

## Chapter 1

# Moving beyond the crisis and finding a new sustainable growth path

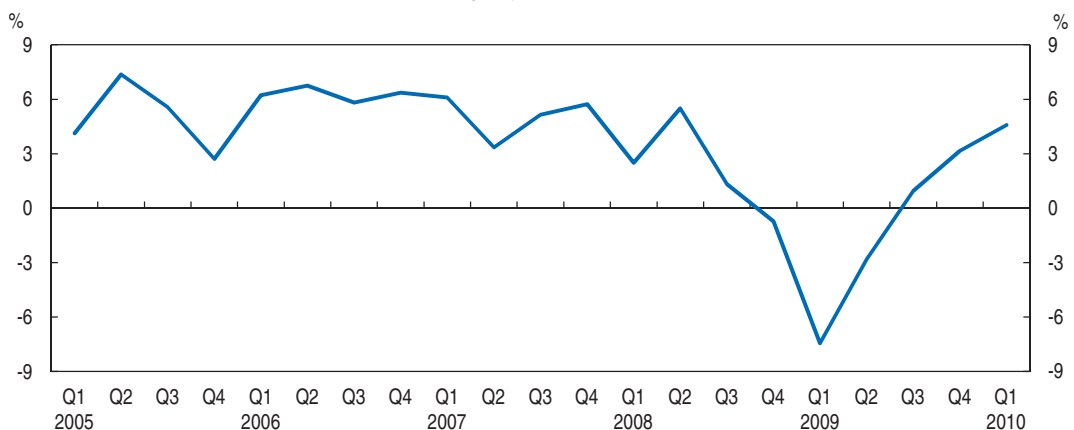
*The global crisis turned what might otherwise have been a mild slowdown in South Africa into a recession. However, thanks to moderately countercyclical macroeconomic policies, and in the absence of a banking crisis, South Africa was only about averagely affected by the global downturn. Given the losses in employment that ensued, pushing up the already very high unemployment rate, the short-term priority is to get the economy growing strongly on a sustainable basis. Once a private-sector-led recovery takes hold, fiscal policy should be tightened and monetary policy will have to protect the credibility of the inflation target in the face of stubbornly high inflation expectations. Beyond the crisis and its aftermath, South Africa needs to improve its trend growth performance to meet the material and social aspirations of its people. Among the areas to focus on to that end, this chapter picks out improving framework conditions for business, higher savings, increasing the contribution of exports to growth and strengthening efforts to tackle climate change.*

## The 2008-09 economic crisis

Like many other countries, South Africa was hard-hit by the global economic crisis, mainly through trade and financial channels. Although output growth was slowing from mid-2007 (year-on-year growth peaked in the first quarter of 2007), quarterly real GDP growth was positive up to and including the third quarter of 2008, when the international financial crisis intensified with the collapse of Lehman Brothers and the near-failure of AIG (Figure 1.1). The shock to international confidence had an immediate sharp effect on capital flows to emerging markets, as investors reassessed risks, and global trade flows collapsed. Portfolio inflows, which had accounted for the bulk of the financing of South Africa's large current account deficits in the years leading up to the crisis, quickly turned to large net outflows, although overall net private flows remained positive as South African banks ran down foreign assets (Figure 1.2). Export and import volumes both plummeted, while the prices of most of South Africa's main export commodities weakened, although this was outweighed by the effect of lower oil prices, resulting in an improvement of the terms of trade (Figure 1.3). The stock market, weakened directly by net outflows on the part of non-residents and indirectly by the large corrections in equity prices elsewhere, had begun falling in May 2008 but saw sharp declines between September and November 2008, in line with equities in other emerging markets (Figure 1.4).

As a result, South Africa suffered its first recession since the early 1990s. Real GDP began falling in the fourth quarter of 2008 and declined for three quarters. Output declined by 1.8% in 2009, marking the first negative annual growth rate in the post-apartheid era. Moreover, the change in the growth rate of real GDP between 2008 and 2009 represented the largest single-year slowdown on record for South Africa, and was larger than in most advanced and emerging economies, though far from being the worst (Figure 1.5A).

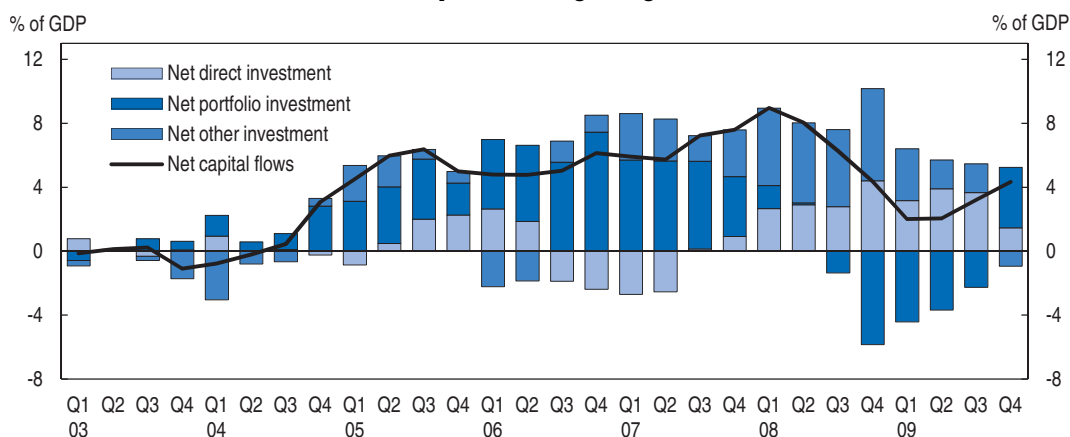
Figure 1.1. **GDP growth**  
Seasonally adjusted, annual rate



Source: Statistics South Africa.

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Figure 1.2. **Breakdown of capital flows**  
4-quarter moving average



Source: OECD calculations based on SARB Database.

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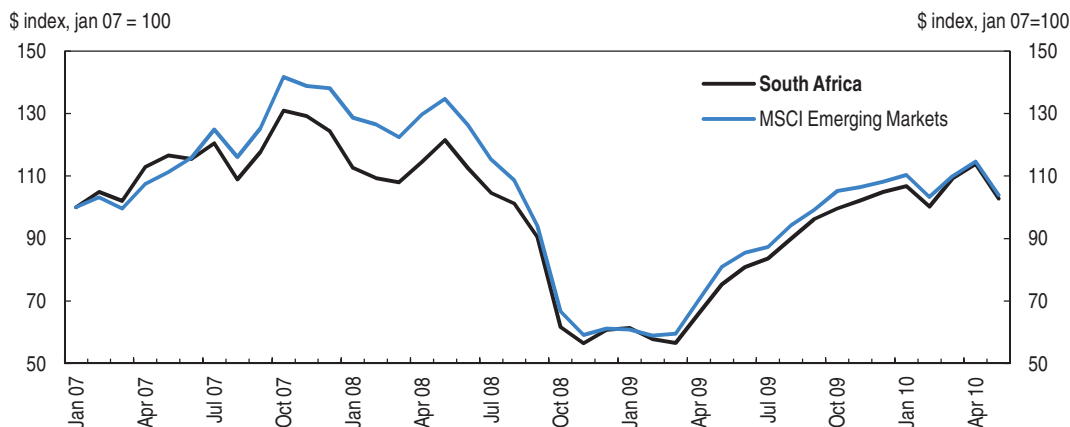
Figure 1.3. **Terms of trade**  
Seasonally adjusted



Source: SARB Database.

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Figure 1.4. **Share prices**

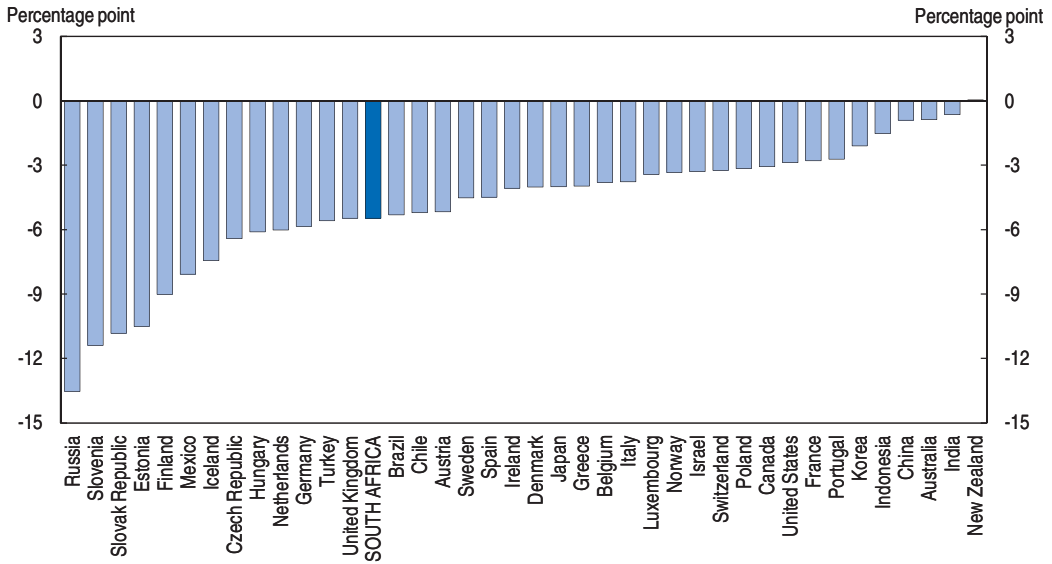


Source: Datastream and SARB Database.

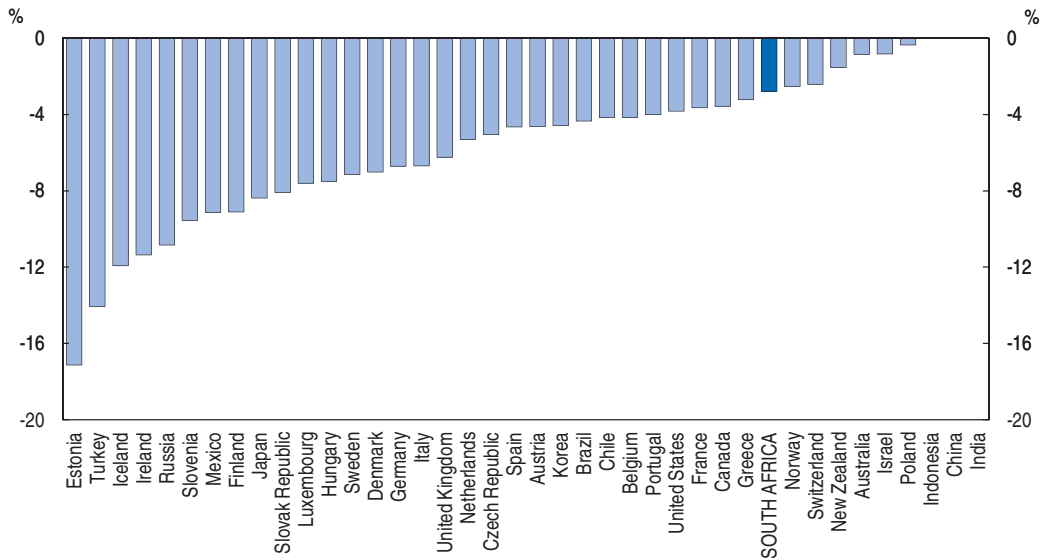
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Figure 1.5. **Growth slowdown and output fall during the crisis**

**A. Change in GDP growth rate between 2008 and 2009**



**B. Peak-to-trough fall in output (maximum output decline during the period 2008q1-2009q4)**



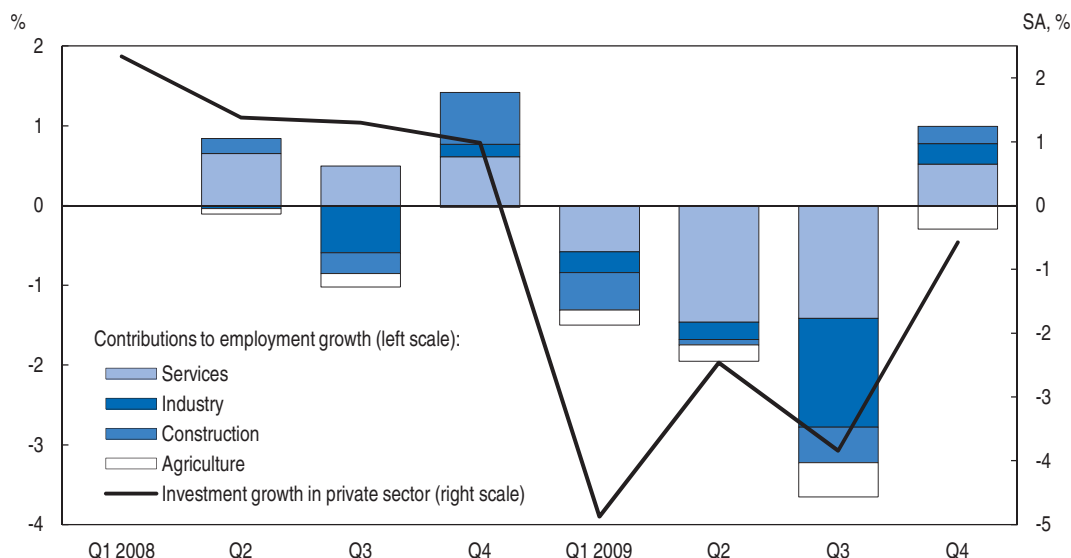
Source: OECD Economic Outlook 87 Database.

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The output decline was led by manufacturing and mining where the sudden drop in export demand was reflected in a sharp reduction in private investment and subsequently in falling employment (Figure 1.6). The latter put a drag on consumption, which was also pulled down by negative wealth effects from declines in house prices and the equity market (Figure 1.7). Several service sectors, notably wholesale and retail trade, also experienced large output and employment declines.

The South African economy has proven to be relatively resilient, however. Although South Africa’s slowdown was rather sharp, reflecting high growth rates prior to the recession, the downturn was fairly shallow: the peak-to-trough fall in output in South Africa was smaller than in most OECD and emerging market economies

Figure 1.6. Private investment and employment growth

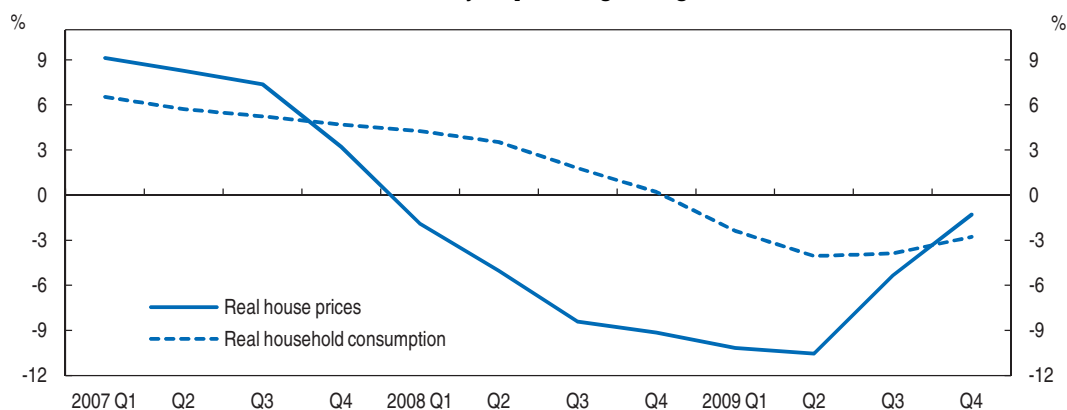


Source: SARB Database and Statistics South Africa, Quarterly Labour Force Survey.

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Figure 1.7. House prices and consumption

Year-on-year percentage change



Source: OECD calculations based on ABSA Bank and Statistics South Africa.

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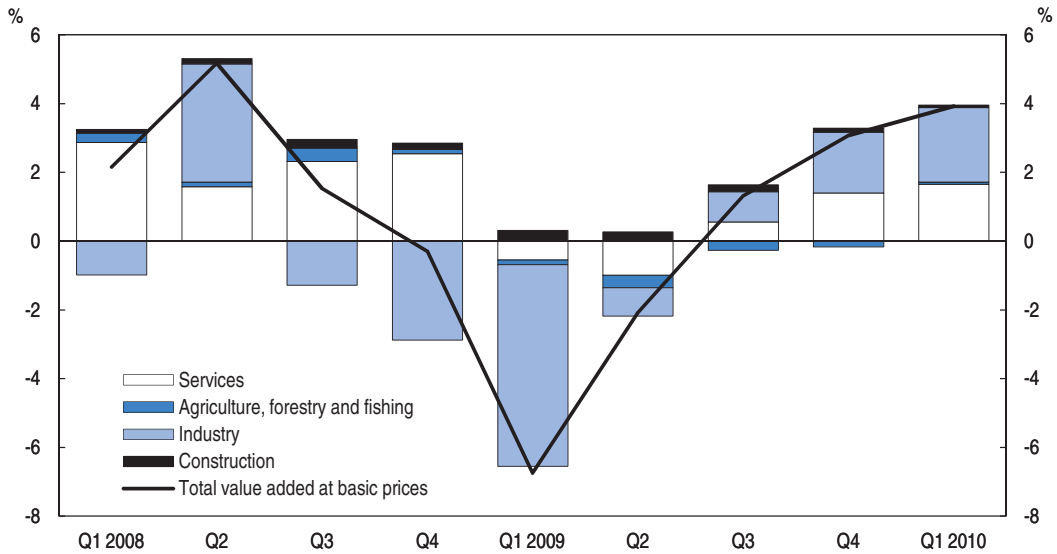
(Figure 1.5B). On a sectoral basis, the most important offset to the negative dynamics that took hold in manufacturing and mining was construction, which held up well through the recession (Figure 1.8A). This was primarily a function of public investment, in part linked to the 2010 World Cup and associated transport projects: despite sharp declines in private sector investment, gross fixed capital formation contributed positively to output throughout the recession. Inventories, net exports and consumption all made negative contributions (Figure 1.8B).

An important element of South Africa's resilience to the global economic crisis was that it did not experience a banking crisis. Despite the sharp swing from rapid economic growth into recession, and in particular the decline in house prices after a long mortgage lending boom, South Africa experienced no bank failures.<sup>1</sup> Non-performing loan (NPL) rates did surge in 2009, but the surge in bad loans was not reflected in major losses for the

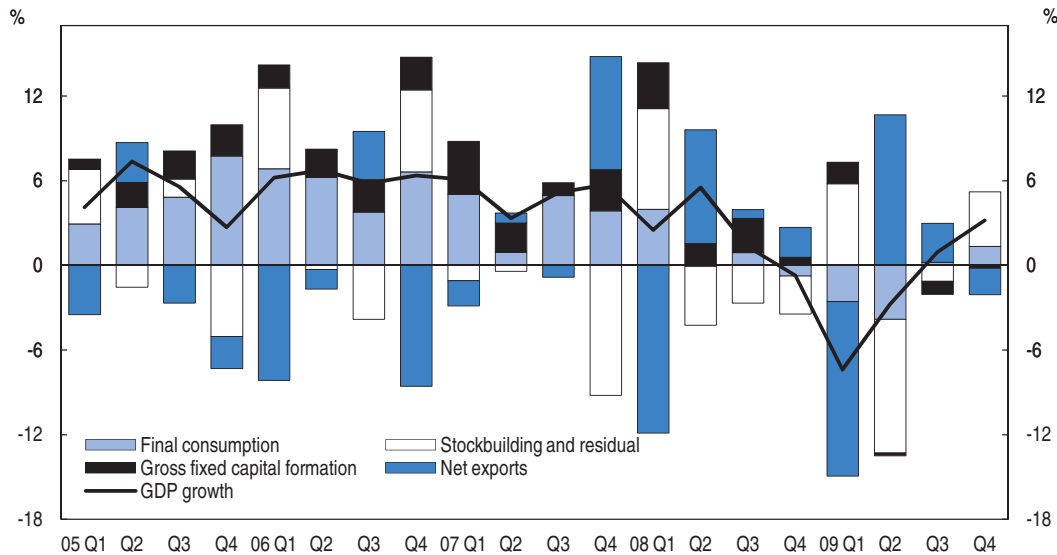
Figure 1.8. **Contribution to GDP growth by activity and expenditure**

Quarter-on-quarter, seasonally adjusted data, annual rate

**A. Contributions to GDP growth by activity**



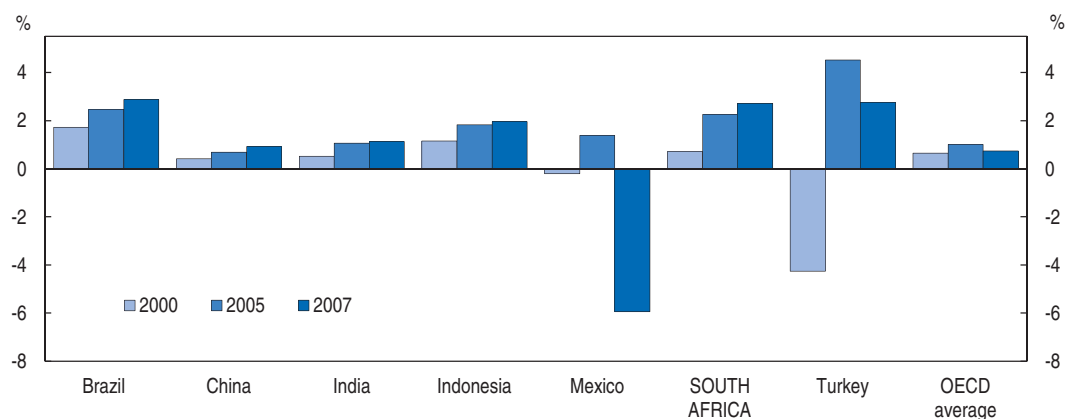
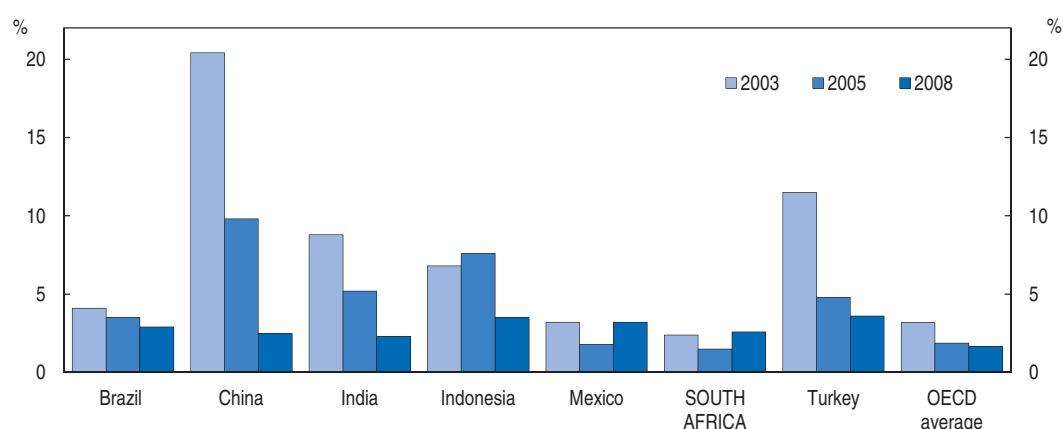
**B. Contributions to GDP growth by expenditure**



Source: OECD calculations based on Statistics South Africa.


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banks. There were several reasons for this, including the banks' strong profitability, low level of NPLs and comfortable capital cushions going into the downturn (Figure 1.9); their lack of direct exposure to problem assets in the US and Europe; bankruptcy laws that favour creditors in recovering collateral for bad loans; and conservative approaches on the part of both the regulator and the banks themselves. In addition, the lending boom was already cooling before the intensification of the international crisis in September 2008, in part because of the coming into force of the National Credit Act, which tightened standards on lending to households (Box 1.1).<sup>2</sup>

Figure 1.9. **Pre-crisis financial position of banks****A. Return on assets****B. Non-performing loans/total loans**

Note: Country groups show GDP-weighted averages of the respective variable.

Source: World Bank, *Financial Development and Structure Database*; IMF, *Global Financial Stability Report*; People's Bank of China; and OECD.

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In late 2008 the government began discussing an anti-crisis strategy with social partners, and in February 2009 the *Framework for South Africa's Response to the International Economic Crisis* was endorsed at a special Presidential Economic Joint Working Group meeting, which included civil society representatives. It comprised a package of actions covering macroeconomic policies, industrial policies, support for employment, and social policies, all aimed at cushioning the economy and especially the most vulnerable households and sectors from harm caused by the international crisis. Notable among the measures were a training layoffs initiative, in which firms could get financial support if they sent staff for training instead of making them redundant, and a strengthening of the Expanded Public Works Programme, to cover a total of 4.5 million individuals over a 5-year period. Although quite comprehensive, the *Framework* was not always specific, which was no bad thing: it largely avoided concrete commitments to industrial policy initiatives, for example. South Africa's anti-crisis strategy was also unusual in that there was no need for measures taken by a number of other countries, such as emergency support for banks or the introduction or expansion of deposit insurance coverage.

### Box 1.1. The National Credit Act of 2005

In 2004 the Department of Trade and Industry's Consumer Credit Law Reform published a policy framework for the consumer credit market. This framework was intended to develop a regulated and unified credit market, which would ensure protection for low-income consumers. The report identified the following undesirable practices in the market: extreme interest rates, inflated credit prices, non-transparent credit life insurance, negative option selling, encouragement of reckless credit with payment preferences and debt collection, incomplete and incorrect consumer credit information, the lack of a rehabilitation mechanism for extreme cases of over-indebtedness, and inefficient and ineffective enforcement of consumer protection. According to the report, these practices adversely affected consumers, undermined their choices and did not encourage a competitive credit market.

The stated purposes of the National Credit Act (NCA) are to promote a fair, transparent, competitive, sustainable, responsible, efficient, effective and accessible credit market and industry, and to protect consumers. This is especially important because many people were being taken advantage of and being charged phenomenally high prices due to their inadequate education about credit and consumer rights and their lack of understanding of credit instruments.

The NCA also defines the rights of consumers with respect to credit markets: the right to apply for credit, protection against discrimination in respect of credit, the right to reasons for credit refusal, the right to information in an official language, the right to information in plain and understandable language, and the right to receive documents.

The NCA provided legislation for the establishment of the National Credit Regulator and the National Credit Tribunal. These institutions were deemed necessary for the implementation and enforcement of the regulations, as well as the resolution of conflicts to ensure the legislation is working.

The NCA is applicable to all credit providers and all credit transactions. The legislation directly affected credit-marketing practices. It set new regulations in place to minimise misleading, fraudulent and deceptive advertising. All costs involved with the product or service must be disclosed, so that an informed decision can be made by the consumer. Under the new legislation, negative option marketing is illegal too. A credit provider is neither able to harass a consumer to enter a credit agreement nor come to their place of residence or work to sell his product of service without a preliminary agreement. All financial charges must be quoted to consumers and these quotes are valid for five days.

An important element of the NCA is its explicit focus on preventing consumers' over-indebtedness and discouraging reckless credit extension by lenders, as well as establishing mechanisms for resolving over-indebtedness should it arise. Extensive affordability analysis has to be done by all credit providers in order to determine whether a consumer can service the debt. Debt counselling was established as a mechanism to determine if a consumer had been granted credit recklessly or if a consumer is over-indebted and needs their debts to be restructured in order to meet their obligations. If this is the case then the lender does not have the right to reclaim the outstanding balances owing to them.

The NCA, adopted in 2005, became partly effective in June and September of 2006, with the limits to the cost of credit becoming effective only as of June 2007.

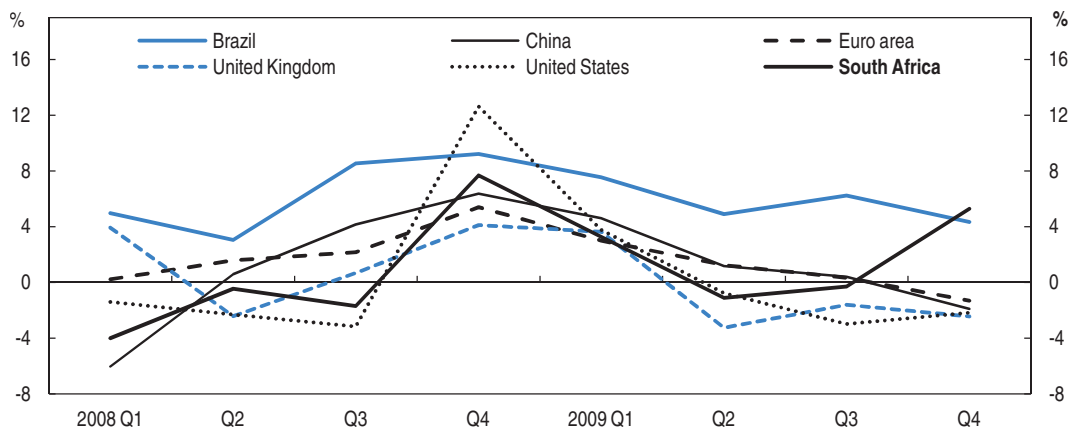


Macroeconomic policies from the onset of the crisis were countercyclical, although to a lesser extent than in many other countries. The consolidated government budget balance worsened by about 6 percentage points of GDP in 2009/10, due in roughly equal measure to a decline in the revenue-to-GDP ratio and a rise in expenditures to GDP. Most of that deterioration was cyclical, reflecting the emergence of a negative output gap and the operation of automatic stabilisers on the revenue side, but about 1.4 percentage points of GDP corresponded to a structural increase in expenditure.<sup>3</sup> This was less a function of discretionary anti-crisis measures than the maintenance of pre-existing ambitious public sector investment plans (both on the part of the government and key state-owned enterprises, which were the recipients of government loans to that end) in the face of the economic slowdown and the attendant fall in revenues. Public consumption also supported output during the decline, again in part by “accident”, as unexpectedly large public sector wage increases were granted in 2009 after a wave of strikes.


Interest rates were reduced by 500 basis points during the recession, but the easing of monetary policy was not aggressive by international standards. The South African Reserve Bank (SARB) began to ease in December 2008 as the effect of the decline in international food and energy prices began to feed through to the CPI, and as the first indications of the economic downturn emerged. Soon after the international crisis struck the Monetary Policy Committee (MPC) moved to monthly meetings, from once every two months, in order to be able to react promptly to developments, and between December 2008 and August 2009 there were four cuts of 100 basis points and two of 50 basis points. A further cut of 50 basis points was made in March 2010. In contrast to many OECD countries, however, where interest rates fell nearly to zero, the SARB’s repo rate bottomed out at 6.5%, and no emergency actions, such as capital support for banks or quantitative easing to support lower interest rates, were judged to be needed given the absence of severe difficulties in the banking sector. Real interest rates were negative in South Africa in the first half of 2009, but actually less so than just before the crisis, and with the continued fall in inflation, by the second half of the year had turned substantially positive again, unlike real rates in most OECD member countries (Figure 1.10).<sup>4</sup> The growing sense of normalisation was reflected in the MPC’s move back to bi-monthly meetings in November 2009.

Figure 1.10. **Real short-term interest rates**

Deflated by the consumer price index



Source: OECD calculations based on OECD Economic Outlook 87 Database and OECD, Main Economic Indicators Database.

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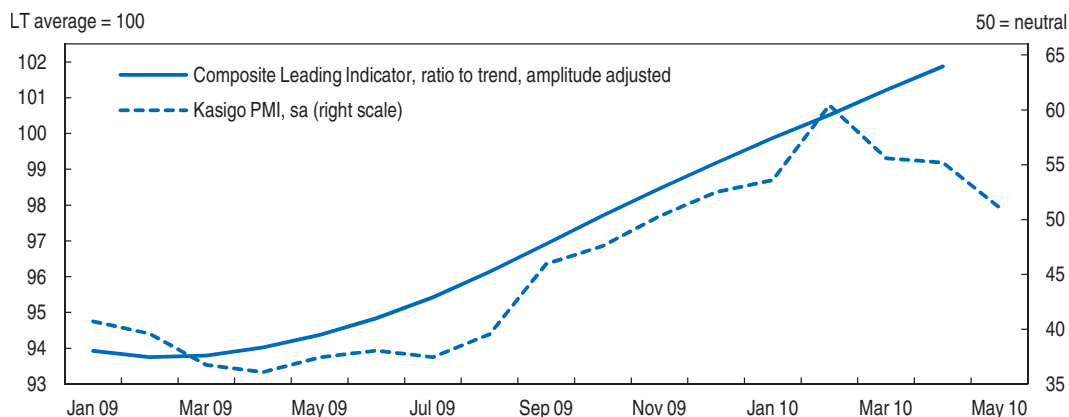
The use of structural policies to respond to the crisis was also limited. The *Framework for South Africa's Response to the International Economic Crisis* emphasised the urgent need to use industrial and trade policy, preferential treatment of domestic firms in procurement, and rescue packages for crisis-affected sectors, but there has been little concrete action in these areas to date, which is welcome from the perspective of both economic efficiency and long-term growth. Some tariffs, mainly on clothing, were raised, and a small number of anti-dumping investigations were launched, but overall the trade policy stance did not become significantly less open. Corporate bail-outs were also not a major feature of the downturn. The state-owned Industrial Development Corporation (IDC) was empowered to lend ZAR 6 billion over two-years (equivalent to about 0.1% of GDP) to distressed enterprises in a number of sectors, but as of August 2009 only about 10% of that amount had been approved. The main action on the labour market side, a training layoffs scheme, suffered from low take-up, and thus did little to mitigate employment losses.

Although macroeconomic policies were supportive and the downturn was not particularly deep compared to the international average, it was nonetheless relatively prolonged, and a few countries (Australia, China, India, Indonesia, Israel, Poland) were much less affected, while a number of others (e.g. Korea, Brazil and Chile) suffered deeper downturns initially but then experienced faster rebounds, thus outperforming South Africa over the period since the beginning of the global economic crisis. The main reason for this is that South Africa was already moving into a cyclical downturn when the international crisis struck. What might have been a moderate growth slowdown in South Africa, as households worked down excessive debt loads via higher savings rates, was turned into a recession via the negative shock to external demand and financial conditions.

Growth has resumed, and has been strengthening. After three negative quarters, real GDP growth turned marginally positive (+0.2% quarter on quarter seasonally adjusted, not annualised) in the third quarter of 2009 and quickened to 0.8% in the fourth quarter, as private consumption growth turned positive after five quarters of contraction and the rate of inventory drawdown slowed. In the first quarter of 2010 growth picked up further to 1.1%. Government consumption contributed positively throughout 2009, while gross fixed capital formation declined in the fourth quarter for the third quarter in a row, though at a slower rate than in the previous two quarters. Export and import volumes both rebounded in the second half of the year, with exports beginning to recover earlier but import growth outpacing that of exports in the last quarter of the year. Although some sectors, such as manufacturing, have experienced a significant bounce back from the low point of the recession, others, including wholesale and retail trade, agriculture and fisheries, and finance and real estate, have lagged. Two important factors holding back the recovery appear to be credit growth and employment. With household debt levels remaining high and weakening labour market conditions, consumption has so far played less of a role in the recovery than in many other countries.

Most high frequency indicators suggest that momentum is building, although the evidence remains mixed. Notably, house prices have been rising since mid-2009, and the OECD Composite Leading Indicator has been signalling growing strength, although the Kagiso PMI has given back gains in recent months, suggesting that the recovery in manufacturing is stuttering (Figure 1.11). Many of the factors which have contributed to the turnaround so far are expected to remain favourable through the rest of 2010 and into 2011. For example, as regards external conditions, most economic forecasters, including the

Figure 1.11. Indicators of activity

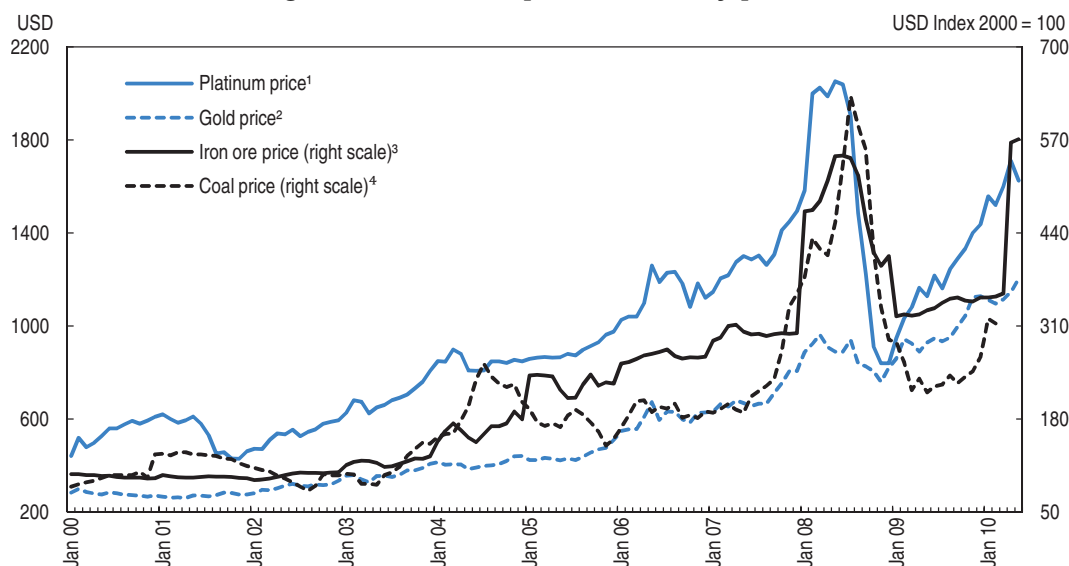


Source: OECD Composite Leading Indicators Database and Bureau of Economic Research.

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OECD, have been revising upwards their projections of global economic growth in 2010, and the prices of South Africa's export commodities have continued to surge (Figure 1.12). A further export price windfall should arise from the recent decision of market participants to shift from annual to quarterly iron ore pricing contracts, as current spot prices are far above the previous annual contract prices. The further cut in interest rates in March 2010 is also helpful for near term growth. Output growth is therefore expected to quicken over 2010-11 (Table 1.1).

Figure 1.12. Main export commodity prices



1. London Platinum Free Market USD/Troy oz.

2. Gold Bullion London Bullion Market USD/Troy Ounce.

3. Hamburg Institute for Economic Research, world market price, iron ore, scrap.

4. South Africa, USD per metric tonne.

Source: IMF, IFS Database, Datastream and HWWA.

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Table 1.1. **Macroeconomic projections 2010-11**

	2007	2008	2009	2010	2011
	Percentage changes, volume				
Private consumption	5.5	2.4	-3.1	2.3	5.5
Government consumption	4.7	4.9	4.7	3.6	3.4
Gross fixed investment	14.2	11.7	2.3	3.0	8.9
Final domestic demand	6.9	4.6	-0.6	2.7	5.8
Stockbuilding <sup>1</sup>	-0.4	-1.3	-1.3	1.3	0.1
Total domestic demand	6.4	3.3	-1.8	4.0	5.9
Exports of goods and services	5.9	2.4	-19.5	8.9	6.1
Imports of goods and services	9.0	1.4	-17.4	10.9	9.2
Net exports <sup>1</sup>	-1.2	0.2	0.1	-0.9	-1.1
GDP at market prices	5.5	3.7	-1.8	3.3	5.0
<i>Memorandum items</i>					
Inflation	7.1	11.0	7.1	5.3	5.2
Employment growth	0.4	1.8	-3.6	1.2	2.3
Unemployment rate	22.3	22.9	24.0	24.5	24.0
Current account balance (USD billion)	-20.5	-20.1	-11.2	-17.6	-22.0
Current account balance <sup>2</sup>	-7.2	-7.1	-4.0	-4.9	-5.5
Consolidated government budget <sup>3</sup>	1.7	-1.0	-6.7	-6.1	-4.7
Household disposable income growth	5.5	2.4	-2.8	3.0	4.5
Household net saving ratio	-0.8	-0.8	-0.4	0.0	-0.3

1. Contributions to changes in real GDP

2. As a percentage of GDP.

3. As a percentage of GDP. Data refer to fiscal years starting in April.

Source: OECD Economic Outlook 87 Database, Statistics South Africa, SARB Database and OECD estimates.

## Emerging from the crisis

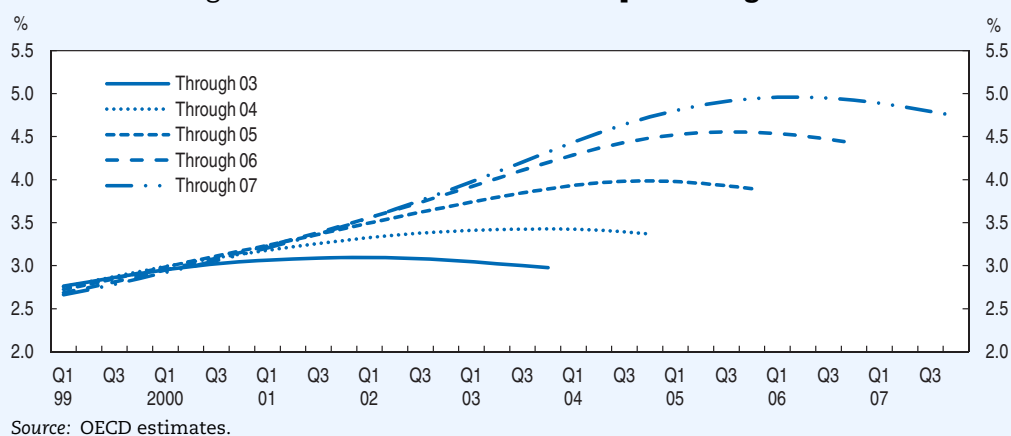
The downturn has shed new light on the cyclical component of growth in recent years. It is now clearer than it was before the crisis that a good part of the rapid growth experienced by South Africa from 2004 through mid-2008 was cyclical in nature. Even before the crisis, there were numerous signs that an unsustainable boom was underway, including surging consumption, widening current account deficits, and an extended house price boom. There was considerable uncertainty, however, about how much of the improved growth performance since the early 2000s represented a change in the trend and how much reflected cyclical or other temporary factors. Standard statistical filtering methods used for estimating trend growth rates are notoriously oversensitive to end-points, so that when growth is strong, estimates of potential growth rise quickly (Box 1.2). The downturn has helped to define the latest economic cycle and thereby to clarify the cyclical component of the boom. The OECD Secretariat has estimated potential output based on the assumption of a Cobb-Douglas production function with statistically smoothed TFP growth and labour inputs. These estimates suggest that potential growth peaked at 4½ per cent in 2007 before slipping back to about 4%, owing to a decline in labour force participation rate and a slight slowing in trend TFP.

The crisis has probably resulted in a small permanent output loss, but the future potential growth rate should be little affected. In the wake of the 2008-09 crisis the authorities in many OECD countries revised down their estimates of near-term potential output (OECD, 2009). Furceri and Mourougane (2009) estimate that in OECD countries financial crises give rise to a permanent loss of output of 1½ to 2½ per cent on average, and as much as 4% in some cases. For low- and middle-income countries the permanence of

### Box 1.2. South Africa as an illustration of the end-point problem in filtering estimates of potential output

A familiar problem with statistical filtering approaches to estimating potential output is that the estimates are sensitive to the choice of end-point. During a cyclical upswing successive estimates of potential output tend to rise rapidly. The case of South Africa during the pre-crisis boom years of 2004-07 illustrates clearly that tendency. Using a Hodrick-Prescott (HP) filter on output for the years through 2003 gave an annual potential output growth rate estimate of about 3%. The same procedure applied on the years through 2004, 2005, 2006, and 2007 yields successively higher estimates, peaking at about 5% (Figure 1.13). The same sensitivity to end-points means that taking into account the recession of 2008-09 changes the picture sharply; applying the same HP filtering process to data through 2009 generates estimates of potential growth that are below 3%.

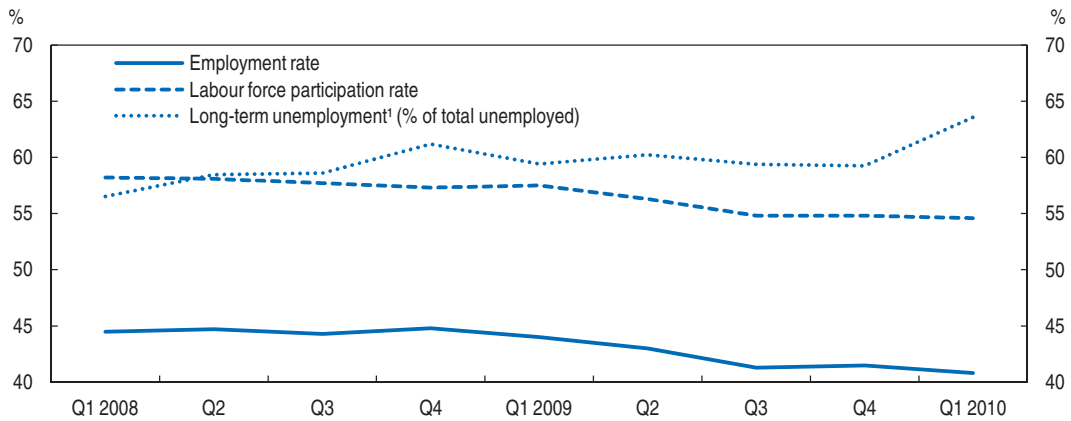
Figure 1.13. HP filter estimates of potential growth



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output losses in crises is more open to question. The main channels for permanent effects are a reduction in the capital stock and higher structural unemployment and/or lower labour force participation. In South Africa's case, overall fixed capital formation continued to increase in 2009, despite a sharp reduction in private investment. At worst, therefore, South Africa probably experienced a modest temporary slowdown in the growth of the capital stock, and the increase in public sector investment mostly corresponds to additions to energy and transport infrastructure which address important bottlenecks and which should have a positive real rate of return. The most significant source of permanent output losses is therefore via lower labour inputs relative to the previous trend. Labour force participation and employment both fell significantly during 2009 and into early 2010, and long-term unemployment rates turned sharply upwards (Figure 1.14). Spells of long-term unemployment tends to be associated with an erosion of skills and impaired employability, and higher unemployment rates also lead to larger numbers of discouraged jobseekers. Loss of human capital arising from extended inactivity is reflected in lower TFP. OECD estimates suggest that the permanent loss of output associated with the crisis was small, less than 1%. As regards future growth rates, Haugh *et al.* (2009) find no systematic effects of financial crises on the potential growth rate in OECD countries. One possible source of such effects is anti-competitive anti-crisis measures designed to support domestic

Figure 1.14. **Labour market dynamics during the crisis**



1. One year and more.

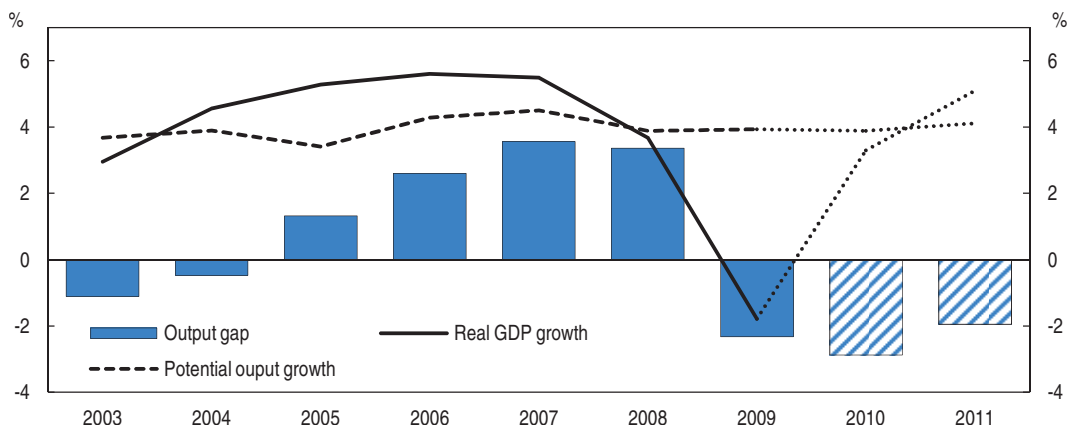
Source: Statistics South Africa, Quarterly Labour Force Survey.

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industries, which can hurt innovation in the longer run. As noted above, such measures have so far been modest in South Africa, and no significant reduction in potential growth rates is foreseen. Indeed, they ought to rise somewhat in the medium term if structural and macroeconomic policies can be refined to better support growth.

The output gap, which exceeded 3% in the last quarter of 2009, is unlikely to be eliminated quickly. OECD projections suggest that the recovery in 2010 will not be sufficiently vigorous to narrow the output gap. Output growth during the first half of the year is seen as being somewhat above potential, boosted by the staging of the World Cup, before slowing somewhat in the second half.<sup>5</sup> The output gap will only begin to shrink decisively when growth strengthens further, which is expected to happen in 2011, and output is unlikely to catch up with potential before 2012 (Figure 1.15). The key short-term task is therefore to consolidate the emergence from recession and put the economy on course for the fastest possible elimination of the output gap. A sluggish recovery is likely to mean a continued upward creep of structural unemployment as long-term unemployment increases, eroding the human capital of displaced workers whose connection to the labour

Figure 1.15. **Potential GDP and output gap**



Source: OECD estimates.

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market is weakened. Slow growth would also delay the pickup in investment via accelerator effects. As a result of these effects on labour and capital inputs, a weak rebound from the 2008-09 recession would increase the negative impact on potential output and hinder progress on the reduction of poverty and unemployment.

The authorities should therefore beware of withdrawing policy support for domestic demand too early. The tame behaviour of core inflation, combined with the strength of the rand, the recession and hesitant recovery to date, suggests that the latest downward move in the SARB's policy rate (in March 2010) was well judged, and scope may yet remain for some further reduction of interest rates. Credit to the private sector and retail sales have been falling, even in nominal terms, while business confidence is still low (albeit rising) and there is as yet little sign of an improvement in the job market. Meanwhile, although global growth projections have been revised upwards in recent months, they continue to portray a tepid recovery. As to fiscal policy, public debt levels remain moderate at about 30% of GDP, and the current deficit (6.7% of GDP in fiscal year 2009/10) is not particularly high by international standards; withdrawal of fiscal stimulus should be modest at first.

In the short term a relapse into recession remains the greatest danger, even if the probability of such an event has fallen. As the recovery proceeds, however, other risks will take on greater prominence. In particular, fiscal policy will need to be tightened, both to safeguard the public balance sheet and to avoid aggravating macroeconomic imbalances. A progressive tightening is indeed implied by the 2010/11 Budget, which projects an improvement in the consolidated budget balance of 0.5 percentage points of GDP in the current year and a further 2.1 percentage points over the next two years. OECD estimates suggest that this will correspond to an adjustment of about 1% of GDP in cyclically adjusted terms this year and somewhat less than 1% in each of the following two years.

Although monetary policy does not look excessively loose, elevated inflation expectations require the central bank to keep policy rates higher than otherwise. Inflation expectations have so far been quite sticky downwards despite the large fall in inflation since mid-2008 and the emergence of a negative output gap. In the inflation expectations survey of the Bureau of Economic Research (BER) in the first quarter of 2010, business and labour respondents saw inflation as remaining around 7% from 2010 through 2012, with economic analysts having somewhat lower expectations. This follows an established pattern of expectations in general, and of business and labour respondents in particular, being apparently heavily backward-looking. In the BER quarterly surveys from 2000 through 2009, the average expected inflation rate for the year ahead was slightly negatively correlated (-0.06) with the actual outcome, while it was highly correlated (+0.80) with the trailing 4-quarter inflation rate. For the two-years-ahead period, the correlation was -0.63 with the actual outcome and +0.76 with the trailing inflation rate. This has been reflected in recent wage settlements that have been surprisingly strong considering the extent of labour market slack. According to the Andrew Levy survey, average settlements in 2009 were 9.3%, down only slightly from the level of 2008 (9.6%), even though actual inflation was lower and real GDP growth negative. Thus, although headline inflation appears tame given slack demand conditions and the easing of food price pressures, the downward rigidity of inflation expectations forces the SARB to be cautious as the economy picks up.

There is no convincing rationale for financial assistance or trade protection for particular industries on account of the economic downturn, and such measures as were introduced during the crisis should be unwound as soon as possible. As noted above, industrial and trade policy measures were central to the rhetoric of the crisis-response strategy, but fortunately little has been done to this end. The limited use of such levers is positive for long-term growth, and with the recession now receding, further use of such efficiency-reducing measures should be avoided.

The authorities should also seek to draw lessons from this crisis and reduce the probability of similar downturns in the future. The exit from recession is a good time to consider how to reduce the likelihood and extent of future downturns. One important avenue is to further improve macroeconomic management to make it more countercyclical possible ways of doing this are discussed in Chapter 2. Also, although South Africa did not have a banking crisis, that may have been partly fortuitous, reflecting the strong position of the financial sector after several years of strong profitability in the context of rapid economic growth. Prudential supervision in South Africa has broadly the same vulnerabilities as in advanced countries. It is therefore to the country's credit that it has been actively participating in international initiatives in banking regulation aimed at making lending less procyclical. Also, while the high level of concentration in the South African banking sector may have increased the stability of the system in this crisis, via the wide lending margins and high profits enjoyed by the big banks, there need not be a trade-off between competition and tight regulation, especially where supervisors are strong, as is the case in South Africa (see OECD, 2010, Chapter 6). In addition, apart from raising financing costs, South Africa's rather extreme levels of bank concentration may contribute to a too-big-to-fail problem which could ultimately be harmful to financial stability and fiscal sustainability.

## Setting a course for rapid convergence on advanced country income levels

### ***The need to improve long-term growth rates***

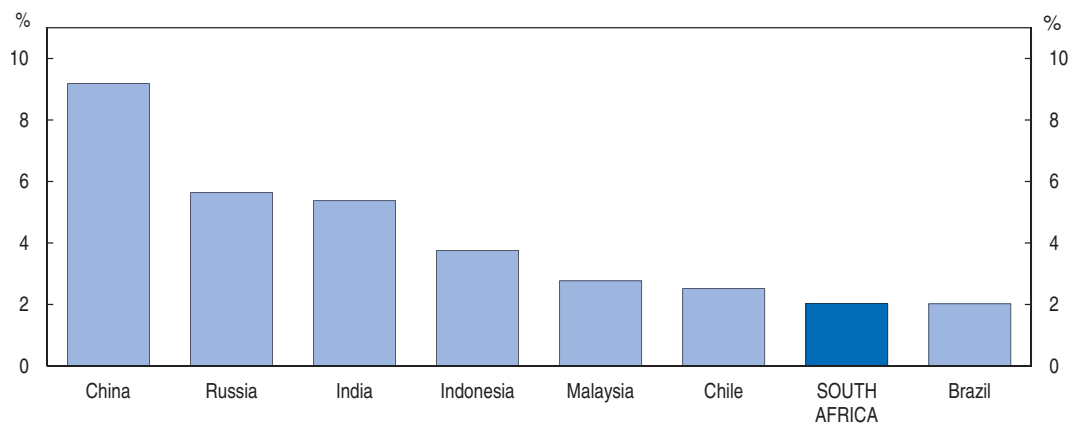
Beyond ensuring recovery from the recession, South Africa faces many challenges. These are broadly interlinked by the need to make better use of South Africa's abundant resources, both physical and human, to accelerate the increase in living standards for the many.

South Africa's growth performance, though improving, has been mediocre. Per capita GDP grew by some 1.6% a year from 1994-2009, and by 2.2% over the decade 2000-09. This is respectable for an emerging economy, but far behind the growth leaders (Figure 1.16). Moreover, although trend growth does appear to have improved somewhat over the past 16 years, South Africa is unusual among emerging economies in having failed to achieve any convergence towards the OECD average of GDP per capita over that period (Figure 1.17).

Faster growth is needed to meet existing government growth targets. AsgiSA, the development strategy introduced in 2006, set out targets of 4½ per cent through 2009 and 6% over the period 2010-14. Although growth initially outperformed those parameters, it has been set back by the recession of 2008-09, and to catch up to the cumulative growth path underlying AsgiSA would now require average annual growth of about 7% (Figure 1.18). A strong cyclical recovery that eliminates the negative output gap would help, but if South Africa's potential growth rate is indeed only around 4% currently, then a



Figure 1.16. Real GDP per capita growth, average 2000-09

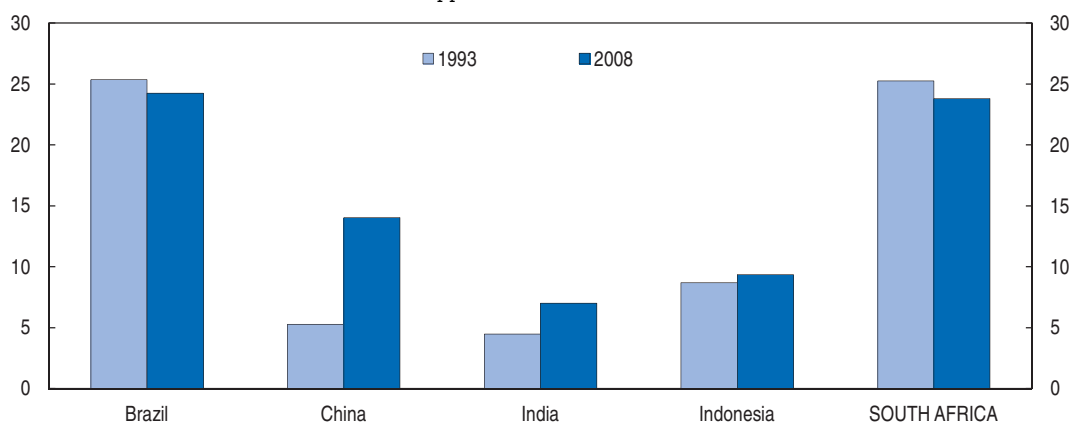


Source: OECD Economic Outlook 87 Database; World Bank, WDI Database.

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Figure 1.17. Convergence to OECD income levels in the BIICS countries

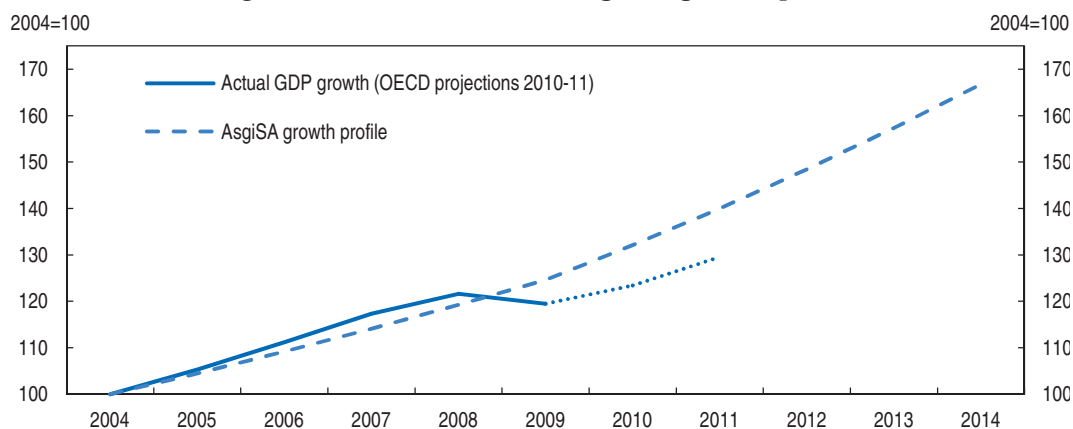
GDP per capita (constant 2005 PPPs)  
Relative to upper half of OECD countries = 100



Source: OECD, Going for Growth 2010, Figure 7.1.

StatLink <http://dx.doi.org/10.1787/888932309389>

Figure 1.18. Government's targeted growth profile



Source: Statistics South Africa, OECD Economic Outlook E087 Database and Presidency of South Africa.

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substantial increase in that rate looks to be needed if the economy is to approach the prevailing official growth targets through 2014.

Faster growth is needed to meet social objectives. The AsgiSA growth targets were framed with a view to halving unemployment and poverty by 2014, which remain as official targets. The low rate of employment and the extreme level of inequality are considered by the government and most South Africans to be the most salient economic problems facing the country. As discussed further in Chapter 3, far too many young black South Africans cannot find work, and unemployment is the main factor in widespread poverty (Leibbrandt et al., 2010). Unemployment, poverty and inequality are also linked to other problems, such as crime, which have in turn hurt investment, and growth and thereby had negative feedback effects on employment. While progress toward the AsgiSA unemployment target was made during the cyclical upswing from 2004 through early 2008, that was undone by the crisis: the unemployment rate is now little changed from its 2004 levels. It is difficult to know how downturns affect unemployment rates in South Africa given the absence of recessions from 1993 to 2008 and the lack of consistent unemployment series. Other countries have, however, experienced increases in structural unemployment as a result of recessions (Blanchard and Summers, 1989; OECD, 2009). Moreover, even during the boom, when growth averaged more than 5% a year, the unemployment rate fell by only 4 percentage points over 4 years. This suggests that even faster growth will be needed to achieve a rapid reduction in unemployment.

Faster growth is needed to expand the freedoms enjoyed by South Africans. The unfreedoms (in the terminology of Amartya Sen) of joblessness, poverty, insecurity and poor education, linked in part to the failure to achieve faster economic growth, in too many cases negate the substantial civil and political liberties enjoyed in democratic South Africa. The expansion of social benefits, both via monetary grants and through initiatives such as free electrification of low-income communities, have had considerable positive effects, but there are limits to what can be done by redistribution. Already, South Africa has about three times as many recipients of social benefits as it has income tax-payers, an extremely high ratio by international standards.

### ***Selected areas for action to achieve sustained rapid growth***

The economic growth literature is vast and inconclusive. It is generally agreed that many things influence growth, but there is little consensus on what factors constitute necessary or sufficient conditions for sustained rapid growth. Recent empirical work on growth takeoffs and the study of the Commission on Growth and Development (henceforth Spence Commission) of successful growth experiences suggest that faster growth can sometimes be triggered by the relaxation of a small number of constraints. This was the rationale for the AsgiSA approach, and it remains valid, even if the specific AsgiSA targets for 2014 are now probably beyond reach.

The crisis and what it tells us about the pre-crisis boom point to some conclusions about South Africa's growth performance to date and how to improve it. It is clearer than before that between 2004 and 2008 South Africa experienced an unsustainable consumption boom driven in part by the interrelated phenomena of terms of trade gains and strong capital inflows (the product of excess international liquidity and euphoric sentiment towards emerging markets), while underlying improvements in total factor productivity growth were only moderate, reflecting in part policy weaknesses. Achieving sustained satisfactory growth rates will probably require more savings and investment, an

institutional framework that facilitates faster growth of total factor productivity, and reduced susceptibility to surges in capital flows, which are often linked to rises in commodity prices. The stubbornly high rate of unemployment even during the high-growth pre-crisis period, and its rise since the onset of the recession, also suggest that growth should, at least for a time, be more labour-intensive. One aspect of this problem has been unrealistically low electricity prices, which by encouraging capital- and energy-intensive industries like metal processing have also aggravated South Africa's large carbon footprint. Sustainable growth is likely to mean, *inter alia*, less energy- and carbon-intensive output.

Correspondingly, this chapter focuses on a few factors related to weaknesses that have been revealed by the descent into recession and the downgraded assessment of potential growth. These include low savings rates, the domestic demand-led bias to growth, the indifferent record of innovation and multifactor productivity growth, and the excessive energy- and carbon-intensiveness of economic activity, which compromises environmental sustainability. Some major issues linked to growth and other important objectives, such as health and education, are mentioned only briefly on this occasion.<sup>6</sup> Future *Economic Surveys* will come back to these issues in depth. Likewise, South Africa's extreme levels of inequality, among the highest in the world, are not discussed in detail in here, but have been the subject of other recent OECD work (Leibbrandt *et al.*, 2010) and will be revisited in future *Economic Surveys*. Inequality is tightly linked to labour market outcomes, which are the topic of Chapter 3.

The identified problems are interrelated, as are the proposed recommendations. For example, higher savings rates would help ease pressures for real appreciation of the rand and help reverse the domestic demand-led bias to growth. Higher relative prices for energy would not only reduce the carbon-intensiveness of South African GDP, but also help unwind the excessive capital-intensiveness of growth in past years. Strengthening innovation and productivity growth would help improve South African's export performance.

While there is no single country that should be seen as a role model for South Africa in all areas, Chile's policy record may be instructive in some respects. If there is one country which stands out as having faced a broadly similar set of challenges in the past 20 years or so, with a somewhat greater degree of success, it may be new OECD member Chile. Like South Africa, Chile is a middle-income country with a commodity-dependent economy, which has come through a tricky political transition to democracy, has faced large swings in the terms of trade and has experienced surges in capital inflows and occasional sudden outflows. It has adopted an outward-oriented, open policy approach, but has not been averse to taking action to limit capital inflows when they have threatened to harm the economy. Macroeconomic policies have been exceptionally prudent, buttressed by fiscal rules, a commodity stabilisation fund and an inflation-targeting regime (though the last has not implied indifference to the real exchange rate). Product market regulation has been less restrictive than most other emerging markets and even a number of OECD economies. A number of the recommendations in this *Survey* go broadly in the direction of these policy orientations.

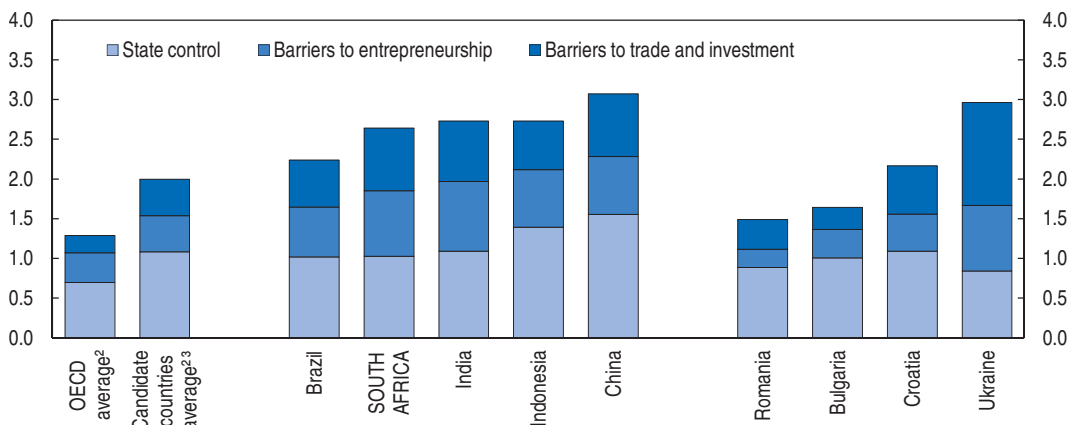
### ***Improving framework conditions for business***

In the long run, converging on OECD income levels will require a large increase in average productivity, *i.e.* in the economic and technical efficiency of production. Public

policy can facilitate such an increase across a range of fronts. For example, the OECD's *Innovation Policy Review of South Africa* (OECD, 2007) made a number of suggestions for how to improve innovation performance, a critical contributor to long-run productivity growth, through improvements in such areas as tax incentives, public R&D expenditures, education, and immigration policy. Another crucial aspect of the issue is the competitive framework within which firms operate. Empirically, a strong relationship has been found between robust competition in product markets and the performance of firms in the critical areas of innovation, capital-deepening, and corporate management. Competition also removes the allocative distortions caused by monopolistic market structures. A lack of competitive pressure is often found to be reflected in weaker investment (Alesina *et al.*, 2005), weaker efficiency gains (Nickell *et al.*, 1997; Nicoletti and Scarpetta, 2003) and, at least over a range, weaker innovation (Aghion *et al.*, 2005; Griffith *et al.*, 2006). Strengthening competition is therefore a particularly promising means of achieving faster convergence in income levels.

Product market regulation in South Africa is not conducive to robust competition. In 2008 South Africa's scores on the OECD's Product Market Regulation (PMR) indicators were found on aggregate to be more restrictive than any OECD country except Poland. Compared to other non-OECD members, it was found to have more restrictive regulation than countries such as Chile or Brazil, but less than China, India or Russia. Among the five Enhanced Engagement countries, South Africa's overall PMR score was about average.<sup>7</sup> The scores for the main sub-indicators – on state control, barriers to entrepreneurship, and barriers to trade and investment – were all well above the OECD average, while compared to other non-OECD countries, barriers to entrepreneurship stand out as the area in which South African regulation is relatively restrictive (Figure 1.19).

Figure 1.19. **Decomposition of PMR in Enhanced Engagement and other non-member countries, 2008<sup>1</sup>**



1. Based on a "simplified" PMR indicator.

2. Simple average.

3. Chile, Estonia, Israel, Russia and Slovenia.

Source: OECD estimates.

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In that context, it is not surprising that South Africa is also found to have low levels of product market competition. For example, Fedderke and Naumann (2009) use Rosenbluth and C5 concentration ratios to show that South African manufacturing industries were

highly concentrated throughout the period 1976-2001. Some empirical work on the margin between price and costs also suggests that competition levels are low in South Africa (e.g. Fedderke and Hill, 2007; Aghion et al., 2008), although in this area the evidence is more mixed: Edwards and Van de Winkel (2005) fail to find evidence of high mark-ups in manufacturing.

As noted in OECD (2008b), surveys of firms in South Africa confirm the finding that barriers to entrepreneurship are a particular problem. Complaints are particularly directed at regulatory compliance complexity (Strategic Business Partners, 2005; Rankin, 2006). This is consistent with the high scores registered in the disaggregated PMR indicators for simplification of rules and procedures and communication (where complexity of procedures appears to be the problem; communication is relatively good) and streamlining of procedures for getting licenses and permits.

Less restrictive product market regulation, especially as regards barriers to entrepreneurship, could boost growth significantly. Econometric work on OECD countries suggests that lower aggregate PMR scores are associated with stronger growth (Nicoletti and Scarpetta, 2005; Conway et al., 2006; Wölfl et al., 2009). Wölfl et al. find that when growth regressions are run on an enlarged sample of OECD and non-member countries, the effect of aggregate PMR scores is not statistically significant. At a disaggregated level, however, significant growth effects are found, specifically for the “barriers to entrepreneurship” sub-indicator, which appears to be driving most of the association between overall product market regulation and growth. The estimated coefficients suggest that an improvement of half an index point in the barriers to entrepreneurship sub-indicator, a bit less than the difference between the South African score on this sub-indicator and that of the average OECD country, would translate into approximately a 0.4-0.6% higher average annual rate of GDP per capita growth over the subsequent decade. On average across Enhanced Engagement countries (among which South Africa is about average), the annual growth rate of GDP per capita could increase by as much as 1.4 percentage points if these countries were characterised by regulatory environments corresponding to the average score of barriers to entrepreneurship across the least restrictive OECD countries.

Other OECD work suggests that PMR affects growth via an interaction with productivity catch-up (Arnold et al., 2009). Estimating the growth-enhancing effects of reducing PMR restrictiveness using this approach requires data on detailed sub-indicators that are not yet available for South Africa, but the results for OECD countries again suggest that the growth effects of less restrictive regulation could be substantial. For example, simulations indicate that middle-income countries like Poland and Hungary could achieve a cumulative increase in labour productivity of almost 20% over ten years if they were to move to the least restrictive levels of PMR prevailing in each area, and these countries have lower initial PMR scores than South Africa and are closer to the technological frontier, both of which suggest that the growth-enhancing effects should be greater for South Africa.

Greater product market competition would not only be expected to boost long-term growth rates, but would also be beneficial for employment outcomes and for the reduction of inequality. A number of theoretical and empirical studies have suggested that easing anti-competitive product market regulation may have a positive effect on employment (e.g. Blanchard and Giavazzi, 2003; Nicoletti and Scarpetta, 2005; Griffith et al., 2007). The existence of substantial product market rents gives firms an incentive to share these rents

with labour (to reduce the costs of strikes, turnover, and shirking). Real wages for employed workers are thus higher than otherwise, and total employment lower.

One aspect of product market regulation that is much debated in South Africa currently is the trade and foreign investment regime. Trade barriers were reduced substantially in the 1990s, and South Africa generally has low tariff and non-tariff barriers compared to other middle-income countries. Liberalisation of the trade regime has largely stalled in recent years, however, and proponents of a more active industrial policy would like to see South Africa selectively raise tariffs within WTO bound levels in order to increase protection for favoured industries. Indeed, some limited steps in that direction were taken during the crisis. Some OECD work suggests, however, that this would be misguided. Kowalski *et al.* (2009) find that trade liberalisation is favourable for total factor productivity growth in South Africa.

### ***Raising the savings rate***

The relationship of domestic savings and the current account balance to economic growth is theoretically ambiguous. If savings matter, the most obvious mechanism is that they finance investment, although the extent to which investment is a driver of growth is itself a matter of debate. In the closed-economy Solow model, technological change is the primary determinant of long-run steady-state growth, and investment affects growth only in the transition to the steady state. There is no reason to believe that middle-income countries like South Africa are in a steady state, however; their capital-labour ratio should be rising through time, with the implication that capital accumulation does matter for growth. Also, endogenous growth theories often incorporate a role for physical and human capital in determining steady-state growth. While there is an empirical as well as a theoretical debate about the relative role of capital accumulation and TFP growth in determining growth performance, most studies (*e.g.* Bosworth and Collins, 2003; Mankiw *et al.*, 1992) attribute a significant share of growth to capital accumulation.

It is not straightforward, however, that investment is constrained by domestic savings, or that domestic savings should be preferable to foreign savings from a growth perspective. Indeed, foreign direct investment in particular may also boost TFP growth via the transfer of know-how from more advanced economies. One possible theoretical rationale for why domestic savings may have a positive effect on growth has been advanced by Aghion *et al.* (2009a), who argue that growth in countries that are far from the international technology frontier derives mainly from catch-up to that frontier. Such catch-up is facilitated by inward investment, but that often requires co-operation between a foreign investor familiar with the frontier technology and a local entrepreneur who knows the local conditions in which the technology would be applied.

Empirically, there is certainly a strong correlation between domestic savings rates and growth performance (Houthakker, 1961; Modigliani, 1970; Carroll and Weil, 1994; Schmidt-Hebbel and Servén, 1999). In addition, Aizenmann, Pinto and Radziwill (2004) found that countries with higher self-financing ratios grew faster than those with lower ratios. This ties into the well known literature showing that, in most countries and periods, domestic savings and investment are highly correlated (Feldstein and Horioka, 1980; Taylor, 1996). Looking at cases of sustained strong growth, the Spence Commission (Spence *et al.*, 2008) noted, “there is no case of a sustained high investment path not backed up by high domestic savings”.

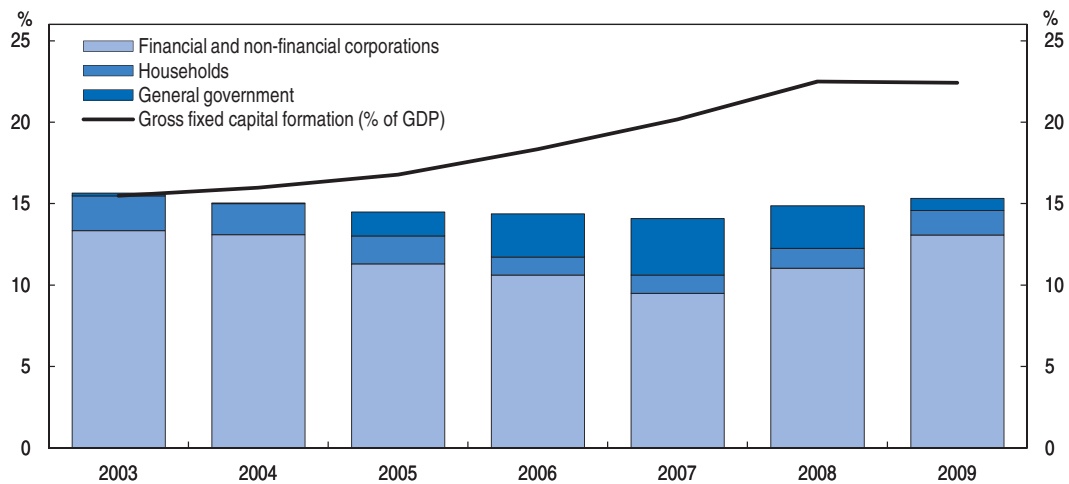
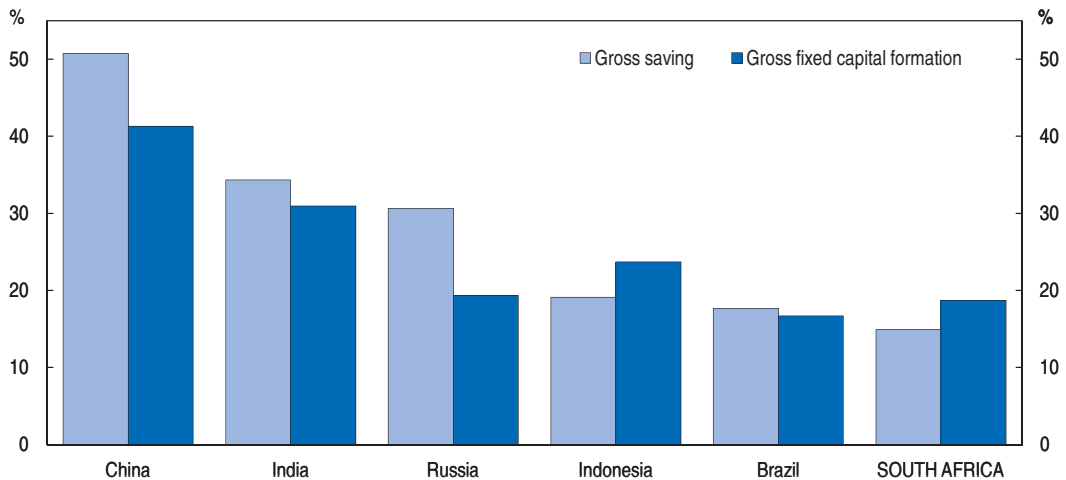
The savings-growth correlation does not prove that savings cause growth, and empirical evidence aimed at answering that question is inconclusive. Attempts to assess the direction of causality via Granger causality tests give no clear picture. For example, Schmidt-Hebbel *et al.* (1994) find that savings do not Granger-cause growth, and conclude that there is a complex rather than unidirectional relationship between the two variables. Carroll and Weil (1994) argue that growth actually Granger-causes savings, although Attanasio *et al.* (2000) take issue with this, finding that, depending on methodology, the relationship can be found to run either way. Aghion *et al.* (2009a) find evidence that for poor countries lagged savings is a significant explanatory variable for future growth, though not for rich countries. They argue that this is consistent with their hypothesis that domestic saving facilitates the transfer of frontier technology and thereby permits faster productivity catch-up.

Other recent work may offer an alternative explanation for how savings can have a positive effect on growth in developing countries. Prasad *et al.* (2007) find that for non-OECD countries current account deficits, instead of promoting growth by relaxing financing constraints, are associated with slower growth rates. Prasad *et al.* find further that this result, which emerges in cross-section, panel and time series regressions, appears to be driven by domestic savings rates: when the current account is replaced by savings, the former becomes insignificant and the coefficient on the latter is positive and significant. In addition, the authors report that countries which experience growth spurts generally experienced a positive shift in the current account balance prior to the growth spurt; both savings and investment rates rise, but savings rise by more. Higher domestic savings seem to reduce a reliance on foreign savings which can actually be harmful for growth performance in developing countries.


This result is consistent with other findings on the possible growth-reducing effects of surges of foreign capital (Reinhart and Reinhart, 2008; Rodrik, 2006; Hausmann *et al.*, 2004). In a range of panel growth regressions conducted by Bosworth and Collins (1998), overall capital inflows were not found to be significantly related to growth, although FDI was. Reinhart and Reinhart (2008) note that one of the channels through which surges in capital inflows appear to cause harm is the induced procyclicality of fiscal policy during capital flow bonanzas. Governments, along with other economic agents, often fail to discern the temporary nature of the bonanza, and increase spending during the boom.

While, therefore, the exact relationship between domestic savings and growth remains a matter of debate, there are good reasons to believe that countries (especially developing countries) with strong growth performance have tended to have high savings rates, high (but lower) investment rates, and (therefore) current account surpluses and net capital outflows. The picture for South Africa is strikingly different. In the last decade South Africa has had large net private capital inflows, low savings and investment rates (Figure 1.20), and (despite a consumption boom from 2004-08) mediocre growth, particularly as regards the growth of export volumes (Figure 1.21). Eyraud (2009) finds that the low contribution of capital accumulation is the main difference between in South Africa's growth performance and that of faster-growing peers.

Moreover, apart from the link from savings to the current account and growth, there is also the question of external vulnerability. Dependence on flighty foreign capital increases the risk of instability.<sup>8</sup> This risk was manifest in late 2008 when private capital inflows to emerging market economies largely dried up. In South Africa's case this was partly offset

Figure 1.20. **Investment and saving****A. Gross saving as a percentage of GDP****B. International comparison, as a percentage of GDP, average 2003-08**

Source: SARB Database and World Bank, WDI Database.

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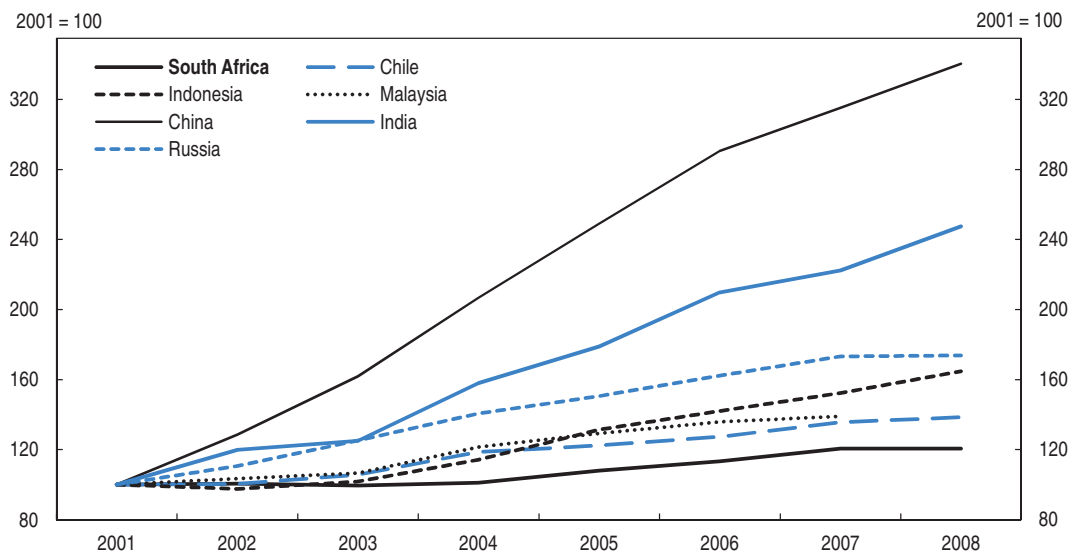
by the running down of foreign assets by domestic banks, which cushioned the effect on net capital flows, but the rand nevertheless plunged and stock and bond prices fell sharply. In the event, inflows to emerging markets resumed quickly, in part because of a recovery in appetite for risk generally, but also because the perceptions of risk as between advanced countries and emerging markets shifted in the light of the much worsened fiscal situation in many OECD economies. The reliance on foreign saving remains South Africa's main macroeconomic vulnerability, however.

All in all, while the evidence does not suggest that raising domestic savings automatically delivers faster growth, the strong association between the two, combined with the evidence on the potential harm of excessive reliance on foreign savings, probably warrants efforts to raise savings rates in South Africa in the medium- to long term. The next question is how to achieve such an increase.

One lever on which the government has direct influence is public savings. Evidence across a wide range of countries suggests that higher public savings also raise national



Figure 1.21. Real exports per capita of goods and services



Source: World Bank, WDI Database.

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savings, although not one-for-one (e.g. Bernheim, 1987, for advanced countries; and Ul Haque and Montiel, 1987, for developing countries; a recent update of evidence for OECD countries is provided by Röhn, 2010). This result is confirmed for South Africa by Tsikata (1998), and Jonsson and Teferra (2001). A higher cyclically adjusted fiscal balance on average would therefore be expected to raise national savings rates. In addition, the possible need to offset the effects of strong private capital inflows (e.g. asset price bubbles and consumption booms) should be taken into account when setting fiscal policy. In part, this may be a matter of accurately gauging cyclical revenue effects (including those driven by capital flow bonanzas) and ensuring that fiscal policy is sufficiently countercyclical. Ways of doing that are discussed further in Chapter 2. It may also, however, warrant a structural tightening of policy when inflows are strong, in order to lean against the induced reduction of domestic savings.

The other most obvious mechanism is institutional changes to encourage private savings. Empirical evidence is much weaker as to what policy measures reliably influence private savings. Of these, the most salient would be the introduction of compulsory pension saving. While individual country cases provide mixed evidence on the overall savings effect of introducing compulsory pension saving, Lopez Murphy and Musalem (2004), using a panel of 43 countries, find evidence that mandatory pension saving increases national saving. South Africa already has plans to introduce such a scheme. Apart from its role in the advancement of social aims, this reform is likely to be a useful contributor to raising national savings and reducing the reliance on private capital inflows. Another approach that appears promising is automatic enrolment, with workers wishing not to participate in employer pension schemes having to opt out. Microeconomic studies from the US (e.g. Madrian and Shea, 2001, Choi et al., 2001) suggest that compulsory enrolment can raise participation in employer pension schemes, although the extent to which it raises overall household saving is uncertain. Another measure for which microeconomic evidence is promising is the “save more tomorrow” schemes proposed by

Thaler and Benartzi (2004), in which the default contribution rate is automatically raised over time.

### ***Increasing the contribution of exports to growth***

Like saving, export performance is a feature for which the theoretical link to growth is controversial but which is found to be strongly positively related to economic growth in developing countries. The Spence report, for example, found that all the cases of sustained rapid growth identified by the Commission were export-led. Multi-country empirical studies finding a link between manufacturing or exporting and growth performance include Jones and Olken (2005), Johnson *et al.* (2007), and Rodrik (2006). These findings do not necessarily mean, however, that such success was necessarily the result of policies targeted at the export sector, and there remain questions as to whether there is a role for policy action to bring about export-led growth, and if so which instruments work best.

There are two broad reasons why market failures might result in inefficiently low levels of export-oriented activity. First, as some have proposed, such activity may convey positive externalities to a greater extent than other activities. Second, surges in private capital inflows may create temporary (but sometimes quite long-lasting) misalignment of the exchange rate that damages profitability of the export sector.

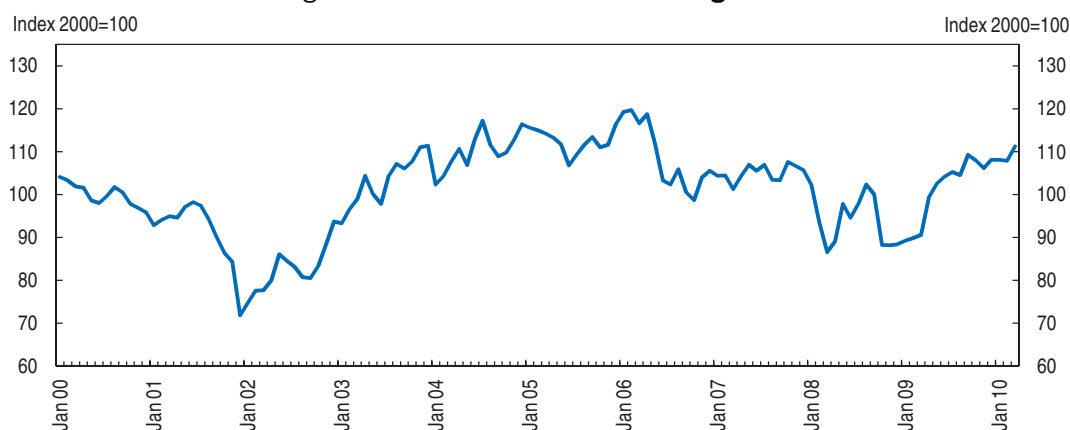
There is little agreement about the extent to which the first factor is relevant, either in South Africa or more generally in middle- and low-income countries. Moreover, there are doubts about the net benefits of many policies that subsidise specific export industries in order to address this perceived market failure. Subsidies can be provided to the wrong sectors or kept in place for too long, can benefit some export industries at the expense of others, tend to suppress competition, and may distract from other needed changes, such as improved education or regulation. Overall, the case for activist industrial policy is not strong, especially where it involves picking individual industries for support.

Support for the relevance of the second factor has been increasing, however, both for emerging market economies in general and for South Africa in particular. Thus, the Spence report notes that one valid purpose of exchange rate management in developing countries “is to prevent a surge of capital inflows (which may be transitory) from disrupting the profitability and growth of the export sectors”. In a working paper for the Spence Commission, Eichengreen (2008) concludes that “the real exchange rate matters. Keeping it at competitive levels and avoiding excessive volatility are important for growth”. Ostry *et al.* (2010) acknowledge that when a country’s currency is overvalued, or roughly in equilibrium, a proactive response to a surge in capital inflows is required, given the negative consequences of overvaluation, and they argue that the use of capital controls is justified as part of the toolkit for managing inflows. Prasad *et al.* (2007) present evidence that for nonindustrial countries overvaluation of the domestic currency is associated with slower growth, while Hausmann *et al.* (2004) show that growth accelerations are generally preceded by reductions in overvaluation or a period of undervaluation. Prasad *et al.* also find evidence of asymmetry: overvaluation is more damaging to growth than undervaluation is favourable to it (although the latter is found to be positive for growth). The case, in developing economies, for using economic policy instruments to avoid or at least resist overvaluation appears quite strong.

Plausibly, this is just what South Africa has failed to do, and this appears to be one reason, especially in recent years, for its failure to generate strong export volume growth.<sup>9</sup>

In real effective terms the rand exhibited a trend depreciation of about 5% a year from 1993 through 2002 (Figure 1.22). Over that period, the current account position was generally near balance, with small surpluses in some years and moderate deficits in others. From 2003 onward, however, the real effective exchange rate deviated sharply from that trend, rising to more than 30% above the previous trendline in early 2006 (Figure 1.23). This was associated with a consumption boom, (continued) poor export performance (Figure 1.21), a sharp rise in import growth and the emergence of a large current account deficit, which reached 7.1% of GDP in 2008 and which even in the recession year of 2009 averaged 4% of GDP. The 2009 IMF Article IV staff report (IMF, 2009) provides estimates of the degree of over- or undervaluation of the rand using three different approaches, finding anything up to 25% overvaluation when including the surge in public investment, and a maximum of 16% excluding that factor. The minimum estimate was 6-8%. The real effective exchange rate has moved up by about 10% since mid-2009, when those estimates were prepared. Using their Fundamental Equilibrium Exchange Rate approach, Cline and Williamson (2010) estimate that the rand was overvalued by about 15%

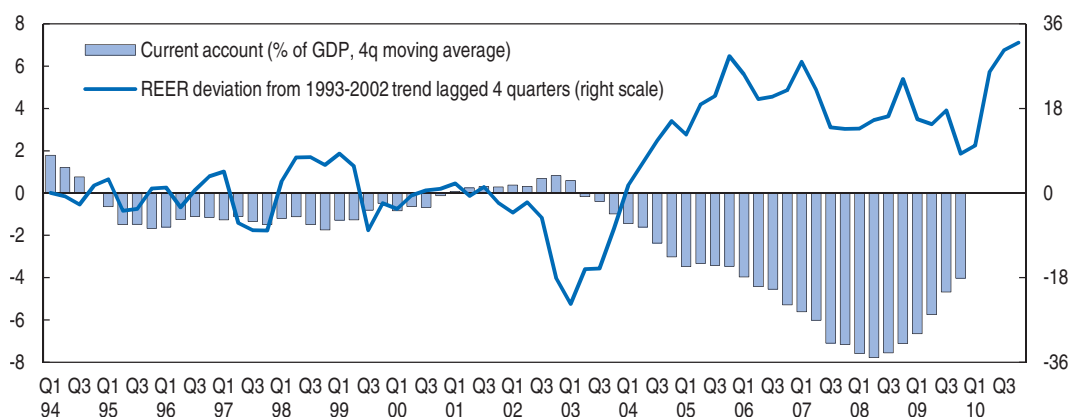
Figure 1.22. **Real effective exchange rate**



Source: South Africa Reserve Bank.

StatLink  <http://dx.doi.org/10.1787/888932309484>

Figure 1.23. **Real effective exchange rate deviation from trend and current account balance**



Source: OECD calculations based on SARB Database and IMF, IFS Database.

StatLink  <http://dx.doi.org/10.1787/888932309503>

in real effective terms in March 2010, and there has been some further real appreciation of the rand occurred since March.

The emergence of overvaluation is linked to strong net private capital inflows in recent years. The break in the trend movement of the real effective exchange rate and the emergence of large current account deficits appear to have been driven by a surge of private capital inflows into South Africa and emerging markets more generally beginning in the early 2000s. With its liquid securities markets and good protection of property rights, South Africa is a popular proxy for emerging market economies generally, and especially the commodity-rich ones. The global financial crisis interjected a respite in the inflow of private capital, and during that interlude the rand weakened sharply, but the inflows quickly returned, and with them, the real appreciation. As of April 2010 the real effective exchange rate was at its highest level since the peak of early 2006.

As already noted, the issue of raising savings is closely related to that of reducing the net inflow of capital, i.e. lowering the current account deficit. Strong net capital inflows are associated with both consumption booms, which lower savings rates, and rapid real appreciation of the currency, which weakens export performance. Prasad *et al.* (2007) find that one of the factors associated with overvaluation in non-industrial countries is low savings.

South Africa's failure to avoid overvaluation and the empirical evidence on the importance of doing so suggest that a greater policy effort is warranted. No single policy is a panacea for managing private capital inflows and mitigating pressures for real appreciation, but a range of actions could play a useful role. To begin with, given the negative relationship between savings and overvaluation, as well as the apparently positive influence of savings on long-term growth discussed earlier, the options for raising saving also apply in this area. In particular, given that inflows often surge when commodity prices are high, it may be worthwhile to find ways of ensuring more adjustment of fiscal policy to commodity price cycles. Increasing the degree to which fiscal revenues respond to commodity price fluctuations, and ensuring that windfall revenues from higher prices are not spent, may be one promising avenue. This is discussed further in Chapter 2.

Foreign exchange intervention is a second area where macroeconomic policy could be more activist in resisting the tendency for the rand to become overvalued. The SARB has exhibited some tendency to buy foreign exchange when appreciation pressures are strong, but only to a weak degree. A stronger asymmetric intervention policy, accumulating reserves when net inflows are strong and allowing depreciation when they ebb, as long as this remains consistent with the primary goal of keeping inflation in the SARB's target range, could help avoid or mitigate overvaluation in the short- to medium term. One fear that is sometimes expressed in South Africa in relation to such a policy is the costs of sterilisation; the interest earned on international reserves will tend to be less than the interest paid on domestic securities issued to sterilise the monetary impact of foreign exchange intervention. Those costs are real (in the region of 0.02% of GDP a year for each USD 1 billion of intervention), but are likely to be exceeded by the economic costs of overvaluation. Moreover, South Africa's current level of reserves is relatively low by emerging market standards, leaving some room for growth on prudential grounds. Foreign exchange intervention could also be backed up by verbal intervention, giving stronger signals to markets about where the authorities see the exchange rate in relation to its equilibrium level.

Another policy instrument that could offset pressures for appreciation is the further liberalisation of capital outflows. Some exchange controls on residents remain, limiting their ability to invest abroad. Accelerated action to remove such controls, while keeping prudential regulations, would help offset net inflows, at least as a one-off measure. Finally, if other actions are insufficient to limit net inflows and keep the rand at a competitive level, consideration could be given to economic instruments to discourage such inflows, such as a tax or deposit requirement on short-term inflows.

South Africa's exchange rate is not only a function of domestic economic policies and fundamentals. In particular, it is likely that part of South Africa's relatively poor export performance in the past 15 years is attributable to the success of some other emerging market economies in pursuing export-led growth, in part via management of their exchange rates to keep their currencies undervalued. Notably, the rand has experienced a strong nominal and real appreciation *vis-à-vis* the *renminbi* (and more broadly the “*renminbi* bloc”, which includes other emerging Asian nations that follow China's exchange rate policy closely) in the past 10 years, during which time South Africa's global export market share in volume terms fell sharply, while that of the *renminbi* bloc countries increased. To the extent that exchange rate policy adjustments on the part of these other countries are forthcoming, there would be correspondingly less need for South Africa to take action itself to resist overvaluation.

Preventing or leaning against nominal appreciation of the rand may be necessary for satisfactory growth and employment performance, but it is not sufficient. Without adequate wage restraint, for example, gains in competitiveness from a less appreciated currency would be quickly eroded by inflation differentials. Thus, an increased degree of management of the exchange rate to avoid overvaluation should be seen as part of a policy package that includes labour market reforms, which are discussed in Chapter 3.

### **Shifting to greener growth**

Growth objectives should not be limited to a higher medium-term rate of increase of GDP per capita. Achieving faster output growth is essential to deliver badly needed increases in employment, reduce poverty, and expand the opportunities for South Africans to pursue the goals they value. It has always been recognised, however, that there are sources of welfare not included in the market value of output, and there has been a growing awareness of the need to move beyond GDP as a measure of wellbeing, as shown, for example, by the OECD's Global Project on the Measurement of Progress in Societies as well as the *Report by the Commission on the Measurement of Economic Performance and Social Progress* (Stiglitz-Sen-Fitoussi report; Stiglitz *et al.*, 2009), which was supported by the OECD. Some of the aspects of welfare not captured by GDP, such as health, education, and personal security, tend to advance with per capita incomes, although that is not assured. With other aspects, including environmental conditions, the correlation with GDP is less obvious. In addition, even to the extent that GDP is an adequate proxy for wellbeing in a given period, focussing only on output would ultimately be self-defeating if sustainability is compromised. In particular, environmental conditions not only affect current well-being, but also whether prevailing levels of well-being can be sustained. Deterioration of the environment will entail a diversion of resources towards clean-up and adaptation, the implementation of cleaner technologies, etc., and could be destructive of physical and human capital. This sustainability point has assumed particular prominence with the emergence of the threat of climate change. In addition, it may be possible to seize

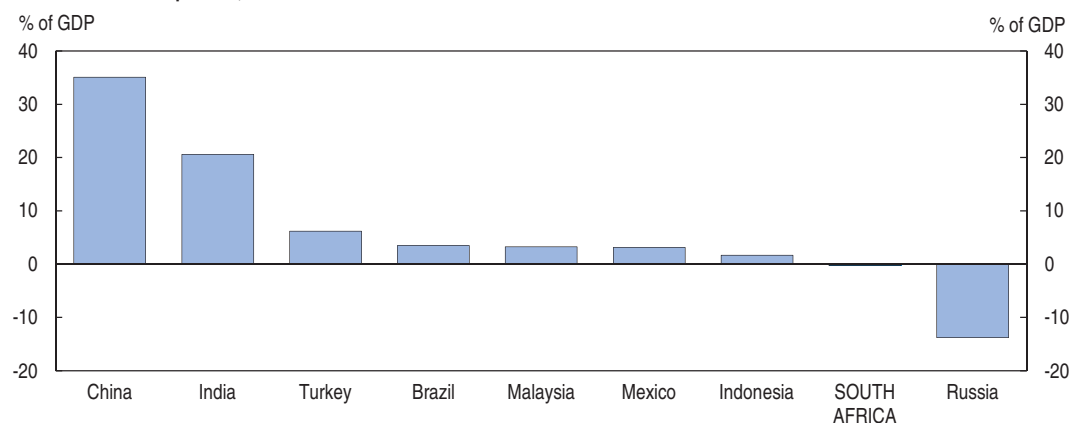
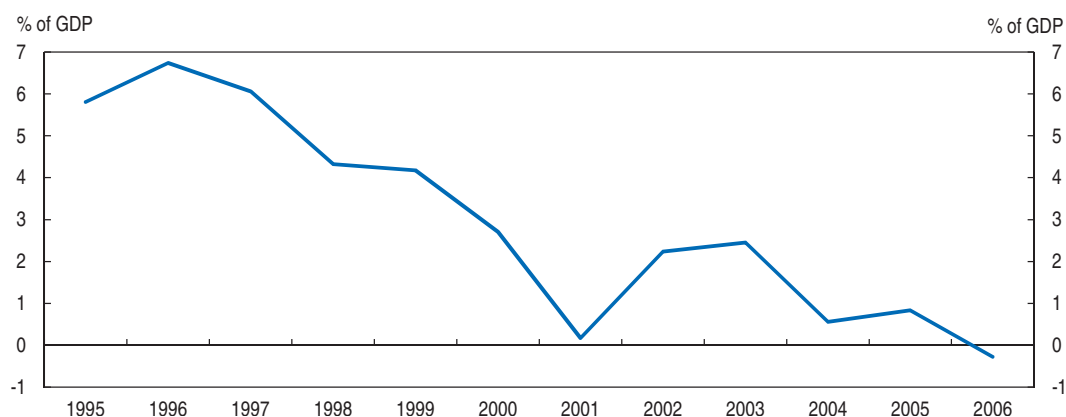
unexploited opportunities for growth by being in the forefront of the move towards improved energy efficiency and greater use of renewable energy sources.

Assessing overall sustainability is beset with difficulties. Environmental sustainability is a complex issue, with no consensus on what indicators should be used or even on the relevant concepts. There is no accepted methodology for aggregating measures of multidimensional environmental conditions into a composite indicator. Even for individual dimensions of environmental conditions, it may not be clear what the mapping from the current situation to welfare is. For example, there is uncertainty about exactly how additional CO<sub>2</sub> emissions translate into climate change, or how near we are to a tipping point where such change becomes self-reinforcing via natural feedback mechanisms. Likewise, we don't know what technologies might emerge in the future for reducing atmospheric GHGs and therefore mitigating the harmful effects of current emissions.

Despite the difficulties, some statistical measures of environmental conditions do exist, and continue to be refined. First, there are a number of indicators proposed as alternatives to GDP as measures of welfare, such as the Index of Sustainable Welfare (ISEW)/Genuine Progress Indicator (GPI) and the Happy Planet Index (HPI), which include an environmental component. A related concept is the World Bank's Adjusted Net Saving, or Genuine Saving, which seeks to show to what extent a country adds to its wealth, i.e. its capacity to generate income, in a given period. This approach involves adjusting nominal savings by additions to human capital and degradation of the stock of natural resources. Negative Adjusted Net Saving indicates a decline in the economy's capacity to generate income, implying an unsustainable path. There are also overall scorecards of environmental conditions which have been calculated for a large number of countries. For instance, the Environmental Performance Index (EPI) combines 10 measures of ecosystem vitality and environmental health effects into a single aggregate score for 163 countries.

South Africa tends to score poorly on such broad indices, especially compared to countries with similar income levels. On the EPI measures, for example, despite relatively good performance in some areas, such as forestry, fisheries, and the effect of air pollution on humans, South Africa has lower scores than its middle-income peers on a range of indicators of emissions linked to industry and energy production. And South Africa's Adjusted Net Saving declined from the mid-1990s onward, falling to a negative level, again lower than most other middle-income countries (Figure 1.24). South Africa also does much worse (118 of 143 countries) on the HPI 2.0 welfare measure, though mainly because of low life expectancy and life satisfaction measures, ranking somewhat higher (67th) on ecological footprint.<sup>10</sup>

Whatever the difficulties of constructing overall indicators of environmental sustainability, it is clear that South Africa is faced with a number of important environmental issues, including local air and water pollution, water management, and biodiversity. The issue of greenhouse gas (GHG) emissions is of particular urgency, and is singled out for further discussion here. This issue is certainly one where the usual problem of identifying the mapping of environmental degradation to welfare costs is acute, all the more so when considering action by a single country on what is a global problem. Nonetheless, the balance of available evidence (as summarised in IPCC, 2007; and Stern, 2006) suggests that there is a substantial risk of catastrophic climate change in the absence

Figure 1.24. **Adjusted net saving****A. International comparison, 2006****B. South Africa**

Note: Adjusted Net Saving including PM10 damage.

Source: World Bank.

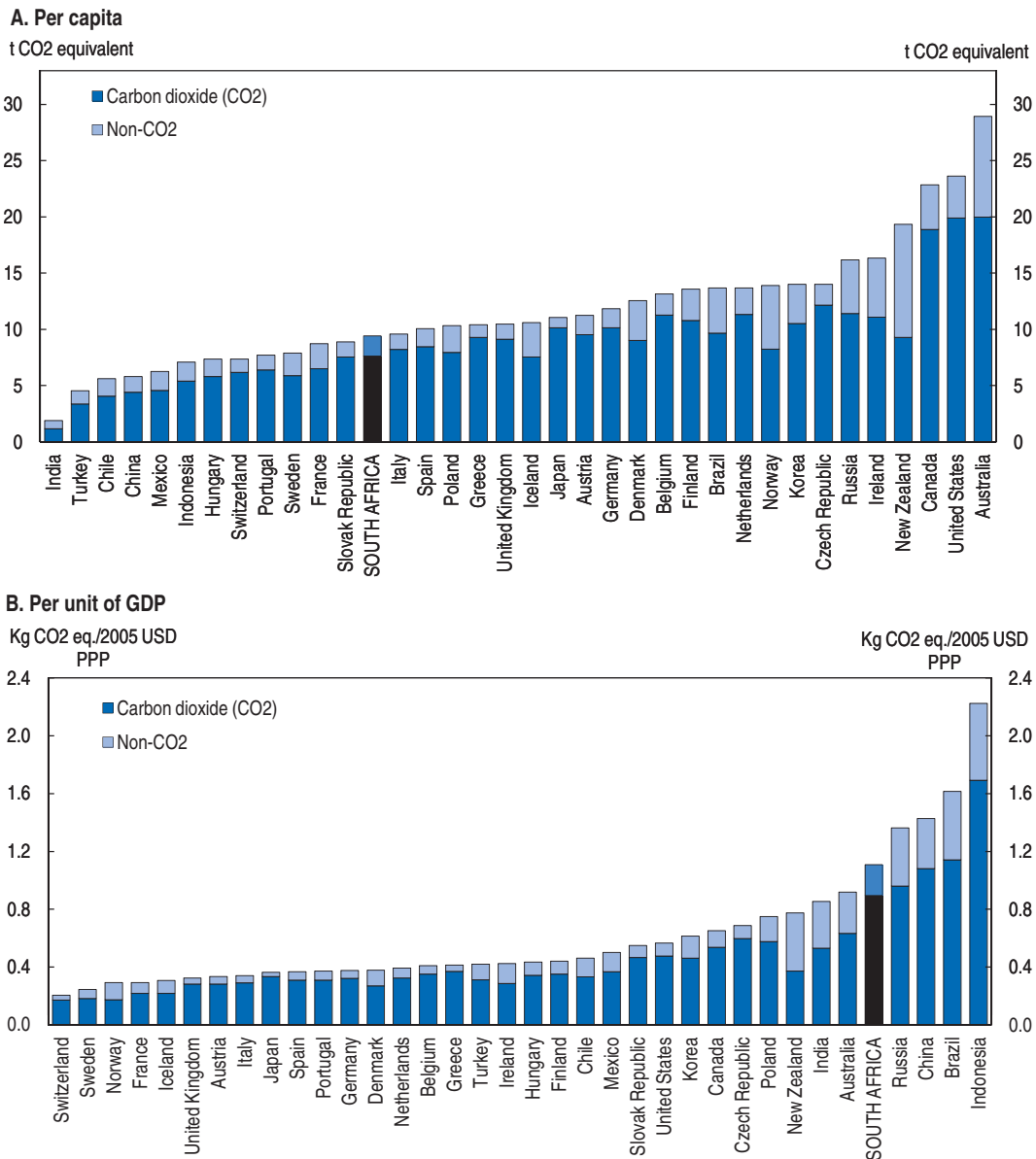
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of timely and vigorous action to reduce GHG emissions, and global initiatives to define a post-Kyoto strategy are under way, so the issue is a particularly pressing one.

South Africa's GHG emissions are relatively high in absolute terms. According to data of the International Energy Agency, in 2007 South Africa was the 18th largest national emitter of CO<sub>2</sub> from fuel combustion, just behind much larger economies like Brazil and France, and ahead of others like Spain and the Netherlands. In part this reflects the fact that South Africa is relatively populous, so that on a per capita basis its emissions are lower than most OECD countries (Figure 1.25A). Its industrial structure, however, gives it a level of CO<sub>2</sub> emissions per unit of GDP that is among the highest in the world (Figure 1.25B).

In addition to the energy intensiveness of economic activity, the level of emissions per unit of energy production is also high. Both of these factors are in large part attributable to the intensive use of coal – South Africa is the most coal dependent economy in the world, with coal-driven power stations accounting for about 90% of electricity generation. The abundance of cheap local coal has enabled South Africa to enjoy low electricity prices and to attract energy-intensive industries such as aluminium smelting.

Figure 1.25. **Greenhouse gas emissions, 2005**



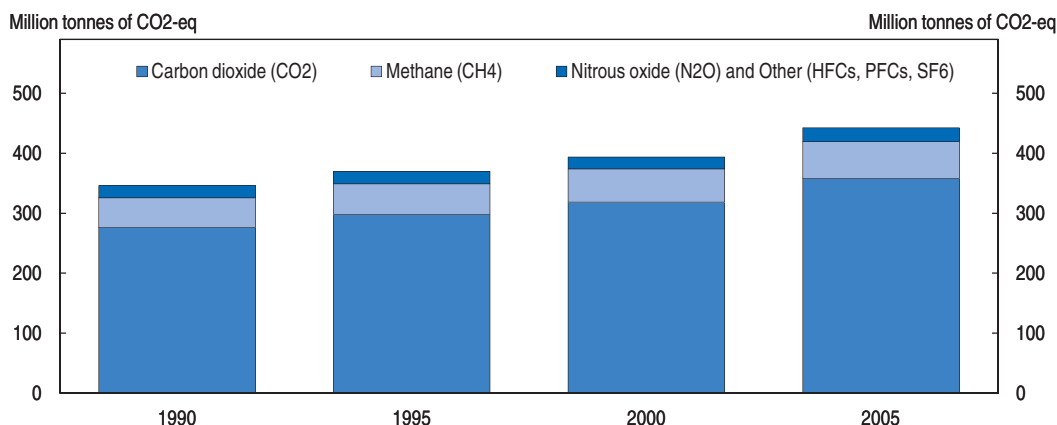
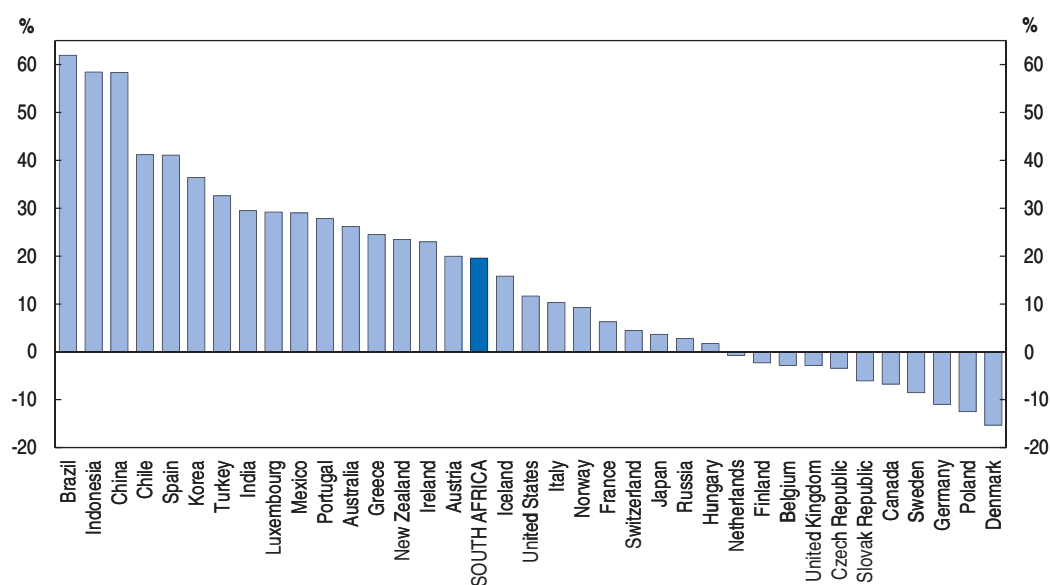
Source: OECD calculations based on IEA Database and World Bank, WDI Database.

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Emissions have risen since the early 1990s, though less rapidly than in most other emerging market economies (Figure 1.26). Like most countries, and especially the rapidly growing low- and middle-income economies, South Africa has experienced declining emissions intensity of GDP since 1990, but not an absolute decline in emissions.

South Africa is a laggard in terms of energy production from renewable resources. As of 2007, South Africa accounted for just 0.07% of global renewable electricity installed capacity, about a tenth of its share of the world’s population. While part of this low figure is due to a less favourable endowment of hydroelectric potential than in many other countries, South Africa has been slow to develop new renewable sources, such as wind, solar, and wave power, where it has considerable potential. The 2003 White Paper on



Figure 1.26. **Greenhouse gas emissions trends****A. South African emission levels, 1990-2005****B. International comparison, percentage change, 1995-2005**

Source: IEA Databases.

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Renewable Energy set a target of 1 667 MW for electricity production via renewables by 2013, but this has subsequently been revised down to 725 MW, and as of 2009 little progress had been made. While wind power generation has been growing globally by about 30% a year, South Africa still has only experimental wind farms accounting for a negligible share of total electricity generating capacity. Feasibility studies have been conducted as regards concentrated solar power electricity generation, but no capacity is yet in place. Small-scale solar water heating and photovoltaic electricity generation make very small contributions to meeting energy consumption needs. Preferential renewable energy feed-in tariffs came into effect only this year.

The government has recognised the need for action on reducing GHG emissions. Notably, in the run-up to the Copenhagen summit on climate change, South Africa made a (conditional) commitment to reducing GHG emissions by 34% by 2020 and 42% by 2025

relative to a business-as-usual path. In the absence of a global agreement and financial assistance from richer countries, that commitment remains potential. Other firm commitments do exist, however. The government is developing a strategy to identify “green jobs” opportunities in energy, manufacturing and services, and a green jobs component has been included in the revised Industrial Policy Action Plan. A White Paper on the production of electricity from renewable resources was published in 2003, establishing a target of 10 000 MWh of renewable production by 2013. The government is now launching a review of that White Paper to establish new targets and a strategy beyond 2013. The 2013 target was criticised by environmental groups as timid, and in any case progress has been slow to date. Despite the range of initiatives now underway (Box 1.3), overall it is fair to characterise South Africa as a late-starter as regards measures to increase energy efficiency and reduce GHG emissions. In particular, there has as yet been no concrete action towards pricing carbon emissions in the economy via a carbon tax or cap-and-trade system, and South Africa has made relatively little use of green taxes generally.

**Box 1.3. Recent South African proposals and measures to reduce greenhouse gas emissions**

- 2003 White Paper on the production of energy by renewables. Targets established for 2013.
- 2006 Treasury draft policy paper: A Framework for Considering Market-based Instruments to Support Environmental Fiscal Reform in South Africa.
- Introduction of electricity levy, 2008.
- Eskom demand-side management programme to reduce electricity demand (from 2008).
- Measures in 2010/11 Budget: Supplementary depreciation allowance for investments by companies in energy-efficient equipment; increased levy on plastic shopping bags (4 cents, increased from 3 cents in 2009); proposed increase in the international air passenger departure tax (which was last raised in 2005/06).
- Preferential tariffs for electricity produced with wind, solar, landfill gas, biomass, or hydro, beginning in March 2010.
- Planned second nuclear power station to come on line by 2020.
- Building regulations revised to require the installation of energy efficiency equipment like solar water heaters and efficiency lighting in new buildings.
- An energy efficiency measurement standard is being developed to support the tax rebate for energy efficiency recently incorporated into the Income Tax Act.
- New standard (SANS204) prescribing maximum energy consumption standards.
- Commitment by national government to support municipalities’ efforts to upgrade the housing and building stock so as to prevent future negative impacts on climate change.
- Planned Department of Energy (with donor support) industrial energy efficiency programme focusing on system optimization.
- Copenhagen commitment to reduce 2020 GHG emissions by 34% relative to no-policy-change scenario.
- Installation of 1 million solar water heaters (target), beginning in March 2010.
- New tax (to apply from September 2010) on vehicles varying by CO<sub>2</sub> emissions.

The urgency of the global problem, South Africa's status as a relatively large emitter, and the slow progress to date all suggest that efforts should be accelerated. Of course, South Africa's share of global GHG emissions is tiny, so that its own efforts to limit emissions will have only a very small impact on the global outcome. But as a country with an outsize footprint, a leadership role among developing countries, and (to a greater extent than most other emerging economies) a long record of high emissions, there is a strong case for South Africa to take vigorous action to reduce its GHG emissions. South Africa's status as host of the 2011 United Nations Framework Convention on Climate Change Conference of the Parties meeting on climate change (COP 12) provides an additional reason to show leadership on this issue.

Beyond the direct objective of ensuring the sustainability of growth, there are additional rationales for some GHG emission mitigation efforts. One of these is fiscal consolidation. In general, green taxes should not be thought of as revenue-raising measures, but they can be easier to implement when there is a budgetary need for revenue. Given South Africa's substantial cyclically adjusted budget deficit (see Chapter 2), revenue considerations reinforce the environmental case for taxing emissions. Another rationale for vigorous action to increase energy efficiency and reduce GHG emissions is the re-emergence of electricity supply constraints on growth. Since the January 2008 power crisis capacity has increased only marginally, and the slack provided by the economic downturn will be quickly eroded as growth resumes. Stepped-up action to make growth less energy-intensive would complement efforts to expand capacity and thus help restore an adequate capacity margin. Also, action to mitigate climate change can have co-benefits on local air pollution. In a simulation of the effects of reducing global GHG concentrations through 2050, the OECD (2009b) found that GDP would be somewhat reduced relative to a business-as-usual scenario, but air pollution and premature mortality would fall, inducing substantial gains in life expectancy, so that welfare would be increased in almost all regions of the world. Similarly, Bollen *et al.* (2009) conclude that climate change mitigation would have substantial co-benefits via improvements in health outcomes. Moreover, neither of these two studies considers effects on morbidity, and neither takes into account the positive effects of improved health and environmental conditions on GDP per capita. As argued by Aghion *et al.* (2009b), such effects could be substantial. Given South Africa's heavy reliance on coal, which is intensive in emissions of pollutants such as SO<sub>x</sub>, NO<sub>x</sub> and particulates as well as GHGs, the co-benefits of emissions reduction would be relatively large. Finally, progress in this area would not necessarily be a drag on output growth in the near term either – indeed, there may be scope for unexploited efficiencies, especially if action is taken sufficiently early to allow for the impact of policies to be felt gradually.

Also, if South Africa takes the lead on renewables in Africa it may be able to exploit export opportunities as demand grows in the rest of the continent, especially in Southern Africa. As the most advanced country in Southern Africa, there is scope for South Africa to establish itself as the regional leader in technologies like solar energy, which might be exported elsewhere in the region. Potential job creation in such sectors is non-negligible, and could even more than compensate for falling employment in the traditional energy sector.

A price should be put on carbon emissions. As the National Treasury pointed out in its 2006 draft policy paper on Market Based Instruments to Support Environmental Reform in South Africa, economic instruments, such as taxes on emissions, are generally preferable to “command and control” regulation on efficiency grounds. The former should

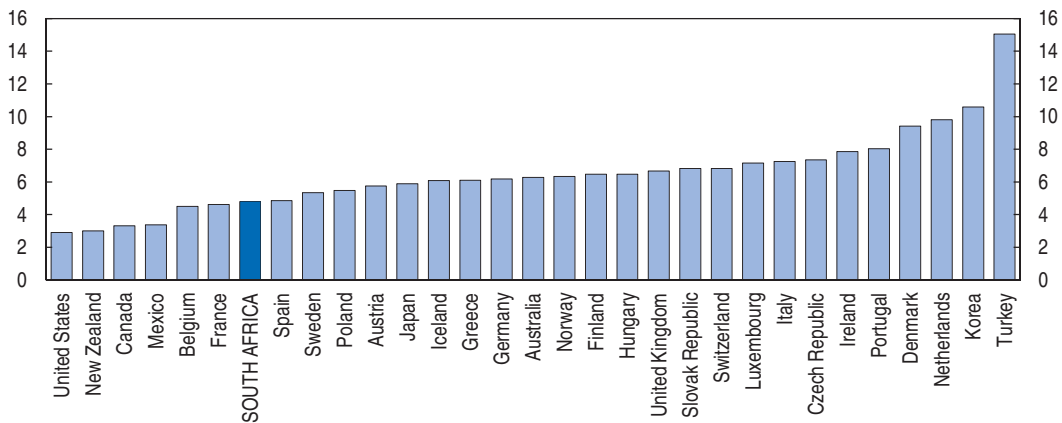
equalise marginal abatement costs across sectors (provided they apply to all relevant polluters) and thus ensure that any given targeted level of abatement is achieved most efficiently, as agents with the lowest abatement costs will contribute the most to the total reduction in emissions.<sup>11</sup> In South Africa's case a carbon tax is likely the best way of putting a price on carbon emissions, as it is relatively simple and generates government revenue, contributing to fiscal consolidation.

The use of green taxes more generally could be stepped up. Whether or not a carbon tax is introduced, the use of other green taxes remains relatively low, and should probably be increased (Figure 1.27). In particular, South Africa has some of the lowest international prices for petrol, with lighter taxation than almost all OECD countries and most others (Figure 1.28).

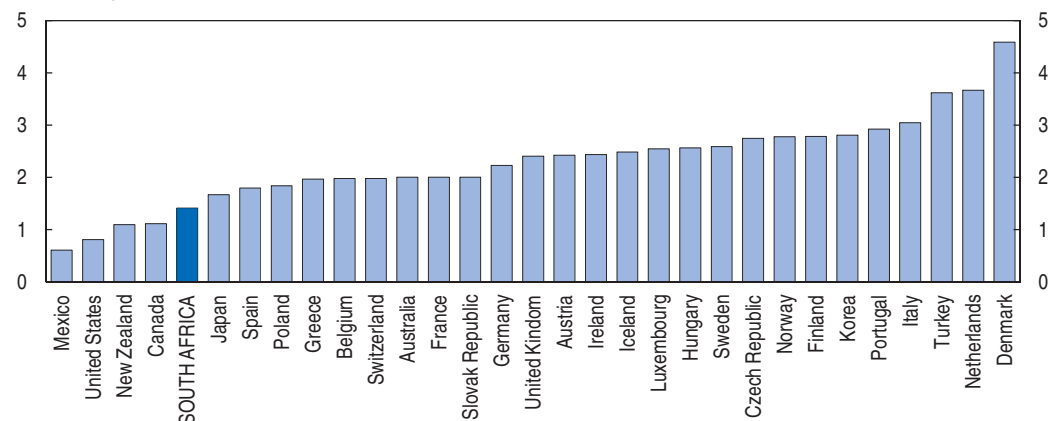
One new tax targeted at CO<sub>2</sub> emissions is being introduced this year. From September 2010 the vehicle tax will vary by emissions category, penalising cars with higher CO<sub>2</sub> emissions. This is a positive step, but fuel taxes would be preferable, as with the vehicle tax the cost per kilogram of emissions is quite different for two owners of a given type of vehicle who drive widely varying distances.

Figure 1.27. **Environmental taxes, 2007<sup>1</sup>**

**A. Percentage of total tax revenues**



**B. Percentage of GDP**



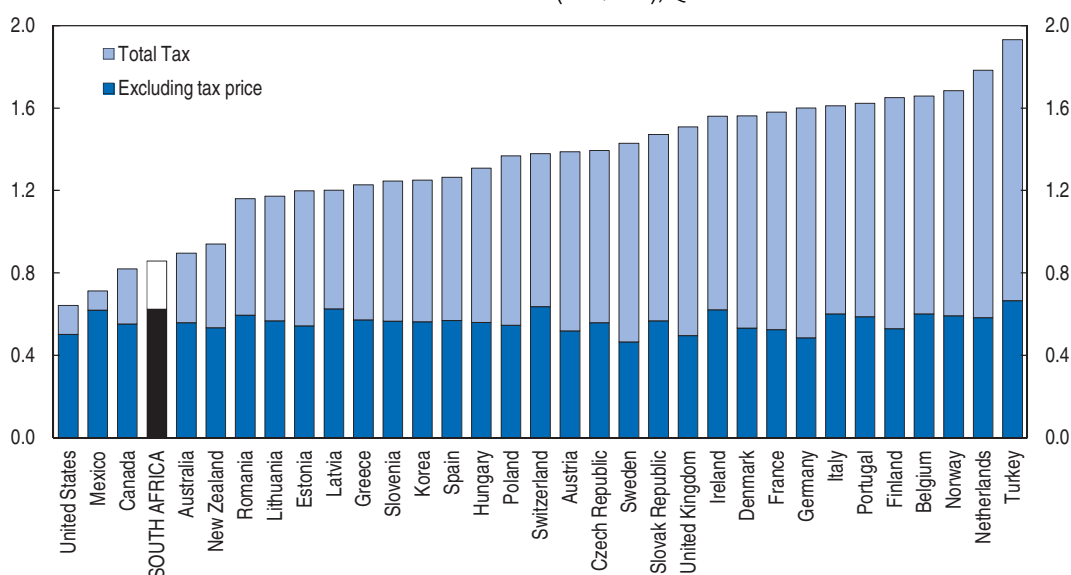
1. 2006 for Italy and Poland.

Source: EEA/OECD Database, SARB Database and IMF, GFS Database.


StatLink <http://dx.doi.org/10.1787/888932309579>

Figure 1.28. **Unleaded petrol prices and taxes**

Premium unleaded 95 (USD/litre), Q4 2008



Source: IEA Database.

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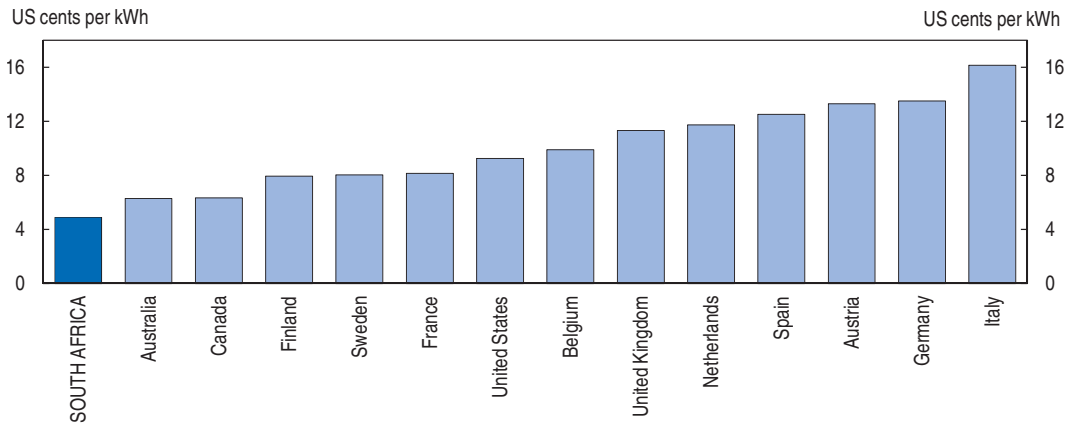
Electricity prices (exclusive of any taxes) should be raised to fully cover long-run costs. For a long time, beginning in the 1970s, South Africa had excess electricity generation capacity. As a result, prices were set at low levels, providing for normal rates of return, but only in the absence of building costs to install new capacity. Actually, subsidisation has gone beyond the non-coverage of capital costs, as Eskom has itself benefitted from coal prices, also established in long-term contracts, that were a small fraction of the international price (Table 1.2).<sup>12, 13</sup> Also, preferential long-term contracts were agreed with some industrial customers, notably for aluminium smelters. The result of all these decisions was excessively low electricity prices, which encouraged overconsumption. Although electricity prices started rising in real terms in 2005, this relative price distortion only began to be significantly unwound in 2008, when in the wake of the power supply crisis in January of that year electricity tariffs were increased sharply. A further large step increase of 34% took place in 2009 and in early 2010 the regulator NERSA approved increases of 24.8%, 25.8% and 25.9% for 2010, 2011 and 2012 respectively. This would still leave South Africa with relatively inexpensive electricity (Figure 1.29), but would bring the

Table 1.2. **Steam coal prices**

USD/tonne (net calorific value)


	2004	2005	2006
For electricity generation:			
South Africa	17.7	21.5	n.a.
OECD	60.3	68.5	73.2
For industry:			
South Africa	33.1	36.3	n.a.
Russia	52.3	58.1	66.2
China	59.9	n.a.	n.a.
OECD	81.0	95.3	100.9

Source: IEA Database.

Figure 1.29. **Electricity prices, June 2009**

Note: The survey is based on prices as of 1 June 2009 for the supply of 1 000 kW with 450 hours use. All prices are in US cents per kilowatt hour and exclude VAT.

Source: NUS Consulting Group, 2008-2009 *International Electricity and Natural Gas Report and Cost Survey*, June 2009.

StatLink  <http://dx.doi.org/10.1787/888932309617>

price much closer to the OECD average. Part of the need for higher prices reflects the fact that the costs of building new capacity have risen sharply in recent years.

Preferential industrial pricing contracts for electricity should be renegotiated. In the wake of the power supply crisis of early 2008 and the global crisis of 2008-09, the case for renegotiating the long-term contracts for aluminium smelters built in the 1990s has been recognised by the government.<sup>14</sup> In particular, the “embedded derivatives” that shift the risk of fluctuations in exchange rates and aluminium prices onto Eskom have come to be seen as problematic. These contracts account for about 5% of Eskom’s output and thus have a significant effect on the capacity margin, while the global downturn hit aluminium prices and triggered large losses on the embedded derivatives, at a time when the finances of both Eskom and the government were stretched. The cancellation of a planned aluminium smelter by Rio Tinto in October 2009 may indicate a new realism about the wisdom of offering long-term electricity contracts at artificially low prices.

Making progress on reducing emissions will probably involve a shift away from coal.<sup>15</sup> While the main policy instrument for facilitating such a shift is likely to be setting a sufficiently high price on carbon emissions, there may also be externalities associated with energy production from renewables that warrant complementing such price incentives with targets or other forms of support for such alternative sources of energy. Such externalities can arise from various forms of market failure: public goods, monitoring costs, asymmetric information, market incompleteness, and economies of scale, and these can in turn induce market failures in financial services and innovation. Since environmental externalities often take a long time to be felt, the environmental area tends to be particularly prone to such market failures. As a large country with a long coastline and tropical regions, South Africa has considerable scope for several “new” renewable energy sources: wind, wave, and solar. It is also already a (modest) producer of nuclear energy, and is planning a large new nuclear facility to enter into service in 2020. Of course, the likelihood of significant market failures has to be set against the danger of government failures, with a waste of public resources and/or a distortion of markets. It is therefore important to cost various initiatives carefully and achieve overall emissions reduction targets in the most cost effective manner, but in so doing, due account should be taken of

falling costs from economies of scale and learning by doing and technological advances. Some industry sources suggest that wind alone could account for some 30% of South Africa's electricity needs with little additional increase in tariffs over and above what is planned to cover Eskom's new (coal-fired) capacity.

Another area which is even more uncertain but which may have potential for South Africa is carbon capture and storage. Although South Africa's coal dependence should diminish over time, it will remain considerable for decades to come, offering an opportunity to be a major participant in global efforts to make coal burning cleaner and to benefit from such efforts, including via the Clean Development Mechanism. The IEA (2004) projected that carbon capture and storage would be a major contributor to GHG emission abatement over the period to 2050, although some aspects of the technology in this area remain unproven, and estimated costs for now are substantially higher than other forms of emissions abatement. A number of other countries have experimental operations under way, while South Africa has so far done very little. The government has committed itself to having an experimental carbon capture and storage project in operation by 2020, but the urgency of reducing emissions before that horizon may warrant efforts to accelerate that schedule.

The government should avoid providing industrial policy subsidies to energy- and carbon-intensive industries. The industrial policy priorities established by the authorities (the National Industrial Policy Framework of 2007 and the Industrial Policy Action Plan released in January 2010) are oriented towards energy-intensive sectors. Clearly, shifting the emphasis of industrial policy support is not easy, since established industries that have benefited from past subsidies constitute powerful sectoral lobbies.

**Box 1.4. Summary of recommendations for emerging from the crisis and finding a new sustainable growth path**

**Emerging from the crisis**

- Fiscal stimulus should be withdrawn gradually at first and scope for easing monetary policy should be used within the constraints of the inflation targets, in order to help the cyclical recovery take hold.
- Further industrial and trade policy interventions based on the effects of the crisis on particular industries should be resisted, and the measures already taken unwound as quickly as possible.
- South Africa should participate in and fully implement emerging international initiatives to strengthen banking regulation. Particular attention should be paid to addressing the too-big-to-fail problem.

**Improving framework conditions for business**

- Product market regulation should be made less restrictive, particularly as regards barriers to entrepreneurship. Regulation should be simplified and compliance eased.
- The level and dispersion of import tariffs should be reduced further to encourage competition and long-term productivity growth.

**Box 1.4. Summary of recommendations for emerging from the crisis and finding a new sustainable growth path (cont.)**

**Raising the savings rate**

- A tighter fiscal policy over the cycle should be achieved to raise public savings and contribute to an overall increase in the domestic savings rate.
- Pension arrangements should be designed with a view to increasing private saving, in conjunction with other goals. Compulsory pension saving by employees is one promising way of doing this, while positive results might also be achieved via compulsory enrolment with an option to withdraw, particularly in combination with a “save more tomorrow” mechanism.

**Increase the contribution of exports to growth**

- Fiscal policy should be tightened over the cycle (in line with the recommendation to improve public savings) and made countercyclical with respect to commodity prices and net private capital inflows in order to offset the associated waves of upward pressure on the exchange rate during upswings.
- As long as the level of international reserves remains relatively low and most signs point to overvaluation of the currency, the SARB should allow for a faster accumulation of reserves when private capital inflows are strong and pressure for rand appreciation is high. Intervention in the foreign exchange market should be backed by verbal guidance to the market as to whether the real exchange rate appears to be misaligned.
- Remaining restrictions on capital outflows should be removed and replaced by prudential regulation.

**Climate change mitigation**

- A carbon tax should be introduced.
- Greater use should be made of other green taxes, such as fuel levies.
- Care should be taken to avoid subsidising energy- and carbon-intensive industries via industrial policy initiatives.
- Electricity prices should be allowed to rise further, in order to fully cover capital costs. Favourable pricing arrangements for large industrial users of electricity should be renegotiated.
- Ambitious targets for the development of renewable sources of energy should be established and implemented.

**Notes**

1. Between 2000 and 2008 South Africa saw an average annual increase in real house prices of more than 10%, greater than that of any OECD country over the same period.
2. Arguably the National Credit Act actually boosted the growth of lending to households between 2005, when it was adopted, and 2007, when it came into force, as there was an incentive for banks to increase lending before the tighter standards began to apply.
3. Chapter 2 discusses in more detail the OECD’s estimates of the cyclically adjusted budget balance and explains the methodology underpinning those estimates.
4. This analysis is based on the standard OECD measure of the real short-term interest rate, defined as the average nominal rate (here the rate on 3-month Treasury bills) in a given quarter deflated by the annualised quarter-on-quarter rate of increase of the private consumption deflator.
5. Most estimates of past major sporting events suggest a modest boost to GDP in the quarters immediately preceding and during the event. South Africa is a somewhat smaller economy than



most past hosts of such events, so that the proportionate effect may be somewhat larger. The general pattern suggests a relapse immediately after the event, with somewhat weaker growth in subsequent quarters. The increase in activity should also bring a fiscal dividend, although this will be smaller than otherwise as a result of a number of tax and duty exemptions specific to the event (i.e. for FIFA and the national federations).

6. For a detailed assessment of South Africa's educational system, see OECD (2008a).
7. Chile is referred to as a non-OECD member in this context as the comparison is of PMR scores in 2008.
8. The risks to stability from running large current account deficits is analysed in Reinhart and Rogoff (2008).
9. Edwards and Golub (2004) find that South African exports are responsive to changes in the real exchange rate (as measured by relative unit labour costs).
10. Details of international HPI score rankings can be found at [www.happyplanetindex.org/learn/download-report.html](http://www.happyplanetindex.org/learn/download-report.html).
11. There can also be a role for command and control measures, for example when technical or measurement problems make it difficult to monitor the emissions attributable to individual agents.
12. The low input price advantage for Eskom has actually been considerably greater than shown in Table 1.2, as the figures there reflect spot market prices and not the low long-term contract prices enjoyed by Eskom.
13. There is a further partial subsidisation of electricity consumption via the subsidized electrification of low-income households. This is, however, marginal in the context of South Africa's overall electricity usage, and has a clear social policy rationale. While ideally it would be better to achieve the social policy goal via market prices for electricity and transfers to poor households, there may be reasons why this is impractical.
14. In September 2009 the Public Enterprises Minister told a parliamentary committee that the long-term contracts with embedded derivatives would have to be renegotiated.
15. Use of coal in electricity production is also water-intensive, and South Africa is a water-stressed country, providing an additional reason to seek to reduce coal-dependence.

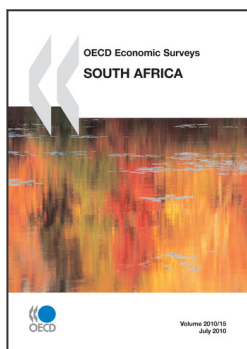
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