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LIST OF ACRONYMS

ASGISA	Accelerated and Shared Growth Initiative – South Africa
BRICS	Brazil, Russia, India, China, South Africa
CERD	Capital Expenditure on Research and Development
CPI	Consumer Price Index
DAC	Development Assistance Committee
DST	Department of Science and Technology
DPME	Department of Performance Monitoring and Evaluation
EU	European Union
FDI	Foreign Direct Investment
GDI	Gross Disposable Income
GDP	Gross Domestic Product
GERD	Gross Domestic Expenditure on Research and Development
GFCF	Gross Fixed Capital Formation
GHS	General Household Survey
GNI	Gross National Income
ICASA	Independent Communications Authority of South Africa
ICT	Information and Communication Technology
ILO	International Labour Organization
ITU	International Telecommunication Union
LDC	Least Developed Country
MDGs	Millennium Development Goals
NDP	National Development Plan
NGP	New Growth Path
NSI	National System of Innovation
NSO	National Statistics Office
ODA	Official Development Assistance
OECD	Organisation for Economic Co-operation and Development
OWG	Open Working Group
R&D	Research and Development
SAPDA	South African Development Partnership Agency
SARB	South African Reserve Bank
SASQAF	South African Statistical Quality Assessment Framework
SDGs	Sustainable Development Goals
SDSN	Sustainable Development Solutions Network
SKA	Square Kilometre Array
SNA	System of National Accounts
SSRR	Social Security and Retirement Reform
Stats SA	Statistics South Africa
TYIP	Ten-Year Innovation Plan
UAS	Universal Access and Service
UNCTAD	United Nations Conference on Trade and Development
UNESCO	United Nations Educational, Scientific and Cultural Organization
WIPO	World Intellectual Property Organisation

STATUS AT A GLANCE

Goal 8: Develop a global partnership for development							
Indicators	Baseline (2001 unless otherwise stated)	2009 status	2011 status	Final status (2013)	Domesticated target (source)*	Target achievability	Indicator type
1. Gross domestic product (GDP) per capita in current prices, Rand Thousands	23 341	50 098	58 676	66 488	No target specified	N/A	Domesticated
2. Investment share in GDP (%)	15.7	20.7	19.1	20.1	25% (short-term DPME 2012 target) 30% (NDP 2030 target)	Not achieved	Domesticated
3. Foreign direct investment (FDI) as a percentage of GDP (%)	8.2	2.1	1.1	0.5	No target specified	N/A	Domesticated
4. Gross savings as a percentage of gross disposable income (GDI) (%)^	16.6	18.6	17.5	14.9	National savings of 25% of GDP (NDP 2030 target)	N/A	Domesticated
5. Public debt as a percentage of gross national income (GNI) (%)	43.3 (2000)	30.8	39.2	45.4	No target specified	N/A	Domesticated
6. Current account balance as a percentage of GDP (%)	0.3	-2.7	-2.2	-5.8	No target specified	N/A	Domesticated
7. Inflation rate by headline consumer price index (%)	5.7	7.1	5.0	5.7	3% - 6% (South African Reserve Bank)	Achieved	Domesticated
8. Employment-to-population ratio (%)	41.5 (2003)	43.9	41.9	42.7	No target specified	N/A	Domesticated
9. Labour productivity, 2008 = 100	100.0 (2003)	98.2	105.5	103.2	No target specified	N/A	Domesticated
10. Capital expenditure on research and development (CERD) as a percentage of GDP (%)^^	0.49	0.54	0.48	0.45	No target specified	N/A	Domesticated
11. Official development assistance received as a percentage of GNI (%)	0.19 (2006)	0.2	0.10	0.12	No target specified	N/A	Domesticated
12. Fixed telephone lines per 100 population	11.1	8.9	8.1	7.1	Universal access	Achieved	Domesticated
13. Cellular telephone subscribers per 100 population	24	93	124	145			Domesticated

* South Africa has chosen to domesticate all MDG 8 indicators. Official MDG targets for these indicators therefore do not exist. Targets provided in the table represent South Africa's targets identified in a range of South African government policy documents, national plans and strategic reports. These include the National Development Plan (NDP) and the Development Indicators report of the South African Department of Performance, Monitoring and Evaluation (DPME).

^ No specific target exists for this indicator for the MDG period or prior to 2015. Given that the NDP target extends to 2030, the target's achievement has been marked as "Not Applicable".

^^ This indicator replaces the previously used indicator of R&D expenditure, Gross Expenditure on R&D (GERD). The new indicator looks at investment in R&D activities rather than total expenditure on R&D. Thus, targets previously used, including those identified in the Ten-Year Innovation Plan of the Department of Science and Technology do not apply.

EXECUTIVE SUMMARY

In 2000, the Millennium Summit reached a milestone objective with UN member countries committing to eight overall Millennium Development Goals (MDGs) to be achieved by all countries by 2015. Countries committed to achieving a number of specific development targets across various areas including health, education, poverty and employment. MDG 8 focuses on the global partnership for development, enshrined in the MDG 6 targets (UNSD, 2015):

- Target 8.A: Develop further an open, rule-based, predictable, non-discriminatory trading and financial system
- Target 8.B: Address the special needs of the least developed countries
- Target 8.C: Address the special needs of landlocked developing countries and small island developing states
- Target 8.D: Deal comprehensively with the debt problems of developing countries through national and international measures in order to make debt sustainable in the long term
- Target 8.E: In cooperation with pharmaceutical companies, provide access to affordable essential drugs in developing countries
- Target 8.F: In cooperation with the private sector, make available the benefits of new technologies, especially information and communication.

As part of this commitment, countries were able to customise and “domesticate” indicators. This choice was based on ensuring that indicators used to assess progress were both applicable and relevant to the country’s environment and status. In some cases, the availability of data was also a determining factor in the choice to domesticate indicators. For South Africa, many official indicators in MDG 8 have little relevance to the country’s development status.

For these reasons, all indicators for Goal 8 were domesticated and customised to reflect South Africa’s unique status. As a result, many indicators for Goal 8 focus on South Africa’s overall macroeconomic and socioeconomic performance, with the indicators grouped into five subsections: Growth, inflation and employment; Investment and savings; International trade and Official Development Assistance (ODA); Research and Development (R&D); and Information and Communications Technologies (ICT).

Within these subsections, South Africa’s domesticated indicators are used to reflect on the country’s progress in achieving the intended outcomes of Goal 8. Where available, government policy and strategic documents have been used to identify targets for the indicators. However, in many cases, even where data are available, the use of domesticated indicators has meant that South Africa does not have official or explicit targets for the indicators chosen.

Growth, inflation and employment

One of South Africa's greatest challenges has been the high structural levels of unemployment faced by the country. Early policy documents (such as the Accelerated and Shared Growth Initiative (ASGISA, 2006) as well as the more recent long-term vision for South Africa encapsulated in the National Development Plan (NDP, 2012), highlight the need for growth in excess of 5 per cent in order to address high levels of unemployment. Prior to the 2008/09 global financial crisis, South Africa made some progress in reducing overall levels of unemployment as strong global and local economic growth drove higher levels of output and the increased demand for labour. South Africa has also performed admirably in managing inflation, due in part to lower international food and oil prices.

However, since the global financial crisis, and on the whole, South Africa has not managed to achieve the desired and necessary levels of growth to reduce the high and persistent levels of unemployment. In addition, South African levels of inequality are and continue to be considered among the highest in the World. These indicators point to the need for a strong focus on both the basic drivers of development (such as adequate investment in quality education) and interventions that clearly address structural barriers to growth and employment.

Investment and savings

Strong levels of savings and investment are critical to economic growth, providing the funding needed for a country to ensure sustained medium and long-term development of both human and infrastructure resources. As a developing country, South Africa is especially reliant on investment for its growth, and increasing savings and investment levels is a key priority outlined in the NDP. Investment can be financed through borrowing funds, domestic savings or from international sources, such as foreign direct investment (FDI).

South Africa's rate of savings has historically been low, and compares unfavourably with a number of its BRICS counterparts and other developing countries. Although there has been some recent improvement in investment levels, the rate of savings has fallen and national debt levels have increased significantly. This will constrain South Africa's future ability to undertake further investment through either domestic savings or government borrowing.

Limited ability to finance investment domestically makes South Africa more reliant on foreign sources of investment. While South Africa remains the prime destination for FDI on the African continent, the country's declining relative competitiveness is reflected in far lower levels of foreign investment as a percentage of GDP. The weak savings and foreign investment performance can be partly attributed to unfavourable global conditions. However, this only serves to raise the importance of dealing with concerns about the domestic business environment. Specifically, South Africa should continue in its efforts to boost both local and foreign investment by reducing the cost of doing business in South Africa and through the roll-out of the government's infrastructure development plans.

Trade and official development assistance (ODA)

As a relatively open economy, international trade is an important driver of growth. International trade can also be used as a tool to encourage the development of other countries, through the importing of goods and services produced by these countries. South Africa's imports have grown significantly since 2001, with a rising proportion of these imports coming from developing countries, and especially China. The global financial crisis, labour disputes and electricity shortages have contributed to poor export levels and total export volumes in 2013 were below those recorded in 2007. As a result, South Africa has experienced a significant deterioration in its current account balance with the rest of the world, with a net deficit recorded consistently over the past 11 years.

Further attention needs to be given to improving South Africa's export performance in order to drive long-term growth. This will require improvements to the overall business environment – such as lowering logistic costs and restoring energy supply – as well as targeted reforms and initiatives to support export-ready industries.

ODA accounts for a relatively small proportion of South Africa's overall budget, making the country far less reliant on foreign donors than other developing countries. While ODA is not a major source of South Africa's overall government revenue, there is nevertheless clear evidence that international donors have reprioritised funding away from South Africa since the global financial crisis. This trend is likely to continue and ODA flows to South Africa are expected to decline further over time. From the positive side, the country's low level of reliance on ODA is largely a reflection of the improved political and development status since 1994.

Research and Development (R&D)

The development of new technologies, products and processes enables productivity improvements, the creation of new product markets and the ability to foster growth. Investment in, and expenditure on, R&D therefore plays an important role in a country's socioeconomic development. South Africa's Ten-Year Innovation Plan (TYIP) and the NDP place significant emphasis on moving towards a knowledge-based economy, and increasing levels of R&D is a key factor in this shift.

The implementation of the 2008 System of National Accounts (SNA) has resulted in the introduction of a new R&D indicator, focusing on investment in R&D rather than total expenditure on R&D. This indicator, Capital Expenditure on R&D (CERD) as a percentage of GDP reflects South Africa's long-term investment in productive R&D. Nevertheless, both the revised domesticated indicator (CERD as a percentage of GDP) and estimates of total expenditure on R&D reflect that South Africa's R&D performance has declined since peaking in 2006/2007.

Some positive developments have occurred in the R&D and innovation space, including the awarding of the Square Kilometre Array (SKA) to South Africa and its partners. The SKA initiative is expected to boost R&D taking place within South Africa, particularly in astronomy, engineering, ICT and mathematics. It is also likely to have a broader positive impact on economic development, through employment and human capital development. However, there remains a significant gap between the deficiencies identified in South Africa's NSI and the strategies needed to address these. Further and deeper work is required to effectively develop solutions to drive South Africa's innovation system and re-orient South Africa away from commodity-based activities towards a knowledge-based economy.

Information and Communications Technology

Information and Communications Technology (ICT) is a fundamental pillar for development and the equitable dispersion of growth across economies. The ICT sector plays an important role in both the economy and in driving equitable access to information. Improved access to ICT services reduces the disadvantages associated with proximity, cuts transactions costs and improves the ability of citizens to engage in wider socioeconomic activities. From a human development perspective, therefore, ICT access is critical. Within this, voice communication via telephone has traditionally been of paramount importance, but is increasingly being displaced by data communications.

South Africa has effectively achieved universal access to voice-based communications, assessed through the two chosen domesticated indicators. While population access to fixed-line telephony has declined over the past decade, this has been effectively countered by a substantial rise in access to mobile lines. However, in terms of internet access (for which South Africa has no domesticated MDG indicator), progress appears to have been more limited. The government's ambition is to provide broadband coverage to all households by 2020.

The South African ICT sector has experienced rapid growth and technological innovation, and has achieved universal access in voice communication. The nature of the ICT market is such that for optimal sector performance, the policy and regulatory role that needs to be played by government is particularly complex and resource intensive. Further developments in this area are therefore required to unlock the future economic and developmental potential of the ICT sector and address the bottlenecks and hurdles facing stakeholders in this space.

Concluding on South Africa's progress and looking towards the Sustainable Development Goals (SDGs)

South Africa has made some progress, based on the domesticated indicators for MDG 8, in achieving macroeconomic stability and developing a framework to encourage the private sector roll-out of universal voice communications coverage. However, despite expansionary fiscal policies during and subsequent to the global recession, South Africa has failed to reach the desired levels of growth and has been unable to eliminate the fundamental constraints to inclusive economic development. High levels of inequality and low labour participation rates remain of major concern.

Looking forward, the SDGs focus on a wider array of development goals, with many of these related to MDG 8. In assessing South Africa's performance in MDG 8, it is clear that there remains room for improvement in both the country's performance and the measurement of this performance. Performance can be better measured where South Africa makes greater use of the relevant international indicators that will be incorporated in the SDGs. Defining specific targets for each of these SDG indicators upfront will also ensure that the country's progress can be better assessed.

Finally, the SDGs highlight a greater role for the private sector, and this therefore requires a significantly stronger partnership for development between private and public sectors. This is particularly pertinent for South Africa, and the country needs to move quickly from the development of policies and plans, to the effective implementation of strategies and programmes that are specifically targeted at encouraging public and private sector investment and removing barriers to long-term inclusive growth.

Official list of MDG Goal 8 indicators for South Africa*

Indicators	Target achievement status	Indicator type	No.
Target 8.A: Develop further an open, rule-based, predictable, non-discriminatory trading and financial system			
8.1. Gross domestic product per capita (current prices)	No target specified	DOM	N/A
8.2. Percentage investment share in GDP	Not achieved	DOM	2
8.3. Foreign direct investment net inflows and net outflows as percentage of GDP	No target specified	DOM	N/A
8.4. Gross saving as percentage of gross disposable income (GDI)	No target specified	DOM	N/A
8.5. Debt to GNI ratio	No target specified	DOM	N/A
8.6. Current account balance as percentage of GDP	No target specified	DOM	N/A
8.7. Inflation rate (CPI)	Achieved	DOM	2
8.8. Employment to population ratio	No target specified	DOM	N/A
8.9. Labour productivity	No target specified	DOM	N/A
8.10. Capital expenditure on research and development (CERD) as percentage of GDP	No target specified	DOM	N/A
8.11. Official development assistance received as percentage of GNI	No target specified	DOM	N/A
Target 8.B: Address the special needs of the least developed countries			
Target 8.C: Address the special needs of landlocked developing countries and small island developing states			
Target 8.D: Deal comprehensively with the debt problems of developing countries			
Target 8.E: In cooperation with pharmaceutical companies, provide access to affordable essential drugs in developing countries			
No domesticated indicators selected			
Target 8.F: In cooperation with the private sector, make available the benefits of new technologies, especially information and communication			
8.12. Fixed telephone lines per 100 population	Achieved	DOM	2
8.13. Cellular telephone subscribers per 100 population		DOM	
2/12			

* All of South Africa's Goal 8 indicators have been domesticated. In many cases, no targets exist for these indicators. Where targets have been identified in government policy documents, these have been used to assess progress.

1. INTRODUCTION

The 2000 Millennium Summit resulted in the formulation of eight international development goals, with a 2015 target for the achievement of these development goals. This was reaffirmed at the 2005 World Summit, which focused on a commitment to a global partnership for development. Specifically this summit highlighted the need for sound economic policies, good governance, the promotion of international trade and increasing the resources made available for development assistance and debt relief.

Millennium Development Goal (MDG) 8 focuses on this international (global) development agenda, with targets and indicators on: Growth, investment and savings; Official development assistance (ODA) and international trade; and Access to new technologies (particularly in terms of research and development (R&D) and communications). This report describes South Africa's progress against these specific indicators, and will serve as a key input into the country's MDG 2015 Country Report.

The overall targets for MDG 8, used since the introduction of the revised MDG framework by the UN General Secretary in 2007, are summarised in Table 1.

Table 1: MDG 8 targets

Target	Description
8.A	Develop further an open, rule-based, predictable, non-discriminatory trading and financial system (<i>Includes a commitment to good governance, development and poverty reduction – both nationally and internationally</i>)
8.B	Address the special needs of the least developed countries (<i>Includes tariff and quota-free access for the least developed countries' exports; enhanced programme of debt relief for heavily indebted poor countries (HIPC) and cancellation of official bilateral debt; and more generous ODA for countries committed to poverty reduction</i>)
8.C	Address the special needs of landlocked developing countries and small island developing states (through the Programme of Action for the Sustainable Development of Small Island Developing States and the outcome of the twenty-second special session of the General Assembly)
8.D	Deal comprehensively with the debt problems of developing countries through national and international measures in order to make debt sustainable in the long term
8.E	In cooperation with pharmaceutical companies, provide access to affordable essential drugs in developing countries
8.F	In cooperation with the private sector, make available the benefits of new technologies, especially information and communication

Source: United Nations MDG Indicators website: <http://mdgs.un.org/unsd/mdg/>

Effectively, MDG 8 reinforces and supports the achievement of the seven other MDGs. The aim is to ultimately ensure a sound and coherent domestic economic and social environment in which MDGs can be more easily and effectively achieved. MDG 8 also acknowledges the importance of international commitments by both developed and developing countries in ensuring a convergence in development priorities and achievements, in the context of increasingly globalised and interdependent economies.

In many cases, official MDG 8 indicators are not relevant to South Africa's development status. As a result, South Africa has chosen to report on only domesticated indicators for MDG 8. In some instances, where MDG 8 indicators are relevant, South Africa has chosen not to report on these indicators as a result of limited data availability. More information on these indicators is provided in Section 2.

For the 2015 MDG 8 report, these indicators have been grouped into five subsections: Growth, inflation and employment; Investment and savings; International trade and ODA; R&D and Information and Communications Technologies (ICT). Trends and insight for these indicators are provided in Section 3, while

Section 4 looks at the emerging framework for the Sustainable Development Goals (SDGs) post-2015. Finally, Section 5 summarises the key trends for MDG 8, based on South Africa's choice of domesticated indicators.

2. DATA SOURCES AND LIMITATIONS

The official list of MDG 8 indicators, as well as the list of domesticated indicators chosen for use by South Africa, is shown in Table 2.¹ It is clear that the majority of domesticated indicators used by South Africa relate to the general macroeconomic environment and therefore focus specifically on Target 8.A, which looks at an open and stable trading and financial system. In many instances, official MDG targets and indicators are also not relevant to South Africa. These include, for example, indicators on the progress of least developed and landlocked countries.

However, there are also indicators which resemble official MDG indicators but which may have some differences. This applies, for example, to two of South Africa's domesticated indicators, those looking at fixed telephone line and cellular (mobile) subscribers, which are effectively the same as the official MDG 8 indicators.

An important result from the choice to domesticate all indicators for MDG 8 is that there are few, if any, official and binding targets for the indicators used. As a result, in discussing the achievement of objectives, indicators have been measured against targets identified in various South African government policy and strategic documents. It must be noted that for many domesticated indicators, explicit targets do not exist.

Primary sources of original and underlying data include Statistics South Africa, the South African Reserve Bank, as well as national government department stakeholders such as the National Treasury, the Department of Science and Technology (DST) and the Department of Telecommunications and Postal Services. For consistency purposes, all domesticated indicators are analysed up to 2013, though further trends are discussed beyond this period where information is available. For all domesticated indicators used, data have been collected and provided by Statistics South Africa. However, not all underlying data used have been validated and assessed through the South African Statistical Quality Assessment Framework (SASQAF). There may therefore be inherent limitations in the extent to which some of the domesticated indicators provide a reliable assessment of progress.

Further analysis of trends and insights into shifts and changes in the official domesticated indicators is based on a range of national and international data, with the data sources and references provided where applicable. Here, a range of official and non-official data is used. In some instances, data quality limitations mean that insights based on this data can only be cautiously provided. Specifically, in assessing the extent to which internet access in South Africa has changed, use is made of data collected on both a household and an individual basis. Statistics South Africa has noted limitations and areas for improvement in the collection of ICT information through its survey instruments (Statistics South Africa, 2015).

¹ In some cases, indicators are assessed as a proportion or percentage of South Africa's overall economic size. This has been done by using a number of measures, including GDP, GNI and GDI. The use of these different measures is based on international practice in the use of different measures of economic size as a base, when assessing a range of indicators.

Table 2: Comparison of official and South African domesticated MDG 8 indicators

MDG 8 target	Indicator type	Official MDG 8 indicators	South Africa's indicators for MDG 8
8.A Develop further an open, rule-based, predictable, non-discriminatory trading and financial system	General		1. Gross domestic product per capita (current prices)
			2. Percentage investment share in GDP
			3. Foreign direct investment net inflows and net outflows as percentage of GDP
			4. Gross saving as percentage of gross disposable income (GDI)
			5. Debt to GNI ratio
			6. Current account balance as percentage of GDP
			7. Inflation rate (CPI)
			8. Employment to population ratio
			9. Labour productivity
			10. Gross fixed capital formation (GFCF) on research and development (R&D) as percentage of GDP
8.B Address the special needs of the least developed countries	Official development assistance (ODA)	8.1 Net ODA, total and to the least developed countries, as percentage of OECD/DAC donors' gross national income	11. Official development assistance received as percentage of GNI
8.C Address the special needs of landlocked developing countries and small island developing states		8.2 Proportion of total bilateral, sector-allocable ODA of OECD/DAC donors to basic social services (basic education, primary health care, nutrition, safe water and sanitation)	
8.D Deal comprehensively with the debt problems of developing countries through national and international measures in order to make debt sustainable in the long term		8.3 Proportion of bilateral official development assistance of OECD/DAC donors that is untied	
		8.4 ODA received in landlocked developing countries as a proportion of their gross national incomes	
		8.5 ODA received in small island developing states as a proportion of their gross national incomes	
Market access	8.6 Proportion of total developed country imports (by value and excluding arms) from developing countries and least developed countries, admitted free of duty		
	8.7 Average tariffs imposed by developed countries on agricultural products and textiles and clothing from developing countries		
	8.8 Agricultural support estimate for OECD countries as a percentage of their gross domestic product		
	8.9 Proportion of ODA provided to help build trade capacity		
Debt sustainability	8.10 Total number of countries that have reached their HIPC decision points and number that have reached their HIPC completion points (cumulative)		
	8.11 Debt relief committed under HIPC and MDRI initiatives		
	8.12 Debt service as a percentage of exports of goods and services		
8.E In cooperation with pharmaceutical companies, provide access to affordable essential drugs in developing countries		8.13 Proportion of population with access to affordable essential drugs on a sustainable basis	
8.F In cooperation with the private sector, make available the benefits of new technologies, especially information and communication		8.14 Fixed-telephone subscriptions per 100 inhabitants	12. Fixed telephone lines per 100 population
		8.15 Mobile-cellular subscriptions per 100 inhabitants	13. Cellular telephone subscribers per 100 population
		8.16 Internet users per 100 inhabitants	

3. MDG 8 TARGETS AND PROGRESS

3.1 GROWTH, INFLATION AND EMPLOYMENT

3.1.1 Background

South Africa has chosen to use four domesticated indicators to reflect the country's overall macroeconomic performance. These indicators provide a "snapshot" of the health of the South African economy. Given the macro-nature of these four indicators, the extent to which other MDG goals are achieved has a strong impact on the performance of these Goal 8 indicators. Similarly, strong growth, low inflation and high employment levels are all contributors to and indicators of a stable and prosperous economy.

The need for strong growth to address inequality and unemployment has long been recognised by the South African government. In 2004, the South African government undertook to halve poverty and unemployment by 2014, as highlighted in its Accelerated and Shared Growth Initiative – South Africa (ASGISA, 2006). The government estimated that the country would need to grow by roughly 5% over the decade; the ASGISA policy document aimed for two phases of growth to achieve this: averaging 4.5% or higher during the period 2005 to 2009, and 6% or higher during the period 2010 through 2014.

The risks associated with a "low-growth, middle-income trap" are well-defined in the country's current flagship long-term policy document, the National Development Plan (NDP, 2012). The NDP highlights that this trap has four key features: uncompetitive goods and services markets, uncompetitive labour markets, low domestic savings, and a poor skills profile. Through the implementation of this plan, these risks are to be mitigated and a number of macroeconomic growth and employment targets are expected to be achieved by 2030:

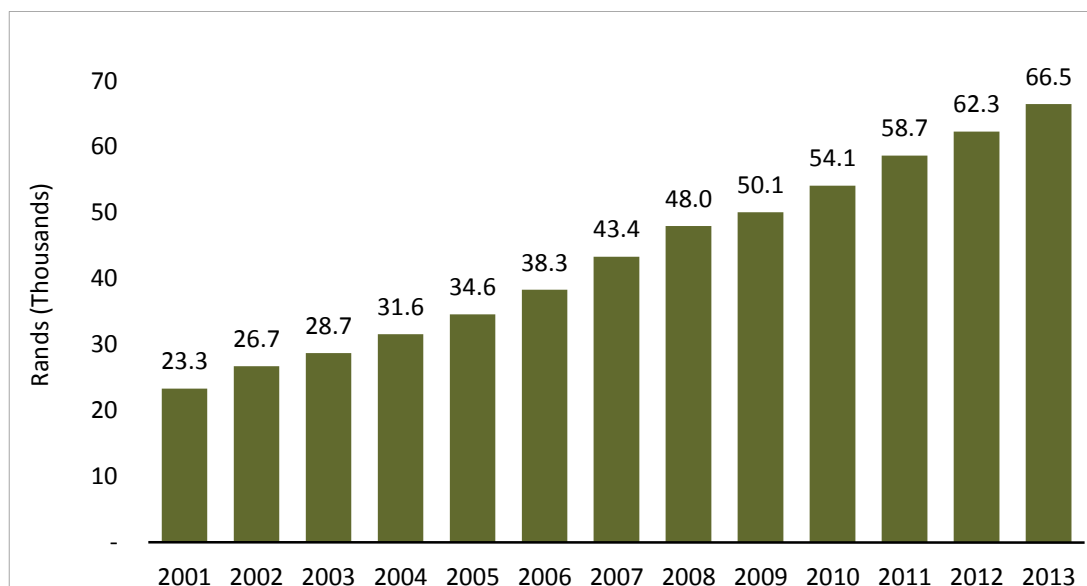
- Increasing the real size of the economy by 2,7 times through an average, real annual gross domestic product (GDP) growth rate of 5.4%;
- Increasing real GDP per capita by 2,2 times between 2010 and 2030;
- A fall in the 'strict' unemployment rate from 25% to 14% in 2020 and to 6% by 2030; and
- An increase in the labour force participation rate from 54% to 65% by 2030, with 11 million additional jobs to be created by 2030.

The New Growth Path (NGP, 2011) policy document aims to achieve the overall targets set out in the NDP through a focus on industrial policy. Together these plans articulate the need for a better educated workforce, improved health outcomes and a better business environment. A number of drivers within the NGP are defined to achieve sustained job creation and growth. These include substantial public sector infrastructure investment, targeting interventions in "labour-absorbing" sectors and fostering rural development and regional integration.

3.1.2 MDG indicators

GDP per capita provides an average estimate of the income earned by each individual in a country, regardless of the distribution of total income across the population. South Africa's GDP per capita (in nominal terms) has increased continuously over the past decade, though this growth has slowed somewhat since 2009. Between 2001 and 2008, nominal growth averaged 11%, falling to an average of 7% between 2008 and 2013. This reflects lower economic growth and a more subdued inflationary environment.

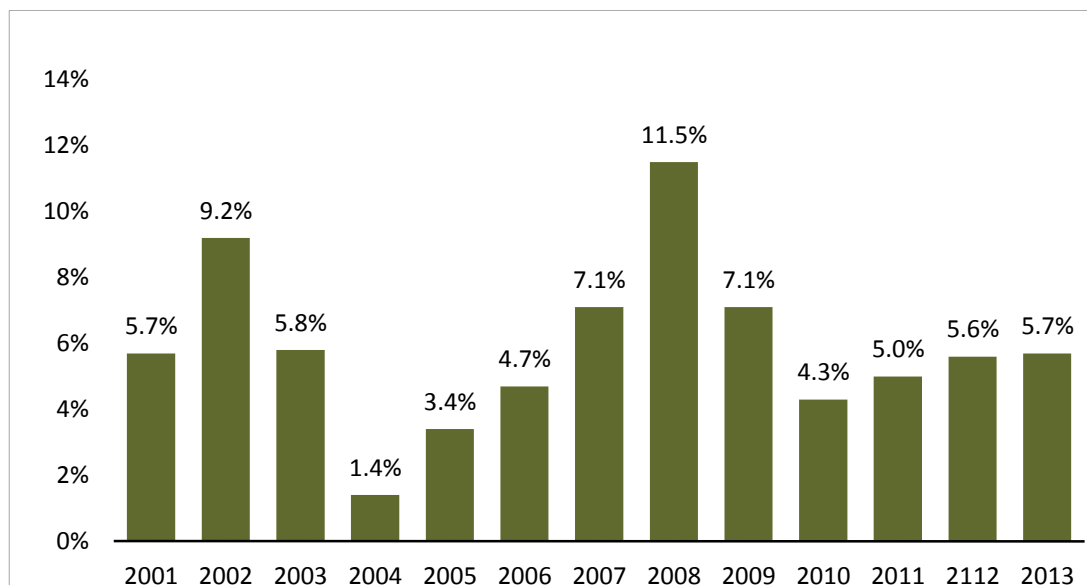
Figure 1: MDG Indicator 1 – GDP per capita (Current prices, Rands (Thousands))



Source: Statistics South Africa

As suggested by Figure 1, inflation as measured by the consumer price index (CPI) (Figure 2) has remained subdued since the end of 2008, averaging 5.5% between 2009 and 2013. This is far lower than the 2008 peak of 11.5%. More recently, South Africa's inflation rate has increased to just above the upper limit of the target band of 6%, averaging 6.1% in 2014. Inflation is nevertheless expected to fall within the target band in the short term, with the South African Reserve Bank forecasting inflation to average 4.8% over the course of 2015 (SARB, 2015).

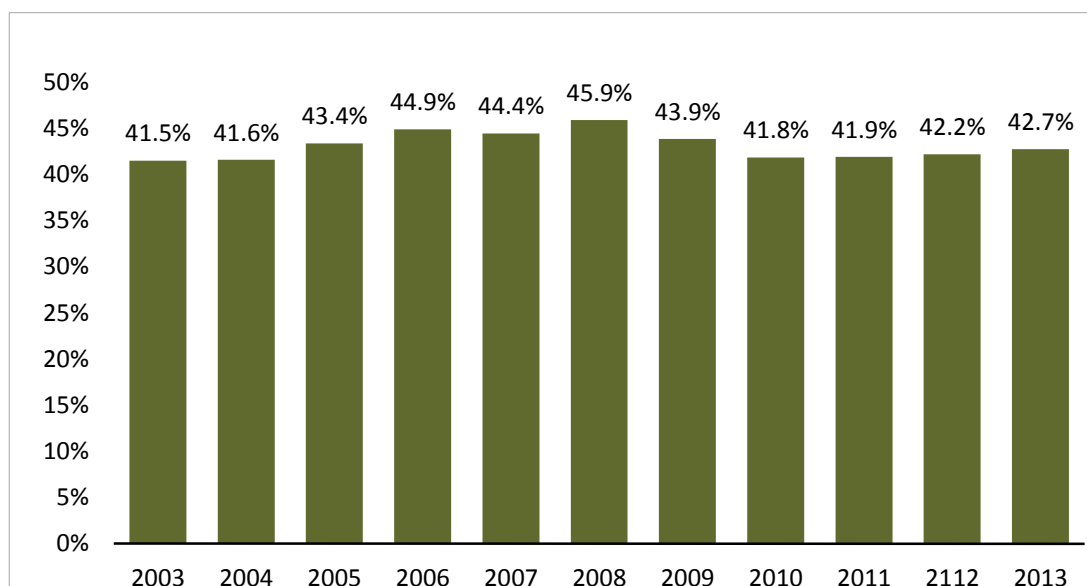
Figure 2: MDG Indicator 7 – Inflation rate (%)



Source: Statistics South Africa

South Africa's level of employment remains a great concern. This is reflected in the employment-to-population ratio, shown in Figure 3. The overall percentage of the working population employed peaked at 45.9% in 2008, but has fallen back somewhat since then.

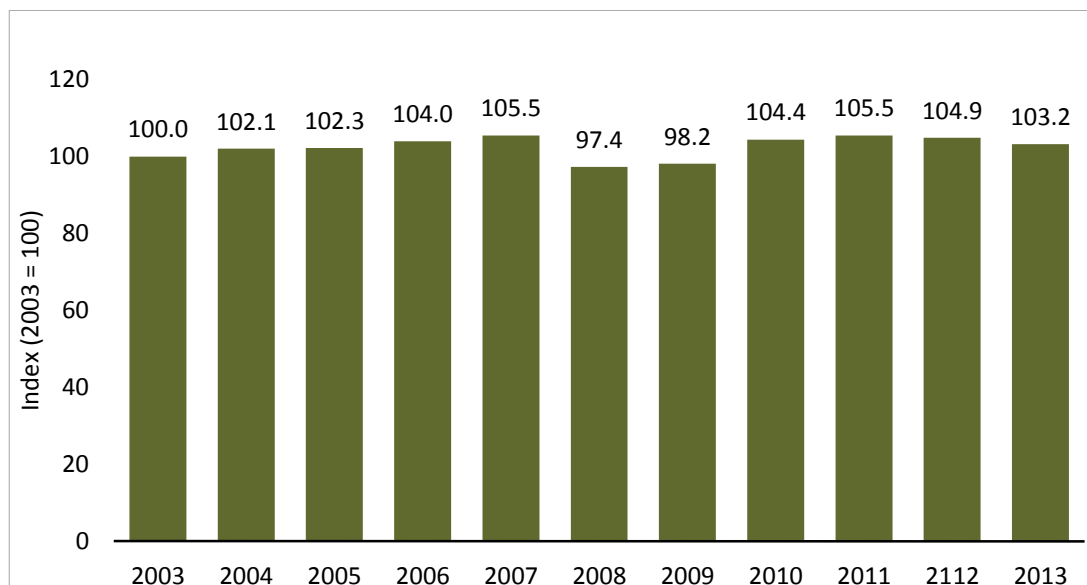
Figure 3: MDG Indicator 8 – Employment-to-population ratio (%)



Source: Statistics South Africa

Figure 4 suggests that South Africa's labour productivity has increased by only 3.2% between 2003 and 2013, at an annual average rate of just 0.3%. This low productivity growth within a low employment environment suggests that South Africa has struggled to increase both productivity and employment levels in order to remain competitive.

Figure 4: MDG Indicator 9 – Labour Productivity (Index, 2003 = 100)

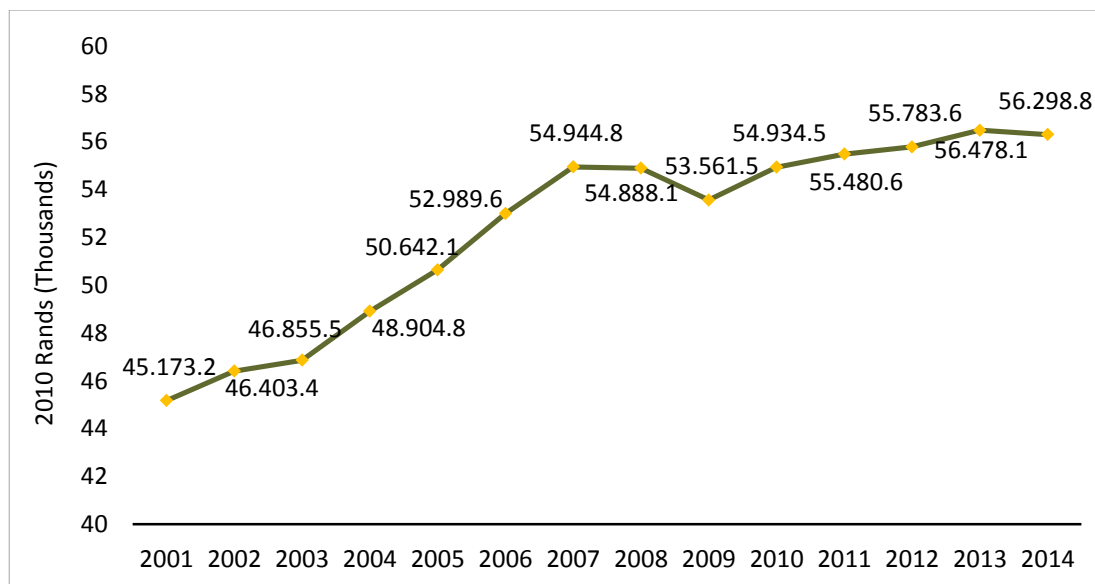


Source: Statistics South Africa

3.1.3 Further analysis

The official domesticated indicators provide a somewhat useful indication of South Africa's overall economic performance. However, this section provides an analysis of further indicators that provide deeper insight into South Africa's overall economic position. From a per capita income perspective, constant rather than nominal (current) GDP per capita is a much better indicator of real growth in the economy, and real improvements in individual incomes. This is shown in Figure 5.

Figure 5: Constant GDP per capita (2010 Rands)



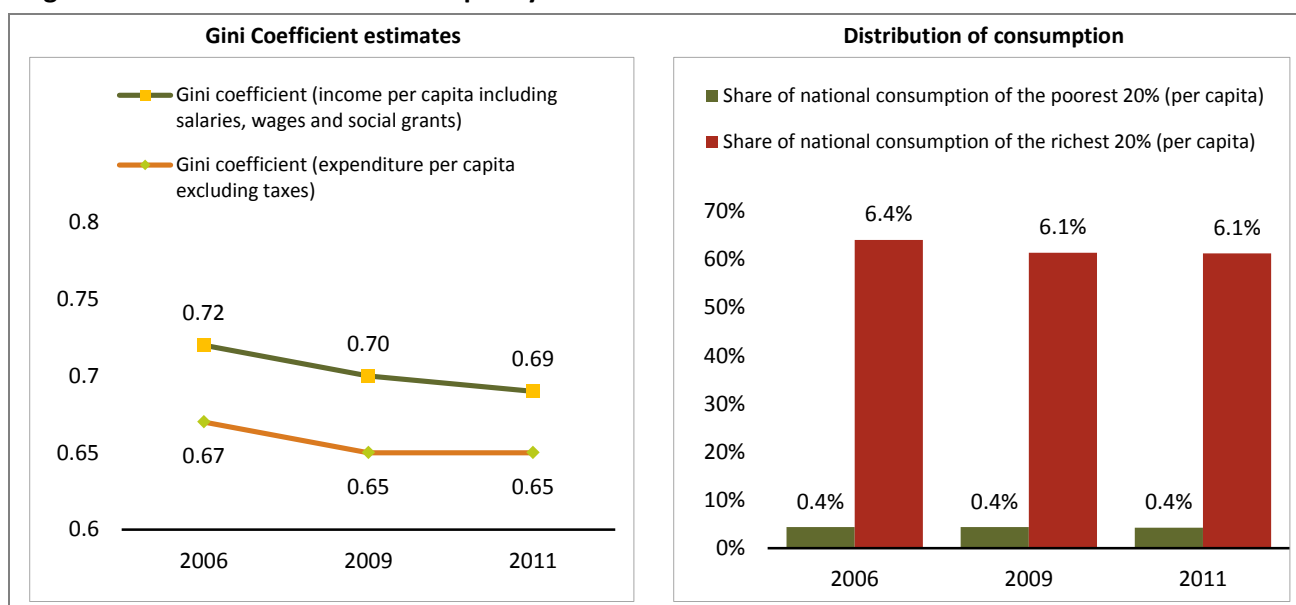
Source: Statistics South Africa

It is clear that real per capita incomes increased significantly between 2001 and 2007, with annual growth averaging 3.3%. Subsequently, improvements in real per capita income have been far lower than the nominal figures suggest. From 2007 to 2014, growth in real per capita GDP has averaged 0.3% on an annual

basis. Moreover, between 2013 and 2014, real per capita GDP experienced the first decline in real per capita GDP since the global financial crisis of 2008 and 2009.

An additional shortcoming of South Africa's official domesticated MDG indicator for per capita income is that this does not reflect the distribution of income amongst the population. South Africa has amongst the highest levels of measured inequality globally.² Estimates of inequality by Statistics South Africa (2014) are shown in Figure 6. Inequality, based on the Gini coefficient, has fallen between 2006 and 2011, though this reduction in inequality has been marginal, and overall levels of inequality remain unacceptably high.

Figure 6: South Africa's levels of inequality



Source: Statistics South Africa (2014)

The main driver of persistent inequality in South Africa is the high level of unemployment; in that large numbers of poor and previously disadvantaged households are effectively prevented from participating in formal economic activity. This is a consequence of the mismatch between the skills available in the workplace and those demanded by employers.

Estimates by the International Labour Organisation (ILO, 2014) for 2013 indicate a global average employment-to-population ratio of just under 60%. This figure is higher across many predominantly developing regions such as East Asia (67.5%), Latin America (61.9%) and sub-Saharan Africa (65.4%). Even prior to the global financial crisis, South Africa's labour absorption rate was significantly lower, peaking at just under 46% in 2008.

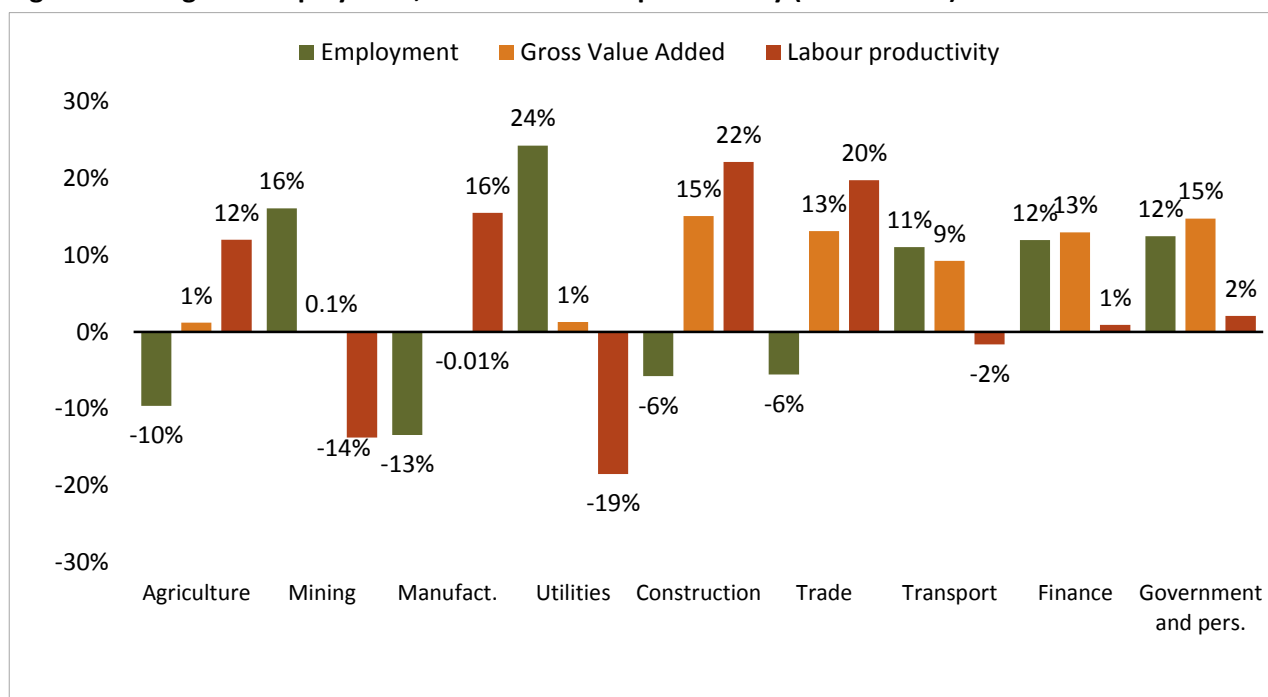
The country's low absorption rate is reflected in South Africa's high rate of unemployment, estimated at just over 25% in 2013. This is more than four times the global average and over three times the sub-Saharan African average, based on data from the ILO (2014). Based on this evidence, South Africa has failed to address long-term structural impediments to job creation and to undertake the policy reforms that are needed to encourage the greater use of the available labour force in existing and new industries.

In this low employment context, it is understandable that South Africa has seen a moderate increase in labour productivity, especially since 2009. However, the use of real GDP per worker as a measure of labour

² Based on information from the World Bank's World Development Indicators (WDI), South Africa had the highest level of inequality, based on the Gini Index, out of 101 countries for which data were available after 2009.

productivity masks underlying structural concerns. Figure 7 shows that there are relatively few industries where South Africa has seen growth in both productivity (as measured by value added per worker) and employment between 2008 and 2013.

Figure 7: Changes in employment, value added and productivity (2008 – 2013)



Source: DNA Economics based on data from Statistics South Africa

For industries such as agriculture and manufacturing, productivity increases have occurred largely due to job shedding, with the size of these sectors remaining relatively unchanged in real terms. Within the construction and trade sectors, productivity increases have occurred due to a combination of lower levels of absolute employment and large increases in the real size of these sectors. Industries that have seen an increase in the levels of employment have seen a marginal increase, or a fall, in productivity levels.

High levels of inflation can also have detrimental effects on poverty and inequality; as the poor (and especially the unemployed) are less able to adapt to rising prices. The official MDG indicator shows that inflation has consistently remained within the South African Reserve Bank's target band since 2008.³ This band was set at between 3% and 6% and has remained as such, except for a short period in 2001, when the upper limit was lowered to 5%.

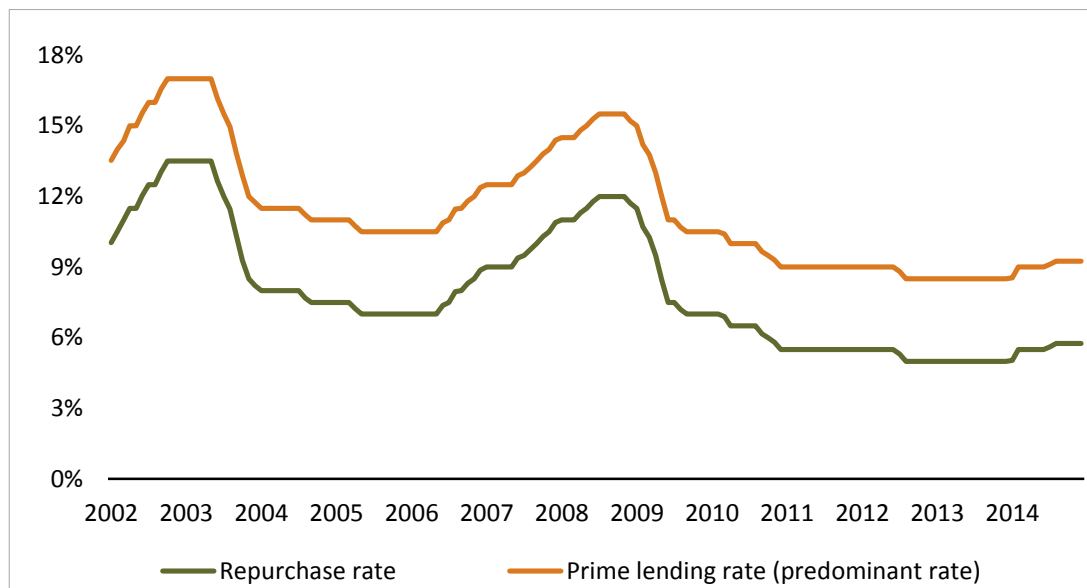
Food and fuel prices have a significant supply-side impact on inflation, as experienced in South Africa in the period prior to 2008, when the cost of fuel and food rose substantially, resulting in inflation levels that were well above the South African Reserve Bank's target range. Administered prices make up roughly 18.5% of the CPI basket, accounting for a range of regulated prices including electricity and water. Price increases in electricity and other fuels, and water and other services have increased well above the annual inflation rate over the past decade. Between 2008 and 2014, price increases in water (and other services) averaged 8%, while price increases in electricity (and other fuels) averaged 18%.⁴

³ Inflation targeting was adopted by the South African government in February of 2000. This entails the Minister of Finance mandating the South African Reserve Bank (SARB) to pursue a specific target range.

⁴ Based on CPI data from Statistics South Africa.

The South African Reserve Bank aims to manage the inflation rate by setting and adjusting the repurchase rate⁵ (and by extension the prime lending rate⁶) based on inflation forecasts and expectations of future price levels. Given the largely benign inflation environment that South Africa has experienced since 2008, the repurchase and prime lending rates have reached historical lows, as shown in Figure 8. South Africa's consumer price inflation exceeded the South African Reserve Bank's upper 6% limit of the target band in 2014, resulting in a small increase in lending rates. However, a steep decline in international oil prices between 2014 and 2015, together with continued weak domestic and international demand, resulted in consumer price inflation falling back below the upper limit of the target band by September 2014.

Figure 8: SARB repurchase and prime lending rates



Source: South African Reserve Bank

3.1.4 Conclusion

South Africa has performed admirably in managing inflation, due in part to lower international food and oil prices and prudent monetary and fiscal policies. However, the country has been unable to emulate levels of growth seen by other emerging market and developing economies.⁷ Within the Brazil, Russia, India, China, South Africa (BRICS) partnership, South Africa is the smallest economy (in terms of GDP and population), and has the lowest levels of both average growth and employment over the past decade. In addition, South Africa continues to sustain levels of inequality that are among the highest in the world.

In an increasingly global environment, South Africa competes for resources (both human and capital) and for market share for its products. International competitiveness rankings, such as the World Economic Forum's (2014–2015) Global Competitiveness Report, continue to highlight key weaknesses in South Africa's growth dynamics. The most severe of these include:

- The quality of primary education (ranking 133 out of 144 countries), higher education (140) and math and science education (144);

⁵ The basic rate at which private banks borrow from the South African Reserve Bank.

⁶ The rate that private banks use as the basis for lending to the public.

⁷ Based on data and country aggregates from the IMF World Economic Outlook (April 2015). Using GDP based on international purchasing power parity for comparisons of real growth, South Africa's annual average GDP growth was 5,4% for the period 2001 – 2013. This compares with 5,8%, 12,4%, 9,6% and 6,5% for Brazil, China, India and Russia respectively. Annual growth by other emerging market and developing economies (excluding BRICS countries) averaged 7% for this period.

- Poor labour-employer relations (144), a disjoint between pay and productivity (136), highly inflexible wages (139) and highly rigid labour legislation (143); and
- High levels of government regulation (120), significant business costs of crime and violence (133) and strong discouragement of FDI by existing regulations (104).

These indicators point to the need for a strong focus on both the basic drivers of development (such as adequate investment in quality education) and interventions that clearly address structural barriers to growth and employment.

3.2 INVESTMENT AND SAVINGS

3.2.1 Background

The government of South Africa has committed to boosting savings and investment in the economy through a number of initiatives, legislative changes and programmes, including inter alia, the Social Security and Retirement Reform (SSRR) initiative, the National Development Plan (NDP) and National Infrastructure Plan (NIP).

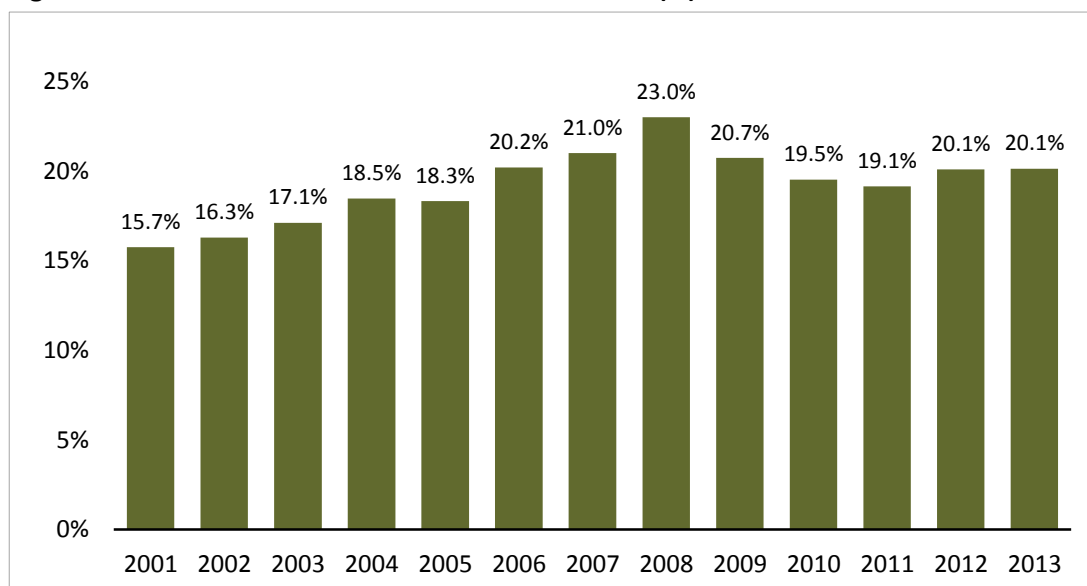
Strong levels of savings and investment are critical to economic growth, as GDP is a function of consumption, investment (and savings), government spending, exports and imports. As a developing country, South Africa is especially reliant on investment for its growth. The NDP states as one of its core priorities the need to increase investment: *“Bringing about faster economic growth, higher investment and greater labour absorption”* (National Planning Commission, 2012, page 16).

However, in order to achieve higher levels of investment, South Africa will need to raise additional finance, either through its own savings, by attracting investment from abroad, or through increased borrowings. South Africa’s investment standing is therefore reflected in four indicators, namely local investment as a percentage of GDP; foreign direct investment (FDI) as a percentage of GDP; gross savings as a percentage of GDP; and debt as a percentage of gross national income (GNI).

3.2.2 MDG indicators

Figure 9 below depicts the level of investment in South Africa as a percentage of GDP from 2001 to 2013. From 2001 to 2008, the share of investment in GDP grew consistently from 15.7% in 2001 to 23% in 2008. Following the financial crisis of 2008, investment declined by 2 percentage points in 2009, and continued to decline to 19.1% of GDP in 2011. From 2012 onwards, the country has seen a slight improvement in the share of investment in GDP. Comparing South Africa’s investment in 2013 to the other BRICS nations, China (49%), India (31%) and Russia (23%) performed better than South Africa, whereas Brazil (18%) did not.

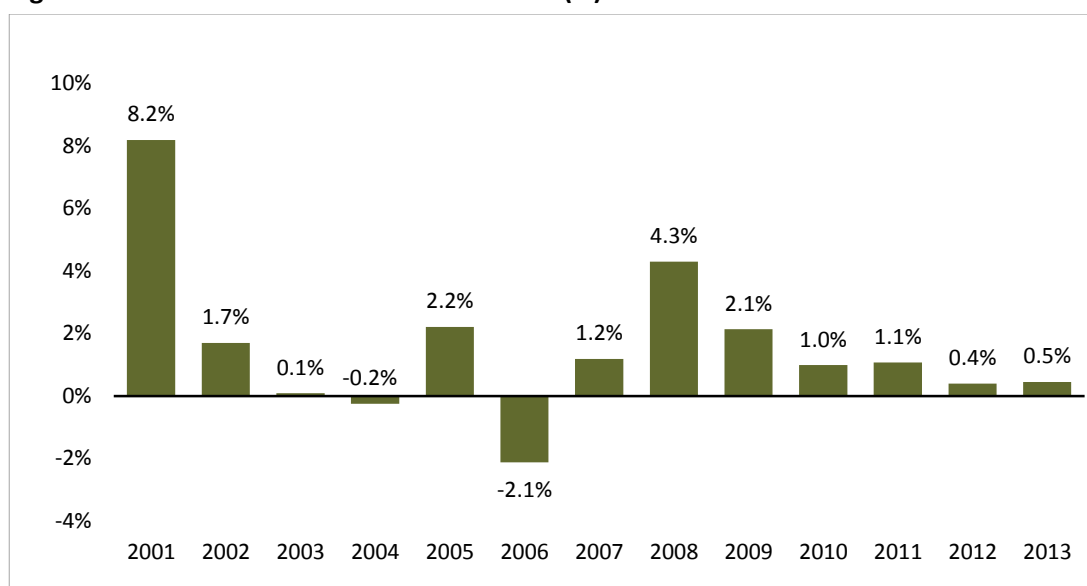
Figure 9: MDG Indicator 2 – Investment share in GDP (%)



Source: Statistics South Africa

Figure 10 reflects the level of FDI in South Africa as a percentage of GDP. This represents investment inflows emanating from outside of South Africa. As can be seen, FDI (as a percentage of GDP) has fallen sharply from 8.2% in 2001 to below 1% in 2013. Compared to other BRICS countries, South Africa's FDI remains low relative to Brazil (3.6%), China (3.8%), India (1.5%) and Russia (3.4%) in 2013.

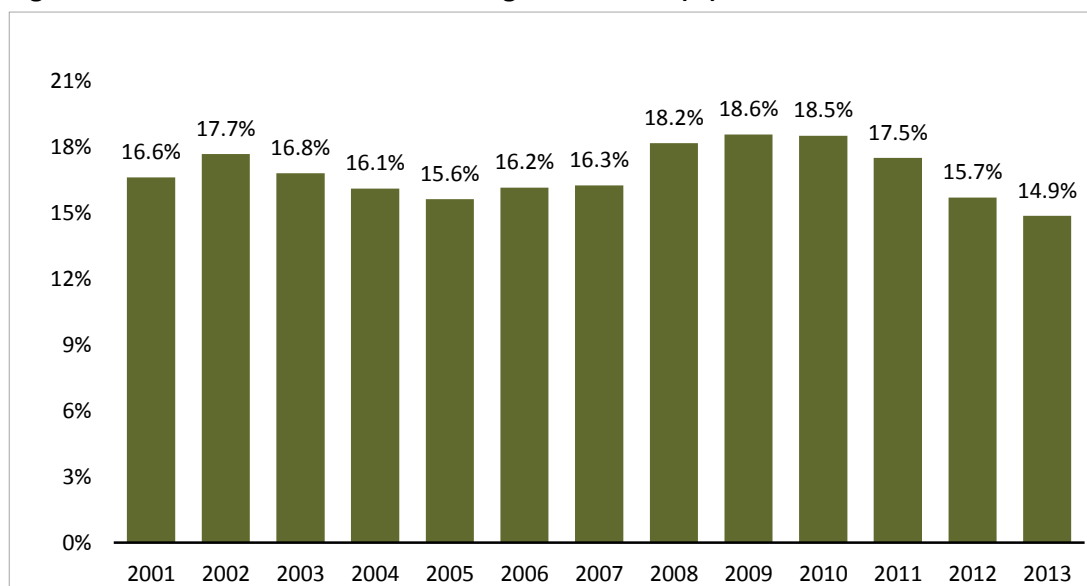
Figure 10: MDG Indicator 3 – FDI as % of GDP (%)



Source: Statistics South Africa

Figure 11 portrays the national savings level as a percentage of gross disposable income (GDI). This reflects the proportion of income saved nationally. South Africa's saving/GDI ratio has been relatively consistent over this period. It is, however, of concern that since 2009, the proportion of savings has declined from 18.6% to 14.9% of GDP in the space of five years.

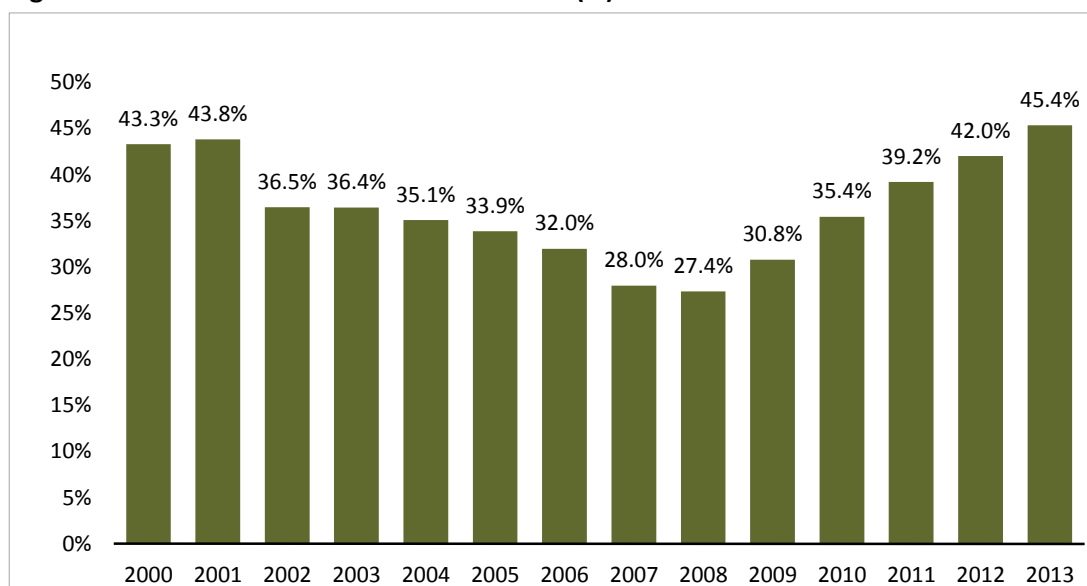
Figure 11: MDG Indicator 4 – Gross savings as % of GDI (%)



Source: Statistics South Africa

Figure 12 shows the level of debt as a percentage of GNI. Whereas overall national debt as a percentage of GNI fell, on balance, from 2000 (43.3%) to 2008 (27.4%), it has subsequently increased from 27.4% in 2008 to 45.4% in 2013 in response to slower economic growth and a widening government deficit.

Figure 12: MDG Indicator 5 – Debt as % of GNI (%)



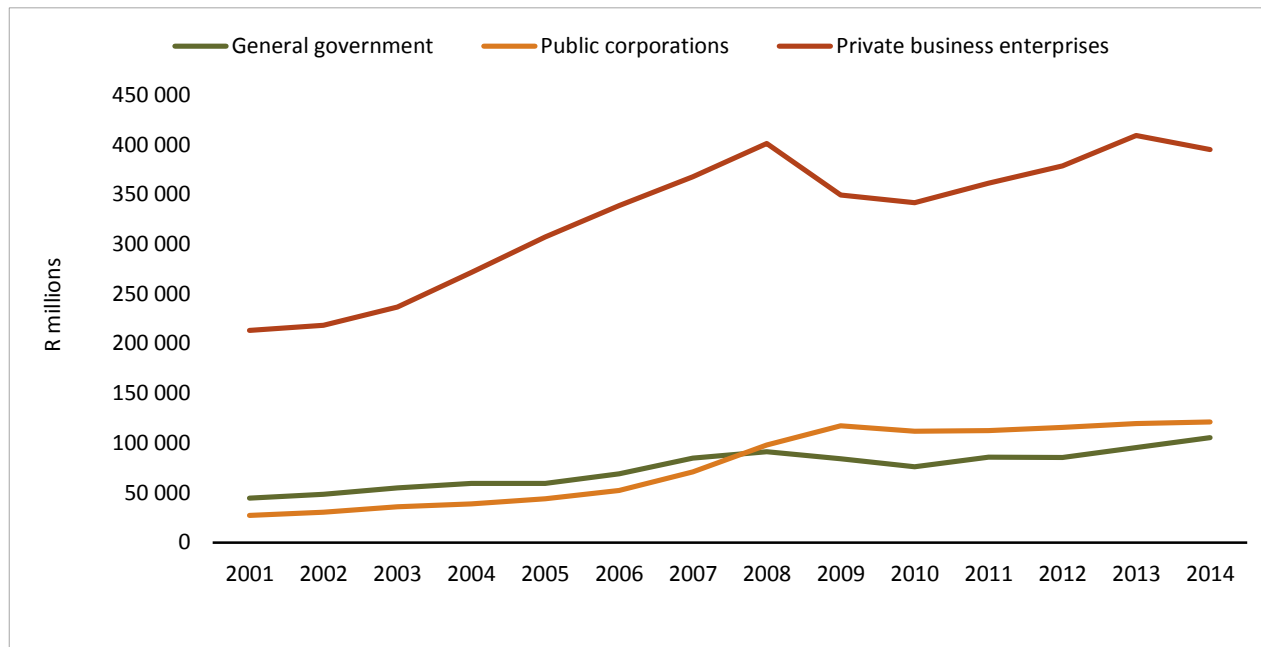
Source: Statistics South Africa

3.2.3 Further analysis

Understanding why South Africa's investment and savings levels are declining while debt is rising requires a closer look at both local and global factors. All four savings and investment indicators reflect a step change in 2008, commensurate with the global recession. From then onwards, savings and investment declined while debt levels rose sharply. Rising debt indicates an attempt to stimulate otherwise stagnant growth during a period of low global and domestic demand.

More detailed analysis of public and private sector investment shows that there has been a slowdown in investment since 2009. As shown in Figure 13, the private sector has been the biggest contributor to capital investment in South Africa, and real investment from this sector only recovered to pre-recession levels in 2013.

Figure 13: Gross Fixed Capital Formation (Investment) by sector (constant 2010 prices)



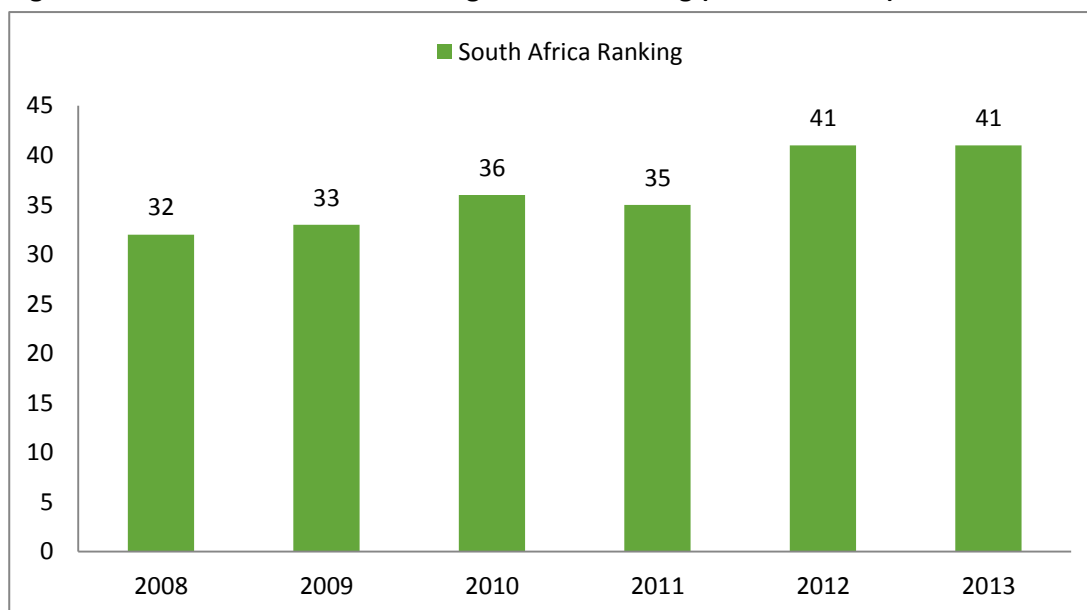
Source: Based on data from South African Reserve Bank

The South African National Treasury noted that between the 2008/09 and 2010/11 fiscal years, the proportion of government's infrastructure spending declined from 98.6% to 68.3% of the allocated budget. This was largely as a result of budget underspending by provincial and municipal departments, as well as public enterprises (National Treasury, 2012). As shown in Figure 13, this resulted in falling real investment by both public corporations and general government during this period. Government interventions (including efforts to improve infrastructure planning and enhancing institutional capacity (National Treasury, 2015) has since seen an increase in investment by general government, as shown in Figure 13.

South Africa has also experienced a persistent decline in the rate of FDI from 8.2% of GDP in 2001 to 0.5% in 2013. Foreign investment is highly responsive to perceptions about the local business climate, and with reference to the Ease-of-Doing-Business Index shown in Figure 14

, South Africa has experienced deterioration in its world rankings since 2008. Furthermore, the South African government and many domestic institutions have experienced downgrades in their risk ratings by the dominant international ratings agencies since 2008. This would also impact adversely on the decisions of foreign investors. However, the government recognises this as a challenge and has set a goal *"To improve government's efficiency and effectiveness in attracting investment by creating an environment conducive to business operation"*, and to increase FDI in South Africa (DPME, 2012, pp. 6 and 86).

Figure 14: South Africa's Ease-of-Doing-Business ranking (lower is better)

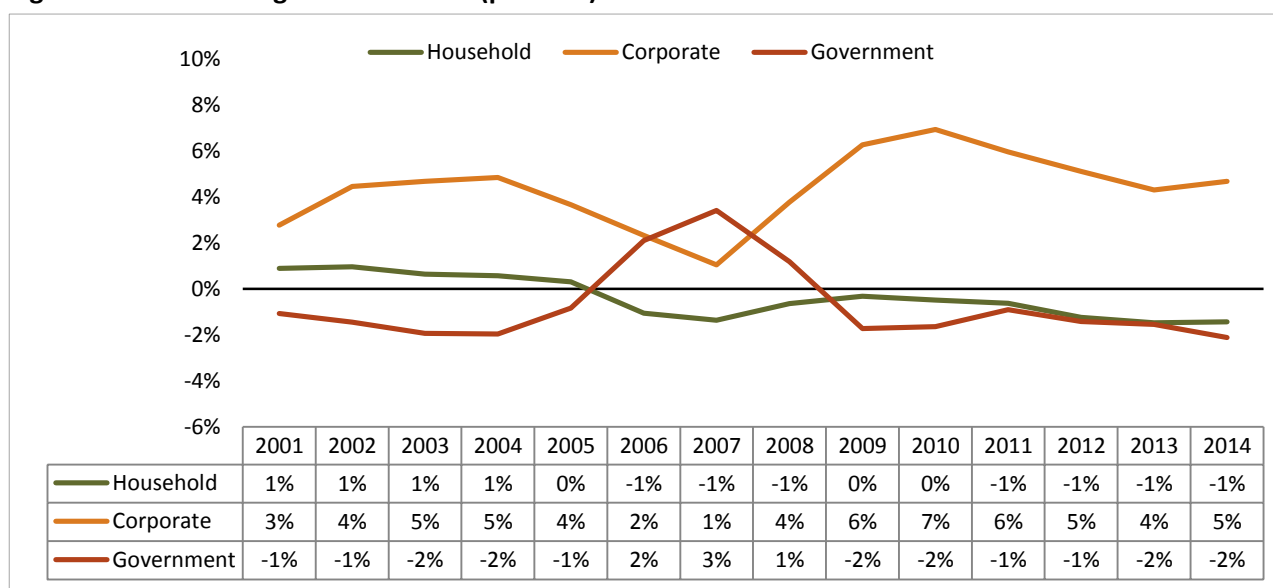


Source: World Bank (Ease of Doing Business)

In the face of lower international investment, domestic savings will become a critical source of domestic investment. In South Africa, the overall savings rate is constrained by the persistently high unemployment rate and household indebtedness. Figure 15 shows that South African households have been net dis-savers since 2005, and currently borrow more than they contribute to the national savings pool. Government too has become a significant dis-saver since 2009. Consequently, the corporate sector is the only net contributor to domestic savings in South Africa, and total corporate sector savings have exceeded 4% of GDP since 2009. Whereas corporate savings are an important source of national savings, the recent increase also reflects some reluctance from the private sector to invest in the South African economy.

In terms of the challenges around national savings, the South African government has committed itself to a boosted savings environment via the SSRR initiative, the National Financial Education Network, the Consumer Protection Act, as well as the tax breaks for special savings accounts to encourage private savings (G20, 2014). Moreover, regarding government debt, the *“Government aims to limit its debt and reduce its demands on the financial markets”* (DPME, 2012, page 9). Thus, even though there are challenges facing South Africa regarding its savings, investment and debt levels, there is a clear acknowledgement of these issues as well as the goal to address them.

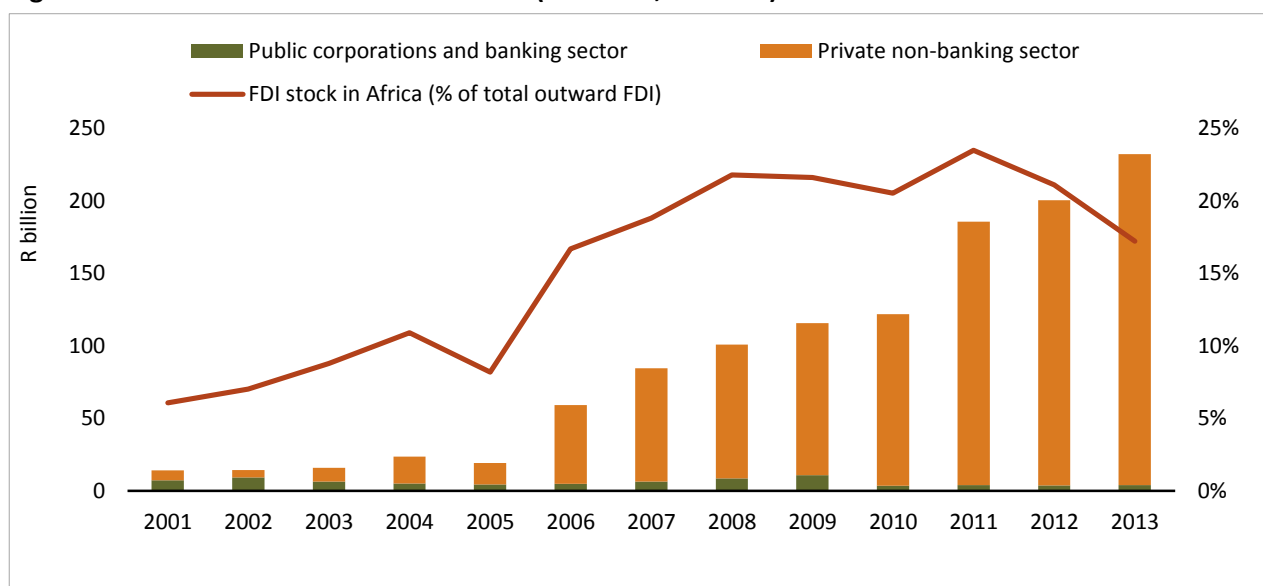
Figure 15: Gross savings as a % of GDP (per cent)



Source: Based on data from South African Reserve Bank

From a global perspective, South Africa plays an integral role as an investor on the rest of the continent. Measured by FDI stocks, South Africa is one of the largest investors in the rest of Africa. South Africa's FDI stock (in nominal terms) in the rest of Africa has grown substantially since 2001, as shown in Figure 16, with this growth driven by the private non-banking sector. South Africa's FDI stock in Africa has grown from under R15 billion in 2001 to over R230 billion in 2013, in nominal terms. Africa's growing importance as an investment destination for South Africa is underlined by the fact that South Africa's investment in Africa has grown from 6% in 2001 to just under 18% of South Africa's total outward FDI in 2013.

Figure 16: South Africa's FDI stock in Africa (R billions, nominal)



Source: Based on data from South African Reserve Bank Quarterly Bulletins

3.2.4 Conclusion

South Africa's overall savings and investment climate is cause for concern and is likely to constrain the country's future growth potential. Investment as a percentage of GDP has improved from 2001 (15.7%) to 2008 (23%), but has fallen considerably over recent years. FDI has declined dramatically since 2001 and in 2013 measured below 1 per cent of GDP. National savings as a percentage of GDP have, on balance, contracted from 2001 (16.6%) to 2013 (14.9%), and as a result, the country has become increasingly dependent on borrowings from abroad to finance its spending plans.

While this low savings and investment performance can be partly attributed to unfavourable global conditions, this only serves to raise the importance of dealing with concerns about the domestic business environment. Specifically, South Africa should continue in its efforts to boost both local and foreign investment by reducing the costs of doing business in South Africa and through the roll-out of government's infrastructure development plans.

3.3 INTERNATIONAL TRADE AND ODA

3.3.1 Background

As a developing and comparatively open economy, South Africa depends on the strength of its relations with the rest of the world as a market for the goods and services that are produced domestically, and as a source for the diverse range of imports that are required by domestic producers and consumers. In addition, South Africa has historically received a reasonable amount of direct assistance from its international partners, which has served to support the country's development plans across a number of priority areas.

These two aspects of South Africa's engagement with the world economy are reflected in the two indicators presented in this section, i.e. South Africa's current account balance (as a % of GDP), and the value of ODA received (as a % of GNI). There are no international or national targets for these two domesticated indicators.

The current account balance describes the net flows of income recorded by South Africa as a result of the country's trading activities; payments and receipts of profits or dividends from investments in and out of the country; and the payments and receipts of donations and remittances. A positive balance indicates that the country is receiving more in the way of export earnings, dividends, donations and remittances than it is paying to foreign suppliers, individuals or investors.

The only component of the current account that is specifically targeted and supported by government, is the trade balance, and specifically exports. The NDP targets an annual export growth rate (in volume terms) of 6% up to 2030, with non-traditional exports to grow by 10% a year (NDP). To do so, it argues, will require improvements in human capital, infrastructure and productivity. The Trade Policy and Strategic Framework (2010) of the Department of Trade and Industry (DTI) *"sets out the principles, approaches and key elements that should shape South Africa's strategy for integration into the global economy"*, but does not specify any specific interventions or targets (DTI, 2010, p. xii). That said, the DTI does offer substantial support to new and existing exporters through direct incentives, trade missions, information services and its offices abroad.

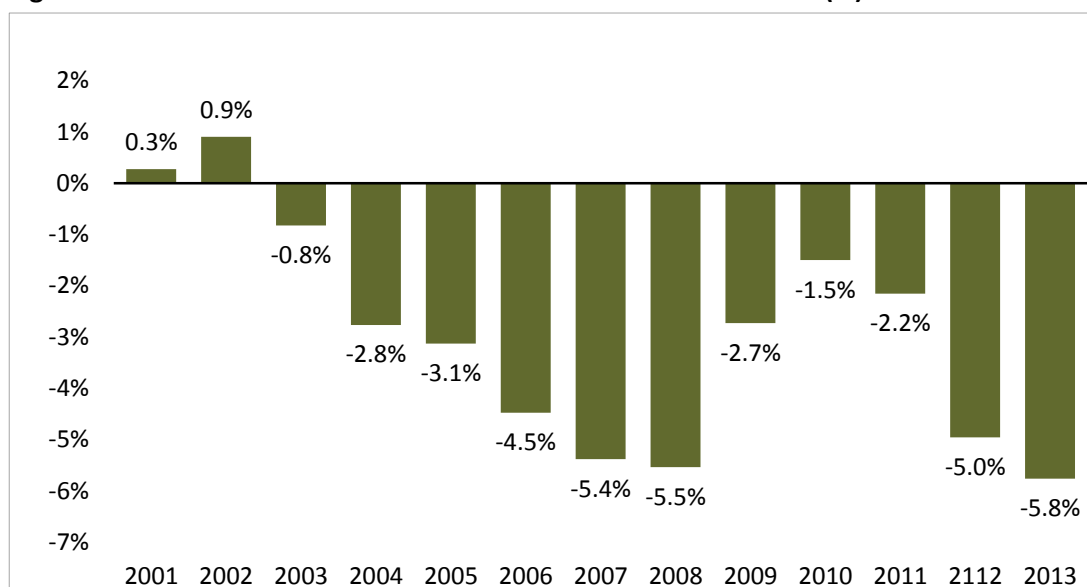
The value of ODA indicates the total amount of financial assistance provided by international donors, to the people of South Africa. Whereas some of this assistance is channelled through the national budget or specific government departments; some donors have established significant operations in South Africa

from which they dispense and manage these funds. It is also important to acknowledge that South Africa is in the process of establishing its own donor agency, the South African Development Partnership Agency (SADPA), with an annual budget of R500 million (Lucey and O’Riordan, 2014).

3.3.2 MDG indicators

Since 2003, South Africa has experienced a significant deterioration in its current account balance with the rest of the world, with a net deficit recorded consistently over the past 11 years. Whereas the overall deficit declined in the aftermath of the global financial crisis of 2008, it has widened again in recent years, reaching a peak of 5.8% of GDP in 2013. To fund this large and growing deficit and keep the economy in balance, net outflows through the current account must be matched by an equivalent in-flow through the financial account. This has consequently increased South Africa’s dependence on foreign investors and short-term portfolio flows.

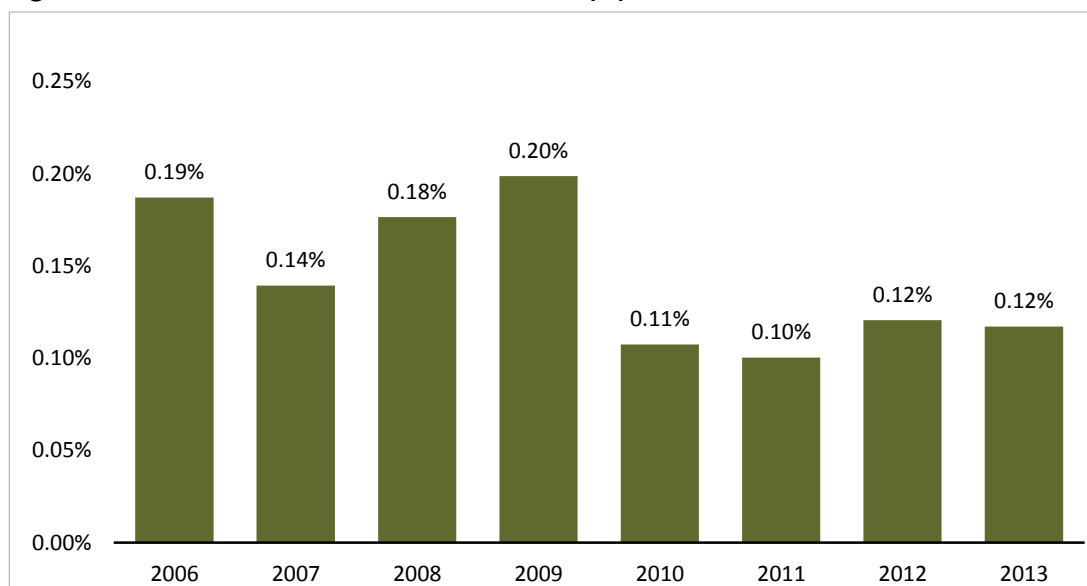
Figure 17: MDG Indicator 6 – Current Account Balance as % of GDP (%)



Source: Statistics South Africa

ODA is not a major source of South Africa’s overall government revenue, accounting for around 0.1% of gross national income (GNI) since 2010. The marked drop in ODA between 2009 and 2010 was partly in response to the budget austerity plans of the major donor nations in the wake of the global financial crisis, but also reflects a longer-term shift in development priorities away from middle-income countries such as South Africa, and towards poorer and crisis-hit regions. This trend is likely to continue and ODA flows to South Africa are expected to decline further over time.

Figure 18: MDG Indicator 11 – ODA as % of GNI (%)

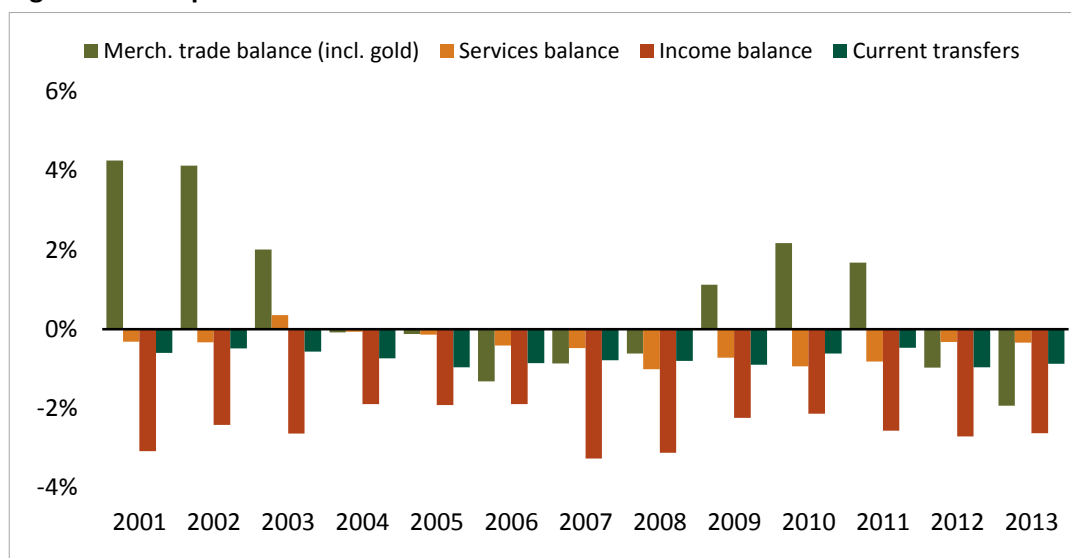


Source: Statistics South Africa

3.3.3 Further analysis

In order to understand what is driving South Africa's widening current account deficit, it is necessary to break it down into its component parts. The components of the current account are shown in Figure 19. It is clear that throughout this period, income (items such as dividends and profit repatriation) and current (items such as remittances and donations) payments from South Africa have exceeded South Africa's receipts from abroad. Imports of services generally exceed exports, but not by a large amount. The main change over this period has been in the trade balance, which has moved from a large net surplus position in the early 2000s, to a substantial deficit in 2013.

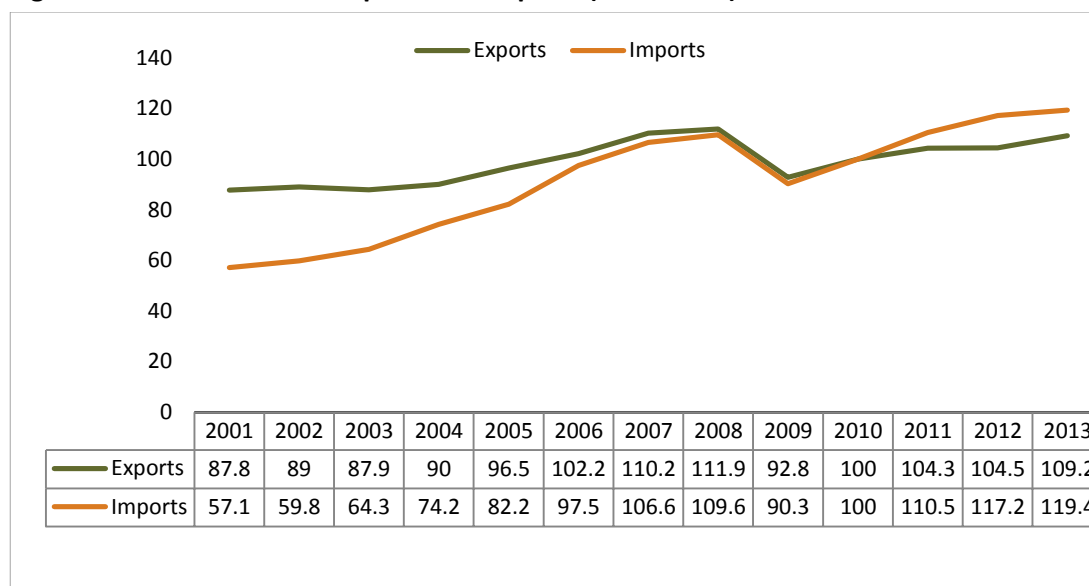
Figure 19: Components of the current account



Source: South African Reserve Bank

The underlying reason for the deterioration in South Africa's trade balance is shown in Figure 20. Overall import volumes have grown at a buoyant pace since 2001, interrupted briefly by the slowdown in domestic growth and demand over the period of the global financial crisis. South Africa's exports, on the other hand, have remained relatively stagnant over this period; total export volumes in 2013 were below those recorded in 2007. This is partly a reflection of the strong demand for imported industrial inputs into South Africa's infrastructure expansion programme; but also reveals the adverse impact of recent electricity shortages and labour disputes on the exports of mining and metal products.

Figure 20: Total volume of exports and imports (2010 = 100)



Source: South African Reserve Bank

The surge in imports over the past decade has also contributed to some marked shifts in South Africa's international trading relations. These are shown in Table 3. In 2003, just under half of South Africa's total imports were purchased from its traditional trading partners, being Germany, the USA, the UK, Japan, and for oil, Saudi Arabia. By 2013, China and India had established themselves amongst South Africa's leading trading partners, and the number of developing countries amongst South Africa's top 20 sources of imports had increased from four to eight. The emerging importance of three of South Africa's BRIC (Brazil, Russia, India and China) partners can also be clearly seen in this table.

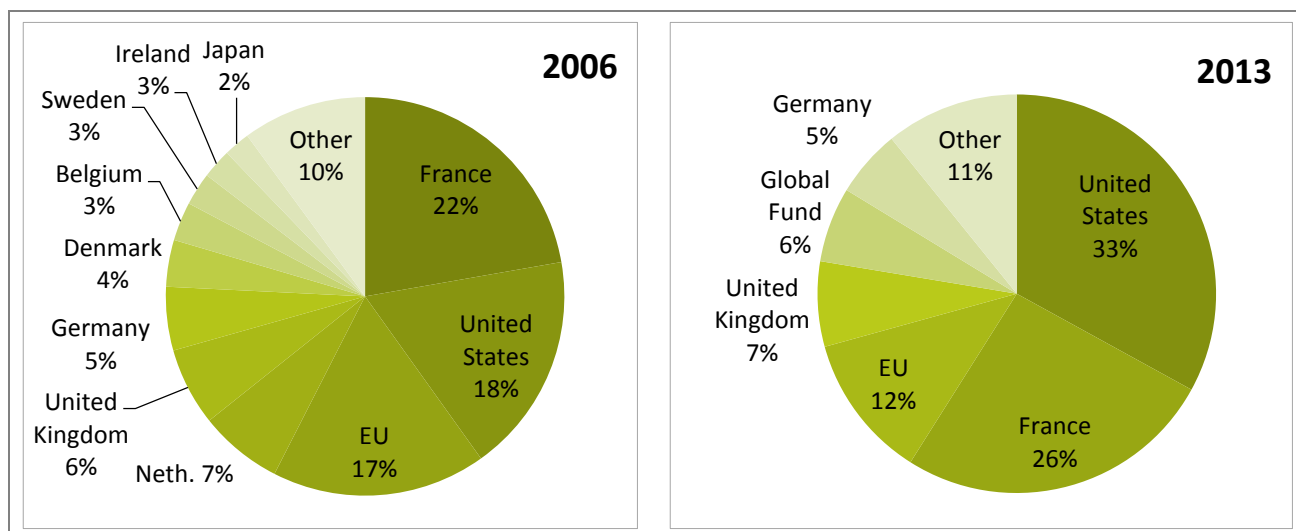
Table 3: Top 20 sources of imports (developing countries shaded)

Rank	Exporters	Imports 2001 (US\$ mn)	% of total	Exporters	Imports 2013 (US\$ mn)	% of total
1	Germany	3 768	14.7%	China	16 011	15.5%
2	United States of America	3 046	11.9%	Germany	10 699	10.3%
3	United Kingdom	2 144	8.4%	Saudi Arabia	8 027	7.8%
4	Saudi Arabia	1 745	6.8%	United States of America	6 566	6.3%
5	Japan	1 722	6.7%	India	5 377	5.2%
6	China	1 064	4.2%	Japan	4 077	3.9%
7	Iran (Islamic Republic of)	1 036	4.0%	Nigeria	3 617	3.5%
8	France	958	3.7%	United Kingdom	3 342	3.2%
9	Italy	943	3.7%	Thailand	2 750	2.7%
10	Australia	708	2.8%	Italy	2 696	2.6%
11	Brazil	694	2.7%	France	2 319	2.2%
12	Taipei, Chinese	529	2.1%	Singapore	1 971	1.9%
13	Netherlands	479	1.9%	Angola	1 961	1.9%
14	Switzerland	476	1.9%	Spain	1 887	1.8%
15	Korea, Republic of	451	1.8%	Korea, Republic of	1 876	1.8%
16	Belgium	370	1.4%	Netherlands	1 662	1.6%
17	Ireland	349	1.4%	Brazil	1 607	1.6%
18	Finland	307	1.2%	Australia	1 337	1.3%
19	Sweden	304	1.2%	Mozambique	1 270	1.2%
20	Malaysia	286	1.1%	Swaziland	1 166	1.1%

Source: ITC Trade Map based on South African Revenue Services (SARS) and UN Comtrade data

Likewise, there have been clear shifts in the pattern of South Africa's ODA receipts from international donors. According to the data submitted to the Creditor Reporting System of the Organisation for Economic Co-operation and Development (OECD), the USA has replaced France as South Africa's most important official donor; and the relative contributions from many other European countries have fallen over the past 7 years. Specifically, ODA contributions from the Netherlands, Denmark and Ireland have been cut considerably over this period. At the same time, new donors such as the Global Fund and China (which do not report to the OECD) have begun to emerge, and South Africa itself has become an important contributor to development institutions and programmes.

Figure 21: ODA disbursements to South Africa (% of total)



Source: OECD Creditor Reporting System

3.3.4 Conclusion and recommendations

South Africa's international economic relations, as described by the two current indicators, appear to be under strain. Specifically, the current account balance reveals a large and widening deficit, and ODA to South Africa is small and falling. Whereas South Africa's performance against the first of these indicators is cause for concern; the country's low level of reliance on ODA is largely a reflection of the improved political and development status since 1994.

It follows, that serious and urgent attention needs to be given to improving South Africa's export performance. Low levels of demand, especially for the commodities that South Africa produces and exports, impose limits on what can be achieved in the short-term. But in the longer term, more needs to be done to increase the competitiveness and diversity of South Africa's export bundle. This will require improvements to the overall business environment – such as lowering logistic costs and restoring energy supply – as well as targeted reforms and initiatives to support export-ready industries.

3.4 RESEARCH AND DEVELOPMENT

3.4.1 Background

A country's ability to invest in R&D is an important source of growth; and a contributor to the global body of knowledge. The DST formulated a Ten-Year Innovation Plan (TYIP) in 2007, targeting expenditure on R&D at 2% of GDP by 2018 and doubling South Africa's share of global research outputs from 0.5% in 2002 to 1% by 2018. The NDP builds on these targets and provides further proposals for improving South Africa's national research and innovation system. These include enhancing linkages between various public and private research and learning institutions; improving mathematics and science outcomes at school level; developing centres of excellence; and increasing funding available for R&D and innovation in the private and public sectors.

3.4.2 MDG indicators

South Africa, through joint work by the South African Reserve Bank and Statistics South Africa, is in the process of phasing in the 2008 System of National Accounts (SNA, 2008). A large proportion of the changes from the 1993 System of National Accounts (SNA, 1993) have been phased-in during 2014.

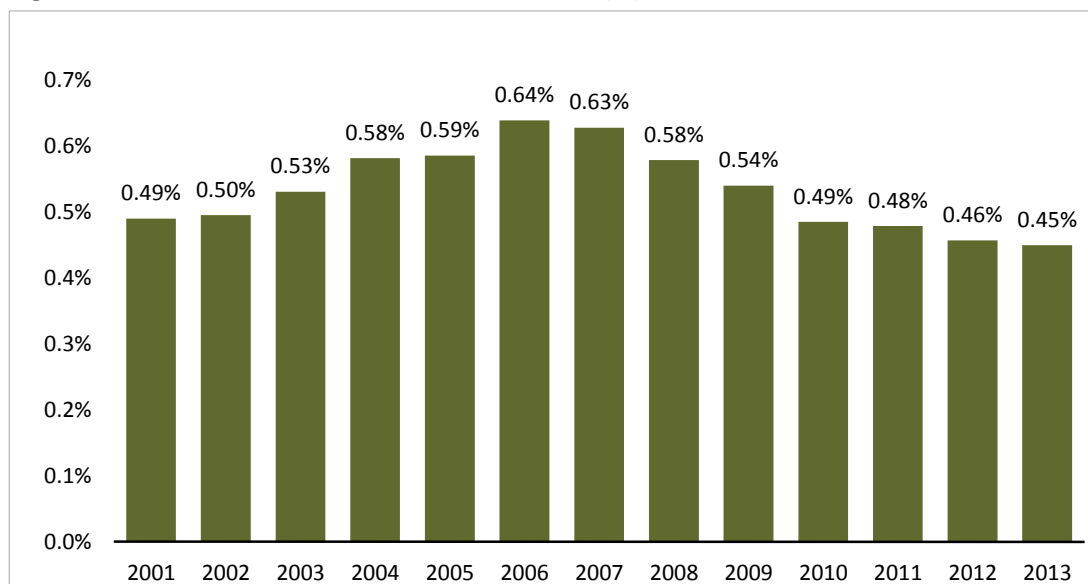
Among these is the capitalisation of R&D based on an internationally standardised framework and in line with SNA 2008 requirements. Ultimately, the impact is that only certain portions of R&D activity can be capitalised. This has resulted in the development of a new indicator, looking specifically at Capital Expenditure on Research and Development (CERD). This indicator therefore captures only the portion of expenditure that can be considered investment, while Gross Expenditure on R&D (GERD) captures all expenditure on R&D activities.

South African data for CERD, in line with the 2008 SNA, were first published in December 2014. This data excludes R&D undertaken primarily for knowledge generation (basic research), which cannot be capitalised under the 2008 SNA. CERD is predominantly undertaken in the private sector and not-for-profit research centres, while higher education institutions tend to focus on basic research.

The 2015 MDG 8 report therefore includes a significant change in the reporting on R&D. In order to more accurately reflect on capitalised, long-term investment in R&D, the R&D indicator reflecting gross expenditure has been replaced by one reflecting capital expenditure. CERD as a percentage of GDP is shown in Figure 22. The previous indicator used as an official domesticated indicator (GERD as a percentage of GDP) is included for comparative purposes (Figure 23).

Based on Figure 22, South Africa's CERD peaked at 0.64% of GDP in 2006. It has since been in decline, falling to a low of 0.45% of GDP in 2013, suggesting the private sector investment in R&D has fallen since 2007.

Figure 22: MDG Indicator 10 – CERD as % of GDP (%)

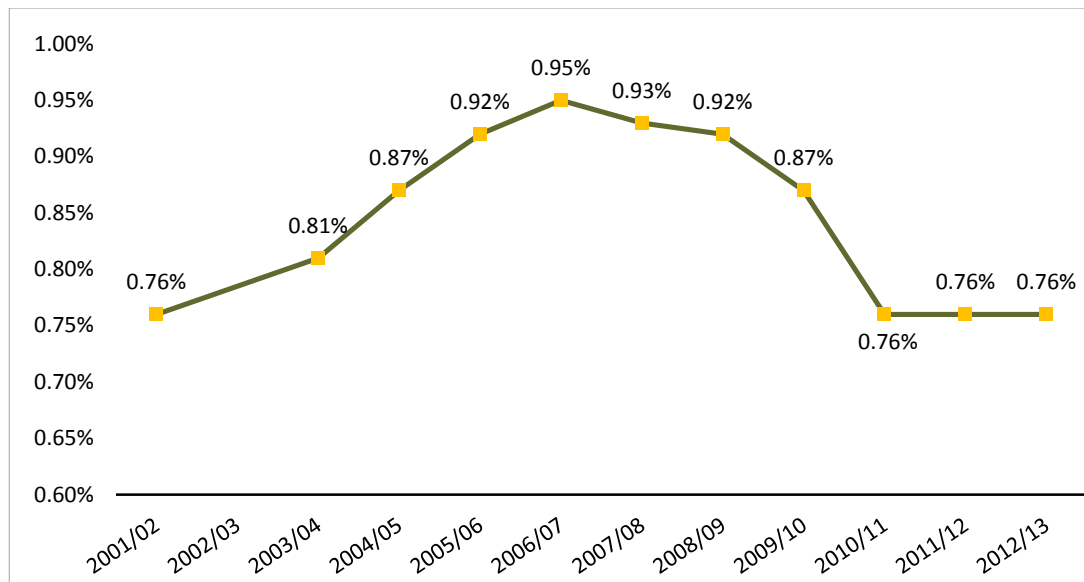


Source: Statistics South Africa

3.4.3 Further analysis

Using South Africa's GERD as a proportion of GDP (shown in Figure 23), it is clear that R&D activity has declined since 2006/07 and has stagnated at 0.76% of GDP since 2010/11. The CERD is likely to closely follow the trend of GERD, the key difference in trends being the lower private investment in R&D since 2007. This has been countered by rising public investment in R&D. As a result, GERD (as a percentage of GDP) has stabilised since 2010/11, while CERD (as a percentage of GDP) continues to see a declining trend.

Figure 23: Gross Domestic Expenditure on Research and Development (GERD) as % of GDP



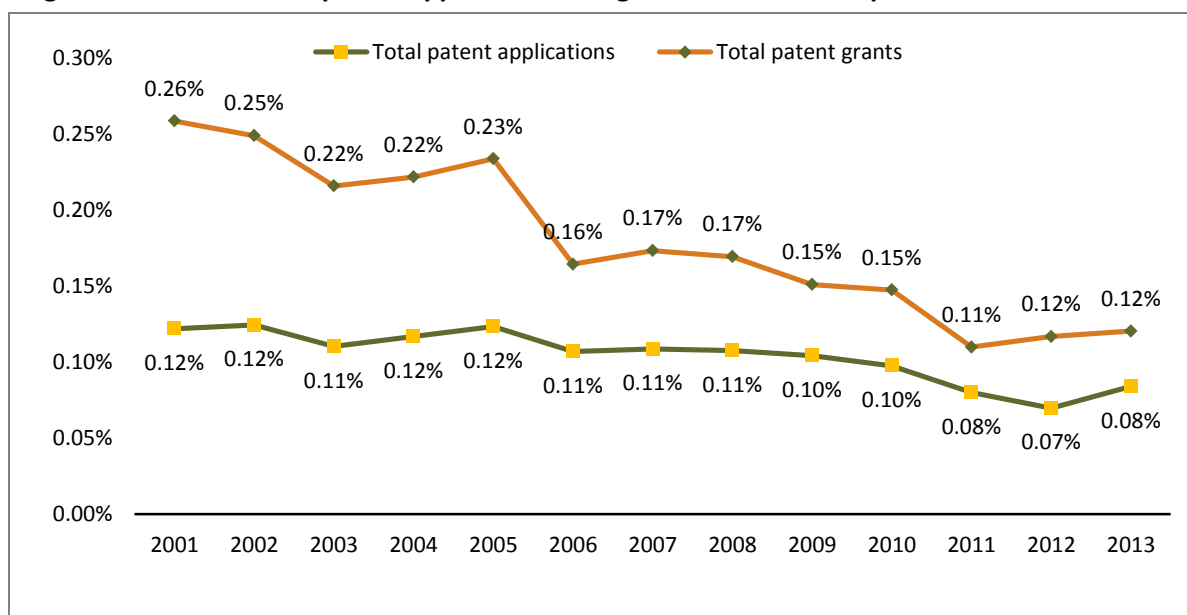
Source: Department of Science and Technology, South African National Survey of Research and Experimental Development reports.

Data from the United Nations Educational, Scientific and Cultural Organization (UNESCO) Institute for Statistics suggests that South Africa's total proportionate expenditure on R&D is relatively high when compared to other developing countries. However, when compared to middle and high-income countries, as well as BRICS nations, South Africa is found to lag.⁸

South Africa's declining performance in R&D is also reflected in the number of patents originating from South Africa. Figure 24 shows patent applications and grants as a proportion of total world patents, based on information from the World Intellectual Property Organisation (WIPO). South Africa's share of patent applications has halved between 2001 and 2013, falling from 0.26% to 0.12% of world applications. Similarly, the share of patents granted has fallen from 0.12% of global patents granted in 2001 to 0.08% in 2013.

⁸ Based on data from the UNESCO Institute for Statistics, BRIC countries GERD as a % of GDP in 2011 was as follows: Brazil (1.21%), Russia (1.09%), India (0.81%), China (1.84%).

Figure 24: South African patent applications and grants as % of world patents

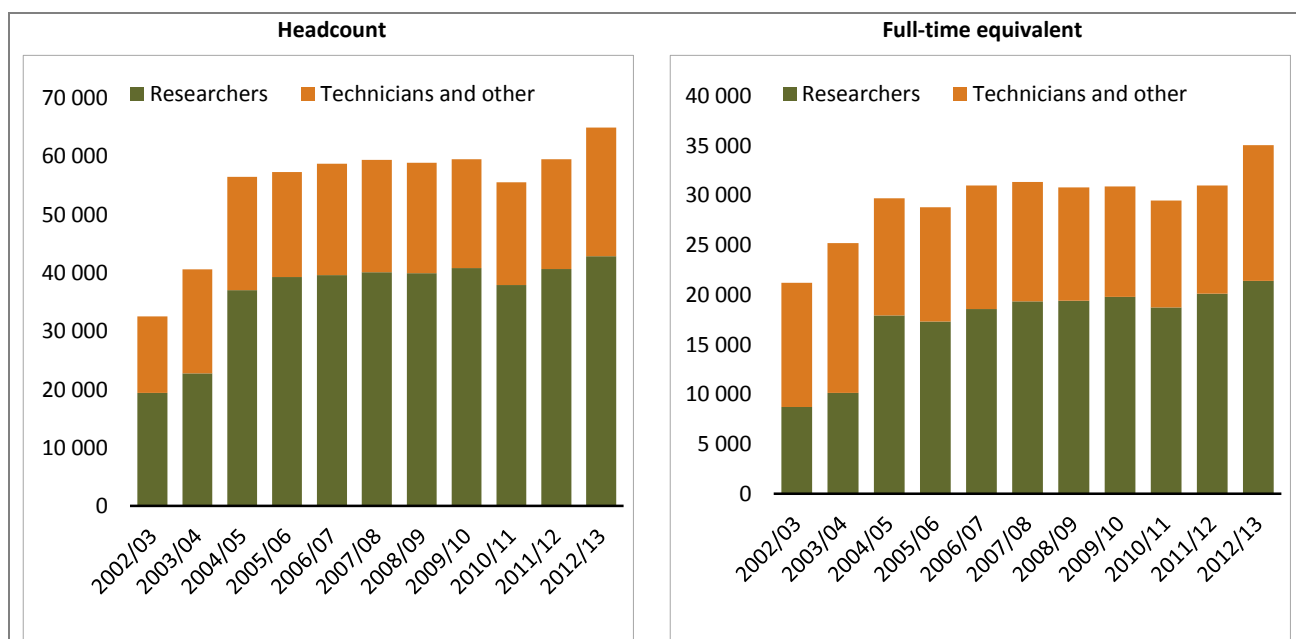


Source: DNA Economics based on data from World Intellectual Property Organisation (WIPO)

Data based on origin of application and grants.

From a human capital perspective, headcount and full-time equivalent indicators of R&D personnel suggest that South Africa has seen a largely positive and consistent trend in the number of researchers, technicians and other personnel involved in R&D activity since 2002/03. This is shown in Figure 25, where the number of researchers (by head count) has increased from under 20 000 in 2002/03 to over 42 500 in 2012/13. Similarly, based on full-time equivalents, the number of researchers increased from under 9 000 to over 21 000 between 2002/03 and 2012/13. Following the global recession, these numbers declined slightly but have since continued the overall upward trend.

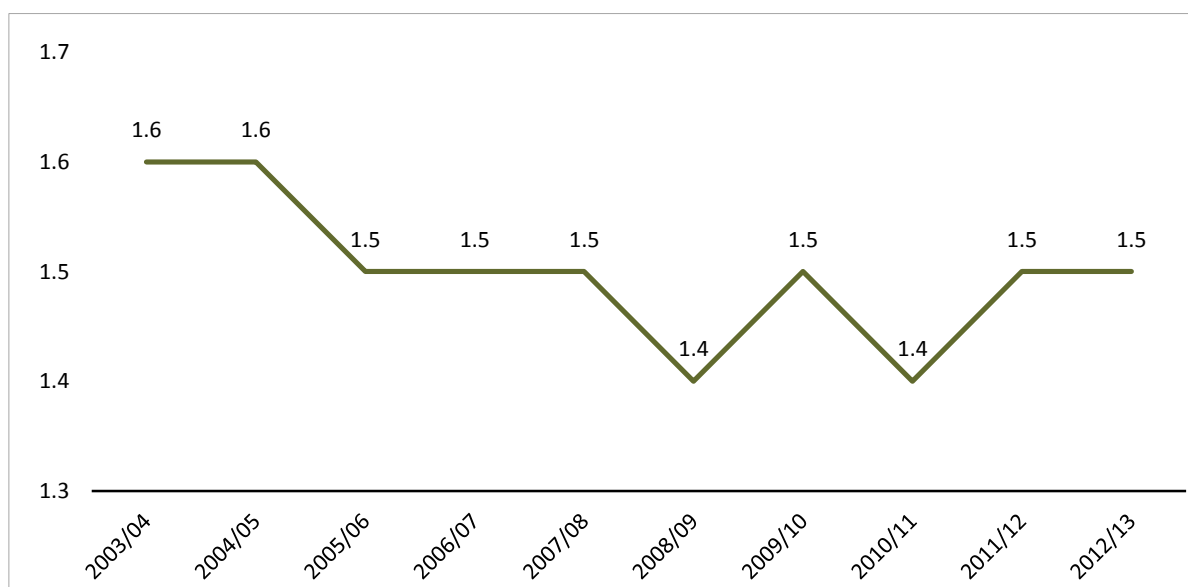
Figure 25: R&D personnel in headcounts and full-time equivalents



Source: Department of Science and Technology, South African National Survey of Research and Experimental Development reports

However, when viewed as a proportion of South Africa's workforce, the number of researchers involved in R&D activity appears to have declined. This is shown in Figure 26, which shows the number of researchers (on a full-time equivalent basis) per 1 000 people employed in South Africa. This indicator has fallen from a 1.6 in 2003/04 to a low of 1.4 before stagnating at about 1.5 researchers per 1 000 workers employed. This largely mirrors South Africa's overall R&D expenditure trend, which has seen the R&D expenditure as a proportion of GDP stagnating since 2010/11.

Figure 26: South African researchers full-time equivalent per 1 000 in total employment



Source: Department of Science and Technology, South African National Survey of Research and Experimental Development reports

Given the apparent decline in research activity and investment, particularly in the business sector, the South African government has focused on identifying gaps in the current system of innovation. This led to the commissioning of a review of South Africa's innovation landscape. The Final Report of the Ministerial Review Committee on Science, Technology and Innovation Landscape in South Africa (2012) highlights a number of key deficiencies in the National System of Innovation (NSI), and these are similar to the problems identified by the OECD (2007) review of the NSI, including:

- A limited coherence and integration in the implementation of the NSI and the system as a whole remains fragmented;
- The role of the private sector has not been adequately included in the NSI and needs to be a key focus in the move away from a commodity-based economy to a knowledge-based one;
- There is insufficient human capital available in the system and priority should therefore be given to optimising the availability of highly skilled individuals; and
- Resource flows for the NSI are distorted and/or inadequate (Ministerial Review Committee, 2012).

The Ministerial Review Committee recommended 41 actions and interventions to address the existing shortcomings in South Africa's NSI. These recommendations cut across the public sector, private sector, higher education institutions, the financing of the NSI and monitoring and evaluation mechanisms and frameworks.

In addition to these constructive policy developments, important achievements have been made in certain areas. This includes the awarding of the hosting of the Square Kilometre Array (SKA) radio telescope to South Africa and its eight partner countries. The SKA is described in more detail in Box 1. Some success has

also been achieved in the commercialisation of new products and ongoing development of new industries. These include developments in the health, nanotechnology, titanium and fluorochemical industries (DST, 2014).

Box 1: The Square Kilometre Array

The Square Kilometre Array (SKA) is a collaborative scientific endeavour involving 11 countries around the world including the UK, South Africa, Australia, New Zealand, Canada, Netherlands, Italy, Sweden, Germany, China and India. The headquarters are located in the UK, while the radio telescopes will be built in Africa and Australia. In South Africa, the telescope antennas will be located in the Karoo desert in the Northern Cape Province and the outer stations will be hosted in 8 other SKA African partner countries which include Ghana, Kenya, Mauritius, Madagascar, Botswana, Namibia, Mozambique and Zambia. The aim of constructing the SKA in this way is to simulate an enormous single radio telescope capable of a wide band of frequencies that cover a significant portion of the sky. Its key purpose is to:

“... help us understand dark energy and dark matter, how and when the first stars and galaxies formed and evolved over the age of the universe, test Einstein’s theory of general relativity and search for signs of life on other planets. It may even detect evidence of extra-terrestrial intelligent life.”

In South Africa, the core site will host a 64 dish MeerKAT array, and will perform the ‘path-finding’ function of the SKA. A consequence of the SKA being built in South Africa (or part thereof) is the boost to R&D taking place within South Africa. This will also have broader positive impacts on economic development.

The telescope will be built in phases with SKA Phase 1 expected to start construction in 2018. SKA Phase 1 has been cost capped at 650 million Euros in order to build an affordable instrument that can still perform revolutionary science. Extensive communication infrastructure will be required to transmit the vast volume of data including antennae, fibre optic cabling and industrial grade network equipment.

The project will also generate employment opportunities and skills development whereby students and new employees will be trained in the maintenance of the equipment. Since the construction phase will last a decade or more, there will be direct benefits to employment during this phase as well as from ongoing maintenance thereafter. It is expected that the project will create thousands of jobs in the economy, many of which will be based around research and development needing advanced engineering skills and expertise.

To help achieve this, government has launched a number of programmes around skills and development. It undertook in 2004 to increase the number of PhD and MSc graduates in radio astronomy. The SKA’s Human Capital Development Programme (HCDP) includes bursaries to students in engineering, mathematics, physics and astronomy and since 2014 approximately 700 students have benefitted from this programme. The HCDP is expected to result in the expenditure of hundreds of millions of Rands in human capital development. Other benefits to the economy include, *inter alia*, a schools outreach programme to promote maths and science; a R750 000 grant to build a Cyberlab at Carnarvon High School, and general communication infrastructure upgrading in South Africa. Taken as a whole, the SKA project will result in significant innovation focused FDI in South Africa, together with socioeconomic benefits in the form of jobs creation and skills development.

(Based on information from Department of Science and Technology, SKA Africa, National Research Foundation (2012) and SKA Organisation (2013))

3.4.4 Conclusion

South Africa's aim, as articulated in the NDP and the Ten-Year Innovation Plan, to transform into a knowledge-based economy, hinges on sufficient investment in research activities, a focus on developing high quality education systems and the development of closer partnerships between participants and role-players within the NSI (Ministerial Review Committee, 2012).

While South Africa has made notable achievements in some areas, a gap remains between the deficiencies identified and the strategies needed to address these. Further work is required to effectively develop solutions to drive the South African innovation system and to improve its contribution to economic and social development, particularly in terms of harnessing the country's strengths and identifying growth opportunities for the country.

3.5 INFORMATION AND COMMUNICATIONS TECHNOLOGY

3.5.1 Background

As indicated earlier in Table 1 and Table 2, a key commitment for MDG 8 is widening the access to new technologies, especially those in information and communications. The ability to easily distribute information and a low cost of communication are central pillars to the achievement of a wide range of social and economic goals. These characteristics also serve an important function in entrenching democracy and encouraging wider socioeconomic participation by all sectors of society.

The ability to access ICT services can be used as a proxy for the ability of an individual to access wider markets and services. Improved access to ICT services reduces the disadvantages associated with distance, cuts transactions costs, improves the ability of citizens to monitor progress towards development goals, and improves the transparency of policy processes, among a range of other advantages. From a human development perspective, therefore, ICT access is critical.

The wider ICT sector's role as an input into most other forms of economic activity increases its strategic importance to the economy. Technological innovation and price competitiveness in ICT has the potential to improve the efficiency of most economic activities. This sector is also a cornerstone in South Africa's striving towards developing knowledge economies and information societies.⁹ This is highlighted, for example, by research showing that a 10% increase in broadband penetration yielded an additional 1.38% in GDP growth for low and middle-income countries (Qiang and Rossotto, 2009; Katz, 2012). Within the broader ICT sector, voice communication via telephone has traditionally been of paramount importance, but is increasingly being displaced by data communications.

Ideally, access to ICT services should be equally and universally distributed between citizens. Achieving affordable Universal Access and Service (UAS) has been a key national government priority since the end of Apartheid. This is reflected in the Telecommunications Act (1996) and subsequent legislation; and in the establishment of the Universal Services Agency in 1996, specifically mandated to promote and facilitate the achievement of UAS.¹⁰ The National Integrated ICT Policy Green Paper (2014) distinguishes between universal service, whereby ICT services are directly provided to individuals, and universal access, which allows for access to ICT on a shared basis, for example within a household or a community. The Green Paper moreover identifies the following three pillars of universal service and access:

⁹ As noted by the ITU "information societies" has no universal definition, though generally consists of three main elements: The wide dispersion of information and knowledge due to ICTs; a proliferation of ICTs; and widespread access and use of ICTs.

¹⁰ The Universal Services Agency was redefined as the Universal Services and Access Agency through the Electronic Communications Act (2005).

- “Affordability – communication services need to be provided at affordable prices;
- Availability – communication services should be provided whenever and wherever they are needed, including in remote and rural areas;
- Accessibility – all citizens should be able to use communication services, regardless of location, gender, disability or any other personal characteristics” (Department of Communications, 2014).

The principal pieces of legislation governing the ICT sector are the Electronic Communications Act, 2005, and the Independent Communications Authority of South Africa Act, 2000. In addition, a number of other pieces of policy and legislation are in place to deal with the large number of diverse institutions and policy objectives in this space. The ICT review process is underway, and an ICT Policy Review discussion document (2014) has recently been released by the Department of Telecommunications and Postal Services, to address the challenges raised by ICT convergence trends, and the possibilities raised by the freeing of spectrum associated with digital broadcasting migration.

A number of commitments have been made as regards the roll-out of ICT services to the South African population. In particular, on voice the Universal Service and Access Agency of South Africa defines universal service as “*service is available to 95 per cent of households on demand; service is affordable to 90 per cent of households*” (Universal Service and Access Agency of South Africa, 2009). More recently, in terms of internet, South Africa’s Broadband Policy (2013) document commits government “to ensure universal access to reliable, affordable and secure broadband infrastructure and services by 2020 and stimulate sustainable uptake and usage” (Department of Communications, 2013).

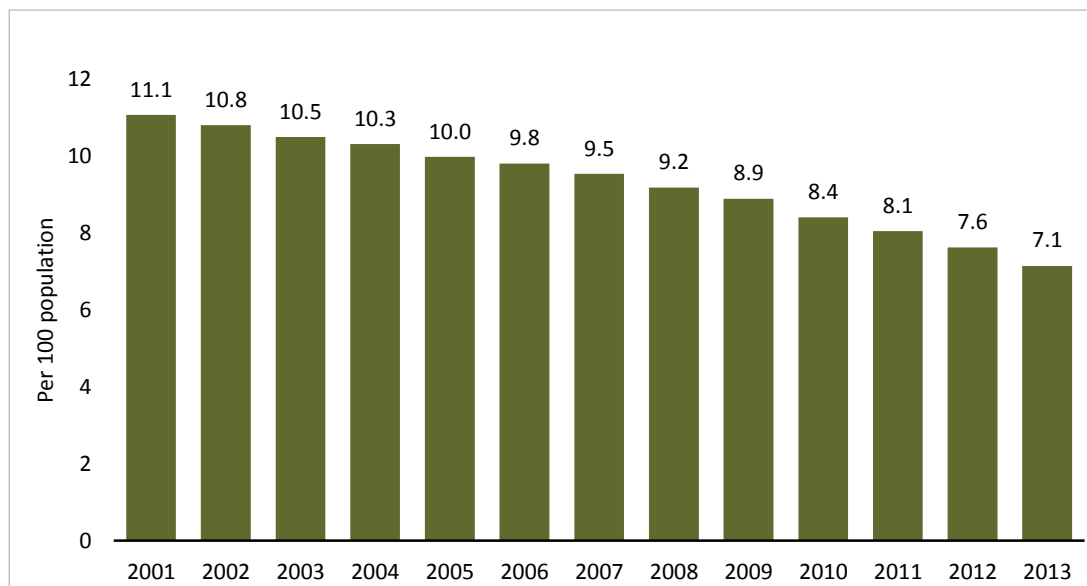
In response to the need to promote universal access, the government has developed policies aimed specifically at addressing the slow dispersion of internet access experienced to date. South Africa’s 2013 National Broadband policy aims, among other goals, to connect 580 clinics, 4 444 schools, 182 police stations and 572 other government offices to the internet during the period April 2015 to June 2015 (Department of Telecommunications and Postal Services, 2015).

3.5.2 MDG indicators

The measurement of access to ICT is complicated by the pace of technological innovation and convergence in the sector. In particular, the two domesticated MDG indicators used by South Africa, concentrate on voice connectivity (through mobile and fixed-lines).

As shown by Figure 27, the number of fixed telephone lines per 100 population has declined steadily from 2001 to 2013, by an average annual rate of 3.6% per year, from 11.1 to 7.1 per 100 population. As a result, total line density has fallen by 32% between 2003 and 2013. The provision of fixed lines continues to be dominated by the market incumbent, Telkom, which remains 39% owned by the state.

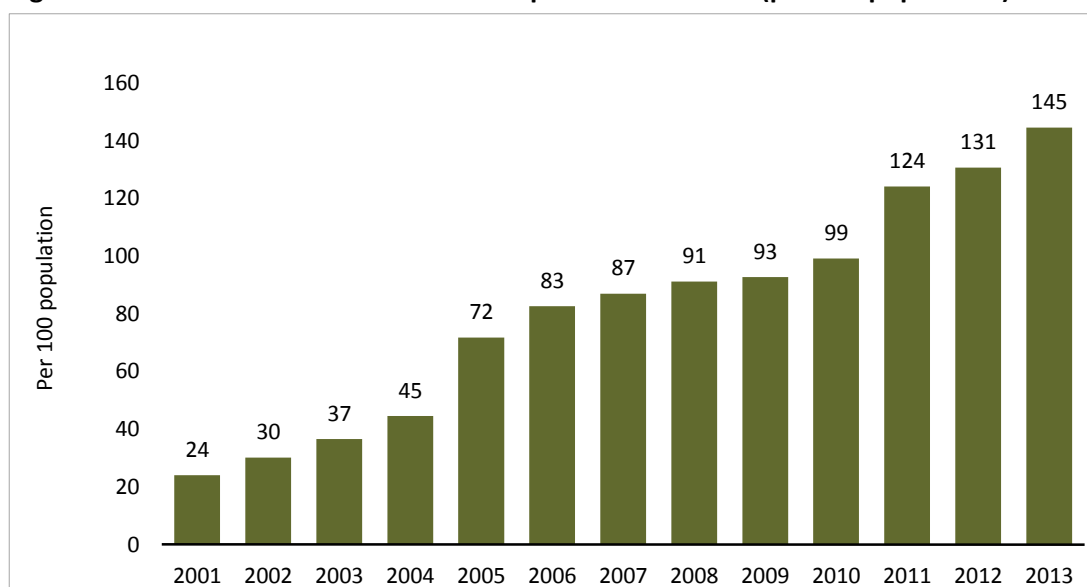
Figure 27: MDG Indicator 12 – Fixed Telephone Lines (per 100 population)



Source: Statistics South Africa

Figure 28 shows that the decrease in fixed line penetration rates has been more than compensated for by the sustained and rapid growth in mobile telephony.

Figure 28: MDG Indicator 13 – Cellular Telephone Subscribers (per 100 population)



Source: Statistics South Africa

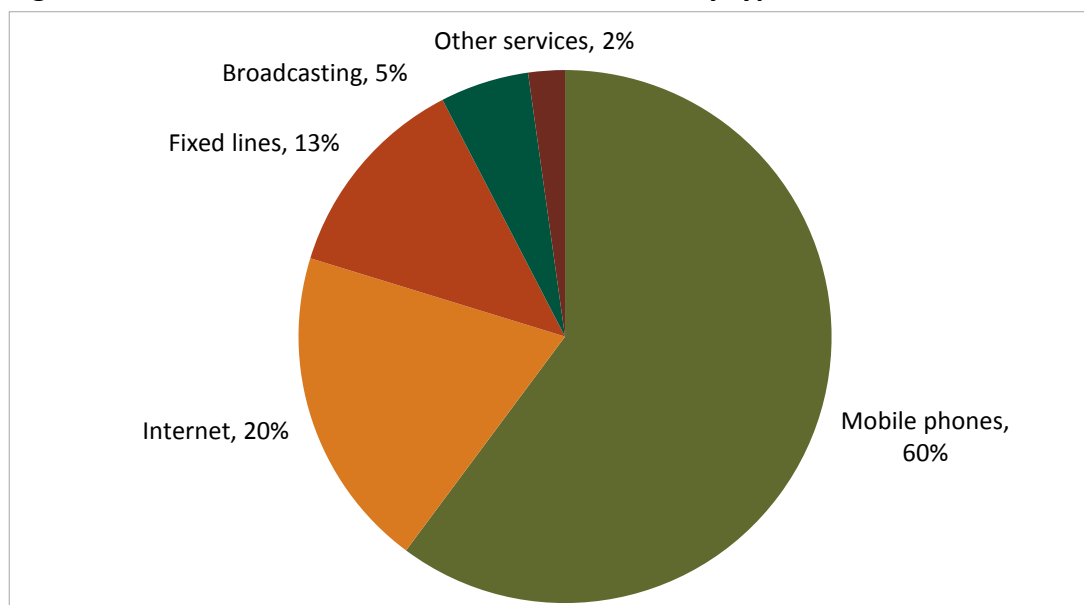
The number of mobile connections per 100 population has almost tripled over the past decade, from 37 in 2003 to 145 in 2013. The higher number of subscribers than total population is partly a reflection of the use of multiple SIM cards (across the mobile network operators) by mobile subscribers. To the extent that fixed and mobile telephony are substitute products, therefore, the overall extent of connectivity is good and access to voice communication in South Africa has increased substantially over the past decade.

South Africa can be considered to have achieved universal access to voice communication, to a level well in excess of that envisaged by policy in 1997.¹¹

3.5.3 Further analysis

The ICT sector comprises a fairly diverse bundle of activities in voice and data communications, both via point-to-point and broadcasting systems. As shown in Figure 29, in 2010 (the most recent year available) the majority of income earned in the sector was derived from mobile telephony, followed by internet sales. Both of these services are of relatively recent provenance, which illustrates the speed of technological progress in the sector.

Figure 29: Income in telecommunications activities by type of service, 2010



Source: Statistics South Africa (2012)

As at 2005, Statistics South Africa found that the ICT sector contributed more than 4% of GDP, with the bulk of activity in the sector comprising telecommunications services (Statistics South Africa, 2013). In addition to its direct contribution to the economy, the ICT sector plays a wide role in community and socioeconomic development, and examples of this contribution are provided in Box2.

However, accessibility in the ICT sector is a function both coverage of the population to the service, its cost (in other words, affordability) and its quality.¹² The affordability issue is of particular importance from a human development perspective, as it can limit the ability of services to reach the disadvantaged. These issues also place into context the complementary roles of universal access and universal service, with community focused initiatives often providing a lower cost method of ensuring wider coverage and access. A prominent example of this is the roll-out of low-cost payphones via the Community Service Telephones Programme.

¹¹ The then Minister of Telecommunications defined universal access in 1997 as living within 30 minutes/5 km of a telephone, and universal service as more than 50% of households having a telephone (Genesis (2008), page 31).

¹² See for example the discussion in Genesis Analytics (2008).

Box 2: ICT and development

A number of practical examples of the use of ICT in the achievement of human development goals in South Africa can be identified, across a wide range of areas of economic activity and community building. A few of these are discussed below.

Health-care services

ICT can play an important role both in the delivery of health-care services to disadvantaged areas, and in improving the quality of research and monitoring and evaluation of community health-care services. An example of the former is the Tele-medicine (Tele-radiology) project undertaken by the KwaZulu-Natal Department of Health. Radiological images from five rural facilities without specialist neurosurgeons or radiologists can be submitted electronically to the Nkosi Albert Luthuli Hospital in Durban, allowing rapid treatment of emergency patients in particular (CPSI, 2014).

Medical research or treatment programmes which use large numbers of community-based health-care workers in impoverished areas often struggle to deal with the paperwork required to monitor and evaluate outcomes, and/or collate research data. Leon and Schneider (2012) evaluate the impact of using mobile technology as a reporting system in three such projects, and found great potential for the technique in improving health outcomes.

Municipal Wi-Fi systems

In recognition of the increasing importance of internet connectivity, a number of municipalities have undertaken projects in this area. A recent example of such a programme is Project Isizwe, a free Wi-Fi service, which has been rolled out by the City of Tshwane. The city has currently deployed 520 Wi-Fi hotspots, each with a capacity of 5 000 users, and reports 500 000 unique users to date. The vision is to use free internet access to bridge the digital divide for Tshwane citizens (Project Isizwe, 2015).

Building democratic institutions

The connectivity provided by ICT can be a powerful tool in improving the quality of democratic institutions, as it allows broad-based community monitoring of the performance of such institutions. The KwaZulu-Natal-based Rural Women's Movement, for example, uses ICT as a means of connecting both to the wider human rights community, and as a means of facilitating the access of members to meaningful participation in local governance systems.

In the last national elections, the Independent Electoral Commission used an Elections Mobile Application to improve the quality of interaction with voters. The app provided information on, for example, voter registration status, previous election results and current candidates (CPSI, 2014).

The initial conclusion provided by the domesticated MDG indicators is confirmed by the 2013 General Household Survey (GHS), which found that 95% of households have access to a landline, a mobile line or both, as opposed to only 47% of households that had such access in 2003. Access levels at individual level may need more attention, and there are regional access issues that will need to be addressed going forward. For example, as shown in Table 4 below, in the Northern Cape, 13.6% of households do not have access to either a fixed or mobile line. However, on the whole this is a significant achievement.

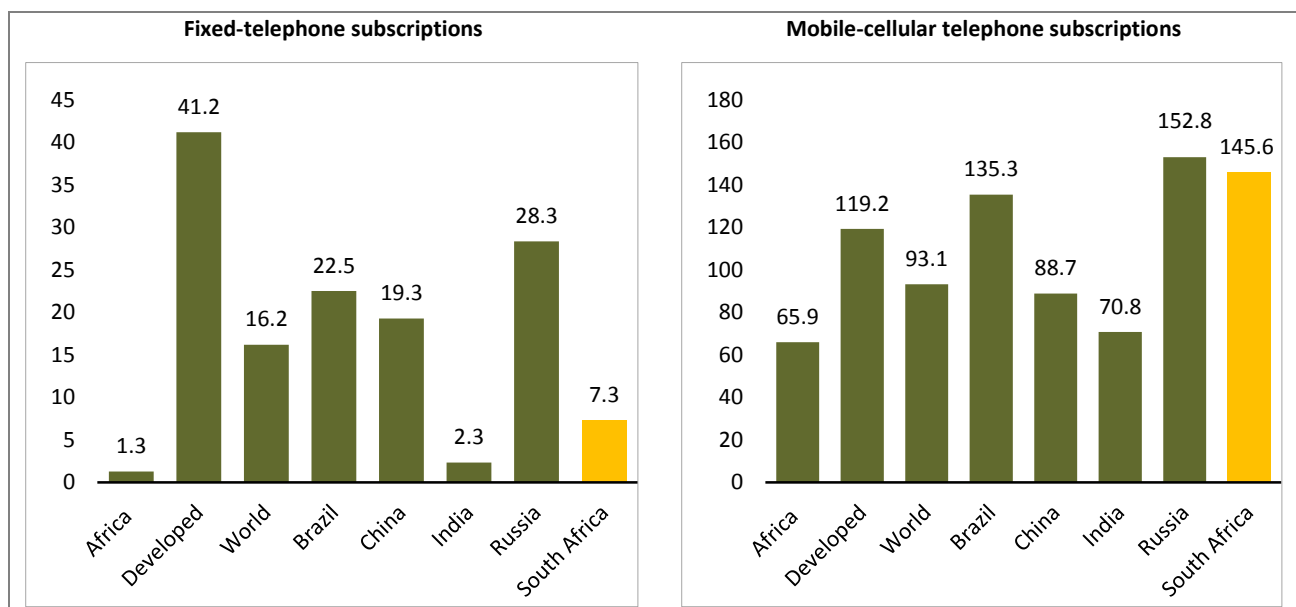
Table 4: Percentage of households who have a functional landline and cellular telephone in their dwellings by province, 2013

	Neither landline nor cellular	Only landline	Only cell	Cell and landline
Western Cape	7.0	1.0	63.1	29.0
Eastern Cape	10.6	0.2	82.2	7.1
Northern Cape	13.6	0.3	75.4	10.7
Free State	5.9	0.2	86.1	7.9
KwaZulu-Natal	4.5	0.3	81.3	14.0
North West	6.0	0.0	89.4	4.5
Gauteng	2.0	0.0	81.3	16.7
Mpumalanga	3.2	0.1	90.6	6.2
Limpopo	4.3	0.1	92.6	3.0
Total	5.0	0.2	81.9	12.9

Source: Statistics South Africa 2013 General Household Survey

Figure 30 provides a brief snapshot of South African voice penetration performance against different global regions and South Africa's BRICS partners. In terms of fixed-line penetration, South Africa substantially outperforms the African region. However, South Africa compares unfavourably against both the global and developed country aggregate. BRICS countries, with the exception of India, also have far higher rates of fixed-line penetration. In terms of mobile penetration, South Africa excels when compared to Africa and the world aggregate. Within BRICS countries, only Russia has higher rates of mobile penetration.

Figure 30: Comparison of fixed and mobile subscriptions (per 100 inhabitants)

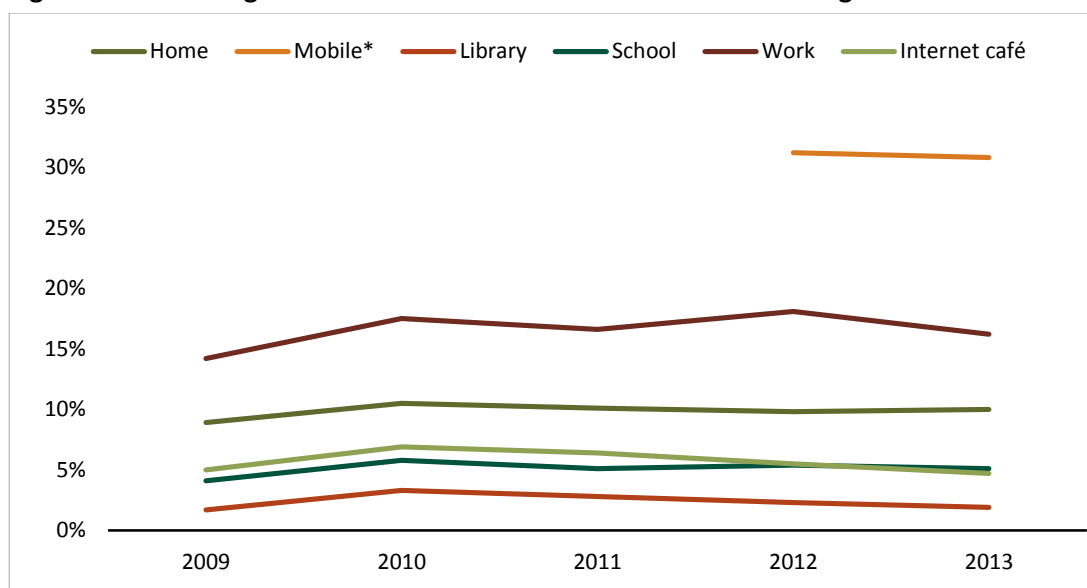


Source: ITU Statistics, available from <http://www.itu.int/en/ITU-D/Statistics/Pages/stat/default.aspx>
For regions, data reflects aggregate information.

From an internet perspective, South Africa's progress in providing UAS is growing gradually. Data limitations, as highlighted in Section 2 of this report, imply that the current evidence of internet penetration in South Africa should be interpreted cautiously. Measuring access is complicated by the fact that access occurs on both a household and individual level, and is likely to differ at home and at work. Technological advances have also meant that the term "internet access" is increasingly used interchangeably with "broadband access".¹³

Considering both mobile and wired (fixed-line) internet access, various sources of data point to increasing use of mobile infrastructure to access the internet. Data from the GHS, summarised in Statistics South Africa (2015), is shown in Figure 31. More than 30% of households used mobile devices to access the internet in 2013, compared to only 10% of households that indicated that they had an internet connection at home.

Figure 31: Percentage of households with access to the internet using different services



Source: Statistics South Africa (2015). Based on General Household Survey data

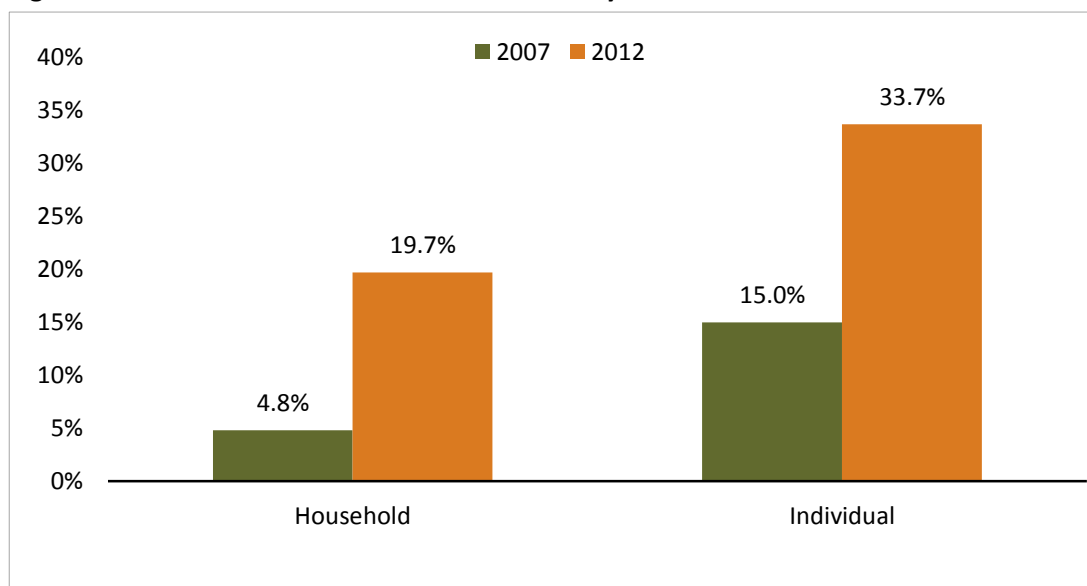
*Questions related to use of mobile devices were not asked in the General Household Survey in 2009 and 2010. The 2011 figure of 19.4% is not comparable with data in subsequent years due to significant differences in the way in which questions were phrased.

Survey data by Research ICT Africa, used as baseline estimate in South Africa's National Broadband Policy (2013), suggests that 33.7% of the population (at an individual level, 15 years and older) had internet access in 2012, shown in Figure 32.¹⁴ This is up from 15% in 2007. Data from this survey confirms that mobile devices are the predominant way of accessing the internet. Of the 34% that have internet access, more than half use mobile devices to do so. Comparatively, less than a quarter access the internet through ADSL lines (Gillwald et al., 2015).

¹³ There remain no standard definitions for broadband. The South African National Broadband Policy (2013) defines broadband as an "ecosystem of high capacity, high speed and high quality electronic networks, services, applications and content that enhances the variety, uses and value of information and communications for different types of users". The ITU, through Recommendation I.113 of the ITU Standardization Sector (ITU-T), defines broadband as a transmission capacity that is faster than primary rate ISDN, at 1,5 or 2,0 Mbit/s.

¹⁴ Research ICT Africa undertakes African country surveys on internet access on a regular basis.

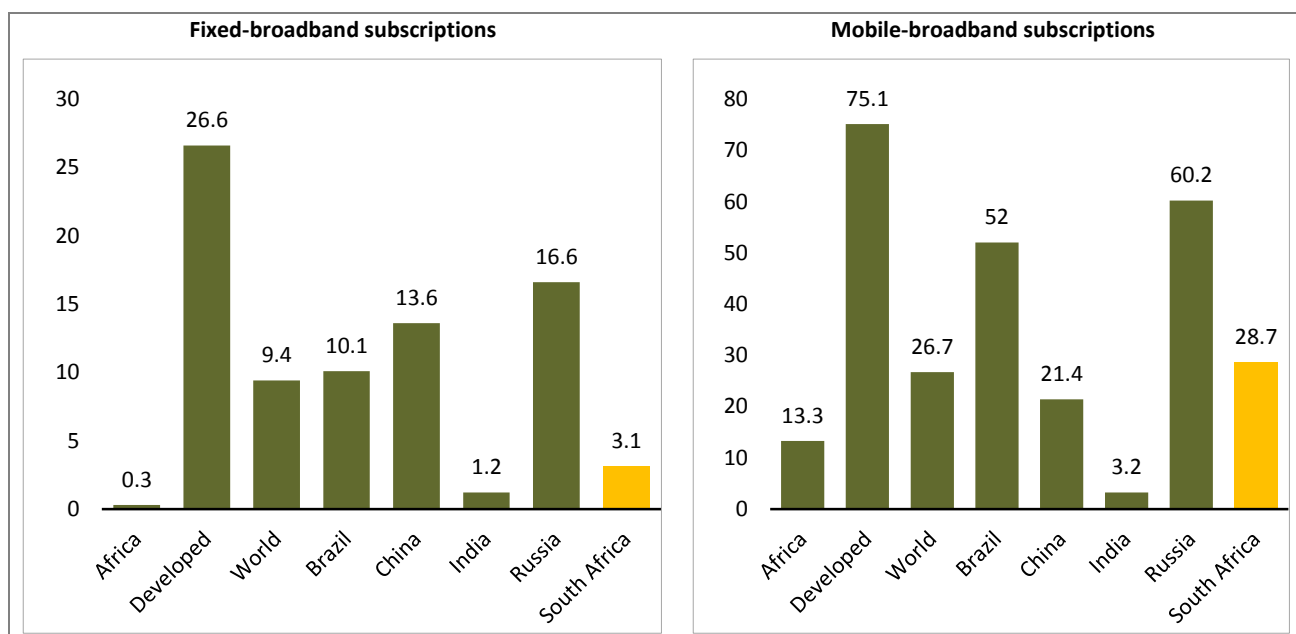
Figure 32: Internet access based on RIA ICT Survey data



Source: Gillwald et al. (2014) based on RIA 2011/12 ICT survey
Individual-level information refers only to those 15 years and older.

A comparison of South Africa's internet penetration rates with global regions and BRICS countries reveals that, despite some evidence of increased broadband penetration, South Africa's internet penetration lags BRICS countries with the exception of India. South Africa's internet penetration far exceeds the African average. This is shown in Figure 33, using data and estimates from the ITU.

Figure 33: Comparison of fixed and mobile broadband subscriptions (per 100 inhabitants)



Source: ITU Statistics, available from <http://www.itu.int/en/ITU-D/Statistics/Pages/stat/default.aspx> and ITU (2014)
For regions, data reflects aggregate information.

In terms of fixed-line broadband, South Africa's penetration, while higher than the African aggregate, is far lower than the aggregate for developed countries, the world aggregate and BRICS partners, with the exception of India. For mobile-broadband, South Africa performs marginally better, though penetration rates remain well below the developed country aggregate and BRICS nations such as Brazil and Russia.

Lagging performance in the promotion of universal access to internet is exacerbated by a number of issues. Among these are relatively high prices, which has decreased the affordability of internet access and reduced the migration to broadband access. The ITU's 2014 Measuring the Information Society report ranks South Africa 75th out of 165 countries in the relative price of fixed-broadband and 82nd out of 150 countries in the relative price of prepaid mobile-broadband. The issue of data affordability is acknowledged to be of concern in the South African National Broadband Policy.

There are some signs that increasing competition in the infrastructure market may deal with pricing issues in the local bandwidth market over time. In particular, recent developments in the fibre-to-the-home (FTTH) market are encouraging, with a number of new entrants competing to provide the last mile of infrastructure to the client's home. However, the FTTH market is in its early stages of development, and is concentrating largely at this point on high income communities who already have reasonably good levels of internet access.

Where internet access is available, speed and quality issues also remain a concern. The World Economic Forum's Global Competitiveness Report 2014–15 found that in terms of internet bandwidth (in kb/s per user), South Africa ranked 126 out of 144 countries surveyed. Several types of ecommerce, particularly as regards the supply of digital media, are only commercially possible at high levels of bandwidth availability, and South Africa's ability to participate in these markets will as a result be constrained until this issue is addressed.

The government's National Broadband Policy (2013) and the government's National Integrated ICT Policy Green Paper (2014) also note policy and regulatory concerns in the ICT sector. As noted in the government's ICT Policy Green Paper (2014):

"The regulatory environment is relatively weak with an under resourced and under capacitated regulator. A review of the institutional roles and responsibilities of the different players involved in policy and regulatory settings indicate a lack of common purpose and interaction to the degree required to drive policy."

3.5.4 Conclusion

Universal access in voice communication has by all accounts been achieved. However, the domesticated indicators for South Africa do not reflect the increasing importance of data connectivity from a development perspective. While the list of official MDG 8 indicators (see Table 2) does include an indicator on internet penetration, early data limitations meant that South Africa was not able to make use of a reliable domesticated indicator to assess progress in the provision of internet.

The nature of the ICT market is such that for optimal sector performance, the policy and regulatory role that needs to be played by government is particularly complex and resource intensive. Most ICT services are provided on a high fixed cost, low marginal cost basis, and are also often only of value to the extent that they offer interconnectivity to a network. These industry features tend to create coordination issues that are most efficiently resolved by some form of central coordination mechanism, and also often tend to create natural monopolies which may require price regulation.

In South Africa, the sector has experienced rapid growth and technological innovation. Nevertheless, the quality, cost and access to broadband internet infrastructure is currently problematic. The government's ICT Policy Review process, which was launched in 2012, aims to address these challenges.

Likewise, the dynamic nature of this sector poses difficulties as regards the identification of indicators which will remain significant over long periods of time. At this point, the focus of the indicators on telephony has probably become disproportionate, and it would be useful to consider possibly combining the two telephony indicators into a single indicator of access to either fixed or mobile lines, and including a new indicator which provides some measure of household access to internet connectivity. This would also be more in line with the likely indicators identified for the various SDGs in the post-2015 agenda, which encompasses both telephony and internet based indicators.

4. TOWARDS THE SDGS – FRAMING THE IMPERATIVES

4.1 THE DRAFT SDGS RELATED TO MDG 8

The Open Working Group (OWG), under the auspices of the United Nations, and following on from the Rio+20 Conference, has prepared a proposal for the SDGs beyond 2015. A total of 17 SDGs have been identified, building upon the MDGs and identifying areas of increasing importance for equitable, inclusive and sustainable global development.

A number of the 17 SDGs overlap with MDG 8, including:

- Goal 8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.
- Goal 9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation.
- Goal 16. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels.
- Goal 17. Strengthen the means of implementation and revitalize the global partnership for sustainable development.

The Sustainable Development Solutions Network (SDSN), launched by the UN in 2012, has developed an indicative list of indicators for measuring progress in achieving the SDGs. A final report was released by the SDSN in May 2015. Under this framework, 100 "Global Monitoring Indicators" have been suggested for use by all countries in assessing overall progress in achieving the SDGs. In addition to this, a large set of "complementary national indicators" have been suggested for country-specific measurement of targets under each of the SDGs.

The Global Monitoring Indicators proposed by the SDSN for the SDGs are highlighted in Table 5. The potential list of indicators is large and varied, extending well beyond the objectives of MDG 8 and the

respective indicators used to measure achievement of this MDG. Nevertheless, the potential SDG indicators are largely coherent, measurable and relevant.

Table 5: Indicative Global Monitoring Indicators suggested by SDSN for selected SDGs

SDG	Indicator	Potential indicator	Other SDGs that indicator applies to
Goal 8	54	GNI per capita (PPP, current US\$ Atlas method)	11
	55	Country implements and reports on System of Environmental-Economic Accounting (SEEA) accounts	12, 17
	56	Youth employment rate, by formal and informal sector	11
	57	Ratification and implementation of fundamental ILO labour standards and compliance in law and practice	5, 9, 10, 11, 17
Goal 9	58	Access to all-weather road (% access within [x] km distance to road)	2, 7, 11
	59	Mobile broadband subscriptions per 100 inhabitants, by urban/rural	2, 11, 17
	60	Index on ICT maturity	17
	61	Manufacturing value added (MVA) as per cent of GDP	8, 11
	62	Total energy and industry-related GHG emissions by gas and sector, expressed as production and demand-based emissions (tCO ₂ e)	7, 11, 13
	63	Personnel in R&D (per million inhabitants)	8, 17
Goal 16	88	Violent injuries and deaths per 100 000 population	3, 5, 11
	89	Number of refugees	3
	90	Proportion of legal persons and arrangements for which beneficial ownership information is publicly available	17
	91	Revenues, expenditures, and financing of all central government entities are presented on a gross basis in public budget documentation and authorized by the legislature	17
	92	Percentage of children under age 5 whose birth is registered with a civil authority	3, 5, 10
	93	Existence and implementation of a national law and/or constitutional guarantee on the right to information	10
	94	Perception of public sector corruption	
Goal 17	95	Domestic revenues allocated to sustainable development as per cent of GNI, by sector	10
	96	Official development assistance and net private grants as per cent of GNI	10
	97	Private net flows for sustainable development at market rates as share of high-income country GNI, by sector	10
	98	Annual report by Bank for International Settlements (BIS), International Accounting Standards Board (IASB), International Financial Reporting Standards (IFRS), International Monetary Fund (IMF), World Intellectual Property Organization (WIPO), and World Trade Organization (WTO) [other organizations to be added] on the relationship between international rules and the SDGs and the implementation of relevant SDG targets	2, 10
	99	Share of SDG Indicators that are reported annually	10, 11
	100	Evaluative Wellbeing and Positive Mood Affect	3

Source: SDSN (2015)

It is important to note that the list of indicators to be used in reporting on SDG progress has not yet been finalised. Stakeholders across regions and organisations are in the process of providing input into negotiations around the final list of indicators. Representatives from African National Statistics Offices (NSOs) are in the process of compiling a set of national, regional and global SDG indicators as a common negotiating position in the global process of developing indicators for the SDGs. Most recently, African NSO representatives met in May 2015 to further the development of this set of indicators. A final set of globally agreed indicators is expected to be presented by the United Nations Statistics Commission in March 2016 (UNECA, 2015).

4.2 RECOMMENDATIONS FOR FUTURE REPORTING

Through the MDG process, South Africa has made use of a number of domesticated indicators to measure its performance against MDG Goal 8, but many of these indicators do not specifically refer to the aims of MDG Goal 8 (a global partnership for development) and do not adequately reflect South Africa's progress against the country's own sub-goals. Specifically:

- The use of nominal indicators for economic growth, and in particular GDP per capita, does not adequately measure the real change in per capita income and output. It also does not reflect on the high levels of inequality prevalent in South Africa.
- Careful consideration should be given to the way in which expenditure on R&D is measured for the purposes of the SDGs, as opposed to national accounting purposes, and to ensure that this indicator is comparable globally.
- The current account balance is a composite indicator that records the net flow of trade, income and other current account payments in and out of South Africa. If the intention of this indicator is to measure South Africa's trade performance with the rest of the world, then a different and more specific set of indicators is needed.
- South Africa is not dependent on ODA to fund its development objectives. Rather, in order to assess South Africa's own contribution towards global development goals, consideration should be given to including a measure of the amount of ODA that South Africa disburses as a proportion of its GDP.
- The ICT sector is highly dynamic, and as such poses difficulties as regards the identification of indicators which will remain significant over long periods of time. The SDG targets have moved towards indicators focused predominantly on internet penetration, in line with the growing importance of internet connectivity within the ICT sector. This will require the collection of data and the development of indicators in South Africa that provide an effective and accurate measure of internet access and penetration.

While the initial rationale for the use of only domesticated indicators may have been sound, it is clear that these indicators have a number of drawbacks. First, it is difficult to compare them against official indicators used by other developing countries. Second, in many instances these indicators are no longer appropriate or are not sufficiently specific to measure South Africa's performance in each area. Finally, South Africa has not set official MDG targets for the purpose of evaluating the country's performance against the domesticated indicators used in Goal 8.

For these reasons, South Africa should consider the use of the relevant international (Global Monitoring) SDG indicators for comparability and measurement purposes beyond 2015.

Given the multitude of potential indicators in the post-2015 agenda, South Africa will also need to strike a balance between allocating sufficient resources for the collection, measurement and analysis of data for SDG indicators and the selection of official indicators which are most relevant to South Africa's development.

Reporting on MDG 8 indicators has highlighted that this balance can be enhanced by greater integration of future SDG indicators and targets into South Africa's own performance monitoring and evaluation systems. This can include, for example, alignment and integration of indicators into the DPME's programme of action and performance monitoring systems as well as aligning targets from government policies (such as the NDP) with those of the SDGs. Deeper integration of the SDG indicators into South Africa's National System of Statistics (NSS) will also ensure that adequate and timely data is available for those indicators that South Africa chooses to report on.

5. CONCLUSION

Since 2000, South Africa has made significant progress in ensuring a stable macroeconomic environment that is conducive to the achievement of continued development and progress in the seven other MDGs. In addition to the formulation of a long-term policy and socioeconomic vision encapsulated in the NDP, the South African government has continued to develop policies and strategic frameworks in the knowledge-based sectors, specifically the R&D and ICT sectors. In addition, the NGP provides a somewhat useful basis for the country's chosen path to greater industrial development.

However, the global recession of 2008/2009 has exacerbated, and in many ways exposed South Africa's underlying structural impediments. Since 2009, South Africa's progress in terms of economic growth, the reduction of inequality and the development of labour inclusive sectors has effectively stalled. This is reflected in the overall trends in many of South Africa's domesticated indicators:

- GDP per capita is rising but has slowed since 2008;
- South Africa's employment-to-population ratio has increased marginally from 41.5% in 2003 to 42.7% in 2013, remaining well below global benchmarks;
- FDI remains very low at below 1 per cent of GDP (2013), well down from 8.2% in 2001;
- Gross savings as a percentage of GDP remain low at 14.9% in 2013, and have declined from 16.6% in 2001;
- Public debt as a percentage of GNI has risen sharply from 27.4% in 2008 to 45.4% in 2013;
- The current account balance as a per cent of GDP has widened considerably over the past decade;
- CERD as percentage of GDP declined from a peak of 0.64% in 2006 to 0.45% in 2013; and
- Fixed line penetration rates have fallen continuously since 2001, though this has been countered by a more than threefold increase in mobile penetration rates over the same period.

Despite expansionary fiscal policies during and subsequent to the global recession, South Africa has not yet reached the desired growth levels. High levels of inequality and low labour participation rates remain of major concern. Areas of positive development include an inflation environment that has remained subdued since the global recession and some signs that public investment in South Africa is starting to pick up since 2009. Moreover, the rapid roll-out of mobile communications has resulted in universal access to voice telecommunication services over a short period of time, and has transformed the ICT economy.

As highlighted in the post-2015 agenda and through the SDGs, driving inclusive growth and achieving SDG targets will require better coherence in objectives, and stronger partnerships between the public and private sectors. South Africa needs to move quickly from the development of policies and plans, to the effective implementation of strategies and programmes that are specifically targeted at encouraging public and private sector investment and removing barriers to long-term inclusive growth.

6. REFERENCES

- Botes E. 2014. Note on the benchmark revisions and rebasing of South Africa's national accounts statistics. Quarterly Bulletin December 2014. South African Reserve Bank.
- CPSI. 2014. 12th Public Sector Innovation Awards. Centre for Public Service Innovation. Available online: <http://www.cpsi.co.za/wp-content/uploads/2014/11/ELECTRONIC-12th-Award-book.pdf>.
- Department of Communications. 2013. South Africa Connect: Creating Opportunities, Ensuring Inclusion. South Africa's Broadband Policy. 6 December 2013.
- Department of Communications. 2014. National Integrated ICT Policy Green Paper.
- Department of Telecommunications and Postal Services. 2014. National Integrated ICT Policy Discussion Paper/Options Paper.
- Department of Telecommunications and Postal Services. 2015. Media release. Available online: <http://www.dtps.gov.za/mediaroom/media-statements/450-remarks-by-minister-dr-siyabonga-cwele-at-the-inaugural-conference-of-the-wi-fi-forum-of-south-africa.html>
- DST. 2013. National Survey of Research and Experimental Development 2012/13. Department of Science and Technology.
- DST. 2007. Innovation Towards a Knowledge-based Economy, Ten-Year Plan for South Africa (2008 – 2018). Department of Science and Technology.
- DTI. 2010. A South Africa Trade Policy and Strategy Framework. Policy Document. Available online: <http://www.tralac.org/files/2012/12/Trade-Policy-and-Strategy-Framework-2010.pdf>
- G20. 2014. Comprehensive Growth Strategy: South Africa. pp 8. Available online: https://g20.org/wp-content/uploads/2014/12/g20_comprehensive_growth_strategy_south_africa.pdf.
- Genesis Analytics. 2008. South African 15-year Telecommunications Policy Review, Office of the Presidency.
- Gillwald A. 2015. ICT4D, Regulation and Strategy, in Mansell, R. and Ang, P.H.(eds). The International Encyclopaedia of Digital Communication and Society (first edition). John Wiley and Sons.
- Gillwald A, Moyo M & Stork C. 2014. Understanding what is happening in ICT in South Africa. Evidence for ICT Policy Action. Policy Paper 7. Research ICT Africa.
- Katz R. 2012. Impact of Broadband on the Economy. Broadband Series. Telecommunication Development Sector. ITU. April 2012.
- ILO. 2014. Global Employment Trends 2014. International Labour Office, Geneva.
- ISPA. 2013. Letter dated 15 May 2013, addressed to The Chief Director: ICT Policy Research and Development, Department of Communications, from the ISPA Joint Chairs. Available online: <http://ispa.org.za/wp-content/uploads/2012/06/ISPA-Submission-Consultation-on-the-NBP-20130515.pdf>
- ITU. 2014. Measuring the Information Society Report. 2014. International Telecommunication Union (ITU). Geneva.
- Leon N. & Schneider H. 2012. MHealth4CBS in South Africa: A review of the role of mobile phone technology for the monitoring and evaluation of community based health services. Cape Town, Medical Research Council and University of Western Cape
- Lucey A. & O'Riordan A. 2014. South Africa and aid effectiveness Lessons for SADPA as a development partner. ISS paper 252. Available online: <http://www.issafrica.org/uploads/Paper252.pdf>
- Ministerial Review Committee. 2012. Department of Science and Technology Ministerial Review Committee on the Science, Technology and Innovation Landscape in South Africa. Final Report.
- National Planning Commission. 2012. National Development Plan 2030. South African Government.

National Research Foundation. 2013. South African SKA Journey. pp 20. Available online: http://www.ska.ac.za/download/our_journey_brochure.pdf.

National Treasury. 2015. Budget Review, 2015. 25 February 2015. South African Government.

National Treasury. 2012. Budget Review, 2012. 22 February 2012. South African Government.

Nedbank. 2015. Capital Expenditure Project Listing 1 January 1993 to 31 December 2014. Nedbank Group Economic Unit. pp 6. Available online: http://www.nedbankgroup.co.za/pdfs/economic/economicResearch/Nedbank_Capital_Expenditure_Project_Listing_21_January_2015.pdf

Project Isizwe. 2015. Press Release. Tshwane Free WiFi Project reaches major milestone. 4th May 2015. Available online: <http://projectisizwe.org/tshwane-free-wifi-project-reaches-major-milestone/>.

Qiang CZ & Rossotto CM. 2009. Economic Impacts of Broadband. in Information and Communications for Development 2009: Extending Reach and Increasing Impact. The World Bank. Washington, DC.

Ramoroka K. & Jacobs P. 2013. Spreading the news: the use of ICT to raise rural living standards. Available online: <http://www.hsrc.ac.za/en/review/hsrc-review-may-2013/spreading-the-news-the-use-of-ict-to-raise-rural-living-standards>

SARB. 2015. Statement of Monetary Policy Committee. 26 March 2015. South African Reserve Bank.

SDSN. 2015. Indicators and a Monitoring Framework for the Sustainable Development Goals, Launching a Data Revolution. Final Report. May 15, 2015. Sustainable Development Solutions Network.

SKA Organisation. 2013. Media release. Outcomes of The SKA Board Meeting On 24-25 July 2013. 2nd August 2013. Available online: <https://www.skatelescope.org/news/outcomes-ska-board-meeting-july-2013/>.

Skelton D. Project Isizwe has more than 500,000 unique users. Business Day, April 13 2015. Available online: <http://www.bdlive.co.za/business/technology/2015/04/13/project-isizwe-has-more-than-500000-unique-users>

South African Government. 2010. The New Growth Path Framework. 23 November 2010. Republic of South Africa.

South African Reserve Bank. 2015. South Africa's national accounts 1946 – 2014. Supplement to the South African Reserve Bank Quarterly Bulletin, March 2015.

Statistics South Africa. 2015. GHS Series Volume VI, Information and Communication Technologies (ICT), In-depth analysis of the General Household Survey data 2002-2013. Report No. 03-18-05 (2002–2013).

Statistics South Africa. 2014. Labour market dynamics in South Africa, 2013. Report No. 02-11-02 (2013).

Statistics South Africa. 2014. Poverty Trends in South Africa. Report No. 03-10-06.

Statistics South Africa. 2012. Post and telecommunications industry, 2010. Report No. 75-01-01 (2010).

Stanlib. 2013. SA fixed investment activity lost some momentum in the final quarter of 2013. Economic Focus. Available online: <http://www.stanlib.com/ECONOMICFOCUS/Pages/SAfixedinvestmentactivitylostf2013.aspx>

DPME. 2012. Development Indicators, 2011. The Presidency, South Africa: Department of Planning, Monitoring and Evaluation.

The Presidency, South Africa. 2006. Accelerated and Shared Growth Initiative – South Africa (ASGISA).

12th Public Sector Innovation Awards Booklet. Available online: <http://www.cpsi.co.za/wp-content/uploads/2014/11/ELECTRONIC-12th-Award-book.pdf>

UNECA. 2015. Press release, “Africa Proposes Sustainable Development Goals indicators”. 13 May 2015. Available online: <http://www.uneca.org/media-centre/stories/africa-proposes-sustainable-development-goals-indicators#.VWggmM-qoko>.

Universal Service and Access Agency of South Africa. 2009. Position Paper and Recommendations to the Minister of Communications and the Independent Communications Authority of South Africa regarding Definitions of Universal Service, Universal Access, Under-Served Areas and Needy Persons. Available online: http://www.usaasa.org.za/export/sites/usaasa/resource-centre/download-centre/downloads/USAASA_Definitions_Position_Paper.pdf

UNSD. 2015. Millennium Development Goals Indicators. The official United Nations site for the MDG Indicators. Available online: <http://mdgs.un.org/unsd/mdg/Host.aspx?Content=Indicators/OfficialList.htm>.

Walters SS. 2014. A brief preview of the forthcoming revision of South Africa’s national accounts and balance-of-payments statistics. Quarterly Bulletin September 2014. South African Reserve Bank.

World Bank. 2014. South Africa Economic Update, Fiscal Policy and Redistribution in an Unequal Society. The International Bank for Reconstruction and Development / The World Bank. Washington DC.

World Economic Forum’s Global Competitiveness Report 2014-15. Available online: http://www3.weforum.org/docs/WEF_GlobalCompetitivenessReport_2014-15.pdf