



# **Policy Change and Economic Growth: A Case Study of South Africa**

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**Policy Paper Number 14**

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# Policy Change and Economic Growth: A Case Study of South Africa

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October 3, 2008

## Abstract

South Africa's growth experience provides an example of how contrasting growth trends – long-term decline followed by improved growth – pivot around political change, in this case a transition to democracy. In the decade prior to 1994, South Africa experienced the worst period of economic growth since the end of the Second World War, with growth variable and declining. The proximate causes of slowing growth were trade and financial sanctions in opposition to the Apartheid government, political instability and macroeconomic policy decisions that resulted in higher inflation, increased uncertainty and declining investment. Democracy has proved critical to, among other factors, creating the possibility of a peaceful and more stable future and reversing investor sentiment at a basic level. Political and economic leadership have been essential to improving the country's growth performance, because of the effect on policy formulation, institutional development, regulatory design, and economic vision. Prudent fiscal policy and sound macroeconomic management have been critical factors in creating an environment conducive to growth by stabilising economic conditions, lowering the user cost of capital and putting downward pressure on the real exchange rate. This case study provides some insight into a more general perspective on political and economic transition and some of the key macro- and microeconomic policy shifts that need to occur to realise a more rapid and sustained growth path.

## 1 Introduction

An economy's growth rate is determined by the rate of increase in the use of capital, labour and other factors of production, and the efficiency with which these factors are used. Economic growth is complex because of the vast range of subsidiary factors that influence these fundamental variables. The subsidiary factors include labour productivity, market structures, regulations and other microeconomic policies, economic growth in trading partners, and the macroeconomic management of the economy through the business cycle. Political factors ranging from institutional governance to the construction of political coalitions in support of good policies play an especially important role in economic growth.

South Africa's growth experience provides an example of where contrasting growth trends – long-term decline followed by improved growth – have pivoted around political change, in this case a transition to democracy. Democracy has proved critical to, among other factors, creating the possibility of a peaceful and more stable future and reversing investor sentiment at a basic level. Political

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and economic leadership have been essential to improving the country's growth performance, because of the effect on policy formulation, institutional development, regulatory design, and economic vision. Economic vision was critical and reflected the need and desire to integrate previously disadvantaged groups, from an Apartheid state of informality and exclusion, within the formal economy. From an economy-wide perspective, this was expected to expand domestic supply and demand and more generally reinvigorate an economy that was slowly recovering from the stagflationary malaise of the late 1980s and early 1990s. Of the range of possible ways of extending the economic franchise of the country, policy was largely directed towards putting in place the basics for sustainable economic growth and securing the means for the long-term financing of social wages, transfers, public services and infrastructure.

Another political economy factor in South Africa's improved growth performance since 1994 has been the policy response to reintegration with the world economy and globalisation. A central objective of macroeconomic policy decisions has been to garner net economic benefits from globalisation; increasing foreign demand for South African exports and enabling an inward flow of capital. These decisions were made in the context of a fluid global environment during the 1990s characterised by burgeoning international financial markets and successive international financial crises.

From a macroeconomic perspective, two quite distinct phases have been evident for South Africa. In both phases, the macroeconomic stance has largely been to lean against the wind. In the first phase, from 1994 to 2002, South African policy adjusted to the high probabilities of sudden reversals of capital inflows and difficulties in attracting foreign direct investment. In the second phase, from about 2002 to the present, macroeconomic policy reflected the desire to maintain stability and enhance growth rates on the back of stronger terms of trade gains while avoiding overheating and real exchange rate appreciation.

Intersecting with and underlying the macroeconomic aspects of addressing globalisation have been a range of microeconomic issues that affected economic growth, in a more direct manner. Macroeconomic management has taken into consideration quite explicitly the challenge of maintaining low inflation and its positive competitiveness effects with a set of pre-existing product markets that discourage new entry and have weak incentives to advance productivity or make greater use of land, labour and capital. Some of the central microeconomic challenges confronting South Africa, in terms of raising the sustainable economic growth rate above 5 per cent per year, include competitiveness, market structure and competition, productivity, tariff and pricing issues. Total factor productivity (TFP) has become an important source of economic growth, while factor accumulation slowed. More rapid growth in productivity with a much greater use of labour remains one of the main growth challenges facing the economy.

The recent findings from the Commission on Growth and Development highlight the growth experiences of those economies that have enjoyed high and sustained growth – defined as average growth of 7 per cent per annum over at least 25 years – in the post-Second World War era. South Africa cannot yet be grouped with such countries, in part because the country is still in the early years of a growth trajectory very different from that of its pre-1994 history. This case study provides some insight into a more general perspective on political and economic transition and some of the key policy shifts that need to occur to realise a more rapid and sustained growth path. In this paper, we provide a summarised and largely synthetic view of economic growth in South Africa and highlight policy changes that have contributed to sustainable improvements in growth.

The paper is structured as follows. In section 2, we provide a brief overview of the growth trends in South Africa since 1970 illustrating the long-term decline and subsequent reversal since 1994. Section 3 looks at the potential growth rate of the economy; reviewing work on decomposing growth into the aggregate factors of production before adopting a more detailed approach to South Africa's growth experience. Section 4 considers the growth experience in the final decades of the Apartheid economy. Section 5 discusses the determinants of South Africa's macroeconomic stability and improved economic growth. Combined, sections 4 and 5 attempt to provide a broad perspective of the drivers of South Africa's economic performance.

In the conclusion (section 6), we attempt to identify a few key microeconomic factors that seem central to the challenge of increasing the rate of sustainable economic growth to 7 per cent or more.

## 2 Overview of South Africa's growth trends

South Africa's economic development has been dominated by colonialism and Apartheid – racially exclusive political and economic systems predicated on exploitation of natural resources, notably gold and other minerals. Industry was mostly linked to commodities or to a perceived need for national capacity, and policy supporting the development of import-competing products was pervasive. Major services, such as electricity, telecommunications and transport were dominated by public sector corporations (or parastatals). Heavily subsidised, these parastatals were able to provide relatively cheap inputs to industrial and mining production. This network of parastatals served the formal sector, but like the rest of the formal sector, was insulated from competition, and thus provided poor quality service at low subsidised prices.

Economic growth was conditioned on the one hand by changes in commodity prices and on the other by a low-productivity and low-employment approach to production that took advantage of limited competition from imports and cheap intermediate inputs (made cheaper by a high real exchange rate). A large urban African working class developed in the mining and manufacturing industries, but was subject to high labour supply costs, imposed as a consequence of Apartheid's spatial dislocation policies. Separate and vastly unequal public services, particularly education, contributed to the creation of large, semi-urban and urban, geographically-isolated communities with low education levels and little means for self-generated economic development. Until 1986, unions formed by black labour were illegal, helping to keep real consumption wages low.

By the 1990s, the supply cost of labour had been driven up by the geographical distance of these areas and the relatively underdeveloped urban environments of the main economic centres. Public transport, roads, and housing were insufficient to absorb migrants from rural or far-flung industrial areas. Formal sector wage bargaining reflected the complex nature of households split between rural and urban areas, elevated dependency ratios, and the high costs of inefficient transport systems.<sup>1</sup> The high-skill, predominantly white, labour market suffered from excess demand and insufficient supply due to the constraints on the ability for black South Africans to attain higher skills. The lower-skill labour markets, both urban and rural, were characterised by massive excess supply, low productivity and low pay.

The financial system that developed primarily addressed the needs of mining, with many of the financial houses started by the one industry capable of generating large surplus profits. Much of the nascent manufacturing, machine goods, and technology industries had finance rationed, which meant that close links were needed to secure sufficient financing. For that reason, South Africa's manufacturing industries relied more on self-generated earnings for investment rather than bank lending or the capital markets.

The structure of South Africa's industries was further influenced by the economic policies implemented under the Apartheid system. Over time, markets for domestically-produced goods had become highly concentrated, with tariffs, labour market policies, and product, distribution and licensing regulations insulating producers of final goods, intermediate goods, and factor markets from consumption pressures and competition.

Monetary policy became accommodative by the 1980s, resulting in consistent negative real interest rates. This policy was made possible by rigorous exchange controls, which prevented capital from crossing the border. In the same period, public spending rose strongly in an effort to extend social infrastructure and increase subsidies to industry. This resulted in large budget deficits and

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<sup>1</sup>In addition to the gradual shift by unions to bargaining over the real as opposed to the nominal wage rate induced by high inflation and the increased focus on driving up entry level wages in order to push up wages throughout the skill hierarchy.

rising debt levels (see Figure 1). This combination of policies resulted in steadily rising inflation; Consumer Price Index (CPI) inflation reached a peak of almost 21 per cent in 1986, negating the effect of the decline in the nominal exchange rate on the real exchange rate and preventing any offsetting rise in exports.

In the decade prior to 1994, South Africa experienced the worst period of economic growth since the end of the Second World War, with growth variable and declining. The proximate causes of slowing growth were trade and financial sanctions in opposition to the Apartheid government, political instability and macroeconomic policy decisions that attempted to resuscitate the economy but resulted in higher inflation, increased uncertainty and declining investment. Protected by import substitution policies, structural constraints such as high market concentration and the dominance of key sectors by bloated and inefficient public sector corporations impeded the productivity- and growth-enhancing effects of competition. New firm creation in most sectors was low.

The distributional effects of this particular economic configuration were especially adverse for those segments of the population outside of the formal sector of the economy. These segments were growing since the rate of labour absorption in the economy was low and started to decline in some sectors in 1986 and in the economy as a whole from about 1989. Economic opportunities for most South Africans were extremely limited, due to racial exclusion, low skills and education levels, and barriers to entry into markets created by legal restrictions and high levels of concentration. These same factors also contributed to low rates of economic growth, generating a vicious cycle whereby new opportunities were simply not created. The real exchange rate directly benefited capital intensive industries, further limiting employment growth. In terms of consumption, the real exchange rate enabled those with high incomes to enjoy strong purchasing power over imported goods.

The downward trend in economic growth rates from the early 1970s was reversed in 1994. The rapid reestablishment of a basic level of political certainty was followed by confidence-building economic announcements, the combination of which helped to reverse some of the low consumption and investment levels. Output in the economy abruptly switched from contraction to growth, and since 1994, has accelerated steadily. After averaging a mere 1.0 per cent during the final decade of Apartheid, output growth rose to an average of 3.0 per cent over the period 1994 to 2003. Over the four-year period since 2004, economic growth has accelerated to an average level of 5.1 per cent (2004-2007).

The downward trend and subsequent reversal is observed in the trend of real Gross Domestic Product (GDP) growth – as shown in Figure 2. Figure 3 illustrates the considerable decline in GDP *per capita* after 1981 and its post-1994 recovery. GDP *per capita* only exceeded its previous peak of R24 000 in 2006.

The observed improvements in South Africa’s growth performance cannot compare to the thirteen examples of sustained high growth identified by the Commission on Growth and Development.<sup>2</sup> These growth champions succeeded in sustaining average growth rates of 7 per cent per annum for over 25 years. South Africa’s performance is closer to what Hausmann *et al.* (2004) set out as criteria constituting a “growth acceleration”. Denoting output and growth in period  $t$  as  $y_t$  and  $g_t$  respectively, they identify growth accelerations by looking for growth episodes that satisfy the following conditions:

1.  $g_{t,t+n} \geq 3,5\%$  per annum *Growth is rapid*
2.  $\Delta g_t \geq 2,0\%$  per annum *Growth accelerates*
3.  $y_{t+n} \geq \max \{y_i\}, i \leq t$  *Post-growth output exceeds pre-episode peak*

where the relevant time horizon for a “growth acceleration” is taken to be 8 years (i.e.  $n=7$ ). Since 1994, real GDP growth has averaged 3.6 per cent annually and accelerated by 2.4 per cent

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<sup>2</sup>These countries are Botswana, Brazil, China, Hong Kong, Indonesia, Japan, Korea, Malaysia, Malta, Oman, Singapore, Taiwan, and Thailand.

relative to growth in 1993. In addition, output in 2006 was 60 per cent higher than the pre-1994 peak. These figures suggest economic recovery in South Africa since 1994 is close to being consistent with the characteristics of an episode of growth acceleration.<sup>3</sup> How did the recovery in the economy occur?

From 1994, the economy started to grow again as a result of improved optimism, the new political dispensation, and a series of initial policy reforms. These were reinforced in the early years of the period with the beginning of a sustained shift in public spending towards the poor and away from inefficient subsidies. The macroeconomic and fiscal programme announced in 1996 (Growth, Employment and Redistribution (GEAR)) set out to lower the high inflation (9.7 per cent in 1993) and reduce the budget deficit that had reached 7.4 per cent. In subsequent years, the fiscal contraction and lower inflation helped to reduce the real cost of capital and promoted investment by the private sector. A new monetary policy framework (inflation targeting) was instituted in 2000, which helped to anchor inflation at a lower level and to increase the credibility of the South African Reserve Bank (SARB).

From 2001, low interest rates, achieved via disinflation and a more sustainable fiscal policy, have contributed to a steady increase in investment growth rates and heightened activity in key economic sectors, including construction, financial services, and retail and wholesale trade. Stronger economic growth supported tax revenue and sustained a consistent rise in public spending since 2001 on health, education, the built environment and public infrastructure. Public sector infrastructure planning and allocations, historically low inflation and interest rates, and stronger employment and household income prompted a sharp rise in private sector investment and a sense of a sustained rise in the economy's long-term growth prospects. Household consumption has played an important role in increasing economic growth, as higher incomes, stronger employment gains, and greater access to credit has both expanded total income and enabled households to smooth consumption over time.

Strong increases in commodity prices, as part of China's emergence as an economic powerhouse and increasing geopolitical risks, further underpinned an increase in South Africa's terms of trade. Over the longer term, the real exchange rate has depreciated by about 20 per cent, with considerable volatility during times of international financial uncertainty such as in 1998 and 2001. The 2001 depreciation of 35 per cent was followed by a gradual reversal of the overshooting. This somewhat stronger currency has helped to lower the cost of intermediate inputs to production, contributing to higher investment in manufacturing and other industries.

Poverty and inequality are two fundamental socio-economic issues facing post-Apartheid South Africa. The coexisting high wages and high unemployment suggests limitations to improvements in the distribution of income and gains from growth. Measures of poverty and inequality were shown to rise during the second half of the 1990s (Hoogeveen and Özler, 2004; Leibbrandt *et al.*, 2005) as the economy experienced relatively low economic growth and sluggish employment growth. Increasing overall inequality in the distribution of income has continued and represents the combination of declining between-race inequality and rising within-race inequality. Expanding within-race inequality principally reflects improving job and income prospects for higher skilled, higher educated individuals as the economy's structure, supported by policies such as tariff reform, shifted towards higher skilled activities. Since the turn of the century, headcount poverty has fallen quite significantly reflecting the expansion in the social grants system after 2002 (van der Berg *et al.*, 2005) and faster job creation since 2003 (see Table 1).<sup>4</sup> The experience with inequality is consistent with the pattern

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<sup>3</sup>While we analyse the growth acceleration in terms of real GDP growth, Hausmann *et al.* (2004) determines growth accelerations using growth rates of GDP *per capita*. Evaluating GDP *per capita* growth for South Africa in the post-1994 era, conditions 2 and 3 are still satisfied since the growth rate of GDP *per capita* has increased by 2.6 per cent relative to 1993 and GDP *per capita* exceeds the pre-1994 peak of 23,972. However, the first condition is not satisfied since the GDP *per capita* growth rate has averaged 1.75 per cent since 1994 and would therefore not be considered "rapid". If one rather turns to the four-year acceleration since 2004, we observe that all conditions are satisfied since GDP *per capita* growth has averaged 3.7 per cent, accelerated by 2.2 per cent and GDP *per capita* exceeds the pre-2004 peak of R23 972.

<sup>4</sup>Headcount poverty, as measured by the share of the population living on less than R3 000 per annum fell from a

experienced amongst countries integrating further with the world economy – the positive impact of globalisation being higher for more highly-skilled workers than for others. Workers in some sectors, such as mining and agriculture have been especially badly affected by structural change in the South African economy, although this probably has had more to do with the long-term decline in commodity prices (prior to 2004) and policy reform in agriculture than globalisation.<sup>5</sup>

### 3 Potential output and the decomposition of South Africa’s economic growth

The transition to a more stable political dispensation helped to turn the economy’s trajectory around to one of positive and sustained economic growth. Successive policy reforms and reintegration with the world economy further provided a supply side boost to the economy and helped to push the average growth rate higher. Yet while TFP increased, the use of capital and labour seemed to slow. The estimated rise in the potential growth rate of the economy moderated.

We use a Hodrick-Prescott (HP) filter to smooth GDP and estimate trend output.<sup>6</sup> This, along with the actual output in the economy between 1970 and 2007 are shown in Figure 4. Table 2 provides a comparison of actual output (real GDP growth) and estimates of potential output growth for different sub-periods.

Potential output provides an indication of the highest level of GDP output sustainable in the long term. Both Figure 4 and Table 2 illustrate the slowdown in potential output, particularly in the final decade of the Apartheid regime, and the subsequent recovery post-1994. Du Plessis *et al.* (2007) calculate that potential output fell by 30 per cent from the mid-1970s to the mid-1990s. The rapid decline in the final decade of Apartheid illustrates the deleterious effects and inherent constraints imposed by the Apartheid regime, choking off the possibilities for sustained growth. Furthermore, the lower average rate of actual growth between 1985 and 1994 exacerbates the condemnation of Apartheid economic policy since the economy was incapable of achieving even this retarded level of growth. During the first decade of the post-Apartheid government until 2004, real GDP growth essentially equalled potential output, implying an increase in potential output of 4 per cent per year. Over the past four years, however, growth has been in excess of trend growth. This divergence is a concern for policymakers since it applies strain on economic capacity and places overheating pressures on the economy. Economic policy must continue to focus on implementing the reforms – largely relating to the microeconomic challenges of market structure and competition, productivity, tariffs and pricing issues – necessary in order to increase potential output and to raise the sustainable level of growth in South Africa.

#### 3.1 Growth Accounting: Decomposing South Africa’s growth experience

Growth accounting enables us to break down growth into the accumulation of factors of production and a residual that reflects technological progress or TFP growth. TFP essentially conveys the efficiency with which factor inputs are combined in the production process.<sup>7</sup> Employing a primal growth accounting approach and using factor shares to condition the relative contribution of capital and labour, we decompose South Africa’s real GDP growth into its three sources – capital or investment, labour, and TFP. This is shown in Table 3. To capture the decomposition of growth

high of 52.1 per cent in 1996 to 43.2 per cent in 2006 (The Presidency, 2007).

<sup>5</sup>Primarily the dismantling of the myriad of marketing boards that existed prior to 1994, some tariff reform, and land reform.

<sup>6</sup>The HP filter derives a trend output such that it minimises a weighted average of the gap between actual output,  $Y_t$ , and trend output,  $Y^*$ , and the rate of change in trend output, or its smoothness, over the whole sample period: where  $T$  is the number of observations and  $\lambda$  is the factor determining the smoothness of the trend (for the quarterly GDP data available, and consistent with other studies, we apply  $\lambda=1600$ ).

<sup>7</sup>For a detailed treatment of standard growth accounting model and various extensions, please refer to Barro (1999).

during the final decades of Apartheid and the different phases of the post-1994 growth acceleration, the time period is split as follows: 1971-1984, 1985-1994, 1995-2000 and 2001-2007.

The results suggest a structural shift in the sources of South Africa's economic growth. The accumulation of factor inputs (capital and labour) have diminished in importance, while technological progress has increased.<sup>8</sup> This outcome seems appropriate given the series of policy and economic shocks that affected the economy over the long-term and accords well with developments in labour and capital markets. Reintegration with the world economy and a sustainable democratic constitution has supported the redevelopment of economic channels that favour the increased access to and feed through of knowledge and an emphasis on productivity as a response to greater competition. Macroeconomic stability, the historically low inflation and interest environment further augmented TFP growth through facilitating an expansion in private investment. High inflation and uncertainty in the past likely reduced the contribution of capital to growth. Inefficient levels of employment caused by high inflation and real wage disequilibrium would have lowered the marginal product of labour and then contributed to falling employment levels.

Both factors have the potential to contribute more to growth. Lower inflation and interest rates will support a rise in the contribution of private sector capital, further encouraging the crowding-in effects of public infrastructure investment. The contribution to growth from labour as a factor of production will rise with better employment growth, the adjustment of firms to the democratic labour law framework, lower inflation and a better balance between real wage growth and labour productivity.

In the remaining part of the paper, we provide an historical perspective on economic growth and some of the policies involved in shaping these economic outcomes.

## 4 1970-1994: Falling growth and the demise of the Apartheid economy

Despite averaging economic growth of 3 per cent between 1970 and 1984, the seeds of the Apartheid economy's demise were sown during this period as economic performance deteriorated. Rapid expansion of the capital stock (5.2 per cent a year on average) reflected an emphasis on extensive economic development. Growth in TFP was negative. In subsequent years, the Apartheid system and consequentially limited social base for the economy forestalled the intensive development of TFP and knowledge-based deepening of the basic economic nodes that the extensive approach had put in place. Moreover, by limiting the participation of the growing black population in economic activity, the extensive approach also suffered inherent constraints and contradictions – economies of scale to compete internationally only existed in mining and unit labour costs soared. The rise in unit labour costs over the period meant that some sectors of the economy were especially unprepared for the moderate trade reform and reintegration that occurred after 1993.<sup>9</sup>

### 4.1 The decline of investment

On average, between 1970 and the early 1980s, investment accounted for more than 25 per cent of GDP, reaching a peak of almost 30 per cent in 1976. From the mid 1980s through to 1993, progressively greater political uncertainty played a major role in investment decisions, and alongside very high inflation, contributed to economic stagnation and contraction. By 1993, the share of

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<sup>8</sup>The finding that labour positively contributed to growth during the second half of the 1990s contradicts other growth accounting exercises (Fedderke, 2002; Arora and Bhundia, 2003). This will, in part, reflect the sub-periods chosen but more likely the data source. Labour data in South Africa suffers from significant problems (this was especially the case during the 1990s). To ameliorate this, we use a consistent employment series supplied by Quantec and which includes agricultural and informal sector employment.

<sup>9</sup>Even though this rise in unit labour costs was in itself relatively modest. See discussion below.

investment in GDP had dropped to below 15 per cent resulting in much lower growth rates and declining GDP *per capita*, while constraining future growth (see Figure 5).<sup>10</sup>

The critical factor behind the investment peak in 1976 and subsequent collapse was the behaviour of public sector investment including the major state-owned enterprises such as Sasol (coal and oil), Iscor (steel) and Eskom (electricity). Public investment was configured to support the Apartheid regime and concentrated on supporting economic autarky in energy. Large scale investment, and oversupply in some areas such as electricity, gave way in the 1980s to much slower growth. Government's share of total investment reached 53 per cent in 1976 before approximately halving to 27 per cent in 1994. At the time of transition, the government investment ratio was just 4 per cent of GDP. At its peak in 1976, it had been almost 16 per cent of GDP.

Public sector investment was deterred by the imposition of financial sanctions that removed state-owned enterprises' source of cheap international finance, forcing them to borrow on the domestic market where interest rates were much higher (see Figure 6). Investment was further discouraged by the considerable excess capacity generated during the investment surge and made worse by rising uncertainty.

The modern theory of investment expenditure places an accent on the interrelationship between the irreversibility and uncertainty of investment decisions (Dixit and Pindyck, 1994). Under the assumption that investment is irreversible, investment becomes especially sensitive to risk and uncertainty (Bernanke, 1983, Pindyck, 1991). Uncertainty – whether this relates to future product prices and input costs, macroeconomic factors such as growth, inflation and exchange rates, or microeconomic factors relating to the tax and regulatory environment – increases the value of new information and therefore delays and retards investment decisions.<sup>11</sup>

Evaluation of investment rates in South Africa's manufacturing sectors has shown strong and statistically significant negative effects of uncertainty on investment. Both sectoral and systemic uncertainty was at play during the 1980s (see Table 4).<sup>12</sup> Financial sanctions, political instability, significant excess capacity and high rates of inflation and interest rates conspired to raise the user cost of capital, choke off cheap sources of international finance and create pervasive uncertainty that deterred and discouraged investment.

## 4.2 The slowdown in employment growth

As growth in the capital stock slowed, so too did employment growth. Economic growth became labour-saving with the rate of employment growth slowing from the early 1970s. Employment growth weakened from 2.8 per cent in the 1970s to 2 per cent in the 1980s and registered an average rate of growth of just 0.67 per cent between 1990 and 1993 (see Figure 7).

Greater employment raises economic output not only today, through increasing income, consumption and therefore demand, but also in the future by ensuring that the economy's workforce acquires the skills and assets needed to be productive and drive the economy forwards. Since the 1970s, and abstracting away from the trend over the past four years, labour has accounted for a diminishing share of South Africa's growth – see Table 3. Some decompositions of growth estimate that labour subtracted from growth in the 1990s.<sup>13</sup>

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<sup>10</sup>The rate of capital accumulation averaged just 0.8 per cent per annum in the first half of the 1990s.

<sup>11</sup>“Uncertainty is seen to retard investment, independently of considerations of risk or expected return. Introduction of uncertainty can be associated with slack investment; resolution of uncertainty with an investment boom.” (Bernanke, 1980: 3).

<sup>12</sup>Fedderke (2004) measures sectoral uncertainty as a moving average of the variance of an output demand measure by sector. Systemic uncertainty is measured using an index of political instability. The index, taken from Fedderke, De Kadt and Luiz (2001a) is a weighted-average of 11 indicators of repressive state responses to pressures for political reform.

<sup>13</sup>Arora and Bhundia (2003) estimate that labour made a -0.9 percentage point contribution to economic growth between 1994 and 2001. Fedderke (2002) estimates labour made a -0.58 percentage point contribution to economic growth in the 1990s.

Output growth and real wages are the conventional determinants of employment growth in a market economy. However, South Africa's unique history of race-based discrimination has shaped the functioning of the labour market and created a structural element to the employment conundrum, especially with regard to the role of trade unions and skills levels for African workers. The spatial distortions that were an integral part of that system also have a nearly permanent effect on the supply cost of labour.

Information asymmetries also appear to play a major role in driving up the supply cost of labour. Observed reservation wages tend to be very high, and indeed higher than predicted wages. Table 5 shows the ratio of reservation wages to predicted wages by characteristics of respondents in the 1994 October Household Survey (OHS) and the 1993 Southern Africa Labour and Development Research Unit (SALDRU) surveys, as calculated by Kingdon and Knight (2001). Differences in the ratio appear to reflect the larger impact of deficient information for people with less experience, education and age.

Higher real wages lower the demand for labour in South Africa, with wage elasticities ranging from 0.3 for high-skilled labour to about 1 for less skilled labour.<sup>14</sup> In part, the slowing rate of employment growth since the early 1980s reflects the rapid growth in real wages that accompanied the expansion in unionisation after the restrictions imposed on unions were lifted in 1979. In addition to the stronger position of unions, increasing focus on real wage bargaining in this period was also a reaction to higher inflation, which would have undermined real income levels if nominal wage growth did not keep pace.

Apartheid's active de-skilling of workers and the extensive nature of development further cut-off the economy's potential by limiting improvements to labour productivity that might have kept unit labour costs stable. As real wages rose faster than labour productivity, South African firms experienced a 38 per cent increase in unit labour costs. The trends in these interrelated variables between 1970 and 1994 are shown in Figure 8.

The rise in unit labour costs was especially detrimental to South Africa's international competitiveness and contributed to the appreciation in the real effective exchange rate experienced between 1986 and 1993. South Africa's unit labour costs in manufacturing over the period 1990-1994 was, on average, 59 per cent higher than a sample of eleven emerging market economies.<sup>15</sup>

### 4.3 Import substitution and disappointing export performance

The worsening competitiveness of exporters due to adverse unit labour cost growth was further weakened by import-substitution policies and trade sanctions. Over the period 1970 to 1984, the value of exports did not change while export volumes grew by a mere 13 per cent. This compares to growth in the volume of world trade over the same period of 70 per cent. In *per capita* terms, exports fell by over 20 per cent. The recovery since 1991 is evidenced in the marked upward trends in both real exports and real exports *per capita*, shown in Figure 9.<sup>16</sup>

Trade policy directed toward import substitution through high tariff barriers, foreign disinvestment, and financial and economic sanctions together provided a fertile environment for structural constraints to develop in the form of high market concentration, low firm creation and the control of key sectors by large and inefficient parastatals. Market concentration was high and rising under the Apartheid regime. Between 1972 and 1996, the proportion of manufacturing output contributed by the largest 5 per cent of firms exceeded 50 per cent for all manufacturing sectors.<sup>17</sup> The post-Apartheid government inherited over 300 state-owned enterprises in 1994, dominated by the

<sup>14</sup>The impact of real wages on employment has been considered in a number of studies (for example, Fallon and Lucas, 1998; Fields *et al.* 1999; Fedderke and Marriotti, 2002).

<sup>15</sup>Golub and Edwards (2003) use a sample of developing and emerging markets, including Chile, Hungary, Hong Kong, India, Korea, Mauritius, Mexico, Poland, Turkey, Singapore, and Zimbabwe.

<sup>16</sup>Since 1994, exports *per capita* and exports have surged by 38 per cent and 72 per cent respectively.

<sup>17</sup>Fedderke and Szalontai (2005) illustrate that higher market concentration predicts lower growth, higher unit relative labour costs and lower labour productivity emphasising the detrimental effects of high market concentration.

parastatals operating in the electricity (Eskom), transport (Transnet), telecommunications (Telkom) and defence (Denel) sectors. The degree of ownership concentration was significant; “the top six conglomerates controlled companies accounting for 85.7 per cent of the market capitalisation of the Johannesburg Stock Exchange (JSE)” (Lewis, 1995: 149). The South African economy exhibited little internal competition and was characterised by inefficiency and poor incentives to innovate and improve productivity.

Under a barrage of economic and trade sanctions, political instability, and damaging micro- and macroeconomic policy, the South African economy stagnated during the final decade of Apartheid, eventually contracting by 5 per cent in the early 1990s.<sup>18</sup> On a *per capita* basis, the economic damage was catastrophic, with *per capita* GDP falling 16 per cent between 1981 and 1993.

## 5 1994 to present: Democracy, macroeconomic stability and growth

### 5.1 Economic policy developments: RDP and GEAR

In 1994, the first democratic government faced the enormous political and societal task of transforming South Africa from a nation that only knew segregation, marginalisation and exclusion to one based on cohesion, inclusion and opportunity. The economic challenges were equally daunting. The inherited economic environment was precarious, suffering from both short-term crises and long-term structural weaknesses manifested in the variable and, on average, declining economic growth of the previous decade.

In the short-term, South Africa faced a myriad of difficulties including the after-effects of a severe drought in 1992, a global economic recession, domestic political strife, economic policy uncertainty, a distinct absence of foreign exchange (reserves could not even cover a week’s worth of imports), and massive outflows of currency (Naidoo, 2007). Fiscal laxity had left the public finances in a parlous state with a budget deficit of 9.5 per cent of GDP recorded in 1992/93.<sup>19</sup> Profligate public expenditure exacerbated the excessively accommodative monetary policy stance prior to 1994, which contributed to high levels of inflation.<sup>20</sup>

These short-term issues were indicative of crisis times. More ominously, long-term structural problems pointed to serious underlying weaknesses undermining aspirations for improved economic performance. Investment and employment were in long-term structural decline, high tariff barriers had cultivated large and inefficient monopolies, and the education system, after decades of neglect, was producing a labour force inappropriately equipped for the economic needs of the country. The national budget, the state machinery and the industrial sector were thus geared not towards growth and meeting the developmental challenges that confronted the new government, but rather towards sustaining the Apartheid system.

The new government chose to focus policy on political, economic and social consolidation. From an economic perspective, the priority was to restore South Africa’s economic and fiscal health and therefore provide the platform for robust growth. The government’s inaugural approach to economic policy was demand-driven under the auspices of the Reconstruction and Development Programme (RDP). The RDP reprioritised spending towards social development, and was predicated on the key mandates of meeting basic needs, developing human resources, building the economy and democratising state and society. Concomitantly, the RDP advocated prudent fiscal policy through tax reform, the consolidation of debt and the cutting of debt service costs that were undermining the new government’s economic and social objectives.<sup>21</sup>

<sup>18</sup>SARB records the period from March 1989 to May 1993 as the longest downswing experienced since 1945.

<sup>19</sup>This includes the deficits of the Bantustans.

<sup>20</sup>Between 1985 and 1994, CPI inflation averaged 14.1 per cent and interest rates averaged 14.5 per cent.

<sup>21</sup>Building on the recommendations and proposals of the Katz Commission, tax reform efforts were initially directed

While much progress towards reconstructing the public finances was made during the RDP, achievements with regards to the social objectives were limited. Insufficient growth precludes feasible social investment and thus economic policy evolved to place an accent on the role of economic growth. Augmenting this, greater certainty was necessary with respect to the major macroeconomic variables that determine long-run investment decisions, such as inflation, interest rates and tax rates. To address these problems, the RDP was supplemented in 1996 with the GEAR strategy, which set out a framework for attaining macroeconomic stability as a basis for economic growth. The strategy focused on accelerating fiscal reform (including a faster fiscal deficit reduction programme to contain debt service obligations), further tariff reform, public sector restructuring (including the disposal of non-strategic assets), continued reorientation of expenditure towards service delivery to the poor and more consistent monetary policy (in order to prevent a resurgence of inflation).<sup>22</sup>

## 5.2 Macroeconomic stability, providing the framework for growth

Under the auspices of GEAR, macroeconomic stability became a core objective of economic policy-making. Prudent fiscal policy lowered the size of the budget deficit to 2.3 per cent of GDP in 2003/04, consolidated debt and cut debt service costs to 3.6 per cent of GDP. This fiscal consolidation supported the introduction of inflation targeting, established in 2001, as a framework for monetary policy. Institutional change provided the SARB with constitutional independence to pursue an inflation target of 3-6 per cent for CPIX inflation (CPI excluding mortgage interest repayments). The inflation targeting regime has anchored inflation expectations in the economy and guided inflation to low levels and interest rates to historical lows – see Figure 10. Trade liberalisation and public sector restructuring that included wage restraint also helped to contain domestic prices and lower inflation.<sup>23</sup>

Using a Taylor chart, which compares the variability of output with the variability of inflation over time, we can illustrate the macroeconomic stability achieved in South Africa. Figure 11 compares South Africa's inflation and output variability over the past decade with other emerging market economies.<sup>24</sup> It also compares the inflation and output variability for three sub-periods of interest – 1985-1994, 1995-2000, and 2001-2006. South Africa's proximity to the origin emphasises the macroeconomic stability that has been both a focus of economic policy and a major achievement of National Treasury and the Reserve Bank. The disaggregation into sub-periods illustrates the marginally higher level of inflation variability since 2001, which was heavily influenced by the depreciation of the currency in 2002, and the significant variability of output in the ten years prior to democracy. Figure 12 compares the same measure of inflation and output variability over the last ten years for South Africa, Canada, Eurozone, France, Germany, Italy, United Kingdom, and United States. It illustrates that South Africa's macroeconomic stability also compares well against this group of developed economies.

Macroeconomic stability has helped to improve the country's risk rating and country risk spread in South Africa – see Figure 13. South Africa's country risk spread fell more quickly than that observed for emerging markets in general over most of the period as illustrated by the considerable decline in the ratio of the South African Emerging Market Bond Index (EMBI) to the Emerging Market EMBI. Most of the decline reflected improvements in fiscal indicators, for example, declining budget deficits, debt levels and debt service costs and more widely the macroeconomic stability achieved under GEAR.<sup>25</sup> The lower borrowing cost and falling risk rating has helped to mitigate

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towards establishing an efficient tax collection system and broadening the tax base.

<sup>22</sup>In April 1996, CPI inflation had fallen to below 6 per cent from 11 per cent in April 1995.

<sup>23</sup>Aron and Muellbauer (2007) emphasise the important role South Africa's trade reform and growing openness played in lowering inflation in the economy.

<sup>24</sup>Here, variability is calculated as the standard deviation divided by the mean for the 40 quarters up to the first quarter of 2006.

<sup>25</sup>From 2005, South Africa's EMBI reached a plateau at a historically low level below 100 points. The continued falls in the emerging market EMBI thereafter explains why the ratio rises later in the period.

the external vulnerability associated with the economy's reliance on foreign capital flows, enabling a faster pace of growth for a given level of the current account deficit.

Macroeconomic stability has been a key factor in encouraging foreign capital, stimulating more investment, innovation, technological progress and growth in TFP. The trend in economic growth reversed itself relatively quickly, although some factors of production continued to be inhibited by the accumulated constraints of previous decades. This was especially true in the labour market, where job shedding continued in mining and agriculture until 2000. Employment in secondary sectors remained moribund. Significant expansions in employment occurred in the wholesale and retail trade sector, and later the finance, real estate and construction sectors. Robust employment growth also occurred in areas where labour contracts could be made more flexible. Overall, however, in the 1990s, the contribution of labour continued to decline, reflecting slow employment creation in the face of both high labour costs and the shift in the structure of the economy. Within this climate of policy change, productivity gains were particularly important, accounting for about 60 per cent of economic growth between 1995 and 2000.

After a period of sub-par growth in the wake of the Asian financial crisis in 1998, growth accelerated once again in 2000. Since September 1999, the economy has enjoyed 35 consecutive quarters of economic growth, an unrivalled period of expansion in South Africa's post World War II economic history. GDP growth has averaged 4.3 per cent largely driven by strong TFP growth, which contributed 2.5 percentage points to growth. Employment growth has remained relatively slow but the average for the period masks the recent improvement with employment growing by an average of 3.7 per cent between 2004 and 2007.<sup>26</sup>

### 5.3 Investment begins to recover

The peaceful and stable transition to democracy combined with the removal of sanctions dramatically reduced political instability, reversed investor sentiment at a basic level and alleviated the systemic uncertainty previously pervasive in the South African economy.<sup>27</sup> Given the pivotal role played by uncertainty for investment in South Africa (Fedderke, 2004; Fedderke and Luiz, 2006), these developments were critical for the recovery of investment. Macroeconomic stability and other policy reforms contributed to the more benign inflation climate, helped lower uncertainty and encouraged a marginal acceleration in capital accumulation between 1995 and 2000. Subsequently, low interest rates, achieved via disinflation and the more sustainable fiscal stance, contributed to a steady increase in investment growth rates and a growing contribution of capital to economic growth. Fixed capital formation (as a percentage of GDP) exceeded 20 per cent in the first half of 2007, its highest level since the early 1980s.

In sustaining macroeconomic stability as the overriding objective of economic policy, the government emphasised reducing the uncertainty that had previously undermined investment.<sup>28</sup> From a position of public sector dominance in the late 1970s, investment in South Africa is now primarily conducted by the private sector. In 2007, gross fixed capital formation by government and public corporations accounted for only 13 per cent and 14 per cent of total fixed investment respectively.

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<sup>26</sup>If one were to disaggregate the growth periods further, and consider the 2004-2007 period where South Africa has averaged growth of 5.1 per cent per year, the growth decomposition would show that growth in factor inputs (capital, 1.5 percentage points; labour 1.6 percentage points) actually contributed more than TFP growth (1.9 percentage points) to overall economic growth.

<sup>27</sup>This is evidenced in the dramatic fall exhibited by the political instability index (Fedderke *et al.*, 2001a) during the early-1990s.

<sup>28</sup>Pindyck (1991) argues that policy reforms that provide an enabling environment for investment, rather than tax incentives and interest rates, may be the more important policy reforms government can adopt. "This latter point follows from Ingersoll and Ross (1988) who show that for long-lived projects, a decrease in interest rates for all future periods may not accelerate investment. Such a change also lowers the cost of waiting and thus can have an ambiguous effect on investment. This suggests that the level of interest rates may be of only secondary importance as a determinant of aggregate investment spending; interest volatility may be more important" (*ibid.*: 45)

Private sector fixed capital formation is strongly correlated to output trends, the real rate of return, the real after tax cost of capital and, as previously emphasised, uncertainty. The fiscal contraction of the early years of the new government helped to reduce the cost of capital and lowered the hurdle rate of viable private investment projects and was therefore growth-oriented. The private sector has been the driving force for capital formation explaining three-quarters of investment since the turn of the century; however, public capital has played an increasingly influential role through the provision of infrastructure.<sup>29</sup>

Infrastructure expenditure raises an economy's growth potential through two channels; the direct channel – as an additional factor of production – and the indirect channel through increasing the productivity of private investment. There has been significant empirical support for the growth enhancing effects of infrastructure expenditure (Aschauer, 1989; Calderón and Servén, 2004) with the direct channel receiving particularly strong support within South Africa (Fedderke *et al.*, 2006; Bogetiæ and Fedderke, 2006; Fourie, 2006; Kulratne, 2006). Evidence shows that the positive direct impact of infrastructure investment on growth increases once institutional factors such as property rights and political stability are considered (Fedderke *et al.*, 2006). This further supports the potential economic benefits of government's emphasis on infrastructure investment given the institutional stability associated with post-Apartheid South Africa.

From 2001, when the cost of capital had fallen sharply, government picked up the pace of expenditure on key infrastructure investments, the renewal of telecommunications and transport networks, and energy production systems that would crowd-in, complement and raise the efficiency of private sector investment.<sup>30</sup> Real public expenditure on infrastructure in South Africa, in both *per capita* terms and as a share of GDP, reached a forty-year low in 2001. Since 2002, infrastructure investment has expanded rapidly, growing at an annual rate of 12.4 per cent in *per capita* terms – see Figure 14.

The role and importance of public sector infrastructural investment will continue to be critical for future growth. Infrastructure was identified as a binding constraint within the current economic policy framework – the Accelerated and Shared Growth Initiative for South Africa in (ASGISA) – and therefore addressing current inadequacies will be important. Greater emphasis by the National Treasury on fixed investment expenditure relative to current expenditure and improving the quality and efficiency of government's fixed investment programmes have been, and will continue to be, central objectives in the effort to increase the growth rate of the economy.<sup>31</sup>

Within this context, recent disruptions to South Africa's electricity supply experienced during 2008 and issues regarding underlying generation capacity are significant policy concerns for government. The development of these problems reflect a combination of increasing electricity demand as growth accelerated from 2004, fixed generation capacity since the mid-1980s, and disrupted supply reflecting poor maintenance of the existing electricity grid. This is largely a pricing issue whereby Eskom's electricity is significantly cheaper than it should be and one of the cheapest sources of power in the world. Indeed, in real terms, the average industrial electricity price has fallen by 40 per cent between 1987 and 2004. Government is addressing the underlying determinants of current supply disruptions through advocating price increases, supporting the funding of Eskom's build programme that will expand generation capacity and through offering tax incentives to demand side management (DSM) policies and energy efficiency improvements (Budget Review, 2008).<sup>32</sup>

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<sup>29</sup>Within this context, the type of infrastructure we are concerned with is economic infrastructure – e.g. transport infrastructure, energy generation, telecommunications, sanitation and water – rather than social infrastructure that is most easily associated with education and health services.

<sup>30</sup>Since 2001, infrastructure investment by government and public corporations has risen at an average rate of 7 per cent and 16 per cent per annum respectively.

<sup>31</sup>This infrastructure focus in public investment was evident in Budget 2008, where infrastructure expenditure by government and public corporations was projected at R568.1 billion over the medium-term period (2008/09 to 2010/11), equivalent to 7.5 per cent of forecast GDP.

<sup>32</sup>National Treasury allocated R60 billion toward the Eskom capacity build programme over the three-year medium-term expenditure framework (MTEF) and R2 billion in terms of tax incentives for DSM and energy efficiency.

## 5.4 The dichotomy between domestic savings and investment

The savings-investment relationship is a basic building block of macroeconomic theory and high domestic savings appears to have been critical to finance large increases in investment in high growth countries.<sup>33</sup> The relatively low level of domestic savings in the South African economy is a potential structural constraint to future growth and a particular concern for policy making in South Africa.

Declining rates of household saving in the 1990s were largely associated with the effects of financial liberalisation (Aron and Muellbauer, 2001), which contributed strongly to the significant rise in the consumption-to-income ratio. Expanding household wealth as a result of rising asset values, particularly house prices, and the decline in the interest rate from 1998 augmented the effects of financial liberalisation on declining household saving (Romm, 2005). In addition, the stable political transition to democracy not only reduced uncertainty, lowering the precautionary motivation for saving, but raised incomes and access to finance through the enfranchisement of previously disadvantaged groups and the emergence of a black middle class. The black share of the higher middle class is estimated to have doubled between 1994 and 2004 (van der Berg *et al.*, 2005). More recently, high levels of household credit extension observed recently have been reflected in household net dissaving since 2006. Despite a relatively stable corporate profit share, corporate saving behaviour has experienced a significant fall since 1995 as dividend distributions have grown and taken a larger share of corporate income.<sup>34</sup>

The trends in household, corporate and government saving are fairly distinct. Prior to 1993, it was falling government saving that was responsible for the decline in domestic saving. Government dissaving peaked in 1993 as the fiscal discipline imposed under the RDP and subsequently GEAR improved the fiscal balance. From 2005, the fiscal stance more directly aimed at making government a net saver, which it achieved in 2006 and 2007. In contrast, household and corporate saving has declined sharply since the early 1990s – see Figure 15.

Gross domestic savings in South Africa declined from an average of over 20 per cent in the period 1985-94 to just 14.1 per cent between 2004 and 2007. The divergence between gross domestic savings and investment has made the economy increasingly reliant on foreign savings to support and finance investment expansion and plug the gap between domestic savings and domestic investment, which is reflected in the current account deficit of 7.5 per cent of GDP at the end of 2007. Investment as a share of GDP was almost 7.5 percentage points higher than gross savings in 2007 – see Figure 16.

South Africa's reliance on foreign capital flows to finance the growing gap between savings and investment helps to stimulate growth but risks a reversal in foreign capital. In an effort to offset that risk, policy was adjusted to build up a level of foreign exchange reserves to improve the national 'balance sheet.' The stock of foreign reserves has increased over the past ten years from a negative net position of US\$22.5 billion in 1998 to a positive gross reserve position of US\$33 billion in December 2007.

## 5.5 Trade liberalisation, the real effective exchange rate and exports

Foreign capital flows will continue to be an important source of foreign currency in the short-term. From a long-term perspective, however, South Africa's future growth path will be influenced by the country's ability to expand exports in manufactured goods and services. Exports enable firms to diversify away from the uncertainties, fluctuations and vagaries of the domestic business cycle and

<sup>33</sup> Within this context, "high" savings translates to at least 25 per cent of GDP.

<sup>34</sup> This is, in part, likely to reflect not only falling real rates of interest as inflation declined under inflation targeting but also the availability of cheap sources of capital globally. Inflation dynamics have played an important role in determining corporate saving in South Africa. Aron and Muellbauer (2001) show that high inflation and interest rates, especially within the context of financial sanctions, made access to external funds difficult and encouraged the internal use of funds during the 1970s and 1980s. As inflation began to decline in the 1990s, corporate saving was supported by higher real rates of interest.

provide a long-term source of foreign exchange to finance imports. Export orientation may also boost productivity growth through learning and demonstration effects, and increased specialisation.

Sanctions and South Africa's own effort to develop import-competing industries, however, had led to widespread import substitution and high taxes on exports. A significant phasing down of tariffs after 1994 as part of the Uruguay Round helped to increase exports and openness more generally, with less achieved since 2001. Most of what has occurred since 2001 was part of the tariff phase down scheduled in the agreement with the European Union, which accounts for about 40 per cent of total imports to SA. Exports and imports as a ratio to GDP grew sharply in the wake of tariff liberalisation (by about 10 percentage points of GDP for each), and then moderated after 2000 – see Figure 17. Openness has fluctuated around 60 per cent of GDP in recent years.

Repeated analyses of the impact of tariff reform have nearly all agreed with the perspective set out recently by Edwards and Lawrence (2006) that trade policy reform during the 1990s cut tariff collection revenues and boosted the competitiveness of exporters by reducing effective rates of protection in the economy (Figure 18).<sup>35</sup> Tariff liberalisation has been good for the economy, investment and employment on a net economic basis.<sup>36</sup> Export orientation is higher (by well over 100 per cent) in a wide range of smaller manufacturing sectors. Between 1991 and 2001, the volumes of imports and exports of goods and services increased by 73 per cent and 70 per cent respectively. While gold export volumes continued to decline – they dropped by 30 per cent over the decade – exports of other commodities increased by 50 per cent and non-commodity exports increased by about 200 per cent.

Yet despite this radical improvement, South African exports grew more slowly than exports in the rest of the world. As Edwards and Golub point out, South Africa's exports increased by 1 to 2 per cent annually in constant dollar terms, whereas world trade grew by 5 per cent annually. Other developing countries showed far better export growth rates – see Table 7. Sluggish exports have been especially noticeable in sectors thought to have a comparative advantage and those where tariff protection and industrial subsidies have continued to be high. Import orientation increased strongly, and has risen most in the most protected sectors (wearing apparel, footwear) and in sectors strong in exports (basic iron and steel, non-metallic minerals, metal products).<sup>37</sup>

High effective protection appears to be a strong indicator of weaker export performance, particularly in clothing, footwear, leather products and textiles, which have effective rates of protection on final goods well in excess of 100 per cent.<sup>38</sup> The manufacturing sectors that have performed best in terms of exports have been the ones liberalised the most, with the lowest rates of effective protection (Fedderke and Vaze, 2001). This implies that tariff liberalisation may have encouraged efficiency gains within these sectors, which subsequently enabled the improved export performance. One source of good export performance has been in automobiles, although there has been a net decline in employment in vehicle assembly.<sup>39</sup> The industry has been extensively restructured, with a major reform of the system of subsidies and tariffs that had, prior to 1994, resulted in numerous small product lines. The Motor Vehicle Industry Development Programme (MIDP) cut tariffs, switched from production to investment and export subsidies, and set review and termination dates. The latter have not been applied and the export subsidies raised for possible World Trade Organisation (WTO) review. The programme continues to be expensive in terms of automobile costs, representing

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<sup>35</sup>Tariff collection revenues as a percentage of the value of imports fell from 11 per cent in 1989 to about 4 per cent in 1998 while the import-weighted effective rate of protection dropped considerably from 35.8 per cent in 1989 to approximately 14 per cent in 2000.

<sup>36</sup>See, for instance, Dunne and Edwards (2007).

<sup>37</sup>The latter likely due to rising intra-industry trade and specialisation.

<sup>38</sup>The effective rate of protection is the percentage by which a country's trade barriers increase the value added per unit of output, taking into account that both input and output tariffs affect an industry's value added.

<sup>39</sup>Edwards and Alves report that the largest observed expansion in medium technology exports was experienced in automobiles, which grew at 21.7 per cent per year, assisted through the Motor Industry Development Programme (MIDP) that provides export credits. The share of automobile exports in manufacturing exports increased from 2 per cent to 14 per cent between 1988 and 2002. In 2002, automobile exports constituted 7 per cent of South Africa's total exports.

a redistribution of surplus from consumers to mostly foreign-owned automakers.<sup>40</sup>

The rise in imports should be seen as a major economic efficiency gain, and has been reflected in rising productivity (Jonsson and Subramanian, 2001; Harding and Rattsø, 2005). But it also continued to reflect a shift towards more capital-intensity of production and greater demand for more highly skilled workers. This has worsened the prospects for real income growth for less-skilled workers in sectors unable to raise productivity and the employment opportunities for those lacking in the skills required by expanding sectors.

The finding that import orientation has grown alongside increasing tariffs and protection for some sectors, as has been the case in textiles and clothing, suggests tariff protection has not fostered improvements in the productivity of domestic producers but rather imposed a significant cost upon South African consumers.

Net employment gains in manufacturing from trade alone are estimated to be about 200,000, compared to growth in services jobs of over 1 million between 2001 and 2007. Employment losses in traded goods have been almost entirely in primary products – mining and agriculture.

Despite the improving trend in exports over the past decade (exports *per capita* and exports as a share of GDP have increased), South Africa's export performance does not compare favourably in an international context. Hausmann and Klinger (2006), in discussing whether South Africa faces an export predicament and looking at the period of export growth (1991-2004), rank South Africa's export volume performance close to last (50<sup>th</sup>) compared with 56 comparator countries.<sup>41</sup> They also find a strong divergence in exports *per capita* between South Africa and other natural resource exporters (Argentina, Australia, Canada and Malaysia) since 1960.

Looking at the change in tariffs, average protection has fallen in most regions, with particularly large declines occurring in lower-middle-income and low-income economies. While tariff protection has declined in South Africa (-4.9 per cent), it has not declined at a significantly faster pace than the average for other lower-middle-income economies (-5.3 per cent) – see Table 8. These results suggest that the liberalisation process in South Africa has not been 'excessive' compared to its counterparts.

So while tariff reform has helped with exports, it is also fairly clear that South African reform has not kept pace with that of competitors who have been putting downward pressure on their real exchange rates via reform and more rapid growth in factor productivity. Trade liberalisation can provide additional indirect benefits to exports because it depreciates the real exchange rate as the relative prices of imports, exports and non-tradables change. Aron, Elbadawi and Kahn (1997) estimate that in South Africa, the real effective exchange rate depreciates by 2.5 per cent in response to a 10 per cent liberalisation, with the long-run impact considerably larger. Li (2004) shows that permanent trade liberalisation in 45 countries leads to real depreciation in the exchange rate of between 27 per cent and 48 per cent (without controlling for other factors).<sup>42</sup>

Between 1994 and 2006, the real effective exchange rate depreciated by 11 per cent. One may be inclined to associate the improvement in competitiveness with the stimulated export growth. Exports as a percentage of GDP were approximately 30 per cent in 2006, up from a low of 21 per cent in 1992. However, it is apparent that exports have been unresponsive to exchange rate depreciation in the past. Edwards and Lawrence (2006) show that the real exchange rate provides little help with explaining export performance, especially the rapid acceleration of exports experienced between 1991 and 1997, and rather appeal to cost variables – i.e. an improvement in export profitability – and most importantly the liberalisation in trade policy.

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<sup>40</sup>Tariffs remain at about 32 per cent for fully built-up vehicles, and a rebate system (itself valued according to exports of vehicles and some components) enables automakers to capture the full difference between tariff-inclusive price and production plus transport costs.

<sup>41</sup>The comparison set is all countries with a population over 4 million and a GDP *per capita* of at least 25 per cent of South Africa's. Hausmann and Klinger calculate South Africa's ranking based on the World Bank's World Development Indicator (2005) data.

<sup>42</sup>Controlling for other factors (deviation from LR equilibrium, relative GDP growth, terms of trade, share of government spending in GDP, capital inflows), Li estimates that the real exchange rate depreciates by 14.8 per cent in the initial years following the opening of the economy to trade, and 17.0 per cent in the long-run.

Firm-level analyses of export behaviour in South Africa (Rankin, 2001; World Bank, 2005) point to factors that inhibit higher exports and faster export growth. These suggest the competitiveness of South African exports remains stunted by the high costs of conducting business, including labour costs and regulations, high communication costs, transport costs and bottlenecks in supply due to underdeveloped transport infrastructure, and costs associated with companies regulation and licensing.

At the same time, few South African firms engage in concerted development of export markets and production for export. Large firms concentrating on commodity-based products account for most exports. An export-oriented motor vehicle industry subsidy programme generates a significant level of automobile and components exports. Trade liberalisation in some manufacturing subsectors has led to rapid growth in some areas although from a very low base. Nonetheless, exports do appear to rise when their relative profitability to domestic sales increases, for example, when the exchange rate depreciates. These episodes do not, however, translate into overall production increases, suggesting fairly flexible approaches to sales and markets but minimal sustained market development or consistent gains to sectors supplying upstream inputs.

## 5.6 Explaining the persistently slow employment growth

In the first six years of democracy (1995-2000), employment growth registered just 0.9 per cent per year. The trend in employment growth has been reversed more recently with employment expanding considerably since 2003 – Labour Force Survey data suggests 1.84 million jobs have been created in the last three years at an average rate of 3.7 per cent per annum. This is a positive development since greater employment of a productive workforce is critical to support growth, both in the short- and long-term. The economy requires an employment growth rate of 3.4 per cent per annum to meet the government’s target of halving unemployment by 2014.<sup>43</sup>

There is a strong belief that the South African economy has experienced “jobless growth” for most of the past decade. However, recent trends suggest this is not the case and there is clear evidence that employment has responded positively to growth, especially since 2002. Estimation of the output elasticity of employment (Fedderke and Mariotti, 2002) shows that the elasticity of employment with respect to output growth in South Africa is close to unitary.<sup>44</sup> This implies a one per cent increase in output will result in a one per cent increase in employment, everything else being held constant.

Despite the recent favourable employment trends, unemployment remains high. The rate of employment growth has been declining since the 1970s, and there is little consensus in the literature on why this has occurred. A range of explanatory factors have been put forward, including insufficient output growth, high real wages and unionisation, trade liberalisation and structural change, to name a few. An increase in the participation rate has also been an important factor, especially for women.

Trade liberalisation since the early 1990s, while offering tangible benefits to exporters, is a frequently mentioned explanation of slow employment growth since 1994 (or rather job shedding in some sectors in the 1990s), particularly with respect to unskilled labour. Trade liberalisation, and the process of globalisation, increases the competitive pressures from low wage, labour intensive exporting countries prompting a shift towards capital and skill-intensive production activities. On balance, however, trade has increased employment while productivity and technological change has reduced employment, with larger adverse effects where firms are far below the technological production frontier or where wages are rigid (Aghion, Braun and Fedderke, 2006). Structural change related to a need for higher level skills has likely played a major role in the decline of employment in the primary sectors (agriculture and mining) and the non-mineral tradable sector (including manufacturing) – see Figure 19.

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<sup>43</sup>The target announced at the Growth and Development Summit in 2003, a tripartite agreement.

<sup>44</sup>The output elasticity of employment describes how employment changes respond to a given change in output.

The skills mismatch deriving from structural change has thus also inhibited the role and importance of employment growth to economic growth. Lower labour demand due to a shift in the economic structure has also been exacerbated by *within-sector*, economy-wide skill upgrading and the move towards skill-biased technical change and hence the employment of more skilled individuals.

The demand for private sector labour depends on private sector growth and the average real private sector wage. The strength of South Africa's labour market institutions – the unions and the collective wage bargaining structure – have reduced the flexibility of the labour market and ensured that prevailing wages are high when compared to wages across other countries at a similar level of development. The effect on wages has not been uniform, with some sectors experiencing strong and sustained growth in real wages for unskilled workers and others relatively stable real wage levels.<sup>45</sup>

Given the impediments to formal employment, the informal sector has a role to play in absorbing lower skilled job hunters into the labour market. In many developing countries, informal employment constitutes up to 75 per cent of all employment. The informal sector should play a bigger role in South Africa, but the legacy of the Apartheid regime and the limitations it imposed on worker mobility have prevented this from happening. The relatively small and slow growth of the informal sector is therefore another potential explanation of slow employment growth.

Poor and inconsistent wage adjustment in formal labour markets, high labour supply costs, and extensive skills mismatches are a critically important set of constraints to a more equitable and growth-supporting labour market. The constraints arose over time in response to political factors, such as the important role of labour unions in the anti-Apartheid movement, as well as economic factors.<sup>46</sup> In particular, the labour market, its functioning, and its outcomes fit with the broader product markets of which they are part.

## 5.7 Product markets, competition, and economic growth

Studies of inflation dynamics in South Africa have tended to find robust results from the effects of producer prices and unit labour costs, the exchange rate, and the output gap (Fedderke and Loewald, *forthcoming*). Using mark-ups (i.e. the pricing behaviour within industries) as a manifestation of the extent to which markets are competitive, National Treasury initiated a research programme to estimate the extent to which the lack of competition and concentration acted as a constraint on growth and a propellant for inflation. Work by Aghion *et al.* (2006) and Fedderke *et al.* (2007) helped to quantify the extent to which South African industry has been able to set final goods and services prices to protect profit margins through the business cycle. Mark-ups over production costs are estimated to be significantly higher in South African manufacturing industries than they are in corresponding industries worldwide, with no evidence of a decline despite tariff reforms in the mid-1990s.

The finding of high mark-ups in South African industry derives, in a large part, from the significant concentration that characterises the economy's industrial structure. While for some sectors this reflects the dominance of current or former state-owned enterprises, high concentration is pervasive. The four largest conglomerates in South Africa accounted for 80 per cent of market capitalisation on the Johannesburg Stock Exchange during the first half of the 1990s and continued to control more than 50 per cent in 2002 (Chabane *et al.*, 2003). High levels of concentration in sectors have been maintained despite the observed unbundling of these groupings in recent years. The collective wage bargaining system – essentially sector-wide agreements extended to non-parties – appears to provide a further degree of protection from potential entrants.<sup>47</sup> Other financial and non-financial

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<sup>45</sup>Banerjee *et al.* (2006) argue that the influence of unions has rather been to prevent real wages from falling since 1994.

<sup>46</sup>Some of the constraints that emerged have been offset by gains, such as greater income stability in some particularly unstable sectors (for example, agriculture) and a more generally quiescent and cooperative labour relations environment.

<sup>47</sup>In addition to the legal backing provided to the collective bargaining system, the general shortage of skilled labour enables greater insulation of labour market insiders from competition. The general approach to bargaining further

factors may also be important, such as extensive cross-shareholdings, a history of exchange controls which limited exposure to foreign assets, and extensive use of licensing and exclusive supply and distribution agreements.

The high levels of market concentration, as evidenced by significant mark-ups, represent a serious underlying constraint to South Africa's potential for achieving sustained higher growth. Aghion *et al.* (2006) emphasise the deleterious effects higher mark-ups have on productivity growth and employment and estimate that a 10 per cent reduction in South African mark-ups would increase productivity growth by between 2 per cent and 2.5 per cent per year. Establishing an effective and proactive competition policy, that scrutinises potential mergers and encourages new firm entry, is therefore imperative.

Competition, input costs, trade liberalisation, innovation and TFP growth are all interrelated. For South Africa, and probably other middle-income economies, innovation can represent the import of knowledge but also domestic innovation in markets that for whatever reason are sheltered or discontinuous with potential substitutes in foreign markets. One aspect of that innovation may simply be the response in terms of productivity to greater competition from imported products. Gains to consumers from lower prices may have volume benefits and other general equilibrium benefits that far outweigh the possible losses to domestic firms from lower returns on capital and/or lower employment. In some sectors, in particular textiles and clothing, very high tariffs have retarded economic adjustment and imposed high costs, especially on low-income consumers who would likely benefit most in terms of improved living standards.

Trade liberalisation, in raising competition from imports is one mechanism to engender innovation, import of knowledge and technological progress. Mirroring this, the efficiency improvements and productivity gains associated with competition will also stimulate exports. Rankin (2001) shows that efficient firms tend to self-select themselves as exporters rather than vice-versa (exports causing efficiency), which suggests that there may be subsidiary benefits for exports to increasing competition and expanding the pool of efficient firms in the economy. Alternatively, competition policy in preventing the abuse of market power and uncompetitive markets will encourage the growth of smaller firms. Since there is a robust positive relationship between exports and firm size, competition policy can play a role in facilitating firms to grow and become more export-oriented.

## 5.8 TFP: Accelerating South Africa's sustainable growth path

Faster accumulation of factor inputs and a regulatory environment that encourages TFP growth will be important in sustaining and further accelerating growth in South Africa, not least because without appropriate manipulation, factor inputs are subject to diminishing returns and their growth-enhancing effects exhausted over the long-term.<sup>48</sup> TFP growth can derive from many sources. In models that treat knowledge as a pure public good, with the dual characteristics of being non-rival and non-excludable, TFP growth results from spillovers and learning-by-doing (the indirect channel) associated with capital investment (Romer, 1986) or investment in human capital (Lucas, 1988).<sup>49</sup> In contrast, the Schumpeterian tradition of economic growth argues that the intentional devotion of private sector resources to the advancement of knowledge creation (the direct channel) enables the economy to produce with increasing returns to scale and achieve higher sustainable growth. Different mechanisms for increasing TFP have been identified, whether they be product varieties (Romer 1990), quality ladders (Grossman and Helpman 1989) or creative destruction (Aghion and Howitt 1992). What is common to all three is the role of human capital, and investment in Research

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reinforces that effect by pushing up entry level wages (and contributing to a large youth unemployment problem).

<sup>48</sup>Given the relatively low level of investment in South Africa and the quantity of unemployed labour, factor accumulation will, however, continue to play an integral role in growth for years to come.

<sup>49</sup>A good is non-rival if each individual's consumption of that good does not subtract from any other individual's consumption of that good. A good is non-excludable if it is impossible to exclude any other individuals from consuming it. This is an indirect channel of TFP growth. Spillovers and learning-by-doing allows capital to cast off the shackles of diminishing returns, achieve increasing returns to scale, and drive sustained higher economic growth.

and Development (R&D) to further knowledge creation.<sup>50</sup> For South Africa, Fedderke (2005) uses manufacturing data to confirm the positive impact of R&D expenditure on the growth of TFP, as postulated by the Schumpeterian tradition of endogenous growth theory. The results also show that human capital is an important determinant of TFP growth but that it is not the quantity of human capital (enrolment once again is the chosen proxy) but rather the quality of human capital that is statistically significant and positively associated with TFP growth in South Africa.<sup>51</sup>

There are many determinants of innovation and technological progress and therefore productivity growth can be fostered through a variety of policies. The appropriate set of policies and institutions depends on a country's relative state of development and its distance from the world technological frontier (Acemoglu *et al.*, 2002). Economies far from the frontier need institutions capable of adopting and using existing technology, whereas technological leaders need to focus on more direct forms of innovation.<sup>52</sup>

Trade liberalisation and increasing openness have also been influential determinants of TFP growth through the import of new ideas, capital, learning effects and technological transfer (Aron, 2001; Arora and Bhundia, 2003). Continuing trade and tariff reform will arguably not only boost competitiveness and exports but also benefit TFP. Arora and Bhundia (2003) find the share of private investment in total investment and investment in capital and machinery to be important in explaining TFP in South Africa. This suggests that continued policy focus on macroeconomic stability and its advantageous outcomes such as low inflation and interest rates, will encourage the private investment that fosters continued technological progress. Institutional reform has also been found to be an important determinant of TFP (*ibid*; IMF, 2003) reflecting the positive impact of political and institutional change since 1994. The stepped-up effort to modernise and enhance the efficiency of the public sector in South Africa could play an important role in raising private sector productivity in coming years.

The dominance of TFP growth as the primary source of growth since 1994 is beneficial since it is technological progress that enables the economy to achieve a higher sustainable rate of economic growth. In many developed countries where the economic growth available from increasing labour and capital has largely been exhausted, the focus is placed on technological progress and TFP growth. This is not the case in South Africa where there remains considerable scope for the economy to achieve growth through increasing employment and investing in the capital stock. Current and future economic policy in South Africa therefore needs to adopt a holistic approach that stimulates all three sources of growth.

## 5.9 Education: Addressing human capital needs and unlocking human capital potential

The fundamental role of human capital in endogenous growth theory places a premium on providing the appropriate education, training and skills development policies to ensure the realisation of technological progress, productivity improvements and TFP growth. As mentioned in the previous section, the pivotal influence is the quality of human capital. The importance of human capital deepening and the quality of education and the labour force for economic growth is well-established (Hanushek and Kimko, 2001; Hanushek and Wößmann, 2007). Furthermore, as the structure of

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<sup>50</sup>Many empirical studies confirm the importance of human capital to economic growth. Barro (1991) in his study of economic growth in a cross-section of countries, using the educational enrolment rate as a proxy, finds human capital to be a significant determinant of growth. Mankiw *et al.* (1992) meanwhile generate an Augmented Solow Model of economic growth by including human capital as an additional factor of production. Their results show that the augmented Solow model can explain 80 per cent of the variation in growth across the countries in their sample.

<sup>51</sup>This is consistent with the literature advocating that it is the quality of education, human capital, and the labour force that is important and statistically significant for productivity improvements and economic growth (Hanushek and Kimko, 2000; Hanushek and Wößmann, 2007).

<sup>52</sup>Policies that facilitate innovation and growth for economies closer to the technological frontier include product market competition and entry, higher education (more important for innovation than imitation), stock market finance, democracy and more decentralised firms with capable and efficient managers and entrepreneurs.

South Africa's economy continues to shift and expand towards medium- and high-technology manufacturing and services, there is a premium placed on investing in and developing a high skilled workforce. This will ameliorate the current skills shortage problems detrimentally affecting the economy but more fundamentally will equip South Africa with a workforce able to sustain an accelerated rate of growth.<sup>53</sup>

The education and skills development system is currently failing in this regard as illustrated in the persistent evidence of South Africa's weak educational performance. Cross-national standardised tests illustrate South Africa is not internationally competitive (Crouch and Vinjevold, 2006; van der Berg and Louw, 2007; van der Berg, 2007). The traditional measure of learning achievement, the matric pass rate, has been declining since 2003 from 73.2 per cent to 66.6 per cent in 2007. Of equal concern are the more subtle changes in learning outcomes and the composition of matric passes, with the relatively low numbers passing in the quality indicators of "exemption" passes and higher grade mathematics and science.<sup>54</sup> This in itself limits access to quality tertiary education and places additional pressure on South Africa's capacity to sustain a competitive economy in a globalised world.

In explaining this poor performance, one cannot ignore the lingering legacy of educational inequities that originated during Apartheid. This is one of the most damaging economic constraints inherited from Apartheid-era government policy.<sup>55</sup> Since 1994, much has been achieved in redressing these educational inequities in terms of school access and government resource allocation. Longitudinal survey data from the Cape Area Panel Study (CAPS) presents "a school environment characterised by almost universal primary education, high enrolment rates up to at least age 16, with grade repetition playing a large role in explaining the racial gap in schooling" (Lam *et al.*, 2008: 11).<sup>56</sup> Despite the laudable progress in access and more equitable government funding, this has not attained an equalisation of educational outcomes.

The education production function describes how educational inputs translate into educational outcomes. Education in South Africa is well-resourced with a significant share of government expenditure devoted to education. On average, over the last decade, education expenditure has accounted for 22 per cent of total consolidated expenditure and has been equivalent to 5.5 per cent of GDP; this compares favourably to many developed countries. Nevertheless, weak educational performance illustrates that higher educational resources does not guarantee improved educational outputs.<sup>57</sup>

Significant research into the South African education production function, however, finds that a large portion of student performance remains unexplained. As a result, attention has been reallocated away from the role of resources towards less quantifiable aspects, such as school management, efficiency and governance and teacher quality (Fedderke and Luiz, 2006; van der Berg and Louw, 2007; van der Berg, 2007).<sup>58</sup>

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<sup>53</sup>In addition to its importance at the macro-level, ensuring that education and human capital is of a sufficient quality is important for micro-level outcomes. Case and Yogu (1999) show the quality of schooling has a positive impact on the probability of employment and adult earnings.

<sup>54</sup>Higher grade mathematics passes had fallen from 29 475 in 1995 to an average of 19 678 over the period 1997-2001. Since 2002, there has been some improvement in this quality indicator with the number passing higher grade mathematics exceeding 25 000 in 2005 and 2006. However, this remains lower than a decade earlier.

<sup>55</sup>An important long-run impact of apartheid, and in particular apartheid education policies, is that it retarded parental education, leaving African parents and communities without the cognitive resources to create a favourable home learning environment. Lam *et al.* (2008: 27) using CAPS data finds "the mothers and fathers of African youth have 4-5 years less schooling than the parents of the white youth". This element of the apartheid legacy will take considerable time to erode.

<sup>56</sup>Grade repetition is found to particularly affect African students and proves an important explanation for the lower grade attainment, confirming the earlier evidence presented by Anderson *et al.* (2001).

<sup>57</sup>Whilst this has achieved some narrowing in the discrepancies affecting school quality, as measured by pupil-teacher ratios, large disparities in school fees has limited the success of equalising government funding translating into equalising pupil-teacher ratios. This also, in part, reflects a drive of policy initially towards raising teachers' salaries rather than increasing other resources devoted towards educating South Africa's young.

<sup>58</sup>Important issues here include the problem of teacher absenteeism, a low proportion of teacher's time dedicated to actually teaching, and the lack of qualified teachers (expanding access led to a compromise on the qualifications of

In summary, constraints including a shortage of high-quality teachers, governance issues within schools, and inappropriate incentives within the skills development system all undermine the quality of educational and skills development outcomes and limit the economy's potential to fully exploit the growth-enhancing policies and reforms instituted since 1994. It is imperative to develop appropriate educational policies to relax these constraints and release the human capital potential of South Africa. Without addressing these needs, the economy is threatened by a persistent problem of skills shortage and greater difficulties of realising economic growth through the channel of TFP and technological progress.

### **5.10 A final note on the underpinning fundamentals: Policy change, institutions and economic growth**

The development of policy and its effects on economic growth in South Africa operates within the context of the institutions that prevail over and underpin the economy and society. The importance of institutions as a fundamental determinant of economic growth has become prevalent and influential as an approach for explaining growth. Institutions are crucial since they “provide the incentive structure of an economy ... [shaping] the direction of the economy towards growth, stagnation or decline.” (North, 1991: 97). For example, economic institutions influence investment in physical and human capital, the incentive to innovate and develop new technology, and how production is organised. As stated in our introduction; South Africa's growth experience provides an example of where contrasting growth trends have pivoted around the political transition to democracy – and a completely different institutional framework.

The disappointing results from the education production function and failure to convert significant resources into educational outcomes is an example that illustrates the importance of governance and the imperative of implementing appropriate institutions. The role of institutional development and its interaction with policy change has provided an important subtext to this case study of South Africa's economic growth.

A wealth of literature lends support for the importance of institutions in explaining not only cross country differences in income levels, but differences in economic growth and volatility (North, 1991; Kaufmann *et al.*, 1999; IMF, 2003; Acemoglu *et al.*, 2004). Apartheid was a political system predicated on a racially exclusive institutional framework that eroded political rights and freedoms, property rights and generated significant levels of political uncertainty (Fedderke *et al.*, 2001a). Crucial to reversing the volatile and generally declining growth observed during the final decade of Apartheid was the stable and peaceful establishment of democracy in 1994 and the process of providing political rights to the majority of the population. The development of these institutional factors was essential for reducing the political instability and improving property rights. As has been emphasised earlier, and confirmed in the econometric evidence, for example, Fedderke *et al.* (2001b), the reduction in political instability, and thus uncertainty, facilitated investment and more generally resuscitated the economy.

Whilst democracy brought the South African economy back to life, the certainty of policy direction in establishing confidence in the economy and providing the framework for growth cannot be understated. It has been this certainty that guided the declining trajectory of fiscal deficits, instilled inflation targeting as monetary policy and granted central bank independence. The focus on growth has been underpinned by commitment to first GEAR and then ASGISA and institutionalising policy certainty continues with the National Treasury adopting the principles of a structural budget balance in the Budget 2008. This policy certainty has established macroeconomic stability, confidence in the National Treasury's stewardship of South Africa's economic policy and more widely confidence in the economy.

Looking ahead, the interactions between institutions, policy and growth will continue to be crucial. Macroeconomic stability is a necessary condition for facilitating growth but is insufficient

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teachers and the proliferation of teachers without a teaching diploma).

to guarantee the economic growth needed to continue to expand economic opportunities and welfare in South Africa. Micro reforms need to be adopted. We have identified the important future role trade policy, competition policy, regulation in product and labour markets and education will play in the as yet unwritten South African growth story and for these policy avenues to be successful, a relevant, appropriate and conducive institutional environment is required.

## 6 Conclusion

South Africa's growth experience has been one of a long period of decline in the 1970s and 1980s followed by an improving growth performance since the transition to democracy in 1994. Despite factor accumulation making a larger contribution to growth since 2000, the fundamental driver of accelerating growth has been TFP growth, accounting for 60 per cent of post-1994 economic growth. Greater integration and flows of knowledge and more competition have been important channels.

Prudent fiscal policy and sound macroeconomic management have been critical factors in creating an environment conducive to growth by stabilising economic conditions, lowering the user cost of capital and putting downward pressure on the real exchange rate. Better use of capital and labour was a key result, and has been evident in the boom in retail trade, finance, and residential and non-residential construction and infrastructure development. Professional and engineering services sub-sectors have also done well. Manufacturing production has been more moderate but sustained, with more robust increases in investment at times when the exchange rate is strong and better exports when the exchange rate makes goods more competitive in foreign markets.

In the South African context of heightened political polarisation prior to 1994, achieving low inflation and macroeconomic stability was critical to unlocking investment by the private sector. However, there needs to be an enabling microeconomic environment to support macroeconomic stability. This area has proved difficult to reform effectively for both political economy and capacity reasons.

Economic growth has been, and still is, skills intensive. This suggests that much more robust and sustained growth is needed to extend economic activity into segments of the population that have low skills levels or are marginalised due to the high costs associated with their location. At the same time, the microeconomic constraints arising from product and labour market rigidities, such as regulations and practices that impose high costs on new entrants to established markets should help to lower the costs of engaging in economic activity and increase opportunity, which would benefit factor accumulation and productivity.

Greater product market competition has proven to be an area difficult to reform, in part because of the interests that have emerged in correspondence with the various levels of control and pricing power in the economic system. Further tariff reform is probably central to efforts to induce the productivity-raising effects of competition, but also to reduce anti-export bias and to help firms concentrate on developing permanent markets for exports. Reform of product and labour markets – essentially to provide and enforce basic service levels, product quality and conditions of work with more price flexibility to increase economic activity levels – remains a critical challenge.

Macroeconomic policy has attempted to address these problems, by providing counter-cyclical pressure and lowering inflation. With the inelastic aggregate supply curve of the South African economy that our discussion has implied and an environment of near fully mobile capital, systematic efforts to adjust nominal exchange rates to target a consistently more depreciated real rate would be difficult although not impossible. It is even less clear, however, if it would work to address supply inelasticity given South Africa's product markets without reform of the regulations and practices affecting those markets. Some combination of a more counter-cyclically-oriented fiscal and monetary policy and extensive microeconomic reform would help to reduce pricing power, create opportunity, and incentivise greater production for export markets. Without such reforms, the surplus created for investment by an initial round of real exchange rate depreciation would be inefficiently expended

and reabsorbed by the existing market incumbents.

Key infrastructure investments have been and will continue to be essential to lowering the costs and improving the efficiency of the transport and telecommunications networks, thereby complementing the efficiency and productivity of private sector investment, reducing the cost burden on exporters and raising competitiveness. Investing in a skilled workforce, in science and technology and R&D is also critical to expand the skilled, productive workforce. Progress in these areas would help to unlock the full potential of the macroeconomic policy configuration on the economy's growth rate by improving the export orientation and increasing foreign demand for South African products.

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## APPENDIX: CHARTS & TABLES

Figure 1: Debt as a share of GDP, 1980-1995

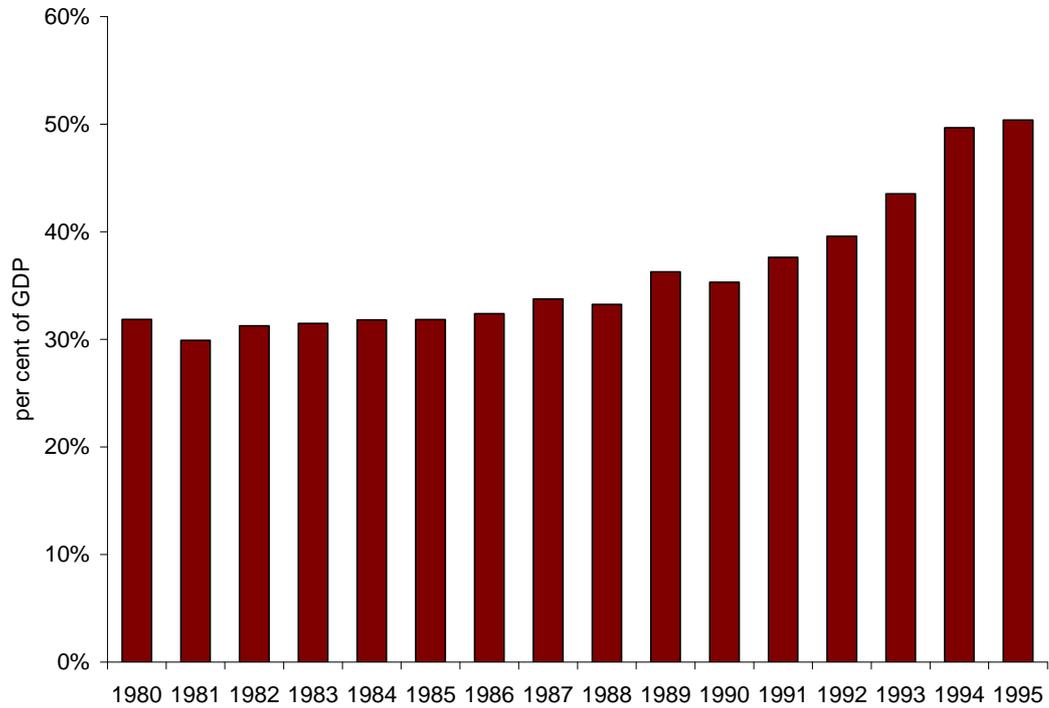
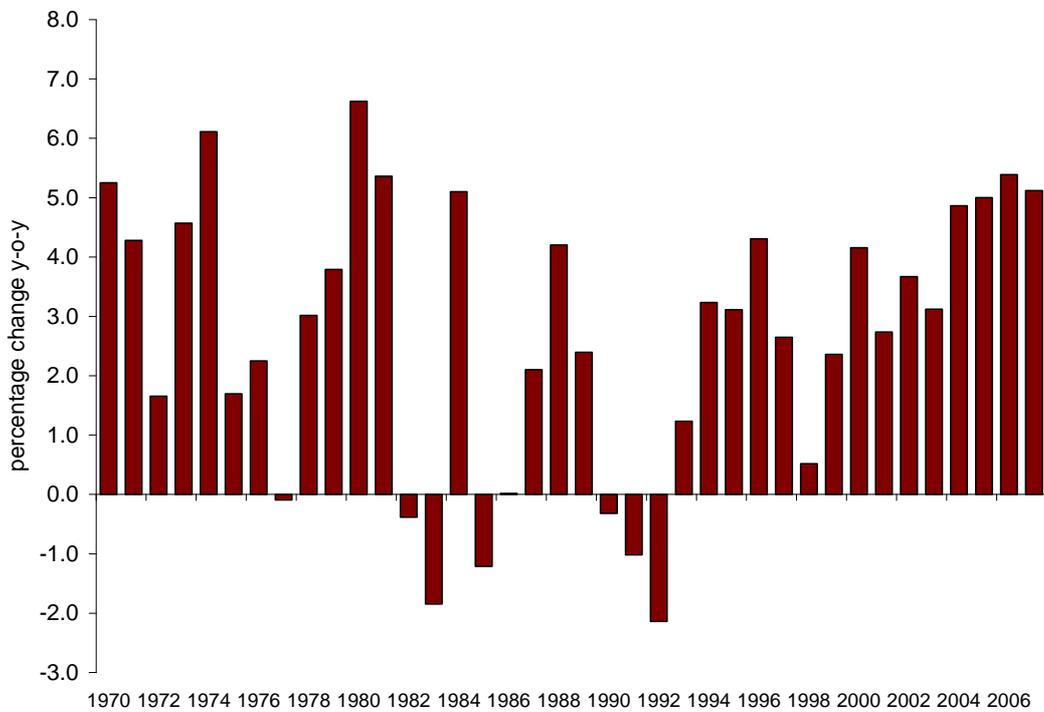
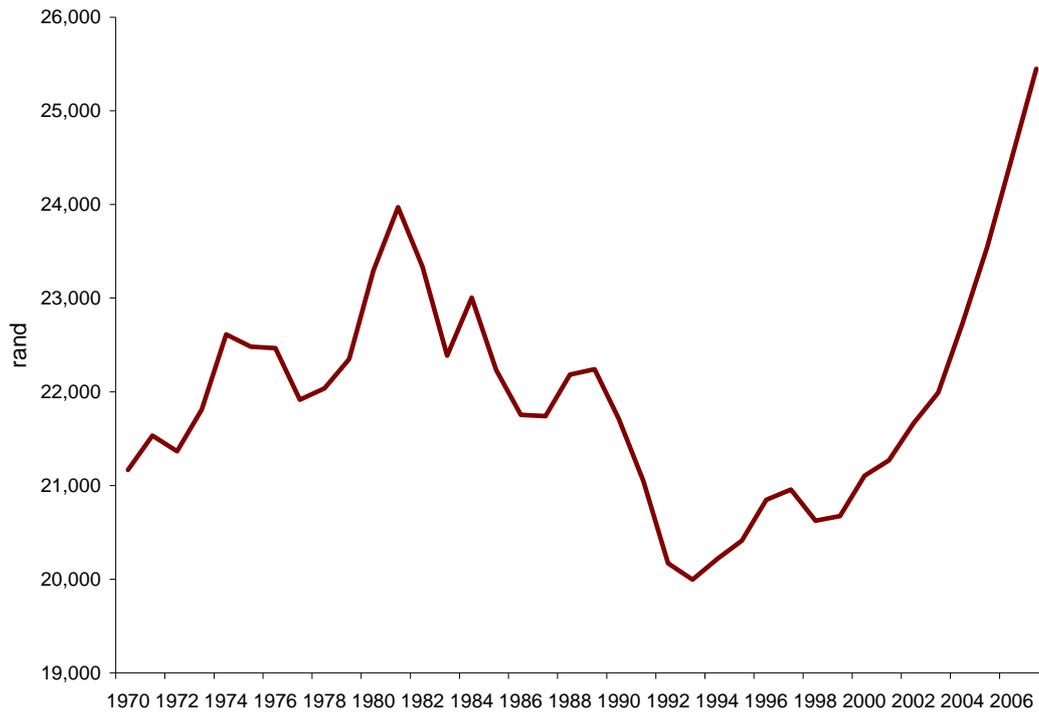


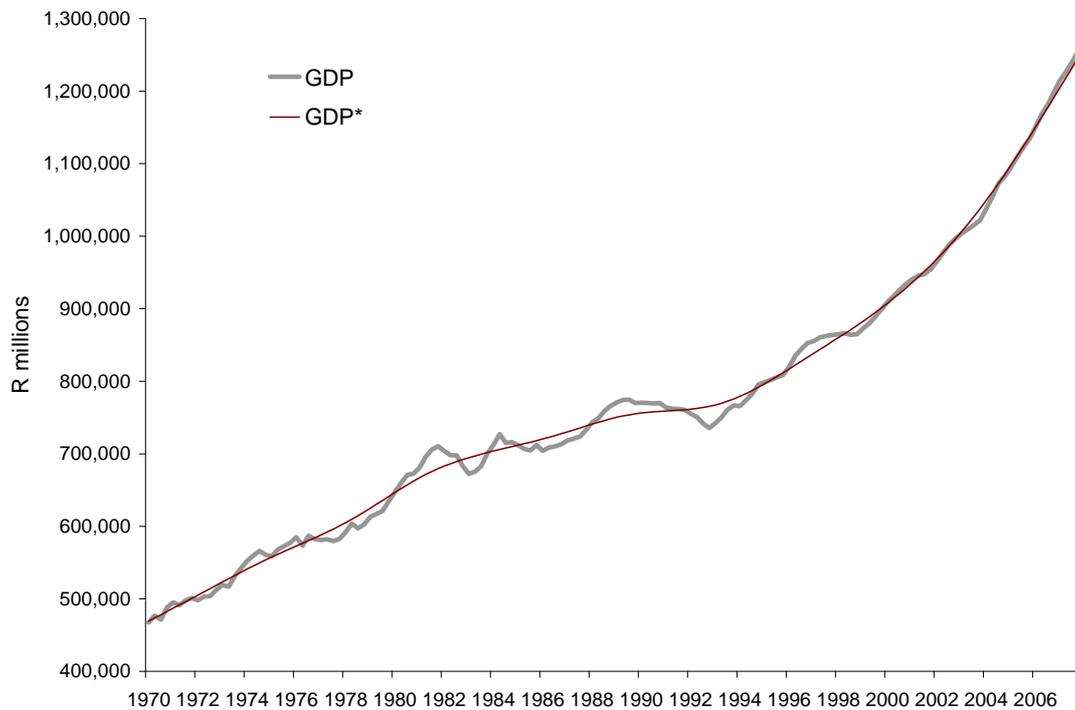
Figure 2: GDP growth, 1970 to 2007



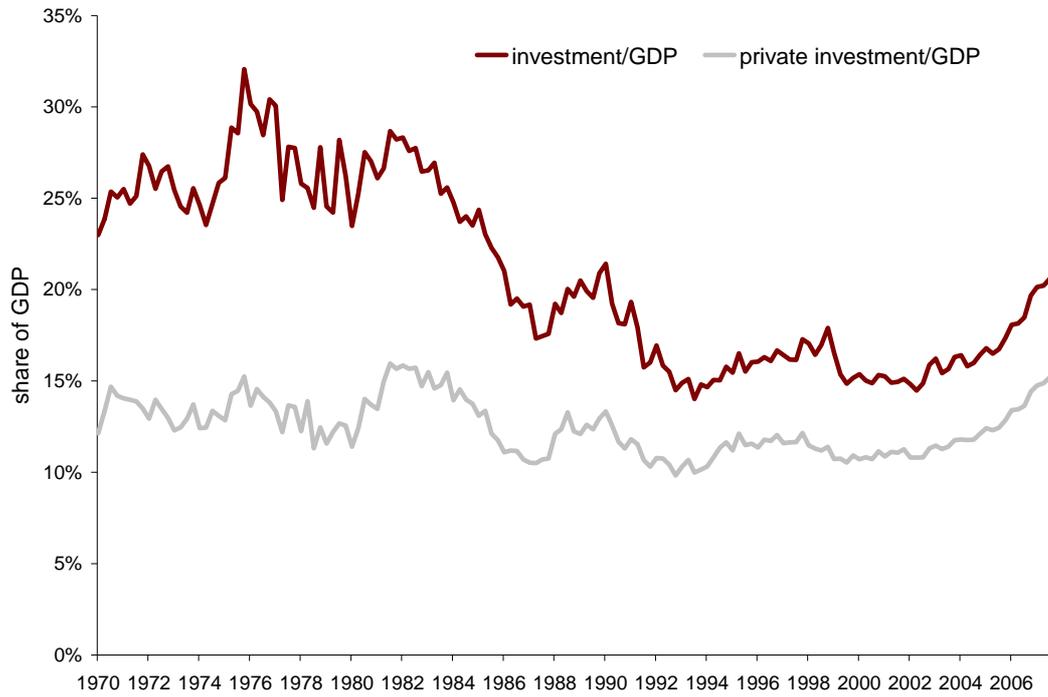
**Figure 3: Real GDP per capita, 1970-2007**



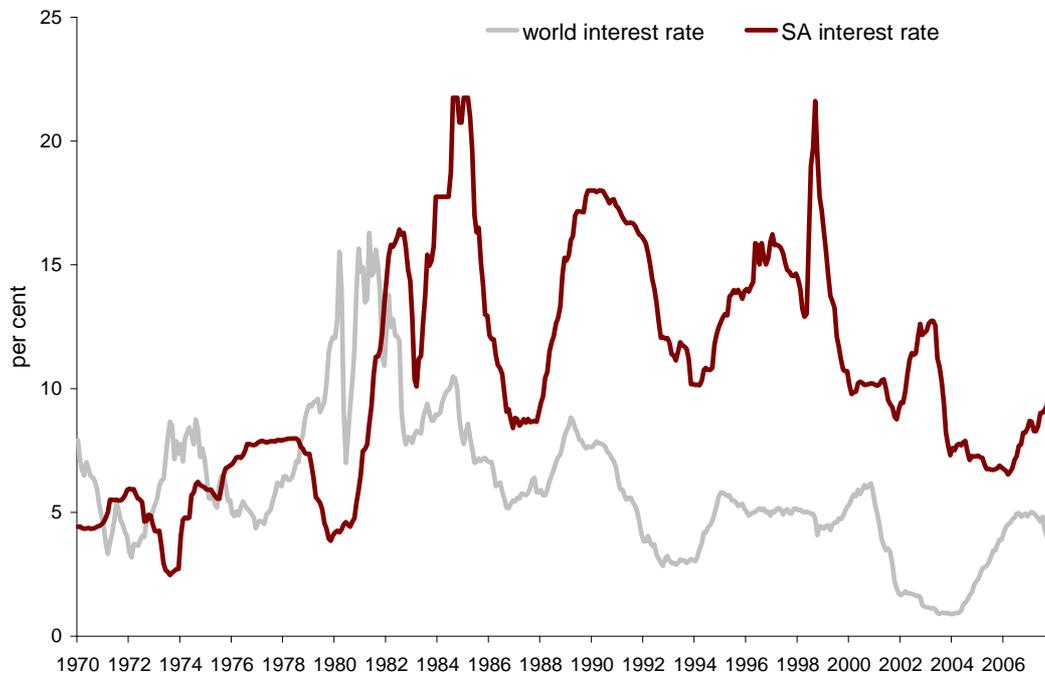
**Figure 4: Real GDP (Y) and Trend GDP (Y\*) using the HP filter, 1970-2007**



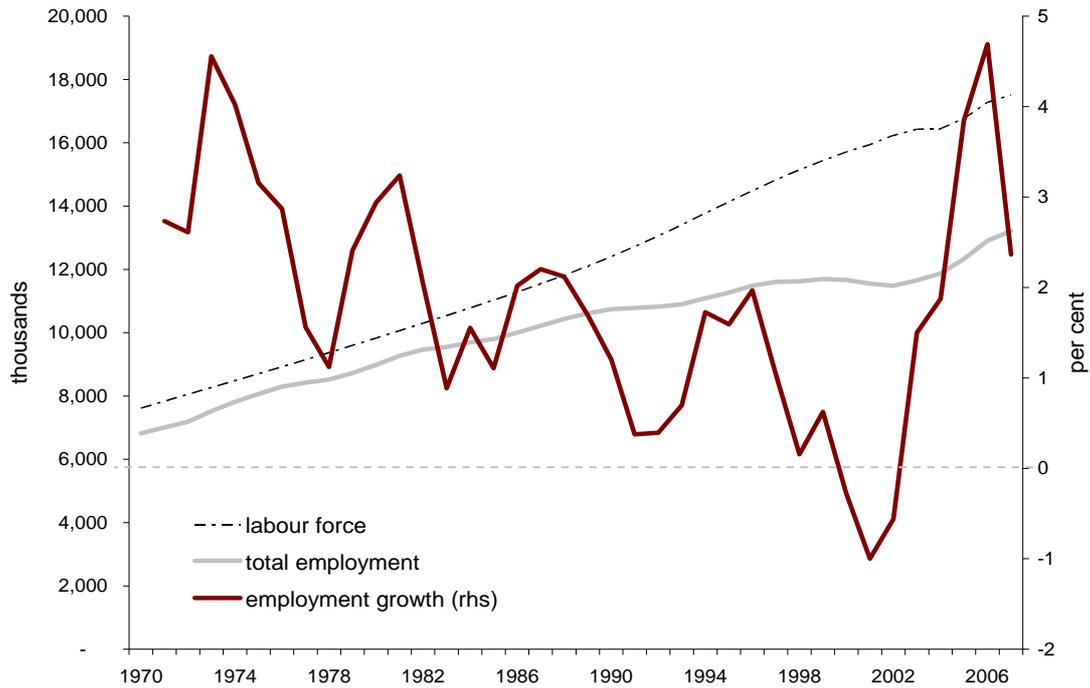
**Figure 5: Total and private sector investment as a share of GDP, 1970-2007**



**Figure 6: SA interest rates and world interest rates (IMF; IFS)**

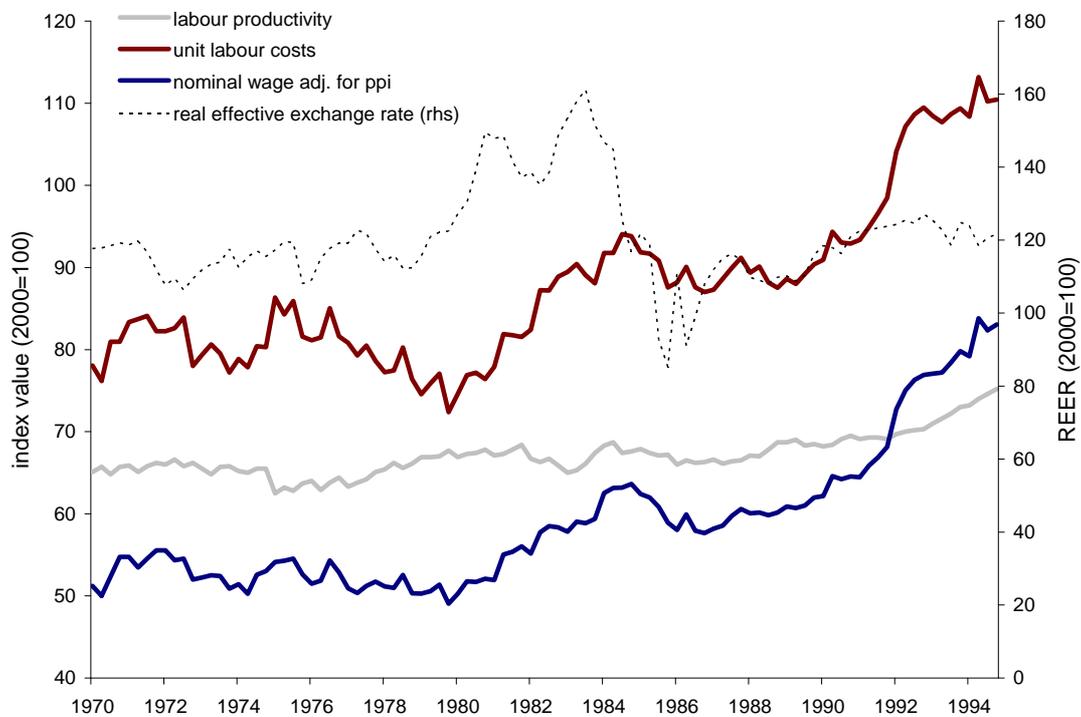


**Figure 7: Total employment and employment growth, 1970-2007**



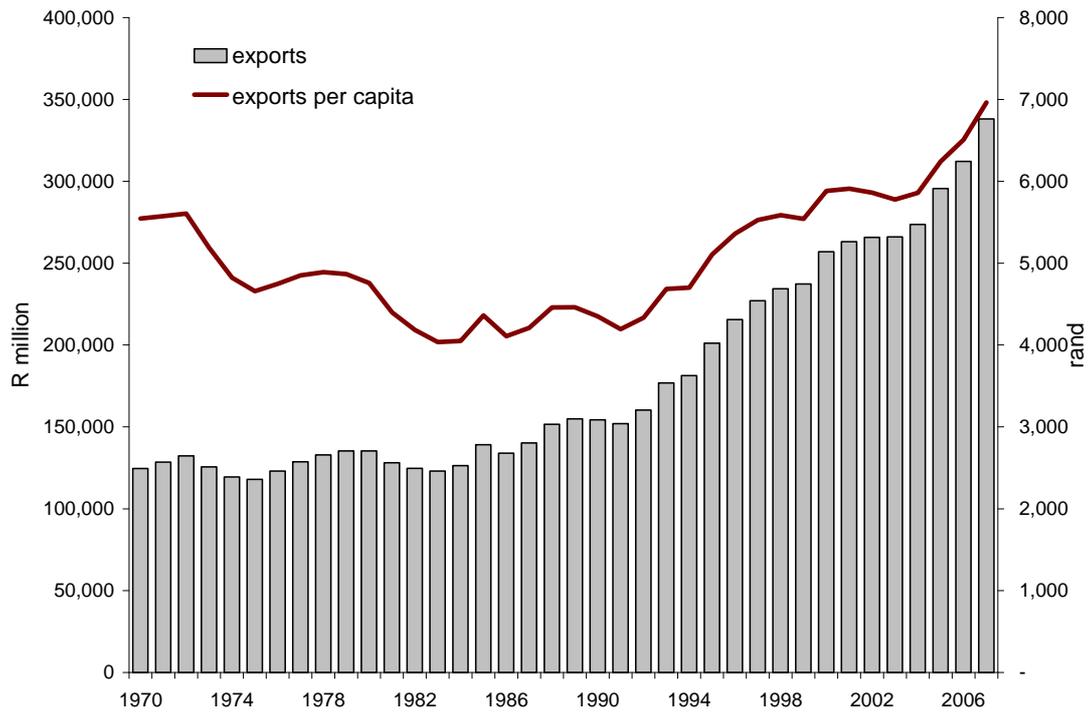
Source: Quantec

**Figure 8: Real producer wages, labour productivity, unit labour costs and the real effective exchange rate – 1970-1994**



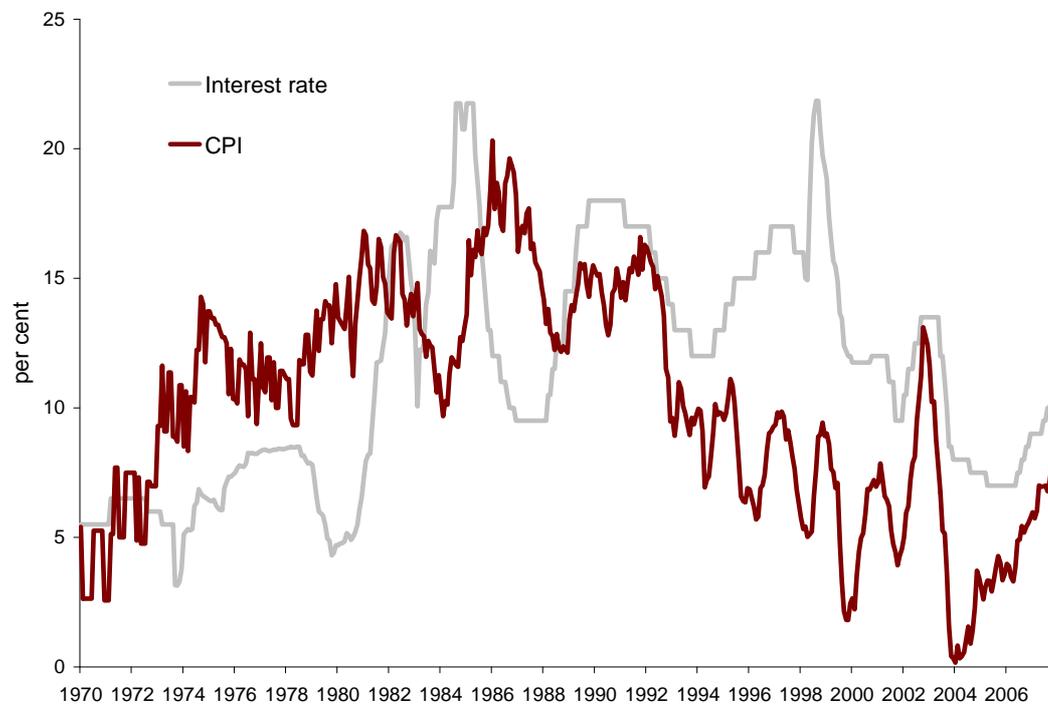
Source: South African Reserve Bank Quarterly Bulletin

**Figure 9: Exports and exports per capita (constant 2000 prices), 1970-2007**



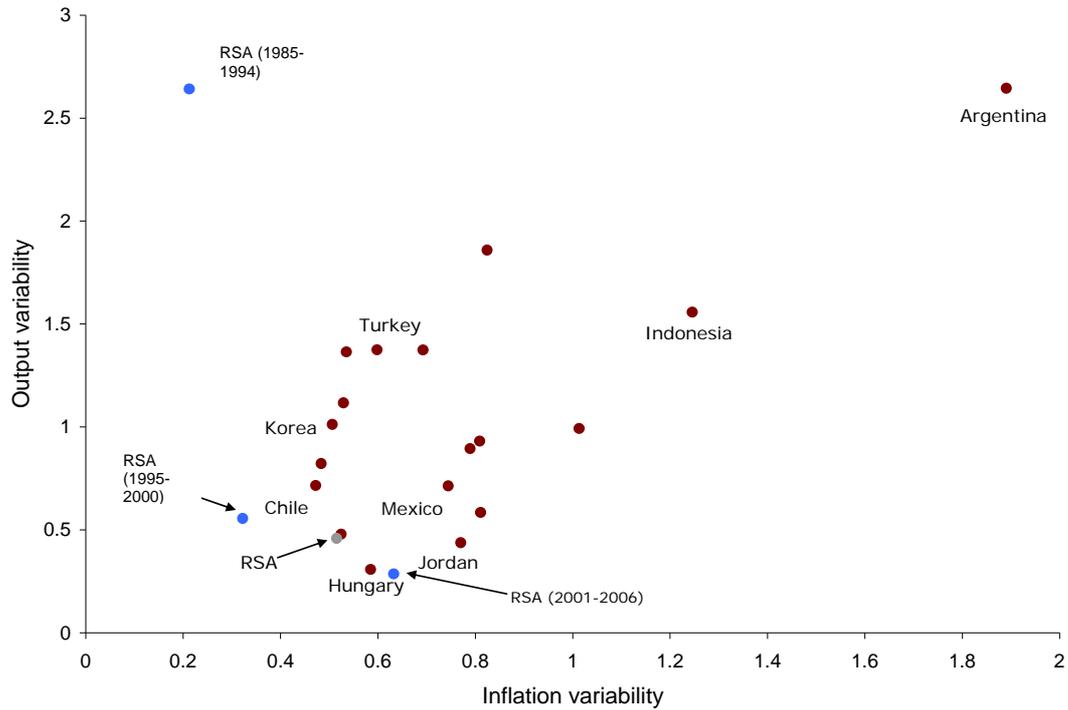
Source: South African Reserve Bank Quarterly Bulletin

**Figure 10: Consumer Price Inflation and Discount Interest Rates, 1970-2007**



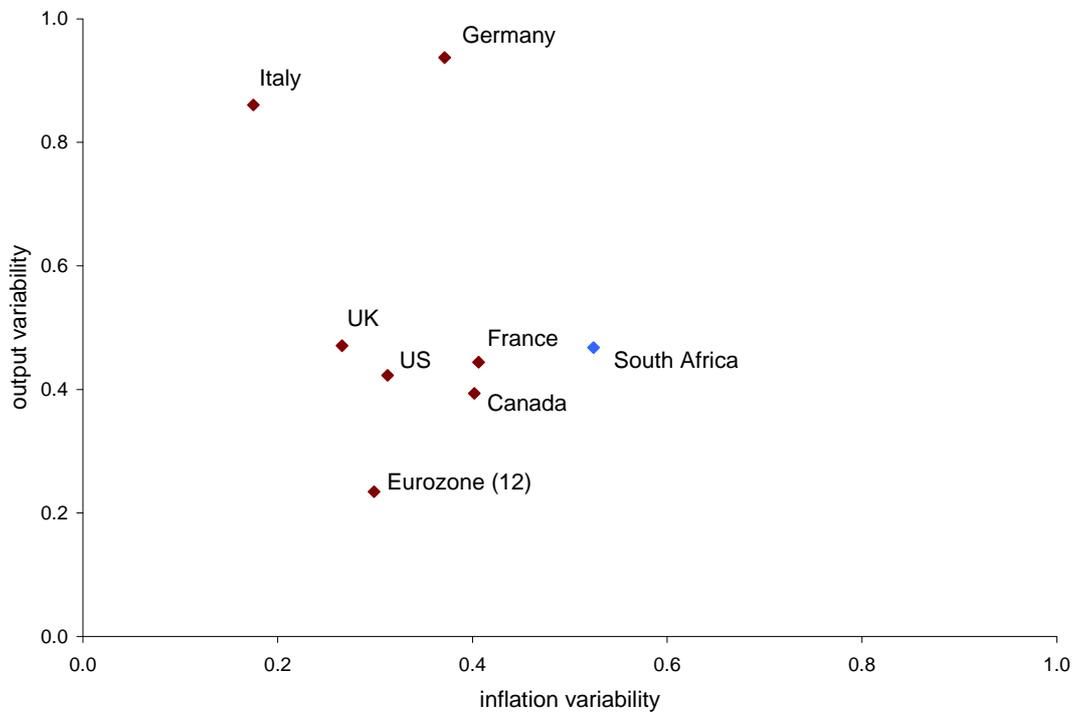
Source: International Financial Statistics (IMF)

**Figure 11: Macroeconomic stability across emerging markets in the last ten years**



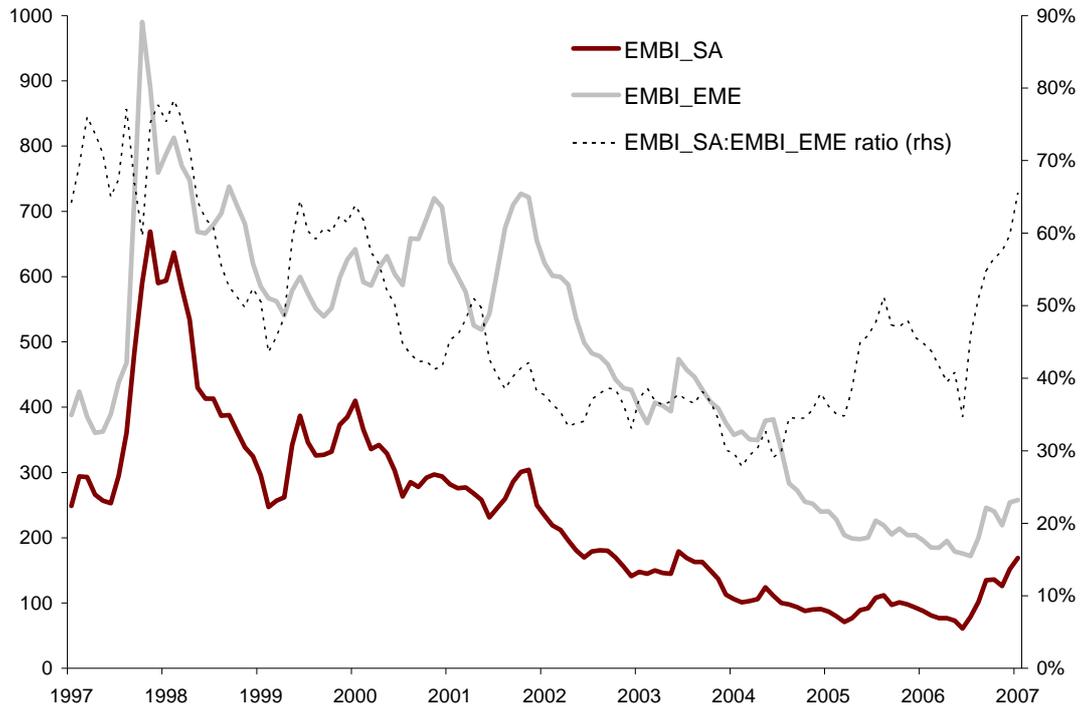
Source: Du Plessis, Smit and Sturzenegger (2007: 3) and authors' calculations

**Figure 12: Macroeconomic stability – South Africa and G7 countries in last ten years**



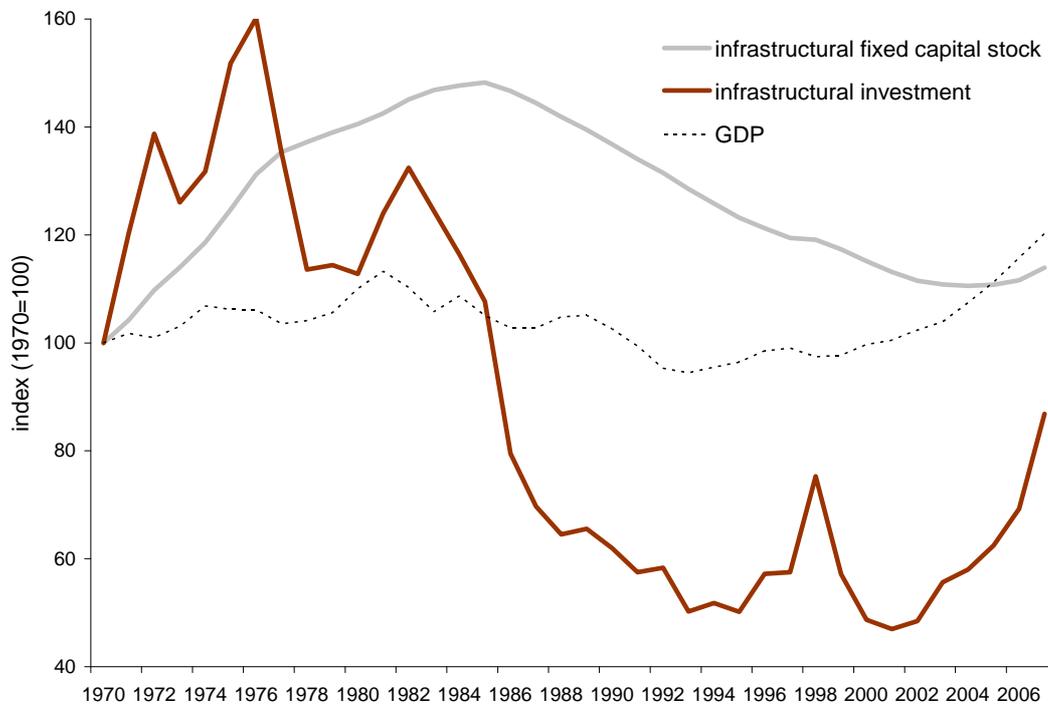
Source: International Financial Statistics (IMF), International Key Macroeconomic Indicators (Global Insight) and authors' calculations

**Figure 13: Weekly country risk spread in South Africa (EMBI SA), 1997-2007**



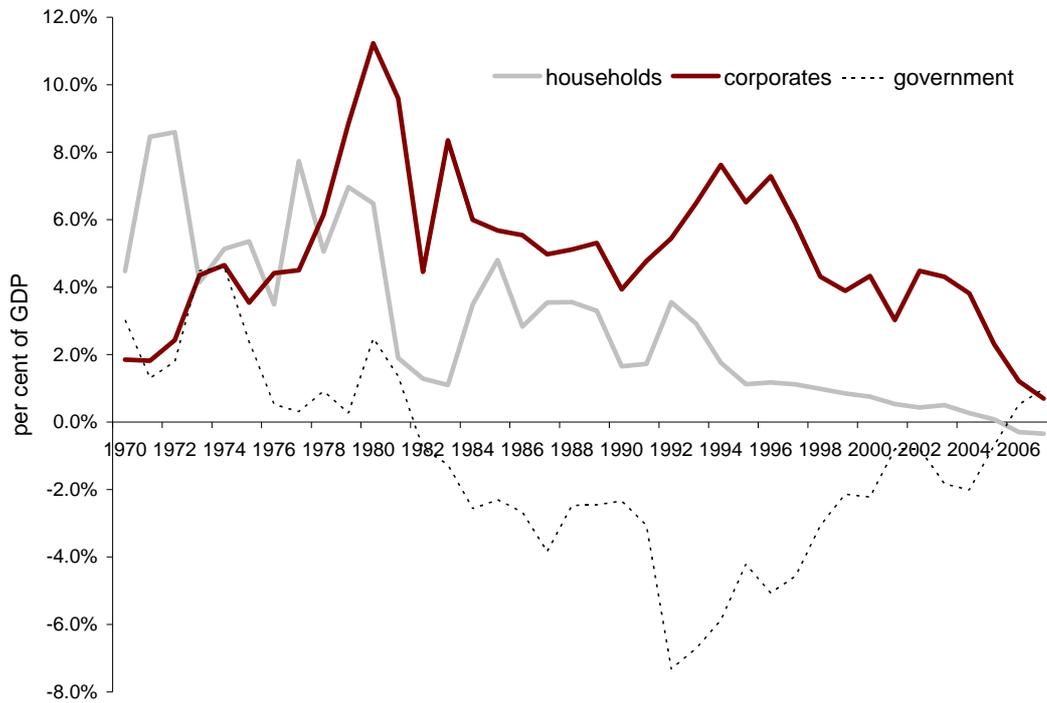
Source: Bloomberg

**Figure 14: Per capita infrastructure investment, infrastructure capital stock and GDP**



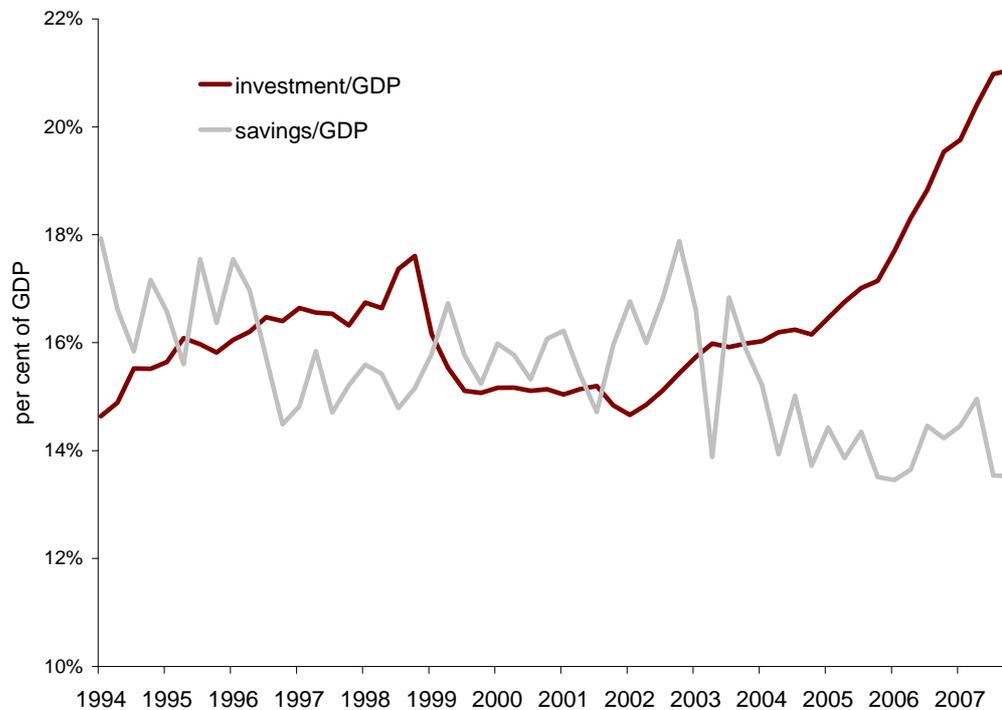
Source: South African Reserve Bank Quarterly Bulletin

**Figure 15: Savings dynamics: household, corporate and government saving as a percentage of GDP, 1970-2007**



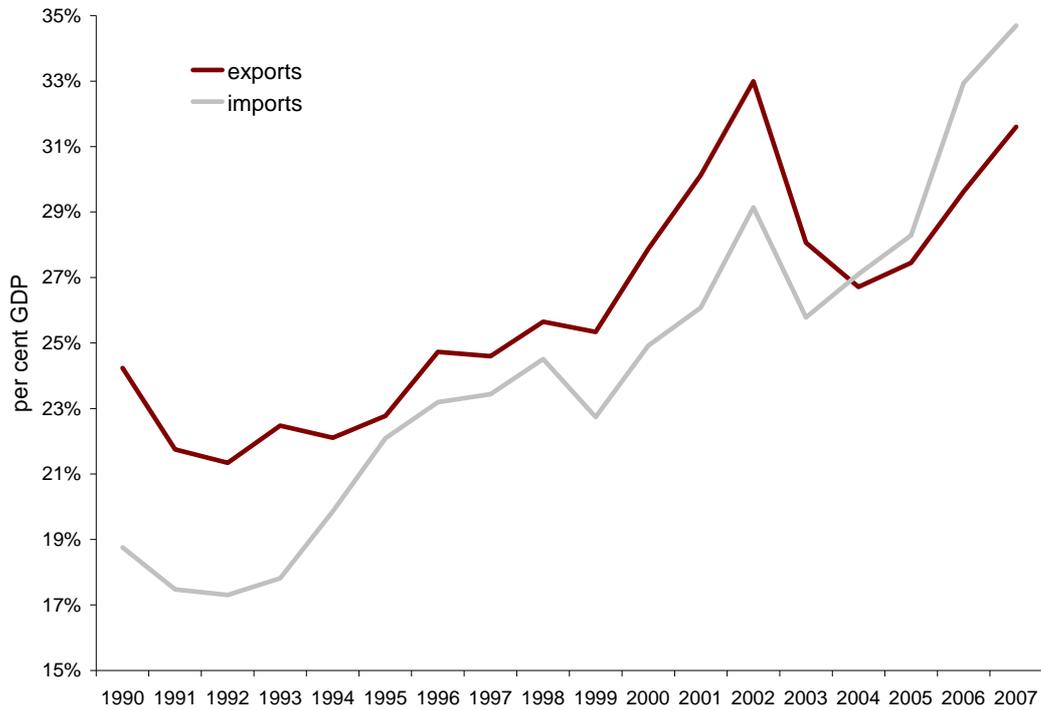
Source: South African Reserve Bank Quarterly Bulletin

**Figure 16: Gross saving and investment as a share of GDP, 1970-2007**



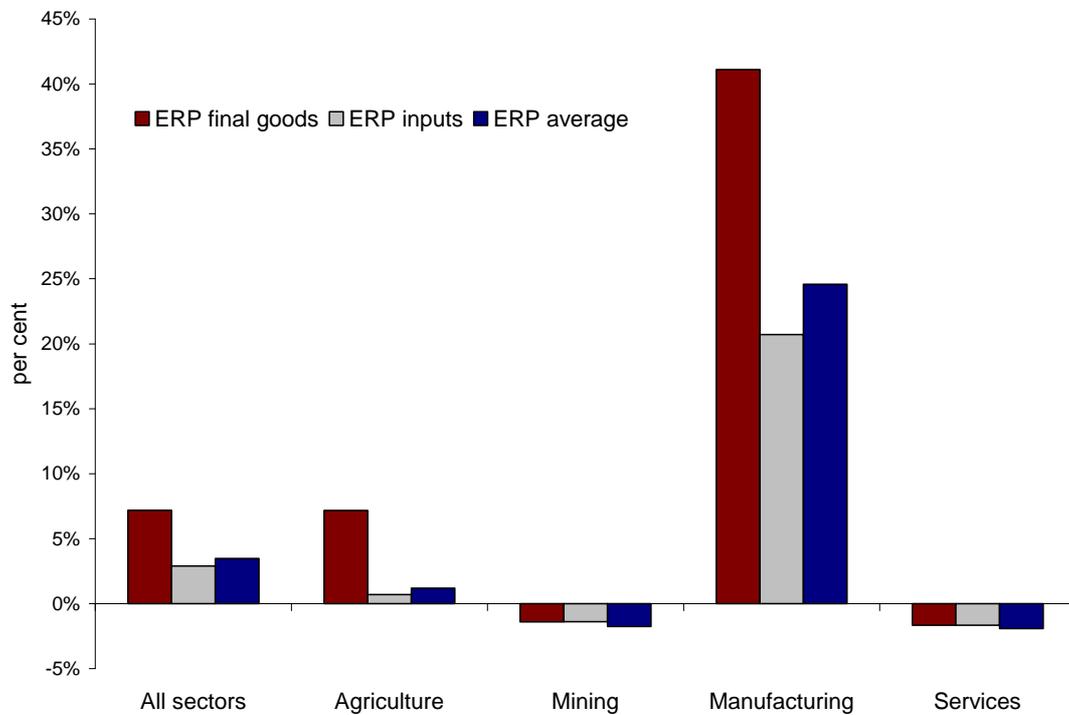
Source: South African Reserve Bank Quarterly Bulletin

**Figure 17: Share of imports and exports in GDP**



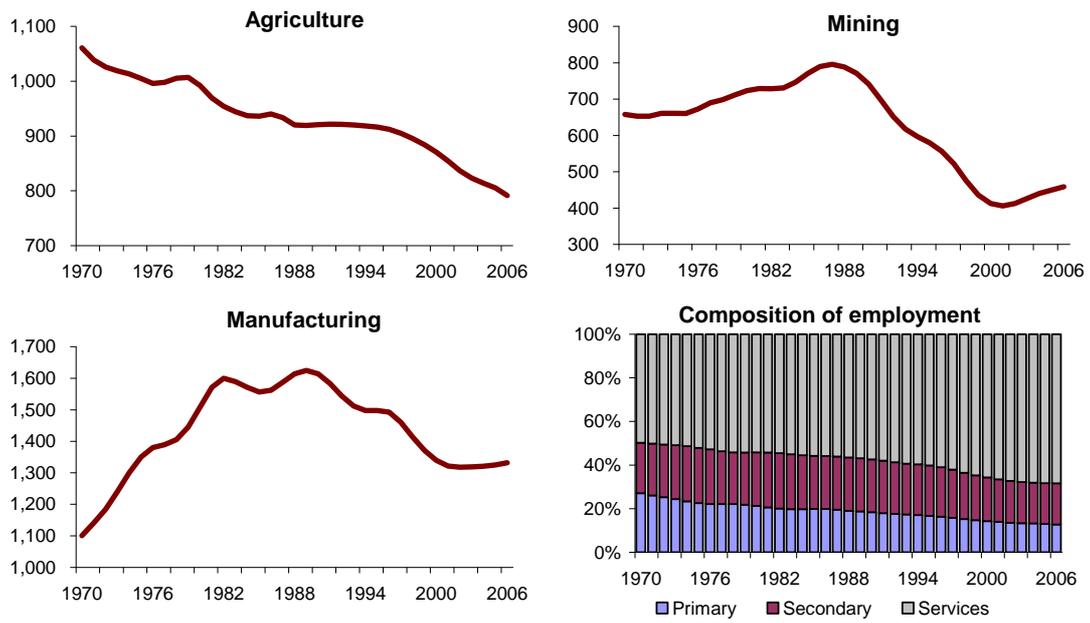
Source: South African Reserve Bank Quarterly Bulletin

**Figure 18: GDP weighted ERPs by end-use and section, 2006**



Source: Edwards & Lawrence (2007)

**Figure 19: The changing structure of formal employment (thousands)**



**Table 1: Labour market trends – participation, employment and unemployment**

Year	Official (ILO) classification*			Broad classification**	
	Participation	Employment	Unemployment	Participation	Unemployment
1995	51.4	43.3	15.6	60.3	28.2
1999	55.4	41.7	24.8	60.6	38.0
2002	56.9	39.6	30.4	68.1	41.9
2003	54.8	39.5	28.0	67.8	41.8
2004	53.8	39.7	26.2	67.3	41.0
2005	56.5	41.4	26.7	67.7	38.8
2006	57.3	42.7	25.5	68.0	37.3
2007	56.5	43.5	23.0	68.0	36.0

Notes: All statistics are for population aged 15 to 65 years old

\* The official classification of unemployment is persons aged 15-65 who did not have a job or business in the seven days prior to the survey interview but had looked for work or had taken steps to start a business in the four weeks prior to the interview and were available to take up work within two weeks of the interview.

\*\* The broad classification of unemployment includes discouraged work-seekers who are persons who want to work and are available to work but who say that they are not actively looking for work.

Source: October Household Survey (1995, 1999) and the September wave of the Labour Force Survey (2000 onwards), authors calculations.

**Table 2: Real GDP growth and trend output in South Africa**

Time period	Real GDP growth	Trend output
1971-1984	3.0	2.9
1985-1994	0.9	1.1
1995-2000	2.9	2.6
2001-2007	4.3	4.2

**Table 3: Decomposition of real GDP growth into the contribution of factor inputs and TFP (per cent)**

	Real GDP growth	of which ...		
		Capital	Labour	TFP
<b>1971-1984</b>	3.01	2.23	1.45	-0.67
<b>1985-1994</b>	0.85	0.44	0.77	-0.36
<b>1995-2000</b>	2.85	0.59	0.47	1.78
<b>2001-2007</b>	4.27	1.11	0.93	2.23

Notes: The contribution of the growth in factor inputs to real GDP growth are calculated by multiplying their growth rate (i.e. capital stock and employment growth) by their respective shares of factor income. As in the Solow model, TFP growth is calculated as the residual.

**Table 4: Standardised coefficients determining the rate of investment in South Africa**

<b>Standardised long run coefficients from PMGE</b>	
Rate of return on capital	0.30
User cost of capital	-0.05
Sectoral uncertainty	-0.09
Systemic uncertainty	-0.51

Source: Fedderke (2004)

**Table 5: Reservation wages relative to predicted wages**

Type of worker	Ratio - reservation wage to predicted wage
Female	1.16
Male	1.13
African	1.27
Non-African	0.81
Low education (< 7 years schooling)	1.30
High education (> 7 years schooling)	1.04
Young (< 30 years old)	1.18
Old (> 30 years old)	1.12
Ever worked before	1.02
Never worked before	1.23
Urban homeland	0.98
Rural homeland	1.37
Urban non-homeland	1.04
Rural non-homeland	1.12

Source: Kingdon & Knight (2001)

**Table 6: The breakdown of economic growth since 2000**

Percentage points of GDP growth

	2000	2001	2002	2003	2004	2005	2006	2007
<b>Consumption</b>	2.6	2.2	2.0	2.2	4.2	4.4	5.4	4.7
<b>Investment</b>	0.6	0.5	0.6	1.4	1.4	1.5	2.4	2.8
<b>Government</b>	0.5	0.6	0.8	1.2	1.2	0.9	1.0	0.9
<b>Inventories</b>	0.0	(0.6)	0.6	0.2	0.7	(0.6)	0.7	(1.0)
<b>Residual Item</b>	(0.6)	(0.5)	0.7	0.1	0.4	(0.4)	0.0	(1.0)
<b>Gross Domestic Expenditure</b>	3.2	2.1	4.7	5.1	7.9	5.9	9.5	6.4
<b>Net exports</b>	0.9	0.6	(1.0)	(2.0)	(3.0)	(0.9)	(4.1)	(1.3)
<b>GDP</b>	4.2	2.7	3.7	3.1	4.9	5.0	5.4	5.1

**Table 7: Annual average growth rates in exports by technology category, 1988 to 2002**

	World	Developed	Developing	South Africa	Resources group
Total exports	6.02	4.96	9.58	2.02	6.14
Primary products	3.59	2.79	4.95	-1.14	4.18
Total manufactures	6.32	5.13	10.63	6.91	7.72
Resource based	4.89	4.09	7.89	4.26	5.63
Pure manufactures	6.59	5.33	11.13	8.57	9.52
Low tech	5.63	4.37	7.94	5.57	8.57
Medium tech	5.67	4.77	11.07	9.67	8.51
High tech	9.1	7.14	15.83	11.53	14.95

**Table 8: Trends in average ad valorem tariff rates for selected countries and regions**

Percentage	1993-95	2002-04	% change
Australia	8.8	4.2	-4.2
Brazil	13.3	13.5	0.2
Chile	11.0	6.5	-4.1
China	37.3	10.9	-19.2
European Union	6.8	4.5	-2.1
India	47.8	29.1	-12.6
Indonesia	16.6	6.9	-8.3
Japan	4.4	3.6	-0.7
Korea, Rep.	9.1	12.7	3.3
New Zealand	7.5	3.2	-4.1
Nigeria	26.9	30.0	2.4
SA (excl. <i>ad valorem</i> equivalents)	16.0	10.3	-4.9
SA (incl. <i>ad valorem</i> equivalents)	18.6	10.3	-7.0
Turkey	9.4	10.0	0.5
United States	5.4	3.8	-1.5
<b>Simple average by region</b>			
High-income, non-OECD	7.8	5.4	-2.3
High-income, OECD	6.4	3.5	-2.7
Lower-middle-income	18.7	12.4	-5.3
Low-income	25.4	14.7	-8.5
Upper-middle-income	12.3	11.7	-0.5
Observations	69	69	
<b>Rank (from high to low tariffs)</b>			
SA (excl. <i>ad valorem</i> equivalents)	31	40	9
SA (incl. <i>ad valorem</i> equivalents)	21	40	19

Notes: Change in tariff is calculated as  $(t_1 - t_0) / (1 + t_0)$ . The averages include agriculture, mining and manufacturing sectors. The data for South Africa is based on the MFN tariff schedule, excluding surcharges.

Source: Edwards (2006)