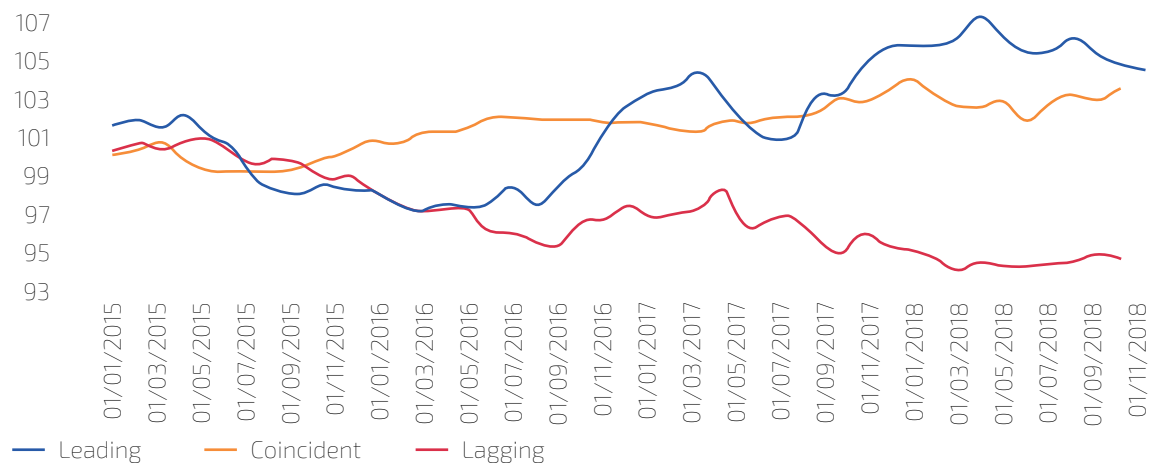
The World Bank expects growth at 0.9% for 2018. Although the previous South Africa Economic Update (World Bank 2018b) of April 2018 cautioned against large upward revisions to growth forecasts early in the year — as most of South Africa's constraints to growth are deeply structural — its GDP forecast of 1.4% for the year 2018 turned out to be optimistic. The main reason is that the boost to confidence had a smaller than expected cyclical impact, while the weakness in the agriculture sector was underestimated. A stronger investment response that was expected to translate into higher exports had also been anticipated.

Yet a recovery in growth remains likely. While the SARB's cyclical indicators still paint a

cautious picture (Figure 1.15) there are reasons to be optimistic about future growth, given the government's structural reform agenda. As this chapter has argued, many of the critical issues that will raise South Africa's growth potential are being tackled. Investment pledges under President Ramaphosa's investment drive are assumed to materialize, further supporting growth. Chapter 2 will also look at a specific policy, fee-free higher education that in the long run is expected to contribute to more inclusive and sustainable growth. Although structural reform always takes time, the World Bank expects an acceleration of South African growth, to 1.3% in 2019 and 1.7% in 2020 (Figure 1.16).



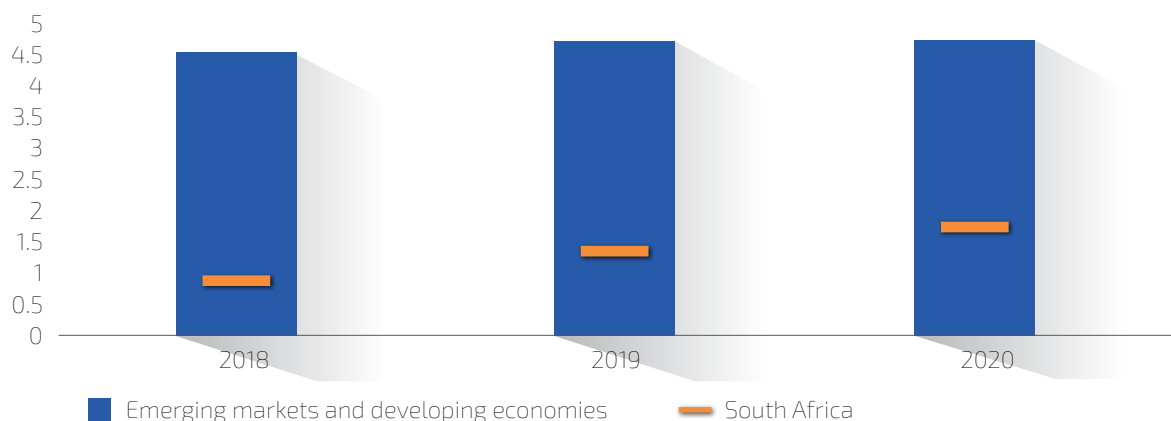
Figure 1.15: South African Reserve Bank cyclical indicators



Source: Haver Analytics



Figure 1.16: GDP growth projections



Source: World Bank Staff Calculations

The external environment holds opportunities and challenges for South Africa.

The World Bank expects the US\$ oil price to stay flat at their 2018 levels in 2019–21, with the impact on the South African consumer depending on the rand-dollar exchange rate. Should the 2019 elections reduce political uncertainty, large and abrupt depreciations of the rand due to domestic reasons will be less likely. However, external events such as heightened trade tensions and tighter monetary conditions in global markets could continue to put pressure on the rand. Slowing demand in China will drag down prices for South Africa's commodities, with the exception of platinum group metals, while more advanced economies are also expected to slow in the medium term. Another drought brought about by the El-Nino weather phenomenon is likely in 2019, which will again hurt agricultural production. This emphasizes that domestic efforts are paramount in lifting growth and improving the conditions for social progress and that South Africa cannot rely on external factors to achieve this.

Maintaining the momentum on reforms and safeguarding fiscal sustainability remain important.

Reforms outlined by the president in the economic

stimulus and recovery plan are likely to have significant growth dividends. They include a renewed focus on infrastructure and the anticipated progress on innovative and cost-effective infrastructure delivery and maintenance will provide a much-needed competitiveness boost to South Africa. The new approach of leveraging partnerships with development finance institutions, multilateral development banks, and the private sector, combined with the pledge to strengthen capacity in local government, makes this a promising area for reform. More reliable, modern, and affordable infrastructure will benefit South African businesses and citizens alike, including the poor. However, ensuring that townships and rural areas benefit from the infrastructure expansion will be a critical marker of the program's success. Finance Minister Mboweni has declared that safeguarding the country's investment-grade credit rating from Moody's will be a priority and a stronger fiscal outlook will be crucial to maintaining that. Overall, faster growth and more efficient public spending can make a significant contribution to strengthening South Africa's fiscal position, creating more room for *investing in people*, South Africa's most important asset.



Table 1.1: Baseline annual growth forecasts

	2015	2016	2017	2018e	2019f	2020f
Real GDP growth, at constant market prices	1.3	0.6	1.3	0.9	1.3	1.7
Private consumption	1.8	0.7	2.2	2.0	1.7	2.0
Government consumption	-0.3	1.9	0.6	1.0	0.8	-0.1
Gross Fixed Capital Formation	3.4	-4.1	0.4	0.2	1.2	2.1
Exports, Goods, and Services	2.8	1.0	-0.1	2.9	3.7	2.4
Imports, Goods, and Services	5.4	-3.8	1.9	5.0	4.0	2.0
Real GDP growth, at constant factor prices	1.2	0.4	1.1	0.9	1.3	1.7
Agriculture	-6.4	-10.2	17.7	-2.9	1.7	2.0
Industry	0.8	-0.8	1.5	0.1	2.2	2.5
Services	1.6	1.4	0.4	1.3	0.9	1.4
Inflation (Consumer Price Index)	4.5	6.6	5.2	4.7	5.1	5.0
Current Account Balance (% of GDP)	-4.4	-3.1	-2.5	-3.4	-3.5	-3.2
Net Foreign Direct Investment (% of GDP)	-1.3	-0.4	-0.3	0.3	0.4	0.6
Fiscal balance (% of GDP)	-3.7	-3.6	-4.0	-4.0	-4.2	-4.2
Debt (% of GDP)	48.9	50.6	52.7	55.8	56.1	57.4
Primary Balance (% of GDP)	-1.0	-0.5	-1.0	-0.8	-0.6	-0.5
International poverty rate (\$1.9 in 2011 PPP)^{a,b}	18.9	19.1	19.1	19.0	18.9	18.7
Lower middle-income poverty rate (\$3.2 in 2011 PPP)^{a,b}	37.6	37.9	37.9	37.8	37.6	37.3
Upper middle-income poverty rate (\$5.5 in 2011 PPP)^{a,b}	57.1	57.3	57.3	57.2	57.1	56.9

(a) Calculations based on 2014-LCS

(b) Projection using neutral distribution (2014) with pass-through = 0.87 based on GDP per capita in constant LCU

Source: World Bank staff calculations. Note: e = estimate, f = forecast.

Investing in higher education is an important step toward more inclusive growth. Investing in tertiary education is an investment in South Africa's human capital, making it easier for labor market entrants to find jobs and earn higher wages. At the same time, a greater number of skilled workers will reduce the wage premium, thus raise the competitiveness of the South African economy, and foster growth—which in

turn will create demand for both skilled and unskilled labor. In a fiscally constrained environment, it will be critical that the government's higher education policy does not impose unnecessary burdens on the national budget. Chapter 2 reviews policy options to sustainably and equitably expand enrollments in universities and colleges in more detail.

CHAPTER 2

Tertiary Education Enrollments Must Rise



Chapter 2 aims to convey the following key messages:

- ✓ Enrolling more students in PSET is a must for South Africa to strengthen its social contract and remain competitive in a world constantly reshaped by rapid technological progress.
- ✓ More public resources can be devoted to PSET as long as they generate positive social returns. However, the new students' financial aid scheme will have little impact on PSET enrollments and education quality – thus job creation – and will only slightly reduce income inequality.
- ✓ South Africa could reduce inequality faster and more sustainably by rebalancing budgetary resources towards supply-side interventions: improving the quality of education, notably in TVET and community colleges, and expanding PSET admission capacity, including through greater private sector participation. This would be made fiscally possible by limiting financial aid to poor students while extending income-contingent loans to more affluent students.

There is large consensus in South Africa on the need for PSET enrollments to rise

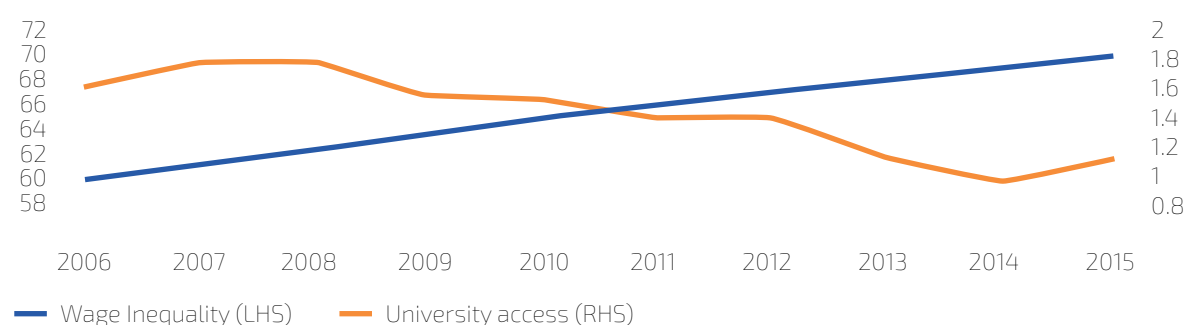
There is a growing recognition in South Africa of the need to expand the Post School Education and Training (PSET) system to enroll more students in universities, the Technical Vocational Education and Training (TVET) sector, community colleges, and in other tertiary education institutions, both public and private. In 2013 the government's White Paper on PSET (DHET, 2013), foresaw the need to more than double the number of students enrolled in universities and TVET by 2030 while students in the *#Fees Must Fall* movement that started in 2015 demanded drastically reduced tuition fees. In December 2017 former President Jacob Zuma announced that students from poor and working-class families would be entitled to free higher education through the National Student Financial Aid Scheme (NSFAS) by raising the threshold for financial eligibility from a maximum family income of R122,000 to R350,000, and converting loans to grants.

Raising PSET enrollment is seen as a key ingredient of a policy package necessary to sustainably reduce South Africa's record-high youth unemployment. Since 2010, labor force surveys show that more than 50% of the population aged 15–24 is unemployed, a level that is among the highest in the world.³ To tackle this, the authorities see increased PSET enrollments and graduations as a central part of a policy package that also includes active labor market policies, tax incentives, public

works programs and support for entrepreneurship.⁴

Raising PSET enrollments is also likely to consolidate the South African social contract. Violence and disruption around the *#Fees Must Fall* movement can be interpreted as a reflection of a deteriorating social contract, whereby citizens delegate their individual powers to the state in exchange for services. One of them is the fair provision of income opportunities, which could have been undermined, inter alia, by the conjunction of two important trends: (i) a rising proportion of youth eligible to enroll at university, but who are financially unable to do so; and (ii) a persistently high skills premium – the difference between the wages of skilled and unskilled workers – leading to growing wage inequality.⁵ Between 2006 and 2015, the proportion of annual cohorts obtaining the bachelor's pass that enables academic access to university, rose from 8 to 15% (from 86,000 to 166,000 students annually), reflecting efforts since 1994 to improve schooling outcomes for children from poor backgrounds (World Bank 2018b). But the number of first-time students (of all ages) entering university grew less rapidly, from 140,000 to 172,000, and broadly stagnated since 2010 (DHET, 2018a).⁶ This growing perception of being excluded from the opportunity to reap the benefits of higher education – whatever the reason: affordability or absorptive capacity of the PSET system – may have added to the frustrations of students.

 **Figure 2.1: University access and wage inequality, 2006–15**



Source: World Bank staff calculations. Note: University access is measured by the ratio of first-time students over the number of bachelor pass graduates in the previous school year.

³ Greece, Spain, Nigeria and Italy are a distant second with youth unemployment rates ranging between 30% and 40% in 2017. India and China record youth unemployment rates close to 10%, while Brazil saw youth unemployment rise from 15% in 2014 to 30% in 2017. Source: World Bank Development Indicators.

⁴ See World Bank (2016, 2017) for discussions on the impact of employment tax incentives and active labor market policies, and the Centre for Development and Enterprise (2017) for a general discussion on youth unemployment in South Africa.

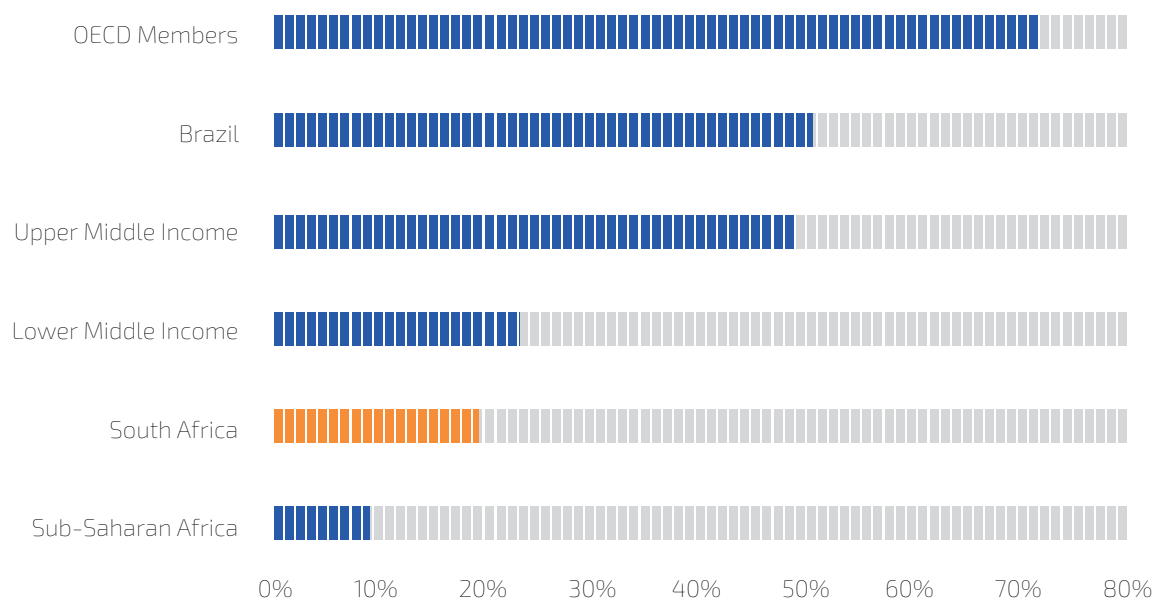
⁵ Source: World Bank (2018a). The rise in wage inequality resulted from a combination of a persistently high skills premium combined with a decline in the creation of semi-skilled jobs over the period 2005–14. Over the same period, the share of the top 10% of earners' wages compared to the share of the bottom 40% almost doubled.

⁶ While the limited absorptive capacity of universities is the primary factor curtailing the entry of first-time students, a secondary factor is that students stay longer at university, as more enroll in post-graduate degrees and fewer in short diploma course programmes.

At 19%, South Africa's gross enrollment rate in university lags behind most peers. In 2015, a total of 985,000 students were enrolled in universities – including 338,000 at the distance learning University of South Africa (UNISA), – representing 19% of the population aged 19–23 and comparing poorly with the group of upper middle-income countries to which South

Africa belongs, but also with lower middle-income countries. Nonetheless, universities only constitute one part of the broader PSET⁷ sector, in which a total of 2.2 million students were enrolled in 2015, including private higher education institutions (147,000 students in 2015); public TVET (738,000); private TVET (88,000); and community colleges (283,000).

Figure 2.2: University enrollment rate in South Africa and selected countries, 2015



Source: World Development Indicators.

Many academically eligible students do not enroll, especially among poor and working-class families

In 2015, public PSET institutions could only enroll a small proportion of academically eligible students.

Focusing on youth aged 18–25, South Africa counted in that year 4.5 million youth with at least grade 10 not enrolled in any PSET institutions, including 2.8 million with at least grade 12. Grade 10 gives access to TVET

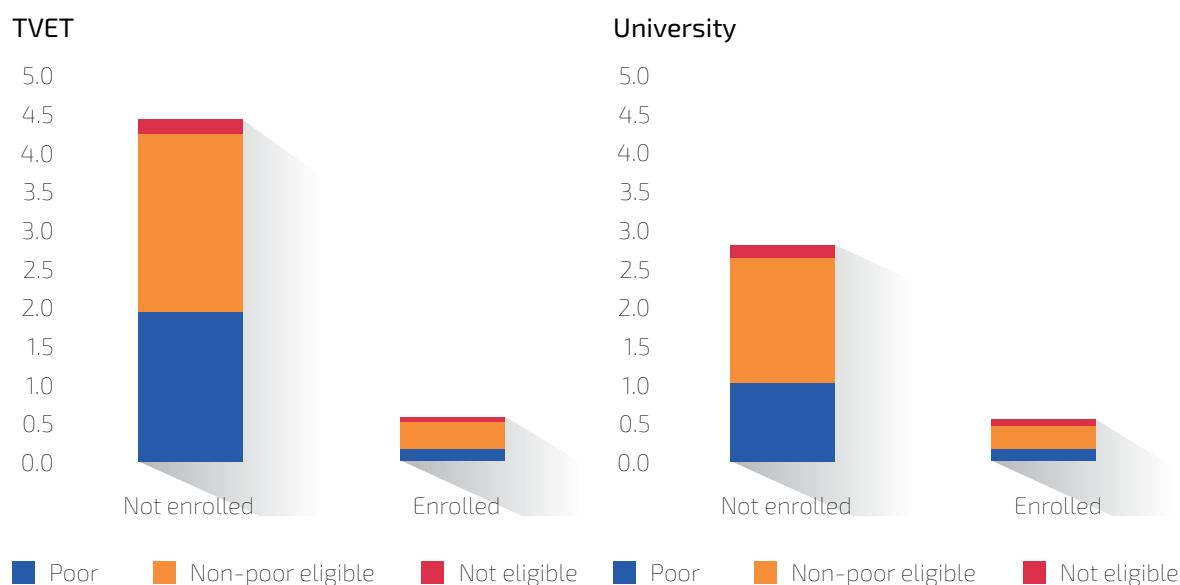
and community colleges, while Grade 12 may give access to higher education.⁸ Against these numbers, students aged 18–25 enrolled in TVET colleges were fewer than 600,000, while students aged 18–25 enrolled in undergraduate studies at university were fewer than 550,000 (Figure 2.3).⁹

⁷ Learnerships, internships and skills development programs under the sector education and training authorities (SETAs), are also considered by the Department of Higher Education and Training (DHET) as a part of a broad definition of the PSET system. However, these are not discussed in this chapter as they are financed through the skills levy while public universities, TVET and community colleges are funded from the consolidated government account. SETA students are currently not envisaged as beneficiaries of the new financial aid scheme.

⁸ Grade 12 may be decomposed into 3 sub-categories: matriculants with bachelor pass, matriculants without bachelor pass, and grade 12 learners not having passed the matric (high-school) exam. Only the bachelor pass allows enrollment for a degree at university and is obtained by about a quarter of grade 12 learners (World Bank 2018b). However, universities also offer certificates and diplomas to the two other categories. The breakdown between the three categories is however unavailable in the NIDS household survey used in this analysis.

⁹ In 2015, another 290,000 (respectively 80,000) students aged 18–25 enrolled in private TVET and community colleges (respectively private higher education institutions). However, students in these institutions are not eligible for NSFAS support. The remaining 715,000 students enrolled in PSET were older than 25 or in post graduate studies, which may not be a relevant group for NSFAS support as it is targeted towards first time students. See Annex for a detailed report on PSET demographics.

Figure 2.3: Enrollments in public TVET colleges and universities, 2015



Note: Eligibility is in reference to NSFAS support.
Source: World Bank Staff calculations based on NIDS 2014/15.

This comparison highlights the potentially large latent demand for PSET which could be met through demand (encouraging students to enroll) or supply interventions (expanding PSET admission capacity).

As far as demand interventions are concerned, in particular the policy of covering the education costs of students living in families with incomes lower than R350,000, it is worth noting that 89% of students enrolled in public PSET fell under this category; and that 95% of students with at least Grade 10 not enrolled were also in this category. The proportion of poor students (i. e. living in 2018 under the upper bound poverty line of R1,200 per month, per person) in the various categories also reflected that:

- Poor students are underrepresented among students academically eligible to enroll in PSET institutions, when compared with their proportion in the total population – 47.6% in 2015.
- Among academically eligible students who have enrolled in PSET institutions, poor students are also underrepresented when compared to the proportion that they make up of this cohort.

Enrolling more students in university and the rest of the PSET system is an attractive, but risky investment proposition for South Africa. Given its likely large impact on reducing poverty and inequality, sustainably stimulating growth and strengthening a

social contract that is undermined by the persistent exclusion of large segments of the society, higher enrollments are worth pursuing as a policy. But it is equally risky given the current challenging fiscal situation and the difficulties already faced by the PSET institutions in offering education of a quality that maximizes professional opportunities for all students.

This chapter reviews policy options to sustainably and equitably expand PSET enrollments in South Africa through demand and supply interventions.

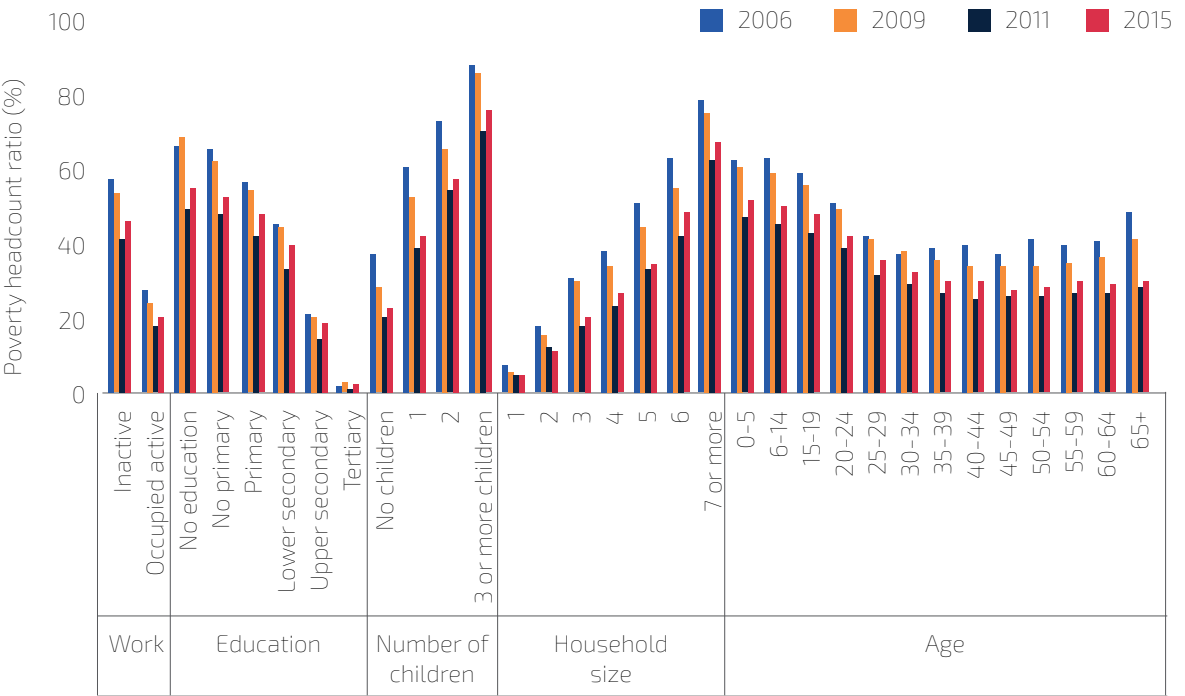
As already discussed in Chapter 1, measures to strengthen human capital and the pipeline of students eventually enrolling in the PSET system is central to South Africa's broad development agenda and to the capacity of the PSET system to equip students with the skills markets need; as is the need to structurally increase demand for skilled labor to ensure more young graduates find employment. In this respect, World Bank (2018b, 2018c) highlighted the importance of focusing more on the first thousand days of a child's life, capacity and accountability of school teachers, economic competition in product markets, property rights, skilled migration and spatial integration. Acknowledging these important dimensions, this chapter focuses on what may be achieved within the PSET sector to address the insufficiency of skills which was ranked as the most binding constraint to reducing poverty and inequality in the World Bank Systematic Country Diagnostic for South Africa (World Bank 2018c).

The Promise of Encouraging PSET Enrollments through Financial Support to Students

APSET degree is a strong assurance against poverty. The World Bank's recent poverty assessment (World Bank, 2018a) underlines the strong relationship between individual poverty and education status. Individuals with tertiary education are more likely to earn higher incomes in the labor markets, enjoying the combination of a lower probability of being unemployed¹⁰ with higher wages. Controlling for individual characteristics (work status, age, family

composition), a tertiary education degree reduces the probability of an adult being poor by 20 percentage points compared with those with just secondary schooling (Figure 2.4). A PSET degree in South Africa increases incomes by 85% on average (World Bank 2018a), which is comparable to Rwanda, Kenya and Ghana, where the percentage increment in wages stands close to 100% between upper secondary and post-secondary education (Darvas *et al.*, 2017).

Figure 2.4: Poverty and tertiary education, 2006-15



Source: World Bank 2018a.

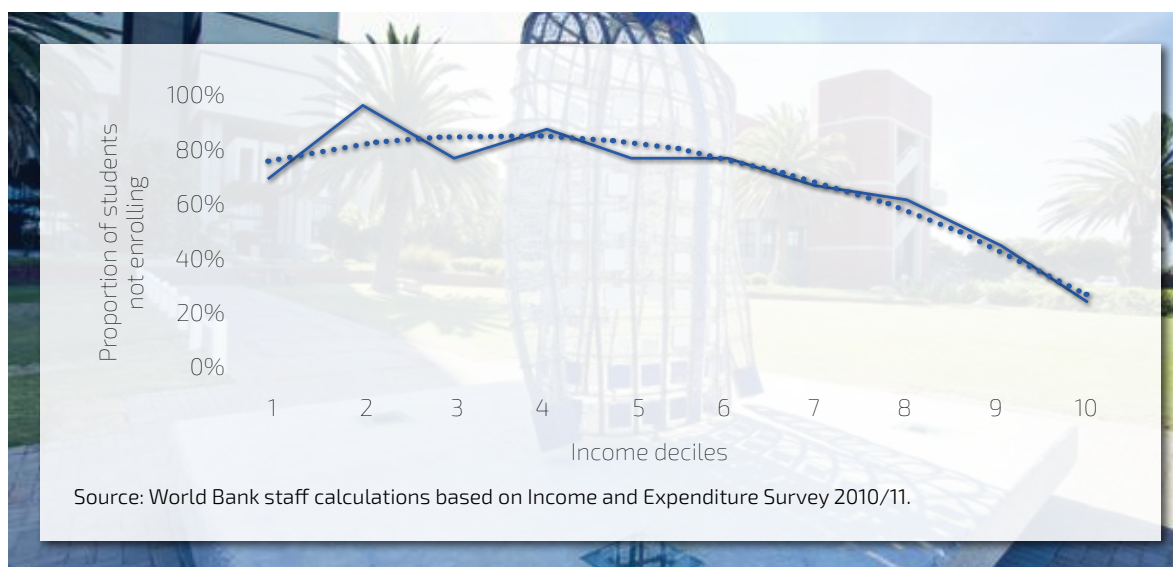
⚠️ Poor returns from TVET, limited access to finance and risks of not graduating may discourage students from investing in PSET

Many academically eligible poor students do not enroll in TVET or university. In 2015, 8% of students from poor households that had at least Grade 10 were enrolled in TVET, against 14% of non-poor students.

In 2011, more than 70% of students from the poorest 5 deciles that had the bachelor pass did not enroll at university, against less than 30% for the richest decile (Figure 2.5).

¹⁰ The unemployment rate of individuals with a PSET education stood at 13.1% in 2017 (Figure 1.10), against 30.5% for individuals without. Graduating from university in South Africa drastically reduces the probability of being unemployed, irrespective of other individual characteristics, including race (van den Berg and van Broekhuizen, 2012). Computations of unemployment rates with NIDS data used in this chapter confirm that the economic origin (e. g. being from a poor family) is not a significant determinant of unemployment: graduates from different economic origins can expect the same unemployment rate.

Figure 2.5: University access by decile



Computing private rates of return to investing in PSET education provides some insight into why prospective students who are poor are less likely to enroll.

Despite the gains made through higher earnings once completed, investing in PSET can be considered risky for the poorest students as they are burdened with upfront payments for registration and tuition fees, books, meals, accommodation or transport. There's also the opportunity cost of forgoing potential income while studying, to which should be added the risk of taking too long to, or eventually not graduating. Table 2.1 shows estimates of private rates of return from PSET at the national level and for students from poor households.¹¹ It measures the extent to which graduating from PSET improves the stream of an individual's revenue over time, net of initial expenditure on PSET. Computations account for an individual's economic background (whether or not they originate from a poor household, as measured by parents' incomes), to capture the possibility that other factors – such as networking that makes it easier for a graduate from a rich background to rapidly find a job – may influence returns (See Annex for background data). It also accounts for the probability and time taken to graduate, versus dropping out before graduating, which differ across deciles. It finally accounts for the estimated costs of studying at various PSET levels, currently broken down between students and the government through a cost-sharing mechanism:

- In TVET, the total cost borne by students is estimated at R50,000 per year (2018 prices), for registration and tuition fees (R10,000), and books, meals, and accommodation or transport (R40,000). The total cost borne by government per TVET student is estimated at R14,000, through direct subsidies to colleges (R11,000) and unrecovered NSFAS loans (R3,000). Under a fully-subsidized scheme, the government would transfer R40,000 per year to eligible TVET students and an additional R10,000 – on top of already existing subsidies – to TVET colleges to cover the tuition fees for each student receiving financial support.
- At university, the total cost borne by students is estimated at R90,000 per year (2018 prices), for registration and tuition fees (R50,000), and books, meals, and accommodation or transport (R40,000). The total cost borne by government per university student is estimated at R50,000, through direct subsidies to universities (R43,000) and unrecovered NSFAS loans (R7,000). Under a fully-subsidized scheme, the government would transfer R40,000 per year to eligible university students and an additional R50,000 to universities on top of existing subsidies for each student receiving financial support, to cover their tuition fees.

¹¹ Rates of return should be understood as being computed in "real" terms, that is, after being discounted for consumer price inflation.

Table 2.1: Private rates of return from PSET

	TVET	Undergraduate	Graduate
National Levels			
Private, cost sharing	1.4%	7.6%	10.2%
Private, subsidized	8.9%	28.8%	33.5%
Poor Students			
Private, cost sharing	1.3%	7.4%	9.9%
Private, subsidized	11.2%	34.3%	39.6%

Source: World Bank staff calculations based on NIDS

Computation of private rates of return from PSET reveals several interesting facts:

- First, that investing in TVET under a cost-sharing arrangement, where students pay most study-related expenditure, may not be a sound economic proposition. At less than 2%, rates of return from TVET are very low:¹² relatively low wage premia (less than R2,000 per month), high unemployment rates (21%) and very high dropout rates contribute to this outcome, where differences between poor and non-poor students lie in lower opportunity costs but higher dropout rates for poor students. Such low rates of return may explain high defaults against NSFAS loans, as discussed below.
- Second, that private rates of return increase with the academic level eventually reached: from less than 2% for TVET, rates of return reach 10% for graduate studies (despite a much higher cost of studying at university than at TVET), reflecting the strong mismatch between the demand for and the supply of skills. While dropout rates

remain high at university, these are more than offset by high wage premia (R6,000 per month for undergraduates, R15,000 per month for graduates), and low unemployment rates (12% for undergraduates, 1% for graduates), irrespective of the student's original economic status.

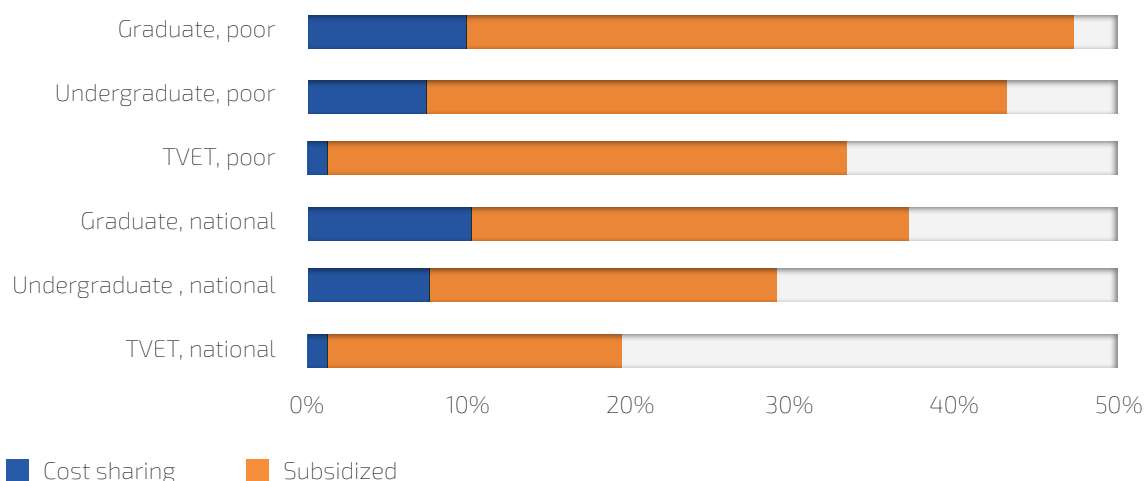
- Third, that subsidizing studies would significantly increase private rates of return, including for TVET, which would make enrollment more attractive. Comparing rates of return under a cost-sharing arrangement with that of a subsidized scheme – where private studying costs would be covered by public grants – suggests it would make a significant difference in terms of higher rates of return, in particular for poor students. While increases in private rates of return would average 17 percentage points at the national level, they would average 22 percentage points for poor students (Figure 2.6). The main reason behind this difference lies in the fact that the higher risk of dropping out and the related cost¹³ among poor students would be borne by the government under the subsidized scheme.



¹² At less than 2% per year, returns can be considered low in a country where the preference for the present remains high, given the high prevalence of HIV and the relatively low life expectancy at birth of 63 years at the national level, and even lower for poor students. On South Africa's equity markets, a minimum real rate of return of 8% can typically be expected for long-term instruments.

¹³ Same computations suggest that the cost of dropping out without graduating at university is equivalent to 9 times the annual income of students at the national level; and 32 times that of poor students. The cost of dropping out without graduating from a TVET institution is equivalent to 5 times the annual income of students at the national level; and 17 times that of poor students.

Figure 2.6: Private rates of return from subsidized education

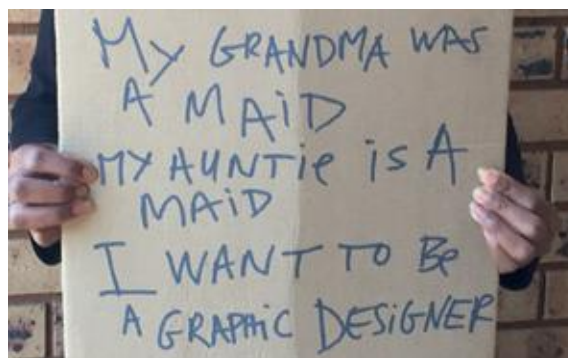


Source: World Bank staff calculations

Subsidizing PSET students' cost will strongly increase enrollment demands

Easing the budget constraints of the poor could contribute to higher student enrollments. As in many other Sub-Saharan African countries (Darvas et al. 2017), it is likely that low-income South African families lack information on studying opportunities, whether on admission processes, support schemes and leveling programs; overestimate the opportunity cost of studying and the risks of not graduating; and underestimate its returns.¹⁴ But it is also likely that severe liquidity constraints among poor students prevent higher enrollments in PSET, particularly in university where rates of returns are positive. The liquidity constraints were only partially relaxed with the NSFAS concessional loans,^{15,16} as they covered only tuition fees, leaving poor students to cover the rest of their education costs and to fully bear the risk of not graduating, in a context of already high household indebtedness. Therefore, subsidizing all the costs of studying could encourage higher enrollments in PSET, particularly among poor students, as the financial assistance would ease the liquidity constraints and strongly reduce the economic cost of not graduating.

Furthermore, evidence for South Africa suggests that supporting students financially results in a higher probability of their completing their university studies. Analyses by De Villiers et al. (2013), and Van Broekhuizen et al. (2016) suggest that on average, students receiving NSFAS support performed academically better than non-NSFAS students in terms of throughput and retention, and after controlling for differences in matric performance, school-level factors, and other university-specific and program-specific factors.¹⁷



¹⁴ Insufficient information on academic and financial opportunities may also explain why academically eligible students from poorer deciles delay their entry into university compared with more advantaged ones (Van Broekhuizen et al. 2016) and miss out on deadlines for bursaries and university admissions (Fedderke et al. 2000).

¹⁵ In 2015, NSFAS granted support worth R7.2 billion to 179,000 university students (averaging R40,200 per student), and R2.1 billion to 235,000 TVET students (averaging R8,900 per student).

¹⁶ This is not to say that NSFAS loans have been ineffective in encouraging student enrollments. Figure 2.5 suggests that NSFAS loans (accruing to the poorest five income deciles) may have attenuated the strong relationship between incomes and enrollments, which is observed for richer deciles.

¹⁷ Van Broekhuizen et al. (2016) find that completion (respectively dropout) rates at university are about 10 percentage points higher (respectively lower) for students supported by NSFAS than for students not supported by NSFAS. However, this does not necessarily imply a causal linkage between receiving financial support and academic performance. Indeed, as financial support was partly awarded on the basis of academic merit it is plausible that, on average, learners who received NSFAS loans would have performed better than those who did not, regardless of whether they were awarded the loans. Given this uncertainty, no improvement in academic performance is assumed in the computations of rates of return under the subsidized scheme, which can be considered a conservative assumption.

The Fiscal and Quality Challenges of Expanding Tertiary Education

⚠️ *The new student financial aid scheme will not be fiscally sustainable*

The increases in PSET enrollments are expected to be financed mostly with public resources and would therefore have significant fiscal implications. As discussed extensively in Chapter 1, protracted weak economic growth makes South Africa's fiscal situation challenging. Therefore, additional expenses that would not have a rapid and large impact on growth could further weaken the fiscal position and debt sustainability. In the case of PSET, most additional expenditure would be on domestic goods and services, such as accommodation and education, and are therefore likely to generate positive multipliers. Nonetheless, there would be a lag before there is increased productive capacity through a higher supply of skilled workers. It would take several years for students to graduate; not all students would graduate; those who do graduate would likely spend time trying to find jobs matching their skills and potential; and not all graduates would find a job or participate in the labor market. And, given the existing tax structure, additional tax revenue collected on the higher incomes of new graduates and through their consumption spending, may not be sufficient to offset additional public expenditure on PSET.

In the fiscal year 2015/16, the government's allocation to the PSET system amounted to R51.2 billion, or 1.2% of GDP (DHET, 2018b). This included direct subsidies to universities (R32.9 billion), transfers to TVET colleges (R6.6 billion) and community colleges (R1.8 billion), and NSFAS financing (R9.3 billion¹⁸), see Table 2.3. From a revenue perspective, public PSET institutions could count on other sources, notably tuition fees not financed by NSFAS, research income and donations totaling R19.2 billion. Thus, the total revenue of public PSET institutions

amounted to R70.4 billion in 2015, or 1.7% of GDP.

Moving from a cost-sharing scheme to a subsidized scheme of financing PSET will have a negative impact on long-term fiscal sustainability. As discussed below, expenses incurred until 2017 by the government on tertiary education included direct subsidies to PSET institutions, administrative costs, and the bailout of uncollected NSFAS loans. The system was broadly sustainable, as higher taxes, both direct and indirect, paid by the new graduates compensated for public expenditure on PSET. This is reflected in the small, but positive estimated fiscal rates of return under the cost-sharing arrangements, computed at the individual level, where initial public costs are weighted against longer-term additional tax revenues stemming from the higher incomes and consumption expenditure of new graduates (Table 2.2). However, poor market outcomes in terms of wages and employment and high dropout rates reflect the low value addition of TVET education, making the fiscal rate of return of TVET barely positive and lower than that generated at university (3 to 5%). Under the new NSFAS scheme, taking on a larger share of the cost through the subsidization of all education costs, without generating any additional tax revenue, would push the fiscal rate of return into negative territory. The overall financial sustainability of the PSET sector would be threatened and its subsidization would need to be justified with the mobilization of positive externalities, such as the reinforcement of the social contract through reduced inequality of opportunity, or externalities of agglomeration.¹⁹ Alternatively, keeping the fiscal deficit unchanged would require creating fiscal space through expenditure cuts in other sectors and raising additional taxes.

≡ **Table 2.2: Public rates of return from PSET**

	TVET	Undergraduate	Graduate
Public, cost sharing	1.3%	3.2%	5.5%
Public, subsidized	-4.1%	-1.5%	0.2%

Source: World Bank staff calculations based on NIDS

¹⁸ Numbers may differ between the government contribution to NSFAS and NSFAS financial support to students. In 2015/16 for instance, the budget appropriation for NSFAS was R6.4 billion while R9.3 billion was transferred to students. This was because NSFAS could, until 2018, rely on other sources of revenue, including loans recovery. Nonetheless, for the sake of simplicity and alignment with fiscal projections where loans are converted into grants to be exclusively financed with budgetary resources, in this chapter we equate transfers to students with budget contributions to NSFAS.

¹⁹ Externalities of agglomeration can, for instance, take the form of spatial concentration of skilled workers. World Bank (2017) discusses the extent of such agglomeration effects in Cape Town and Johannesburg.

The implementation of the new students' financial aid scheme will reduce the availability of the budgetary resources critically needed to improve the quality of education

A second important challenge lies in the preservation and improvement of education quality as PSET enrollments rise.

Increased enrollments cannot be made at the expense of quality education, as appears to have been the case in TVET in recent years. Between 2010 and 2015, average real expenditure per full-time equivalent TVET student dropped by 40%, whereas the number of TVET students grew from 359,000 to 738,000. Other statistics and assessments confirm this likely decline in the quality of TVET education: certification rates²⁰ improved between 2013 and 2016, but remained below 50% on average, concealing low completion rates, with only one-third of students eventually graduating. And authorities (DHET, 2017), acknowledge that: "in recent years TVET college quality has been compromised because of the pressure to increase enrollments without compensatory increases in staff and other resources. [...] Currently learners in the TVET system graduate at an exorbitant per capita cost, which is unsustainable. Moreover, the absorption rate of TVET graduates in the economy is also of serious concern". At university, real expenditure per student grew cumulatively by 6% between 2010 and 2015, while enrollments grew modestly, from 893,000 to 985,000. Graduation and throughput rates²¹ for university undergraduates rose slightly. Yet, at UNISA, the largest university by enrollment in South Africa with 338,000

students in 2015, dropout rates ranged from 84% for 4-year degrees, to 95% for 3-year diplomas.

Though the quality of education cannot be improved overnight, it is certainly a critical policy question for TVET if a sustainable and equitable rise in PSET enrollments is to be ensured.

Quality of education statistics discussed above confirm observations made through the estimated rates of return. The TVET system does not generate the skills needed by labor markets in sufficient numbers and quality and is costly to operate, given the high dropout rates. In contrast, the university system seems to generate skills demanded by markets at a reasonable cost, even if this average assessment probably conceals wide differences between universities of excellence such as Witwatersrand, Stellenbosch, and Cape Town on the one hand,²² and UNISA and historically disadvantaged universities²³ on the other. Thus, the authorities have concluded that investing in improving the quality of education in TVET, UNISA and historically disadvantaged universities may prove more efficient and sustainable than enrolling new students in current circumstances (see below). As for PSET institutions that already offer good private returns, attention should focus primarily on addressing market failures in advancing financial resources to students and in sharing the risks of not graduating.

The Short-term Outlook for the PSET System

The expansion of the PSET system will be constrained by inadequate admission capacity and quality considerations in the short term

From 2019, demand for PSET is likely to grow significantly for several reasons.

■ First, progress made in recent years to prepare school students academically for PSET is unlikely to abate. From the late 1990s to now, the annual number of matriculants grew from 270,000 to 450,000, and the proportion of those matriculants with bachelor passes grew from one-fourth to two-fifths. At the minimum, these flows should be projected to grow at the demographic pace of

about 1% a year, and faster should continuous progress at school level build a stronger pipeline to access PSET.

■ Second, greater financial support to cover education-related expenses beyond tuition for a larger group is not only likely to raise demand for PSET among new cohorts, but also that of cohorts from previous years who are employed or idle – the so called "neets", those who are not in employment, education or training. In 2017 South

²⁰ The certification rate is the formal recognition of a qualification awarded to a successful learner in the last year of study.

²¹ The graduation rate is the proportion of students enrolled at university (irrespective of the year of study) who graduate in a given year. For undergraduates it rose from 15.6% in 2010 to 17.4% in 2015. The throughput rate is the proportion of students completing their curriculum in time. For 3-year undergraduate degree programs, it rose from 20.5% in 2008 to 28.3% in 2014 (DHET, 2018c).

²² See World Bank (2017) for a discussion on the quality of these universities in terms of research and innovation.

²³ Lack of disaggregated economic data prevents the computation of rates of return at the PSET institution level.

Africa counted 715,000 matriculants aged 20–24 not in employment, education or training. Of those, 9% had a bachelor's pass. Under the fully-subsidized scheme, granting students an annual sum of R40,000 to cover living expenses would be a considerable inducement²⁴ for people to attend PSET institutions, even if they are academically unsuccessful and leave after one or two years. Using the probabilistic model discussed below, we estimate that offering the possibility of receiving R90,000 for university studies or R50,000 for TVET studies to students from families with annual incomes lower than R350,000, could increase the notional demand for university studies by 23% and for TVET by 88%.

The demand for tertiary education is unlikely to be met in the near future. Over the period 2019–2022, the admission capacity of PSET institutions, the “supply side” of tertiary education, will likely be the biggest constraint to the faster enrollments necessary to meet the rise in demand. By end-2018, universities planned to increase their enrollments by 1.9% a year. Taking into consideration students already enrolled and continuing their studies or repeating, and those graduating or dropping out, the higher enrollments mean an inflow

of no more than 210,000 first-time students every year (including about 17,000 foreign students). As for TVET, net enrollments are projected to stagnate, indicating the need to improve the quality of education to meet labor market needs. With a small decline in dropout rates, an inflow of 191,000 first-time students in public TVET is projected.

The full fiscal effects of implementing the new financial support scheme will be absorbed within 4 years. The new policy announced by former President Zuma in December 2017 implies that from January 2018, first time students from families earning less than R350,000 would receive financial support for undergraduate or TVET studies on a “N+1” basis, the normal duration of the degree program, plus one year. Therefore students pursuing a 3-year degree would be eligible for 4 years of financial support. Given that the average duration of undergraduate and TVET studies is 3 years, one could expect that the full effect of implementing the policy will be felt in 4 years. Meanwhile, students who were receiving NSFAS support in 2017 will continue to do so under the financial and academic conditions prevalent at the time, with the only difference being that loans from 2018 will be converted into grants.

The new student financial aid scheme will be progressive from an income distribution perspective

Short term fiscal and poverty impacts of the new support scheme will depend on the still-unknown proportion of first-time university and TVET students benefiting from it. It is unclear how students responded to the greater financial incentives as the admission process for 2018 closed shortly after the policy announcement in December 2017 and probably did not allow enough time for all students to react to it. To address this uncertainty, a probabilistic model was developed to predict the propensity of academically eligible youth aged below 25 to enroll as first-time students in university and in TVET. Enrollment propensity is estimated based on individual characteristics – location, race, age, employment status – and the possibility for those from families earning less than R350,000 to receive financial support of R90,000 annually for university and R50,000 for TVET. Results suggest that income levels had a significant influence on the likelihood to enroll. Individual enrollment propensities are then ranked from highest to lowest, and the predicted composition of enrolling students is determined by this ranking, given the PSET admission capacity of first-time students discussed above.

The new financial aid scheme is likely to influence the income distribution of enrolled students. Assuming modest increases in the flow of entrants to university and stagnation in numbers for those entering TVET, the fiscal implication of the new scheme will be mainly determined by the proportion of enrolling students receiving financial aid. Results of the probabilistic model suggest that the composition of entrants to university will be affected by the full implementation – a 100% take-up of the financial incentive – of the new aid scheme. From 86.6% currently, the proportion of South African²⁵ university students eligible for financial aid would rise to 91.6% while the proportion of TVET students eligible for financial aid would grow from 90.7% to 92.5%. Meanwhile, the proportion of poor first-time students could also rise noticeably, from 35.0% to 42.5% at university, and from 30.5% to 41.0% at TVET. A higher relative increase in demand for PSET from poor students is consistent with the rates-of-return approach, which indicates that a subsidized scheme would in particular benefit the poorest students.

²⁴ R40,000 would add more than 50% to the parental income of about 47% of students who have a matric only, and 30% to those with matric with a bachelor's pass.

²⁵ Under the proposed new NSFAS scheme, only South African citizens are eligible to receive financial support.

The new financial aid scheme will absorb a much higher proportion of budgetary resources. It is projected that the PSET allocation could increase from R65 billion in 2017/18 to R172 billion in 2022/23, or from about 1.4 to 2.5% of GDP (Table 2.3), calculated using the assumptions of first-time student flows

described above, proportion of students eligible to receive aid, and constant per-student subsidy to universities and TVET, in real terms. PSET appropriations retained up to 2020/21 in the medium-term expenditure framework presented with the 2018 *Budget Review* are of similar magnitude.

Table 2.3: The estimated fiscal cost of the new financial aid scheme
(PSET-related fiscal expenditures, R billions, nominal terms, unless indicated otherwise)

Fiscal Year	2015	2016	2017	2018	2019	2020	2021	2022
Transfers to universities	32.9	39.5	41.9	45.4	49.0	52.9	57.2	61.7
Transfers to TVET colleges	6.6	6.9	7.4	7.9	8.3	8.8	9.4	9.9
Transfers to community colleges	1.8	2.1	2.2	2.4	2.5	2.7	2.8	3.0
University students financial aid	7.2	10.3	10.8	24.0	37.0	51.0	62.2	65.2
TVET students financial aid	2.1	2.1	2.2	11.0	18.1	23.4	28.7	31.3
Other	0.6	0.7	0.7	0.8	0.8	0.9	0.9	1.0
Total	51.2	61.6	65.4	91.4	115.8	139.8	161.2	172.2
Total (% of GDP)	1.2	1.4	1.4	1.8	2.1	2.4	2.6	2.5

Source: World Bank staff calculations based on Department of Higher Education and National Treasury data. Notes: Years refer to fiscal years, e.g., 2015 is the fiscal year 2015/16 from April 1, 2015 to March 31, 2016.

The pressure on the fiscus may not be felt immediately. As already discussed, the fiscal cost will grow over the years as new cohorts of first-time students join the new financial aid scheme. The take-up of the financial incentives may initially be less than 100%, due to delays in establishing the necessary capacity at NSFAS to support a much larger pool of students and because of initial information gaps. The take-up rate of the previous NSFAS financial aid scheme was around 40%. Nevertheless, a much larger take-up is expected under the new scheme, as it is more generous and less risky than the previous one. In this regard, current capacity issues at NSFAS²⁶ to manage higher demand could be regressive, disfavoring the less-informed students, the majority of whom are poor, and those without financial resources to pay in advance for the costs

of their studies.

But the projected fiscal outcome of the new financial aid scheme casts doubt on South Africa's capacity to meet its White Paper enrollment targets. Under the new financial scheme, increasing public TVET admission capacity by 10% would cost an additional 0.05% of GDP and an additional 0.10% of GDP to increase university admission capacity by 10%. Thus, the White Paper's objectives to raise enrollments at TVET and university by 140% and 60% respectively by 2030 (see Table 2.4, not considering enrollments in community colleges) may prove to be extremely challenging within South Africa's medium term fiscal framework, and likely impose expenditure cuts in other sectors or higher taxation to protect debt sustainability objectives.

²⁶ In August 2018, the government raised "serious concerns about the failure of NSFAS to effectively confirm funding for students and disburse funding timeously to students in TVET colleges and universities. [. . .] Despite increased DHET support, NSFAS continues to face serious challenges in its business processes, IT systems, capacity, and policies and controls. [. . .] These challenges have had a grave effect on the student funding environment since 2017, and have been exacerbated in 2018". Source: Republic of South Africa, 2018.

A more targeted financial support to students would further reduce inequality while freeing additional financial resources to increase enrollments and improve quality of education

The fiscal constraint should nonetheless not compromise the desired objective of increasing PSET enrollments. Rather, it may prompt revisiting the policy trade-off between supporting more students, on the one hand, and improving admission capacity and the quality of education of the PSET sector. A quantitative simulation exercise illustrates this point, running the World Bank Computable General Equilibrium model (World Bank 2018b) over the period 2019–30. It consists in comparing three different policy scenarios:

- A baseline scenario (BAS) in which the new financial aid scheme would not be implemented. This scenario just serves as a counterfactual to measure the impact of the new financial aid scheme.

- A second scenario (NSFAS) where the new financial aid scheme would be implemented, along the lines reported in Table 2.3: keeping PSET real expenditure per student constant and limiting admission capacity unchanged at TVET and slowly growing at university.

- A third scenario (NSFAS+) where (i) the new financial aid scheme would only be extended to students from the first five deciles; (ii) real per student TVET expenditure would be raised by 50%; and (iii) PSET admission capacity would be raised by 10% compared with the two previous scenarios through higher transfers to public institutions.

 **Table 2.4: The estimated impact of various PSET policy interventions on equity and growth**

	Poverty Rate (\$1.9 a day)	Gini Coefficient	Bottom 40% share of total consumption	GDP index (2017=100)
2017	18.6%	0.628	8.6%	100.0
BAS (2030)	12.7%	0.595	10.2%	119.5
NSFAS (2030)	12.1%	0.588	10.5%	117.8
NSFAS+ (2030)	7.9%	0.574	11.5%	120.0

Source: World Bank staff calculations.

Simulations highlight the mixed impact of the new financial scheme on inequality, as well as its high macroeconomic cost. Comparing the BAS and NSFAS scenarios (Table 2.4) suggests that the latter would help in reducing income and consumption inequality. Income for poor households would increase, in relative terms, more than that of non-poor households, even though three-fifths of financial aid would accrue to non-poor students (as they represent a larger share of eligible students enrolling in PSET). Yet, the cost for the economy would be significant, entailing a loss of 1.4% of GDP in 2030 compared with the baseline scenario. This is because NSFAS transfers would be mostly consumed (as opposed to saved and invested), would not lead to higher PSET enrollments, and would bear a much higher fiscal cost. In contrast, more targeted financial support to poor students, combined

with public investments in improving the quality of education offered by TVET institutions and expanding admission capacity would further reduce inequality, while stimulating economic growth.

Therefore, as South Africa decides to devote more public resources to PSET, it could explore alternative options that increase PSET enrollments faster and more equitably in terms of access to and quality of education received. These policy options are discussed in the next section. As they would entail institutional reforms, massive investments, and greater coordination between various players, such policy options may take time to be implemented, and should therefore be considered as opportunities of a medium to long-term nature.

Improving Comprehensively the PSET System over the Long Term

Expanding the South African PSET system over the longer term to improve youth opportunities for professional development will require revamping the institutional framework and funding sources.

South Africa is not unique. International experience shows that countries that face acute public resource constraints cannot achieve rapid growth in enrollment by following the traditional model of building and funding new public universities with budgetary resources. For this reason, spreading enrollment growth across a variety of PSET institutions and delivery modalities — public and private — can achieve higher enrollments in a financially manageable way from a public resources perspective. Non-university institutions such as TVET, community colleges, and distance education institutions usually have lower per-student costs than universities,²⁷ especially research-intensive ones. Countries that have allowed the private sector to invest in setting up good-quality institutions have better managed the cost of

expanding tertiary education in a fiscally sustainable manner. Several options can be explored in improving the performance of PSET institutions, thus ensuring better returns in terms of meeting social objectives, and their capacity to mobilize both public and private revenue, including reviewing financial aid in terms of cost effectiveness and efficiency.

South Africa was one of the first countries in the developing world that started thinking carefully about balanced development of its tertiary education system. In the late 1990s, the government set up a task force to investigate the size and shape of the post-apartheid PSET system, which developed a comprehensive plan for diversifying tertiary education opportunities in South Africa. Along the same lines, the 2013 White Paper (DHET, 2013) spelt out ambitious enrollment growth targets for each of the main segments of the PSET system (Table 2.5).

Table 2.5: Planned evolution of the PSET system by main segment (2015-2030)

Sub-Sector	2015	%	2030	%
Public universities (excl. UNISA)	647	28.9	1,000	17.9
UNISA	338	15.1	600	10.7
TVET	738	32.9	2,500	44.6
Community colleges	284	12.6	1,000	17.8
Private higher education institutions	147	6.6	300	5.4
Private colleges	88	3.9	200	3.6
Total	2,242	100.0	5,600	100.0

Source: World Bank staff calculations based on DHET (2013)

²⁷ Typically, TVET colleges prepare young learners for specific trades and offer technical degrees. Community colleges prepare young and adult learners for professional work and further education and offer associate degrees while distance-learning institutions extend online general and professional education for young and adult learners and offer associate, bachelor, masters and PhD degrees.

Diversifying from the university sector towards TVET and community colleges

The White Paper enrollment targets will be difficult to achieve but point to the need to develop the non-university sector, given the current pipeline of school students.

Current demographic trends indicate that enrolling 5.6 million students in PSET by 2030 would require doubling the share of matriculants in age cohorts, from 38% in 2017 to above 70% in 2030. This is unlikely to be attained, considering the modest improvements in pass rates since 1994 from an average of 32% from 1994–99 to 40% from 2011–17, and the fiscal constraints discussed above. Nevertheless, increasing non-university academic opportunities in TVET and community colleges in particular, will be instrumental in raising overall PSET enrollments, given the need for marketable skills among a growing number of students who do not necessarily have the academic capacity to thrive at university. Described by the White Paper as the cornerstone of the PSET system, TVET and community colleges will increasingly contribute to building the skills of South African youth.

In expanding enrollment at TVET and community colleges, it will be critically important to ensure that this does not reinforce social stratification.

In too many countries, TVET and community colleges are perceived as PSET institutions for the poor and are not able to attract students from richer origins (see Box 2.3 for a counter example). Diversifying the PSET sector so that students from all economic origins access all forms of institutions in reasonable proportions is critical for strengthening social cohesion, and the attention and resources put by authorities on the various PSET institutions. Two main avenues can be considered here.

- First, South Africa needs to reallocate funds towards TVET and community colleges and offer first-rate programs and facilities with qualified instructors. As already discussed, the returns enjoyed by both private and fiscal investment in TVET are low and need to be raised before enrollments are expanded. TVET/community colleges are less expensive than universities because of the shorter duration of studies and the absence of research facilities. But they should not be underfunded, and the negative trend of declining per capita investment in TVET needs to be reversed. Some institutional reforms discussed in the next section can also help improve the quality of education offered at TVET institutions.
- Second, the PSET system needs to ensure pathways and transfer agreements that allow

the brightest graduates from second-tier PSET institutions to move onto mainstream universities. That would be a way to attract promising students and eliminate the perception of training institutions as academic dead-ends. In that respect, the government's decision to expand the proportion of students enrolled in community colleges is a strategic move, as these colleges are less narrowly defined and specialized than TVET. By combining a core liberal arts curriculum with vocationally-oriented professional courses, community colleges could also equip students to later transfer to a university. By contrast, TVET programs focus on technical trades that do not transfer easily to universities. Furthermore, from a lifelong-learning perspective, community colleges offer young and adult students better long-term opportunities. Their flexibility could cater for those not in employment, education or training and employed matriculants who may find it difficult to enrol in TVET several years after passing matric.

The North American success with community colleges could be a source of inspiration for South Africa.

With one-third of its expenditure on PSET devoted to non-university institutions, Canada stands as an outlier among OECD countries, which on average devote only one-eighth to it.²⁸ In Canada, community colleges enrolled 43% of the total undergraduate population in 2017, playing a key role in the preparation of middle-level workers and employees. In future the South African government may consider changing the balance between the community college and the TVET sub-sectors and increase the share of enrollment in the former segment. In Canada and the United States, community colleges tend to offer vocational programs that generate the middle-level and high-level skills required for entry into many professions. In fact, specialists nowadays tend to look at TVET institutions and community colleges as performing similar functions and label them as providers of technical and career education. The Georgetown University Center on Education and the Workforce estimates that between 2018 and 2024, the United States will have about 16 million openings for middle-skill jobs—those requiring more education than a high school diploma but typically not a bachelor's degree. With the rapid growth of the digital economy, these jobs will be in industries such as computer technology, health care, construction and high-skill manufacturing, and require year-long certificates or two-year degrees.

²⁸ Organization for Economic Cooperation and Development (2008).

Expanding cost-effective distance education modes

South Africa has been a leader in distance education on the African continent. Established in 1946, UNISA offers certificate, diploma and degree programs up to the doctoral level to 338,000 students, is the largest open distance learning institution in Africa; and one of the world's top 30 mega-institutions.²⁹ UNISA is committed to providing inclusive education and keeping abreast of a rapidly evolving distance education landscape. It sees itself as a public-good institution with a clear social mandate on the national and international scene.

UNISA has the potential to absorb a larger proportion of South African students and to play a major role in supporting enrollment expansion targets, assuming it improves its graduation rate to a significant degree. Thailand's two open universities, for example, enroll half the total student population, making them the principal instrument for expanding access and reaching out to students from rural areas and the poorest social stratum (Salmi, 2017).³⁰ As it is responsible for a large share of all teacher-training programs in South Africa, UNISA also has a strategic role to play in building the pipeline of future PSET students.

UNISA could apply some of the principles that have made Western Governors University (WGU) one of the most successful online universities in the world. A private institution in the United States, WGU is a non-profit, fully online university, whose curriculum is competency-based. Its mission is to improve the quality of the work force and expand access by providing its mostly adult learners with opportunities for independent studies, regardless of time or place. The university offers bachelor's and master's degrees in teaching, nursing, IT and business administration, and has been recording impressive successes as measured by graduation rates, employer satisfaction, student engagement and follow up with alumni (Middlehurst and Fielden, 2016). WGU does not employ traditional instructors and its academic courses do not follow conventional standards. Students advance through their coursework independently and at their own pace. Faculty members, who are external providers contracted by the university give personalized support to students. WGU breaks the traditional model of integrated course design, delivery and assessment

where a faculty member is fully responsible for developing, teaching and assessing her/his own course. Instead, WGU unbundles the process by assigning each of those responsibilities to different groups of professionals, including industry experts. The success of this innovative online model has been due in large part to the extensive academic support that learners receive from WGU: every student is paired with a mentor who provides advice, from enrollment to graduation. In addition, each course has a group of mentors responsible for disciplinary support (this is the equivalent of a teaching assistant in the traditional campus-based model). Learners also receive help from WGU's Career and Professional Development Center which provides guidance to job seekers or to employed students seeking new opportunities.

The second option that UNISA could consider to improve the quality of its programs is to rely more extensively on high-end Massive Open Online Courses (MOOCs). Today, the MOOCs come complete with exams and electronic feedback from teaching assistants with some also providing certificates to students who complete the courses. Six levels of pricing and academic recognition can be found among the MOOCs in operation around the world (Class Central, 2017):

- Free MOOCs with no academic endorsement.
- MOOCs sanctioned by a single-course certificate.
- MOOCs leading to a micro-credential (program with several courses).
- MOOCs giving a university credit to on-campus students.
- Online degrees through MOOCs.
- MOOCs as part of corporate training, whereby firms pay for the acquisition of certificates and microcredits by their employees.

Finally, UNISA needs to guarantee the quality of its programs through international accreditation. In 2015, the Times Higher Education ranked UNISA as the sixth-best university in South Africa. UNISA was granted full institutional accreditation from the Accrediting Commission of the Distance Education and Training Council of the United States in 2002. The accreditation however lapsed in 2007 and was

²⁹ A number of private higher education providers (Mancosa, Educor) have also developed strong distance learning operations, with potential to expand beyond South Africa into the rest of Africa. Foreign distance-learning institutions, such as Getsmarter, also operate in South Africa.

³⁰ Thailand had a tertiary enrollment rate of 52% in 2014, which is much higher than the rate achieved by its neighbour, Malaysia (30%), even though the latter is among the countries that devote the highest share of public resources to tertiary education (2.6%).

not renewed. It is important for UNISA to regain international accreditation to stay on par with other

distance learning institutions in an online world that has transformed drastically over the last 10 years.

Encouraging effective private sector participation

Faced with a rapidly growing demand for tertiary education, many nations have encouraged the growth of private PSET institutions as part of their expansion and institutional differentiation strategy. In several cases, the growth of private tertiary education has been so significant that more students are now enrolled in private institutions than

public ones, as can be seen in several Latin American (Brazil, Chile, Dominican Republic, El Salvador) and East Asian (Indonesia, Japan, Philippines, South Korea) countries. Table 2.6 shows the average proportion of private sector enrollment in various regions. In OECD and Sub-Saharan African countries, the share is 32%.

 **Table 2.6: Private enrollment as a share of total PSET enrollments**

Region	Proportion (%)
East Asia and the Pacific	42,2
Eastern Europe and Central Asia	29,2
Latin America and the Caribbean	50,2
Middle East and North Africa	39.0
South Asia	47.0
Sub-Saharan Africa	32.0

Source: Salmi (2017)

Private tertiary education institutions vary. Using the two dimensions of degree of selectivity in admissions and legal status, one can distinguish among at least eight categories of such institutions (Table 2.7). Several Asian, Latin American and Middle Eastern countries have highly selective private

universities—secular and/or religious—that are often among the best in these countries. The second tier is made up of less academically and socially selective institutions. The third tier consists of open access private institutions that are often of dubious quality (Salmi, 2017).

 **Table 2.7: Types of private tertiary education institutions**

Degree of selectivity/legal status	Elite	Semi-elite	Non-elite
Secular non-profit	X	X	X
Religious non-profit	X	X	
For-profit		X	X
Public-private partnerships	X		

Source: Salmi (2017)

There are few examples of private institutions resulting from a partnership with the state, but where they exist, they represent an innovative funding approach.

Some of the best-known cases can be found in Malaysia, where three public corporations each sponsored the establishment of a private university.³¹ In each case, the public corporation financed all the initial investment costs and the first three years of operating expenditure. Afterwards the new universities had to function as independent private entities, without further public support, except for student aid. Similarly, Al Akhawayn University in Morocco was initially funded by an investment grant from the Kings of Morocco and Saudi Arabia, but now operates as an independent, American-style university. In Kazakhstan, public-private partnerships operate in the form of “joint-stock” companies established by inviting private sector investors to take equity in former public universities. While the ownership is shared between the state and private individuals or entities, these universities operate as private sector institutions.

Private sector investment can relax the public budget constraint but entails risks in terms of equity.

Substituting private sector investment in PSET for public investment may make higher PSET enrollments more affordable to the public purse. However, there is no strong empirical evidence to support the view that private sector PSET can be made cheaper to students, when comparing programs of similar nature and quality. Ensuring equity would thus require extending financial support to poor students in private PSET and in effectively regulating fees against quality of education, as discussed later in this report.

It is also important to note that South African public universities operate with the kind of flexibility often associated with the private sector.

Universities are free to select their students, decide on their programs and set their fees. Their funding also relies, to a large extent, on private financial resources. In this context, it is useful to review which functions, within each PSET sub-sector, are best operated by the public or private sectors.

Against this background, the White Paper goal of enrolling 500,000 students in private institutions by 2030 may be considered modest.

It would imply a decline in the proportion of private enrollments as part of total enrollments, in a context where scarce budgetary resources will most likely curb the entry of new students. However, several instruments could be leveraged under the premise that greater private sector participation would help expand enrollments at a lower cost to the state (than by expanding public universities), while protecting the quality of education. They are:

- Regulatory reforms enabling the establishment of private PSET institutions, including accreditations, under the same provisions governing public PSET institutions. Currently, private institutions must hire their full contingent of administrative and academic staff before being licensed to operate.³² Private institutions are not allowed to call themselves “university”, even though some of them are officially licensed or accredited to deliver university degrees up to the doctorate level. The process for modernizing the curriculum and opening new programs appears to be unnecessarily lengthy and cumbersome, with DHET having put in place rigid procedures for the creation of new programs or the modernization of existing ones. Because of lack of capacity in the three regulating bodies – the Council on Higher Education, South African Qualifications Authority and Higher Education Quality Committee – private institutions experience long delays in the review and processing of their applications, sometimes up to 18 months. Box 2.1 discusses good practice for licensing and accrediting PSET institutions.
- Public subsidies linked to performance (see section below). These could include support for academic staff salaries, concessional land leases, or the chance to compete for public research funds, a provision that could be considered under South Africa's broader industrial policy framework.³³
- Financial aid to low-income students in private PSET institutions, as is the case in most countries, but not in South Africa.

³¹ Universiti Teknologi Petronas; Kuala Lumpur Infrastructure University College; and Multimedia University.

³² In Poland, the government introduced simple licensing criteria to authorize the operation of new private tertiary education institutions. To start a bachelor's program, private institutions need only have a few high-level professors, an approved curriculum and a minimal teaching infrastructure. The Polish government also allowed public university professors to take teaching assignments in private institutions.

³³ See World Bank (2016) for a discussion of South Africa's industrial policy objectives and instruments.



Box 2.1: Licensing and accrediting PSET institutions

To assess whether a country has favorable legislation and regulation for the private tertiary education sector, it is useful to consider the following five aspects:

- Barriers to entry: Are there any precluding the entry of private providers, including foreign ones?
- Institutional autonomy: Does the regulatory body allow full institutional autonomy - organizational, academic, financial and HR - of private tertiary education institutions?
- Eligibility for government subsidies: Can private institutions benefit from the incentives or subsidies available to public institutions, such as tax exemptions, land leases and salaries of academics?
- Eligibility of private-institution students for state scholarships, grants or loans: Can students from private PSET institutions benefit from government subsidies that are available to students who

share the same socio-economic characteristics, but who are enrolled in public institutions?

- Transparent quality assurance: Does the country have clear evaluation and accreditation criteria and procedures that apply equally to all tertiary education institutions?

Good practice for licensing tertiary education institutions include the following considerations:

- Clear criteria and timelines, and regulatory bodies that fully comply with their own criteria and deadlines.
- Small number of requirements in the licensing phase, as opposed to the accreditation stage, which should legitimately combine a strong self-evaluation report and a thorough external evaluation by independent peers.
- Reliance on qualified and objective evaluators who do not have conflicts of interest.

As a first step, non-profit institutions could be encouraged. South Africa's reluctance to encourage private sector participation perhaps stems from the fear that those institutions will not advance social objectives such as offering youth an equal opportunity to access quality education. Indeed, experience suggests that for-profit private institutions that are poorly regulated may be inclined to compromise on quality, at a high cost to students and/or the government, or even be fraudulent.³⁴ Beyond strengthening the regulatory and incentive framework, which is likely to be cheaper than expanding public universities, South Africa could first consider encouraging the expansion of non-profit private PSET institutions. In other continents, these types of organizations have contributed the most to the growth in enrollments, at a reduced cost to the

government and with academic results comparable to those of public institutions.

The World Bank Group private sector arm - The International Finance Corporation (IFC), is among institutions that could facilitate the development of quality South African private PSET institutions.

Since 2000, the IFC has invested US\$2 billion in private education, impacting almost 5 million students. IFC investment decisions are driven by the potential of private PSET institutions to ensure the effective employability of its students. In order to do so, a diagnostic tool – the Employability Tool – was recently deployed to assist PSET institutions understand how well they are preparing graduates for the job market. The tool measures learning, retention, graduation, and placement rates to assess an institution's effectiveness.

³⁴ In August 2017, DHET publically reported on 21 cases of fraud in higher education between 2012 and 2017, where some registered institutions offered certificates that were not accredited with relevant authorities.

Raising the quality and performance of PSET institutions

South Africa must address the trade-off between meeting the growing demand for enrollments while offering good quality and relevant programs.

To improve quality, raise student learning outcomes, reduce the large numbers of dropouts and repeaters, and increase the relevance of PSET programs – especially from an employability perspective – South Africa may consider three complementary measures: (i) strengthening quality assurance; (ii) ensuring closer links to the productive sectors of the economy and the labor market; and (iii) performance-based funding.

Strengthening quality assurance. The government could prioritize the tightening of the licensing system and closing down sub-standard institutions and programs while applying uniform standards in both the public and private sub-sectors. Over time, the quality assurance standards and criteria should evolve from focusing on inputs and processes to emphasizing the learning outcomes of students and how well graduates of all institutions are absorbed into the labor market. The impact of the work done by research-intensive universities would also be closely monitored. In addition, DHET could offer incentives for the establishment and/or consolidation of internal quality assurance units in all tertiary education institutions, which are essential for a genuine and effective quality assurance culture. This could be

achieved through a combination of matching grants to ensure ownership by the concerned PSET institutions and technical support to disseminate good practices from South Africa and beyond.

Forging closer linkages with industry. Strengthening linkages with industry is an effective way of increasing the relevance of PSET programs. Universities can use a large variety of mechanisms, including internships for undergraduate students, in-company placements of research students and academics, and encourage practitioners from industry to offer their services as visiting lecturers. Incorporating training for entrepreneurship into regular university programs can also help bring them closer to the productive sectors. Universities may consider establishing cooperative learning programs that alternate on-campus learning periods and regular in-firm internships, (Box 2.2). And while it is often assumed that efforts to bring universities closer to industry apply only to engineering and applied science programs but not to the social sciences and humanities, it is actually more a matter of mindset than academic discipline. A cooperative program could be set up for a history degree, for instance, whereby students would alternate between formal periods of learning at the university and periods of study or research while attached to a museum, a restaurant (Box 2.3), or a company in the creative industries.



Box 2.2: Lessons from co-operative programs

Co-operative education alternates academic studies with work experience in a field directly related to a student's academic or career goals. The model has considerable advantages: it allows students to gain relevant work experience, apply theoretical knowledge gained in the classroom and clarify career plans. It also helps students to build contacts with employers and establish networks that would assist in finding employment after graduation. Working as part of the studies program helps students to finance their education. It is also useful for learning how to behave on the job and to develop the skills employers require. The Waterloo example below illustrates these points. Other examples of co-operative education programs are the Singapore Institute of Technology, the Singapore Institute of Management and Berlin's Steinbeis Center of Management and Technology.

Waterloo, Canada is home to the world's largest co-op program with 15,800 undergraduate students and 3,500 partner employers around the world. A co-op student at Waterloo graduates with the same number of study/academic terms as a non-co-op student, plus up to two years of work experience. The student has 4 to 6 work terms – each usually four months long – to try out a variety of careers to find out his/her interests before graduating. On average, by the time the student graduates, he/she has already earned between US\$ 25,000 and US\$ 74,000, resulting in smaller student loans compared to other students and a greater capacity to pay them back. Graduates of Waterloo's co-op programs earn about 15% more than graduates of non-co-op programs. Furthermore, Waterloo University offers the enterprise co-op program where students are advised by experienced professionals and in some cases are supported financially to develop their own businesses.



Box 2.3: Acquiring skills to become a chef



Sibongakonke “Sbo” Kunene, 21, and Gontse Mathobela, 25, are proud students of a private culinary TVET college in Rosebank, Johannesburg. Since enrolling at the school in February 2018, the two young men have formed a bond driven in part by a passion to be chefs. Following their vocation has meant abandoning university education, a move their respective families did not always support.

“Getting here was difficult, at first my family didn’t understand why I wanted to be a chef, but I can now see that they are coming around,” says Gontse, who left a career in mechanical engineering after completing his degree at the University of Botswana. “Coming from a family of teachers, nurses and doctors and four siblings who all have degrees, I felt a lot of pressure, and I could not explain why I was leaving a potentially high-paying career for one that is grueling, with very long hours. But I have never been happier”.

TVET colleges empower post-school students like Sbo and Gontse to make the transition from education to the world of work by combining learning and working, ensuring their employability while helping them to make informed choices and to fulfill their aspirations. For the two, that aspiration is to specialize in fine dining.

Offering national and internationally-recognized qualifications, the Capsicum Culinary Studio, which has six campuses around South Africa, mainly targets school leavers for a year-long teaching program, including placement in the industry for work experience. Both Sbo and Gontse will begin their work experience at restaurants in the prestigious Michelangelo Hotel in Sandton, followed by placements in other restaurants.

“We teach them core classical foundational cooking techniques that can be applied to different cuisine, and skills that will allow them to branch into different areas of specialty,” said Capsicum Managing Director in Rosebank, Renee Hill. The skills learnt prepare the chefs for work in restaurants or to open their own businesses. In 15 years, the school has had about 5,000 graduates.

Capsicum boasts of making it easier for their students to obtain work in an industry that is growing. According to a report by Deloitte, 1 in 22 people employed in South Africa work in the hospitality industry. Worldwide, the norm is 1 in 11. The report estimates that by 2020, food and beverage services will employ around 12.7 million people and by 2023, there will be 337 million jobs in hospitality worldwide.

Using financial incentives. The government could introduce performance-based budget allocation mechanisms that would provide financial incentives for improved institutional results and better alignment with the labor market (OECD, 2007; Salmi and Hauptman, 2006). Policymakers may consider the following three types of allocation mechanisms, separately or combined, to achieve this purpose:

■ **Funding Formulas.** One of the most transparent and objective manners of distributing funds for recurrent expenditure is to use a mathematical formula linking the amount allocated to indicators of institutional performance such as the number of graduates, the employment rate of graduates and/or the research output. Examples of countries that have built performance into their funding formulas include: Denmark, which has a "taximeter model" by which 30 to 50% of recurrent funds are based on the number of students who successfully pass exams every academic year; the Netherlands, where half of recurrent funding is tied to the number of degrees awarded as an incentive to improve efficiency; Australia, where funding for doctoral student places is based on a formula comprising 40% for graduates, 10% for research outputs and research income.

Since 2004/5, South Africa has been relying on a funding framework that has elements of a formula. The framework allocates the available budget according to national priorities. The formula part of the framework combines four dimensions: (i) teaching input linked to the number of undergraduate and postgraduate students; (ii) teaching output based on the number of undergraduate students completing their studies; (iii) research output based on the number of publications making up a quarter of the component, and the number of graduating research masters and research students comprising three quarters; and (iv) institutional factors, which take into account the size of the institution so as to help smaller institutions, and the proportion of black African students. The larger share of budgetary resources is allocated to universities as a block grant, allowing each institution to distribute its resources internally

according to its own configuration of teaching, research and community-engagement activities.³⁵

The main drawback of the current allocation mechanism is that the government is not strictly bound by the distribution formula, as resources allocated each year depend on the fiscal situation, taking away the long-term stability that a funding formula affords PSET institutions. Another limiting aspect is that only a small part of the budget allocation is determined by institutional performance and alignment with national policy objectives. For instance, the number of undergraduate students completing their degrees and research outputs accounted for only 25% of the funding formula in 2016-17. Moving to an actual funding formula would allow the government and PSET institutions to work out a clear understanding of the amount of resources allocated every year and the rules for calculating the budgetary contribution that each institution would be entitled to. The allocations could be linked to agreed performance measurements such as graduation rates, learning outcomes, labor market results, and scientific production in terms of quantity, quality and impact.

■ **Performance contracts** are agreements negotiated between the governments and PSET institutions, defining a set of mutual obligations under which the government provides additional funding to institutions meeting their performance targets. Agreements may be with several or all institutions in a given tertiary education system, or with a single institution. All or a portion of the funding may be conditional on the institution meeting the requirements in the contracts. Examples of countries or sub-national jurisdictions with performance contracts include: Chile, Costa Rica, Finland and France.³⁶

The main advantage of performance contracts is that they encourage institutions to improve their results voluntarily. From the government's viewpoint, it helps align the behavior of tertiary education institutions with national policy objectives, such as improved completion rates and better alignment between programs and

³⁵ The remaining resources are allocated as grants for NSFAS student loans, teaching and research development, foundation provisioning to support underprivileged students needing additional academic help, veterinary science grants, infrastructure and efficiency grants to cope with rising enrollment, clinical training grants, and grants for historically deprived institutions.

³⁶ Chile introduced pilot performance agreements in the late 2000s, whereby four public universities volunteered to receive additional resources to implement a carefully negotiated institutional improvement plan with clear progress and outcome indicators. After a positive evaluation, the scheme has been extended to a large number of public and private universities. Costa Rica has used performance contracts to promote the transformation of four of its five public universities. Denmark uses development contracts setting out long-term improvement goals for the institutions. Finland has contracts that set out general goals for the entire tertiary education system as well as specific goals for each institution while France has allocated about one third of the recurrent budget through four-year performance contracts since 1989.

labor market needs. For the institution, it brings in additional resources to implement the strategic plan, provided the institution has a transformative vision and the will to implement it. Success usually depends on two factors. First, when negotiating the performance agreement, it is good practice to involve someone who is a neutral broker to facilitate a reasonable dialogue between the government and the university leadership. In Chile, former university vice-chancellors widely respected as “wise persons” played a decisive role in that respect. Second, the DHET would need to devote sufficient expertise and time to monitor the implementation of the performance contracts.

- **Competitive funds** have proven their strength and value as an effective and flexible resource allocation mechanism for transformative investments (Salmi, 2017). Under this mechanism, project proposals from institutions are reviewed and selected by committees of peers according to transparent procedures and criteria. Eligibility criteria vary from country to country and depend on the specific policy changes sought.³⁷ Positive experiences in countries as diverse as Chile, China, Egypt, Indonesia and Tunisia show that competitive funds help to improve quality and relevance, promote pedagogical innovations, reduce dropouts, and foster better management, objectives that are difficult to achieve through funding formulas.

Eligibility criteria vary from country to country and depend on the specific policy changes sought. In Argentina and Indonesia, for instance, proposals could be submitted by entire universities or by individual faculties or departments. In Chile, both public and private institutions were allowed to compete. In Egypt a fund was set up in the 1990s specifically to stimulate reforms in engineering education. An added benefit of competitive funds is more transparency as they have an independent monitoring committee and clear criteria and procedures. In addition, they encourage universities to prepare a solid strategic plan, which helps them formulate proposals based on actual needs and a rigorous action plan. South Africa could consider piloting a competitive fund for allocating public investment funds to improve the quality, relevance and efficiency of PSET institutions.

In its attempt to improve the quality of PSET, South Africa should not necessarily encourage specific curricula.

Recommending the use of financial incentives does not mean that the government should try to influence the choice of disciplines and programs. International experience shows that manpower planning does not generally work and is even less likely to work today in a world of rapidly changing technologies that continuously shape the labor market (World Bank, 2018f). To ensure that students enroll in programs leading to meaningful employment and that PSET institutions adapt their programs to the changing needs of the labor market as much as possible, one of the most effective tools that the South African government could rely on is a well-functioning labor market observatory. Bulgaria, Chile and Colombia offer noteworthy examples (Salmi, 2017):

- Since 2012, Bulgaria has published detailed data on the labor market results of university graduates. Using data from the Registry of Tertiary Students and statistics from the National Social Security administration, the Bulgarian Ministry of Education can provide a wealth of information on the jobs and levels of remuneration of graduates who left university in the previous five years.
- Chile's Futuro Laboral, supported by its ministry of education and run jointly with the University Adolfo Abáñez and University of Chile, aims to equip youth and students with the information tools necessary for them to enter the labor market. It provides information on the employment situation and salaries of 75% of technical and professional graduates spanning hundreds of professional and technical careers. The portal displays information on dropout rates, average time taken to complete a degree, average earnings of the graduates after 4 years of graduation, current tuition fees for the program, and accreditation status for each program of every tertiary education institution.
- Graduados Colombia monitors since 2005 the demand for and supply of graduates and is managed by the Colombian Ministry of Education. It offers statistics on the academic level of the graduates of technical institutes and universities, the salaries they receive, the average time taken to find their first job, and the cities in which they work.

³⁷ In Argentina and Indonesia, for instance, proposals could be submitted by entire universities or by individual faculties or departments. In Chile, both public and private institutions were allowed to compete. In Egypt a fund was set up in the 1990s specifically to stimulate reforms in engineering education.

Improving resource mobilization

Very few governments in the world can afford to fully finance PSET systems.

Those who are able to include Saudi Arabia, the Gulf countries, the Nordic countries, Scotland,³⁸ and Singapore. A few others, such as Australia, Canada, England, Hong-Kong (China), Iceland, the Netherlands, New Zealand, Switzerland, Chile (until the recent abolition of fees), China, Japan, Jordan, Malaysia, South Korea, and the United States, manage to properly finance their systems through a combination of high tuition fees and private sector participation. Most countries, though, rely on public resources to finance PSET systems that are predominantly in the public sector, which tends to be insufficiently funded anyway. This is the case in Egypt, Ghana, Kenya, Tanzania and Uganda, and in many of the Eastern European and Central Asian countries that were once part of the former Soviet Union. Insufficient public funding is also a feature of several industrial countries, Belgium, France, Germany, Greece, Italy, Portugal and Spain, whose total share of tertiary education expenditure of GDP is below the OECD average, in large part because of the governments' reluctance to introduce or raise tuition fees. South Africa can be considered part of this last group, as public resources through the student aid scheme will now cover most tuition fees even though the fees covered are insufficient to defray all costs.

South Africa must find ways of generating additional resources to expand the PSET system while improving the quality of education offered.

The Heher Commission of Inquiry into Higher Education and Training (2017), stated: "Block funding to PSET institutions needs to increase in line with increased costs for providing quality education and infrastructure needs. Despite pressure on the National Treasury to consolidate the budget, it is necessary for all three arms of the PSET sector to be funded at an appropriate level to ensure quality education and training. We recommend that, in the short-term, the government work towards funding universities with 1% of GDP (excluding the funding required to establish the recommended student funding model)".

In seeking ways to balance the PSET budget that is already stressed by increased financial aid, authorities should be careful to avoid the pitfall of reallocating money from the university research budget to the general PSET budget.

The major cuts to the Incentive Funding for Rated Researchers program, announced in October 2017, were an early warning that research funding could be adversely affected by the new fees policy. This is of concern as public financial support for innovation has been declining since 2008 (World Bank, 2017).

Several options are envisaged to mobilize additional resources.

As discussed below, tuition fees will need to be regulated to avoid defeating the social purpose of extending financial aid to a larger number of students. Thus, above-inflation fee increases to help defray the cost of providing PSET may not be a workable solution. Therefore, PSET institutions could be encouraged to diversify their income sources through donations, contract research, consultancies, continuing education and other fundraising methods. However, not all sources of income have the same potential. Contrary to what is commonly assumed, technology transfer, on average, is not highly beneficial in generating income.³⁹ Experience suggests that providing continuing education, undertaking productive activities and raising funds from alumni and corporations are the three most important income generation sources.

Fundraising has not been a major priority area in South Africa until now,

on the assumption that resources are limited throughout the economy and that philanthropy is not part of the national culture. However, international experience shows that even in resource-constrained countries, universities can find a few rich companies and individuals – locally and among members of the Diaspora – who can be persuaded to make financial contributions to universities. In Europe, a region with little tradition of philanthropy towards universities, significant progress has recently been made in this regard (Box 2.4), making its experience relevant to South Africa.

³⁸ While it is true that Scotland does not charge fees for Scottish students, 45% of Scottish universities' teaching income is financed by the tuition fees paid by foreign students and non-Scottish UK students.

³⁹ Even in the United States, which has a favorable policy framework for innovation and technology transfer, very few institutions hit the jackpot with path-breaking innovations that can be successfully commercialized. At Harvard University, income from technology transfer licenses is equivalent to only 1% of annual fundraising receipts.



Box 2.4: Lessons from fundraising efforts in Europe

A survey (European Commission, 2011) on the fundraising efforts of European universities found that success was related to three factors. The first is what is defined as institutional privilege, i. e. the wealth and reputation of the university, as well as pre-existing relationships with potential donors. The second is the level of commitment of senior academic leaders and other research staff in this regard. The third has to do with the location of the university and the geopolitical context in which it operates.

With regards to the type of donors, the survey showed that money is raised mostly from private corporations while contributions from alumni are less frequent.

Experience indicates that successful fundraising involves the following aspects:

- Commitment of management and governing bodies.
- Full participation of academic staff.

- Financial and human investment in fundraising activities.
- Rewards for staff who are successful in attracting philanthropic donations.
- Production and dissemination of materials for fundraising purposes, such as a website, leaflets and brochures.
- Use of a database to maintain and update records on interactions with donors.
- Reporting on philanthropy in universities' annual financial reports.

One of the cases of effective fundraising came from the United Kingdom (Universities UK, 2008), where a government-sponsored matching funding scheme was set up in 2008, following positive experiences in Alberta, Florida, Hong Kong and Singapore. Between 2008 and 2011, the British government matched any eligible gift made to a participating tertiary education institution.

PSET institutions should be encouraged to fundraise.

If the tight fiscal situation makes it difficult for South Africa to put in place a matching program, at the very least the government should not penalize the most entrepreneurial PSET institutions by reducing their budgets if they become adept at fundraising. Such penalties would be self-defeating as they remove the incentives to generate additional income. South Africa should maintain or even consider increasing the tax deductions that make it advantageous for businesses and individuals to donate money to PSET institutions.⁴⁰ Favorable tax incentives have been found to be crucial in stimulating philanthropic and charitable gifts to tertiary education institutions. From the viewpoint of the universities seeking to increase fundraising, it is important to have an audacious vision and strategic plan to convince potential donors that their contributions will have a profound developmental impact. Universities must also define clear ethical rules regarding the origin of the funds that they can accept and the types of companies their endowment

funds will invest in. The University of Hong Kong, for instance, has ruled out donations from tobacco and arms-producing companies.

Resource sharing is another indirect way of mobilizing additional resources.

A growing number of universities around the world have redesigned and reorganized their scientific laboratories so that several departments across the institution can use the shared facilities. In Quebec, the network of community colleges known by the acronym CEGEP, has experimented with conducting scientific experiments in one college while students in other colleges are connected by video and via the Internet and benefit from observing experiments in the same lab facilities. The digital sharing of scientific facilities and resources can be extended to many fields and can even cross national boundaries when researchers in one country are able to program experiments that actually take place in the laboratory of a university in another country.

⁴⁰ In the United States, 2015 was a record year with tertiary education institutions raising a total of US\$40 billion. Canada, Hong Kong, several European countries and the United Kingdom also offer generous tax incentives to encourage donations to universities. In Latin America, Brazil, Colombia and Chile permit income tax deductions. Among developing countries, India has one of the most generous tax concession schemes, as all individual and corporate donations to universities are fully exempt from taxation (World Bank, 2002).

Revisiting the financial aid scheme

Public support to PSET is generally regressive. Even though, intuitively, keeping tertiary education free of charge for all is seen as the best way of promoting equity, empirical evidence shows that free tertiary education is highly inequitable, unless the country has a progressive income tax system, as is the case in the Nordic countries. Experience in many parts of the world indicates that a disproportionate number of students from advantaged backgrounds tend to access tertiary education at no personal cost and secure higher remuneration after graduating yet rely on the less-advantaged general taxpayers to fund their education. Independently from the need for additional resources, financing of tertiary education is more equitable when students from high and middle-income families are made to contribute a larger share of the cost of their education.

Analyzing data from the Latin American region sheds light on the impact of various access and funding policies. Argentina has an open access and free tuition policy; Brazil has a restricted access and free tuition policy; Chile has both restricted access and high tuition

fees; and Ecuador abolished tuition fees to improve access. The natural expectation would be that Chile would display the highest degree of inequality. But Brazil is the most regressive country, followed by Argentina and Ecuador, and then Chile. As revealed by Table 2.8, which shows the enrollment rate in each country for the various socio-economic groups, Chile has the highest enrollment for the poorest two quintiles and the lowest disparity ratio, which is calculated as the ratio between the enrollment rate of the richest quintile and that of the poorest quintile. The better results in Chile from an equity viewpoint stem from the fact that, even though all students must pay high tuition fees in both public and private universities, the country has a comprehensive system of well-targeted grants and student loans to protect low-income students. In fact, a benefit incidence analysis of public expenditure in Chile's tertiary education system clearly demonstrated that the student aid subsidies were distributed in a progressive way, whereas the public funds allocated directly to the universities were highly regressive (OECD, 2009).

Table 2.8: Enrollment rates by income quintile in four Latin American countries

Quintile	Argentina	Brazil	Chile	Ecuador
Q1	18.0%	5.0%	21.2%	15.6%
Q2	25.3%	6.3%	26.4%	19.7%
Q3	29.5%	11.6%	26.0%	23.8%
Q4	38.2%	20.7%	37.5%	27.1%
Q5	56.6%	47.0%	61.6%	49.3%
Disparity Ratio (Q5 / Q1)	3.1	9.4	2.9	3.2

Source: SEDLAC; <http://www.cedlas.econo.unlp.edu.ar/wp/en/estadisticas/sedlac/estadisticas/>

South Africa could consider revisiting the design of its financial aid scheme to make it more efficient and sustainable. Two dimensions are worth considering: the nature and targeting of financial aid, and how this is articulated in policies for tuition fees.

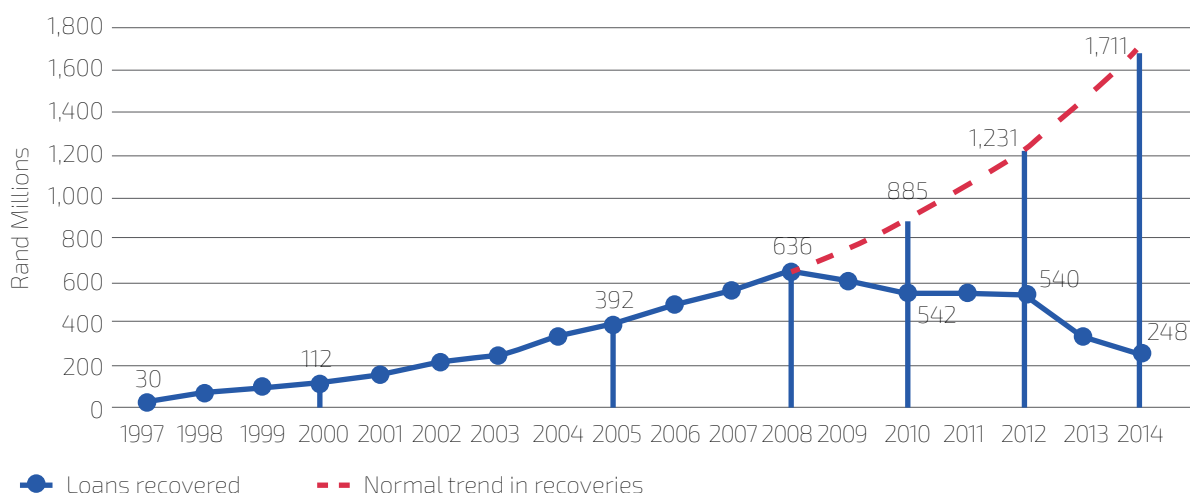
Loans versus grants. In South Africa and elsewhere,⁴¹ there is general recognition that financial aid has a positive impact on the academic performance of students receiving the assistance, as discussed before in the case of South Africa. In this regard, the

⁴¹ In Colombia, 20% of the total student population is supported by the ICETEX loan agency. The agency provides subsidized loans to students from the poorest families, ethnic and racial minorities, and students with disabilities. The poorest students enjoy a zero real interest rate during the loan period. An impact evaluation carried out a few years ago found that, on average, loan beneficiaries were less prone to drop out and obtained better academic results than the other students (Salmi, 2017). The average dropout rates were 34.4% for non-beneficiaries and 9.4% for student loan beneficiaries. During the first semester of study, the percentage of students with high marks was 92% for loan beneficiaries in private universities compared to 83% for those without a loan; in public universities it was 85% with a loan and 72% without a loan (Econometria, 2010).

nature of the financial aid – loans versus grants – is an important consideration when seeking to expand PSET enrollments. Indeed, South Africa's experience with NSFAS suggests that it became increasingly difficult to recover loans since 2008 (Figure 2.7), and that the effect of the non-recovery on NSFAS' financial sustainability made it difficult to support a larger number of students.

Such difficulties could have contributed to the creation of a so-called "missing middle", whereby a large group of students are excluded from financial aid but cannot access bank loans and other funding due to a lack of capital and low salaries in the family (Heher Commission, 2017).

Figure 2.7: NSFAS loan recoveries (1997-2014)



Source: Heher Commission, 2017

Converting grants to income-contingent loans could strengthen NSFAS' financial sustainability. The decision made in 2017 to convert all students' loans into grants is an acknowledgement of the difficulty of recovering loans.⁴² Yet, many factors explain the relative success or failure of loan schemes, including design considerations relative to the interest rate and administrative costs, the strength of its leadership, the quality of management systems, and the ability to react rapidly and flexibly to economic or social problems affecting the repayment capacity of graduates. The decline in recovery rates started in 2008 with the financial crisis and a period of protracted slow economic growth (Figure 2.7). However, there may be scope to strengthen the scheme rather than

to simply abandon it. Indeed, without an income-contingent provision, economic crises are bound to cause repayment difficulties (Chapman, 2014; Salmi, 2014). International experience shows that income-contingent loans tend to have higher repayment rates and are more equitable since graduates pay a fixed portion of their income and are exempted from repaying if they are unemployed or if their income is below a pre-determined ceiling. Experience in Australia and New Zealand with contingent loans are discussed in Box 2.5. South Africa could consider extending such loans to most affluent students, whose probability to repay is highest, as underlined in the rate-of-return analysis, while confining grants to highly vulnerable and under-privileged students.

⁴² Chile recently experienced a similar issue, with the level of indebtedness of poor students becoming unsustainable, eventually prompting the abolition of tuition fees following protests that started in 2011. As in South Africa, Chilean student loans administered under the state-guaranteed scheme were not income-contingent.



Box 2.5: Income-contingent loans in Australia and New Zealand

From the late 1980s, Australia and New Zealand started to raise tuition fees while introducing loan programs that allow students to pay tuition fees over an extended period, based on their incomes once they have completed their education. But their approaches differ with respect to income-contingent loan schemes.

In 1988, Australia chose an innovative approach to cost sharing through its Higher Education Contribution Scheme. Faced with prospective widespread student opposition to tuition fees, Australian policy makers decided to use public funds to pay the tuition fees while students were enrolled. All students participating in higher education were then obligated to repay the fees as a percentage of their incomes after completing their tertiary education. Students with below-average incomes were exempted from repayment.

In 1990, New Zealand took the more traditional approach of imposing tuition fees to be paid by students when they enrolled. Beginning in 1992, students could borrow to cover the cost of these fees as well as a substantial amount of living expenses. Repayment of these loans would then occur through the income tax system based on a percentage of a student's income once they have completed their education.

The two countries have moved in different directions since they first adopted their income-contingent loan schemes. New Zealand began with a more market-based approach in which virtually all borrowers (who then constituted a small share of students) repaid on the basis of their income, with interest rates slightly below market levels. Over time, New Zealand

has moved away from market-based principles by increasing subsidies, including exempting more low-income students from making repayments and forgiving interest on most loans. As a result, borrowing has grown substantially. The overriding policy concern now is that high debt levels are causing a growing number of graduates to emigrate from New Zealand to avoid their loan repayment obligations. The government has responded by making repayments for borrowers who remain in New Zealand interest-free since 2006.

Australia's system on the other hand, created a fiscal challenge at first as a growing number of students enrolled in higher education without having to pay fees upfront. To reduce pressure on the budget, Australia moved in 1997 toward the market-based approach by reducing subsidies and introducing three bands of tuition fees as well as reducing the level of income exempted from repayment. In addition, more market-based loan programs have been developed for the more than one-quarter of students who do not participate in the higher education contribution scheme, including growing numbers of foreign students and domestic students enrolling in fields of study not covered by the scheme. In 2016, the government closed the loophole that allowed Australians living abroad to leave their debt unpaid while away from Australia.

Thus, as Australia has moved to a more market-based student loan system, New Zealand has moved away from a market-oriented approach. But in both cases, the income-contingent loan system has contributed to significant increases in coverage and improved equity, at a fiscal cost lower than that of extending grants.

Source: Chapman et al. (2014); Salmi and Hauptman (2006).

Another important policy issue to consider is that of fees regulation. Until a few years ago, the government of South Africa was careful to respect the institutional autonomy of its universities, including in setting tuition fees. Since the beginning of the #FeesMustFall movement, however, the government has stepped in to control fee increases proposed by public universities. This is common practice in most countries — industrial

and developing alike — where government and/or the parliament determine the yearly increase that public universities are allowed to implement, if any.⁴³

In countries where fees represent a significant proportion of public universities' income, regulating fees can create a tension between equity considerations and the degree of autonomy

⁴³ In Azerbaijan, the government also strictly regulates the level of fees in private universities. Other countries do it in an indirect manner. In Chile and Côte d'Ivoire, the government establishes a reference price that is used to calculate the amount of the scholarships for low-income students enrolled in private institutions. Similarly, in Colombia, the government fixes the maximum loan amount any student can obtain. In Mexico, private universities are free to set tuition fees as they see fit, but by law they must offer full scholarships to at least 5% of their students.

that tertiary education institutions need to offer quality programs and research. In South Africa, where the state is now responsible for paying the fees of students from families with an income less than R350,000 per year, there will be a strong incentive to keep the fees from rising to reduce the burden on the National Treasury. This may have an adverse effect on the historically disadvantaged universities that need significant additional investment to improve quality, as well as on the top research-intensive universities that seek to maintain or increase their research expenditure.

At the very least, the government of South Africa should make sure that fee increases match annual inflation rates to avoid a deterioration in the financial position of the country's tertiary education institutions. When this principle is not applied, the risks to the entire tertiary education system are high. As an example, the deteriorating funding situation of the University of California system, once hailed as the best tertiary education system in the world in all aspects, is a sober lesson for all countries (Douglass and Bleemer, 2018).

An interesting approach worth considering is that of the United Kingdom government, which recently started to link fee increases to the quality of teaching and learning achieved by British universities. In 2016, the UK government launched the Teaching Excellence Framework which aims to provide incoming students with more objective information about the quality of programs offered by British universities, thereby encouraging them to improve the effectiveness of teaching and learning. While participation in the framework is voluntary in principle, in practice institutions must make a submission in accordance with the framework if they want to raise tuition fees in line with inflation. In the future, fee increases may be directly linked to results as measured in the framework (Ashwin, 2017). The framework relies on three sets of data: student evaluations of the quality of teaching coming out of the National Student Survey, dropout rates, and rates of employment of graduates. Universities receive a gold, silver or bronze award based on their performance benchmarked against the characteristics of their students. Interestingly, in the first round of evaluations carried out in 2017, the top research universities achieved the lowest results in terms of quality of teaching and learning (O'Malley, 2017).

CONCLUSION

There is a strong rationale to support financially poor students to pursue post-school education and training. This would significantly contribute to reducing income inequalities and would magnify the parallel efforts to improve learning outcomes at school. Converting loans to grants and covering the costs of studying beyond tuition will significantly encourage matriculants from poor backgrounds to enroll in public TVET institutions and universities. A more generous financial support structure could also help reduce dropout rates while improving completion rates.

At the same time, extending such support to too large a pool of students will diminish the public resources available to admit more students into PSET. Our analysis suggests that more than 90% of potential PSET students could benefit from the new NSFAS criteria. This would in turn put a huge strain on the fiscus, equivalent to about 1 percentage point of GDP, leaving fewer public resources to increase admission capacity without compromising education quality. This imbalance is likely to create frustration

among potential students, many of whom will be barred from entering the PSET system, despite now being eligible for financial support.

To sustainably and equitably expand PSET enrollments, South Africa could be inspired by a few models successfully tested in other developing and developed countries. This could include: (i) diversifying from the university sector to TVET and to community colleges; (ii) revamping the distance learning model; (iii) encouraging greater private sector participation in PSET, starting with non-profit institutions; (iv) raising the quality of education, as measured by the employability of PSET students and graduates, through stronger quality assurance mechanisms, financial incentives to meet quality standards, and closer linkages with employers; (v) enlarging other potential sources of resources for PSET while regulating tuition fees; and (vi) revisiting the student financial aid scheme to make it more equitable and through greater risk sharing, protect it against the contingencies suffered by individual students.

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ANNEX

PSET Statistics

Throughout the report, the following decomposition of PSET by grade, both for enrollment and academic attainment is used, using categories retained in the National Income Dynamics Study (NIDS).

Table A1: Academic classification

Technical studies (TS)	Undergraduate studies (US)	Graduate studies (GS)
NTC 1 / NCV 2	Certificate requiring Grade 12	Bachelor's Degree and Diploma
NTC 2 / NCV 3	Diploma requiring Grade 12	Honors Degree
NTC 3 / NCV 4	Bachelor's Degree	Higher Degree (Masters, Doctorate)
Certificate not requiring Grade 12		

Source: World Bank staff decomposition based on NIDS.

Combining administrative and NIDS data allows us to estimate the following breakdown of enrollments by PSET institution type, age, nationality and household incomes in 2015. In 2015, there were 2.204 million students enrolled in PSET institutions (excluding SETAs), out of which 25.3 thousand poor South Africans aged 18-25 enrolled in graduate studies in public PSET institutions.

Table A2. PSET Enrollments in 2015

Technical studies (TS)	TS	US	GS
Total	1,108,907	889,270	205,936
Of which aged 18-25	864,396	625,551	147,620
Of which South African nationals in public PSET	575,225	500,772	118,174
Of which eligible for NSFAS new scheme	521,737	433,507	111,375
Of which poor	175,555	175,205	25,270

Source: World Bank staff calculation based on NIDS and DHET. Notes: Public PSET institutions under TS only comprise TVET, as community college students are currently not eligible for NSFAS.

Using NIDS data allows us to compute unemployment rates according to academic achievement, and economic background. In 2015, the unemployment rate of individuals having achieved undergraduate and graduate studies was statistically significantly lower than that of individuals with no PSET. There was in the same year no statistically significant difference in the unemployment rate of individuals according to their economic status of origin (poor or not), for the same academic achievement. In other words, graduates from different economic origins could expect the same probability of being employed.

Table A3. Unemployment rates by academic achievements for active population aged 18-25 (%)

TS	Total	No PSET	TS	US	GS
Poor origin	22.7	25.5	20.1	11.3	3.3
Total	21.7	25.9	21.1	12.1	1.2

Source: World Bank staff calculation based on NIDS. Note: Individuals of poor origin are defined as having parents who were classified as poor in 1994.

Using NIDS data allows us to estimate the additional wage income of employed individuals aged 18-25 in 2015 stemming from various characteristics, compared with that of a black female with no PSET residing in the Limpopo province (reference group), at same age and with same household size. For instance, a coloured male having achieved undergraduate studies and living in an urban zone in the Gauteng province was earning R9,373 ($1041+2043+5213+1417-341=9,373$) more than the reference group.

Table A4: Additional monthly wage income stemming from individual characteristics (rands 2015).

	Location	Demographics	Race	PSET Education
Urban	1,417			
Western Cape	-1,951			
Eastern Cape	-1,211			
Northern Cape	-1,119			
Free State	-474			
Kwazulu Natal	-607			
North West	1,383			
Gauteng	-341			
Mpumalanga	461			
Male		2,043		
Household size		-39		
Age		209		
Age squared		-2		
Coloured			1,041	
Indian			4,338	
White			4,080	
TS				1,691
US				5,213
PS				12,677

Source: World Bank staff calculation based on NIDS data. Note: Coefficients estimated on 9,003 observations, with an adjusted R² of 0.41. All coefficients are statistically significant, with P-values below 1%, but that of Free State (15%), Gauteng (12%), Mpumalanga (8%) and Household size (4%).



The World Bank
442 Rodericks Road, Lynnwood,
Pretoria 0081,
Republic of South Africa
Tel: +27 (0) 12 742 3100
Fax: +27 (0) 12 742 3135
Twitter: #SouthAfricaEU
www.worldbank.org/za
www.facebook.com/WorldBankSouthAfrica