South Africa
Economic Performance and Policies
Overview
PREVIOUS WORLD BANK PAPERS ON SOUTH AFRICA

Previously published in the World Bank series of informal discussion papers on South Africa:


Southern Africa Department, May 1993. "An Economic Perspective of South Africa".


In addition, a number of technical and seminar papers prepared by World Bank staff and South African counterparts in key sectors have been discussed in the country.
FOREWORD

This overview of South Africa’s economic performance and policy implications is published by the World Bank in its informal series of Discussion Papers on the South African economy. It is drawn on extensive research carried out with the support of a broadly-representative group of South Africans, and involving South African institutions and researchers. Working drafts, and an abstract of findings, have been used at workshops with counterpart groups in South Africa.

This study examines the challenge of promoting equitable and fiscally sustainable growth of the South African economy. A number of alternative paths to growth have been evaluated using an econometric model developed by World Bank staff. The broad conclusion is that there needs to be greater complementarity than at present between stimulating the economy through public investment and revival in private investment of South Africa is to achieve a sustainable growth. The prospects of success will be improved considerably if skills are upgraded and a reorientation towards exports is achieved, accompanied by a restructuring of public expenditure -- within fiscally sustainable limits -- for targeting the poor. The scenarios examined assume that political stability is achieved and access to international capital markets improves.

This overview presents the salient findings of the main report, which is published separately with extensive statistical annexes.

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1. Introduction

Much of South Africa's economic future will depend on what happens in the next few years. Although the country is only emerging now from a deep five-year recession, it has much in its favor. It is rich in natural resources (minerals); its economy (in monetary and exchange-rate policies) is well-managed; and its annual income per capita (USD 2,600) puts it in the upper middle-income bracket for developing countries. The recent 1988-1993 recession, the longest in South Africa's history, is due partly to a nose-dive in investment by parastatals in 1985 and to lack of consumer and business confidence. Yet South Africa's economic problems run much deeper. For 30 years, GDP growth has been declining; unemployment has increased dramatically; and inequality between blacks and whites (employment, income, education and access to other public services) is almost as wide as ever.

This paper addresses one question: how can South Africa move on to a much faster growth path in which the poorer majority of its citizens gain the most? Growth without such redistribution is almost certainly unsustainable, as it would falter as social tensions rose. Two prime requirements of redistributive growth are fast employment creation and narrowing the gap in provision of public services across racial groups. The analysis outlined here suggests that such a growth path can be achieved if the right policies are in place and other conditions are met. There are four main conclusions:

- Sustained growth requires an ongoing improvement in the supply-side of the economy. This can be encouraged by improving export incentives and the skills of the labor force. A revival of demand within the economy can lead to only a limited amount of growth. However, kick-starting the economy through public expenditures could play an important role: well-targeted public investment will help redistribution while assisting economic recovery.

- Private investment must increase from its currently depressed level if sustainable growth is to be attained. Higher private investment would stimulate demand, but its more important role is to increase supply. To raise private investment, policies need to be transparent, credible and stable. Excessive fiscal deficits are likely to send the wrong signals.

- Redistribution can be achieved through a number of avenues. Public expenditure can be diverted towards investment in activities benefiting the disadvantaged, and a significant proportion of the backlog in social expenditures can be cleared in a few years without breaking important macroeconomic constraints. Unskilled and semi-skilled workers can be upgraded to higher levels, but this must be supported by improved basic education for blacks. A modest
Figure 1:

Program of rural resettlement based on a willing-buyer-willing-seller exchange should create employment and be affordable. Encouraging the development of small enterprises should also be redistributive and consistent with higher growth.

Redistribution through immediate pay increases to lower-paid workers and excessive public expenditure is unsustainable. The results of such policies, are likely to include increased inflation and pressure on the balance of payments.

2. The Economy

Slower Growth

South Africa's real GDP growth has been declining since 1965. In the first half of the 1960s, it was almost 6 percent per year; by the late 1980s, it had fallen to around 1 percent. With population growing at about 2.6 percent each year, per-capita GDP growth has been negative since 1982. It plunged after the Soweto uprising of 1976 and after financial sanctions were imposed in 1985. Despite a recovery in 1986-88, growth has been increasingly influenced by continuing political uncertainty and growing social unrest. Growth in the economy has become increasingly unstable.
For many years, the chronic decline in growth was accompanied by a high (and increasing) ratio of investment to GDP. South Africa was investing an increasing share of its income and receiving less in economic growth. Total factor productivity (TFP) growth declined markedly throughout the 1970s, becoming negative in the 1980s. Indeed, in three important sectors of the economy (agriculture, mining and manufacturing), growth fell and productivity faltered.

**Agriculture.** Capital intensity and a highly regulated and protected environment for white agriculture resulted in huge investments but low growth in agricultural efficiency. While yields per hectare exceed Africa's average by about 50 percent, they compare unfavorably with the rest of the world. Over the past 20 years, physical yields of major domestic crops have increased only moderately, and maize yields (44 percent of crop area) have been virtually stagnant since 1970. The sector is extraordinarily capital-intensive -- the capital/output ratio in agriculture has been as high as three times that of manufacturing -- and the total factor productivity of South Africa's main crops increased only modestly between 1960 and 1989.

**Mining.** In the 1960s, mining productivity (as measured by the output/capital ratio) increased steadily, reflecting stable technology and improved efficiency. Despite stagnation in output since the early 1970s, capital stock increased rapidly. Between 1970 and 1980, it grew at 6.6 percent a year. Output, however, declined at 1 percent a year. Similar trends continued during the 1980s.

**Manufacturing.** From 1950 to about 1970, the growth of capital stock in manufacturing was about equal to output growth. Thus, capital productivity was relatively stable. Since then, it has fallen (despite a decline in output growth) as the capital stock continued to grow, because of low real interest rates, higher wages, and increased investment in heavy intermediate goods.

In the past 20 years, South Africa's manufacturing sector has been characterized by low (and occasionally negative) total factor productivity growth, and average annual capital stock growth of 5 percent combined with lower employment and output growth. In 1960-72, there was a rapid increase in labor productivity without any change in the productivity of capital. In 1972-90, however, capital productivity declined significantly at almost -3 percent a year, and labor productivity growth slowed to about 1 percent a year. Between 1972 and 1983, there was a huge fall in capital productivity as a result of large "strategic" investments in chemicals. After 1983, there was a major recession with low output growth, absolute declines in capital stock and anemic growth in labor productivity. Total factor productivity growth was low -- 0.5 percent per year -- over the past twenty years. Such low TFP growth is well below the levels achieved in high-performing economies.

**Rising Unemployment**

Employment growth has deteriorated consistently since 1970, with a shift away from agriculture. It peaked for all racial groups in the 1960s, and has declined ever since. Labor supply growth, however, changed little over the past 30 years although lower net immigration reduced growth in white labor supply. Growth in the African labor force increased from 2.5 percent in the early 1960s.
to 2.8 percent a year in the 1980s. For Asians and Coloreds, it declined from 2.8 percent to 2.6 percent, while for whites it fell from 2.8 percent to 1.6 percent. Consequently, there has been a growing imbalance between black labor supply and employment in the formal sector. That gap has been filled only partly by growth in the informal sector due to increased ineffectiveness and later removal of apartheid-linked regulations. Unemployment has thus grown rapidly among blacks. In contrast, there was full employment among whites up to 1985, but since then white unemployment has grown significantly.

Less than half of the black labor force hold jobs in the formal sector. Although subsistence agriculture in the homelands and the informal sector provide an invaluable source of employment for the rest, roughly one quarter of blacks are without work. Unemployment is disproportionately concentrated among females and young people, and only a few new entrants to the labor market can expect to find wage jobs. Black unemployment on such a scale is not only a great waste of resources; it fuels social unrest.

**Extreme Inequality**

Apartheid intensified inequality in South Africa beyond that expected in a country at its level of development. Although it is an upper-middle-income country, most of South Africa's national income goes to the white minority. Whites have personal incomes per capita of about 9.5 times those of Africans, 4.5 times those of Coloreds and 3.0 times those of Asians. While social indicators for whites (such as infant mortality and life expectancy at birth) are in the range for developed countries, those for the African majority are broadly comparable with poorer surrounding countries. Such extremes tend to confirm that there are really two South Africas -- a First-World society for whites and a Third-World society for blacks.

But there is evidence that income inequality across the races has narrowed. Since 1970, the share of personal income accruing to whites has declined substantially, while the share for Africans increased from 22.3 percent to 31.5 percent in 1987. This has been accompanied by a clear narrowing of the proportionate gap between whites and other racial groups, thanks partly to above-average wage increases for Africans from the early 1970s onwards. Despite slower growth in African employment, their share of wage income rose from an estimated 31.6 percent in 1975 to 38 percent in 1987. But given slower growth in African real wages since 1989, this progress has faltered.

In most areas of government expenditure, apartheid worked in favor of whites and further increased the differences in welfare across racial groups. This has resulted in wide disparities in access to public services including water, sanitation, electricity, education and health. White preference in the civil service and major parastatals was used to support white employment.

In its white cities, South Africa ranks among the top four or five countries in the world in per-capita spending on infrastructure. Yet urban areas have worse facilities on average than other developing countries with similar per-capita income. This is evident in such indicators as the extent of squatting, lack of electricity, poor access to water supply and inadequate sanitation. In the PWV urban area -- the strongest economic region of South Africa -- almost 70 percent of African households have no direct access to water, and about 50 percent live in shanty towns.
In education, the picture is the same. Education is compulsory for white children. Not so for African children, 25 percent of whom are not schooled. For those that are, the quality of basic education is deplorable. This is hardly surprising. Public spending per pupil in 1990 was more than four times higher for whites than for Africans. Teachers are poorly trained, schools are badly managed, and basic instructional facilities and materials are in short supply. It is common to find 80-100 black children in a schoolroom designed for 40. The result is poor academic performance. In 1991 only 11 percent of Africans who sat for Standard 10 examinations qualified for university, compared to more than 70 percent for whites and Asians.

The Present Crisis

Since 1989 the South African economy has been in a deepening recession which has exacerbated unemployment. GDP growth was -0.6 percent in 1990 and 1991. In 1992 it dropped further to -2.1 percent, due partly to an unusually severe drought. Even so, many indicators strongly suggest that the economy is being driven by falling aggregate demand.

Consider these facts. First, private investment dropped absolutely in real terms between 1989 and end-1992.
As a percentage of GDP, it fell from 13.3 percent in 1988 to 11.4 percent in 1992. Second, employment in the non-agricultural sectors fell by about 4.9 percent between mid-1989 and December 1992. Third, the Central Statistical Services’ measure of capacity utilization in manufacturing shows a fall of over seven percentage points during 1989-92. Fourth, all three composite business cycle indicators, as calculated by the South Africa Reserve Bank, show comparable declines. And various measures indicate that business confidence has flagged severely in recent years.

A weak recovery is now underway. In 1993, GDP may have grown by as much as 1 percent. Business confidence seems to be rising given higher exports and the lifting of most remaining sanctions. But, private investment continued to decline over much of the year, although a renewal in foreign investment is hoped for.

The 1989-1993 recession is rooted in the demand shock that followed a substantial and sustained fall in parastatal investments after 1985. It intensified as private-sector confidence declined with growing political uncertainty and social turmoil. In the present circumstances, it is difficult for the authorities to stimulate the economy and resume positive growth. They face constraints concerning the balance-of-payments, the fiscal deficit, and the need to keep inflation under control.

Balance-of-payments problems have greatly constrained the economy in recent years as limited access to international finance has meant that the external current account has had to remain in surplus. In mid-1988 the current account started to slip into deficit following moderate growth in the economy. To protect foreign exchange reserves and dampen inflation following depreciation of the rand, interest rates were raised and new import duties were imposed. This curbed growth and pushed the economy back into recession. Balance-of-payments considerations were less of a problem before 1985; it was possible to cover current account deficits by overseas borrowing. However, this became more difficult after the Debt Moratorium was imposed and financial sanctions were intensified.

Gross foreign exchange reserves stood at only about 1.1 months of imports at end-September 1993, and this position would rapidly deteriorate under renewed balance-of-payments pressure. In such circumstances South Africa would be forced to generate current-account surpluses, making it hard to see stable growth emerging.

The fiscal deficit (the excess of government spending over revenues) was not much of a problem until recently. It becomes a problem when it crowds-out private investment, or leads to balance-of-payments difficulties and inflation. Elsewhere (in sub-Saharan Africa and Latin America, for instance), governments ran up unsustainable deficits, with disastrous economic results, when they attempted to create growth and redistribution through massive public spending and subsidies to parastatals. In the past, the South African authorities managed to avoid such excessive fiscal deficits and public debt. That has now changed. The fiscal deficit grew rapidly over 1991 and 1992. The budget deficit for FY 1992/93 reached a record 8.6 percent of GDP, due mainly to lower-than-expected revenues. There is no sign of this large deficit leading to higher aggregate demand, as the effect of the increased deficit is being offset by a decline in private investment.
From 1981-91, South Africa's inflation hovered at 15 percent per year, while in the OECD countries it averaged about 3 percent. Until recently, it could be argued that expectations on inflation had settled down to something close to the actual level, so that uncertainties about prices and wages had largely been eliminated. Any significant increase in inflation, however, would foster greater social discontent.

Only in the past year or so has inflation fallen. In 1992, it was 13.9 percent, despite a rapid increase in food prices after the drought. However, inflation in food prices is declining, and inflation is likely to be around the 10 percent mark in 1993. This is due mainly to the deepening recession and the mild appreciation of the real effective exchange rate in recent years.

### The Brighter Side

There are some rays of hope. Although the country is in a deep recession, rapid growth is possible in the early years of a new administration. As of end-1992, GDP could be raised by 9 percent with investments only just sufficient to maintain existing capital stock. This figure was unusually high, however, given the severe drought in that year; it may have decreased in 1993 to around 8 percent.

Thanks to substantial public investment in the past, there is underutilization in much of the country's infrastructure and in power-generation. South Africa has a considerable advantage over other countries at a similar stage of development. Little new investment will be needed over the coming years in substantial parts of the transport and communication systems or in electricity generation.

As a result of financial sanctions, South Africa has an unusually low foreign debt-to-GDP ratio (see Figure 4). So if foreign finance can be secured, higher investment could be partly financed by external sources. South Africa is not in the foreign debt trap faced by some countries in Latin America and Eastern Europe. Savings as a percentage of private disposable income is unusually high. If dis-saving by the public sector can be controlled, and productivity increased, South Africa could maintain a high level of investment relative to GDP within a sustainable balance-of-payments position.

### 3. Why the Decline?

Why did high investment not generate more jobs and more satisfactory growth? There are many reasons.

First, growth of the economy's capital stock has had an important influence. Both investment and growth in the capital stock declined during the 1980s. This was accompanied by a substantial increase in the capital intensity of the economy which further hampered employment growth. Second, there has been a deterioration in the allocation of capital stock. Investment was increasingly channeled towards activities with lower-than-average capital productivity such as in the public sector. Third, there has been inadequate acquisition of skills within the workforce: this has lowered the returns to investment and slowed productivity growth. Fourth, there has been a probable decline in work input among the unskilled. Finally, rising wages and industrial unrest since the early 1980s further dampened employment growth.

### Declining Investment

While the investment level in South
South Africa: Economic Performance and Policies

Africa has been a major influence on economic growth, its decline after 1975 cannot wholly explain falling GDP growth. Following heavy investment in the 1960s and mid-1970s, the capital stock grew rapidly. While the capital stock has continued to grow, its rate of growth has steadily declined. Through 1960-67, there was little difference in the rates of GDP and capital-stock growth and the output-to-capital ratio was constant. Over 1967-88, the output-to-capital ratio declined by as much as 3 percent a year, and it has since remained roughly constant. Movements in capital-stock growth alone cannot explain the progressive decline in GDP growth.

It is important to first distinguish between public and private sector investment. Public investment had three main aims: to extend and develop infrastructure (mainly in white areas); to expand public utilities; and to promote self-sufficiency in parts of the economy likely to be affected by sanctions. It grew rapidly from 1946 until 1979-80.

Figure 3:

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[Graph showing South African government fiscal account and current account as a % of GDP from 1965 to 1990]
Since then, the trend has been dramatically reversed with first a modest decline of 13 percent in 1981-85 and then a much more precipitous fall of 52 percent from 1986-92. Investment by government was the first to start falling in 1976-1980, followed by a decline in parastatal investment after 1979, that became more pronounced after 1985. This was in part due to the privatization of two major parastatals in the late 1980s.

Movements in private investment closely parallel those of the parastatals, but show a clearer-cut response to booms and recessions. World Bank research suggests that the private sector responds positively to changes in public-sector-generated demand. This underlines the importance of the public sector and its actions on other parts of the economy. An expansionary policy by government or parastatals has tended to stimulate the economy and hence private investment.

Investment has been driven largely by internal forces. Historically, exports were generated by mining and manufacturing; other sectors were pulled along by import-substitution policies. The potential for further import substitution has been exhausted. The supply side of the economy has increasingly been driven by changes in domestic aggregate demand through population growth, movements in the terms of trade, other internal and external disturbances, and actions of the government. The private sector has been relatively passive. The secular increase in government spending as a proportion of GDP kept much of the economy at near-full capacity for many
years but contributed to a gradual fall in capital productivity and decline in the growth of GDP and employment.

The past three years saw a marked change. The fiscal deficit has risen rapidly, but private investment has slumped. What is the most likely explanation? Private-sector confidence has been shaken badly by growing political uncertainty and rising violence. Growth in public expenditure over recent years has been entirely in government consumption, while public investment is at a low level relative to GDP.

These negative developments have not been helped by a trade regime that is extremely product-specific and biased towards production for the domestic market. This, coupled with sanctions, has created an environment in which many South African producers have not expanded into a much larger world market. The result is that the economy has not fully benefited from the efficiency gains associated with international trade. Exports have been used to utilize spare capacity rather than as an engine of growth.

**Redirect of Investment**

Although the expansion of public investment stimulated the private sector, it also increased the share of capital stock in sectors with much lower-than-average output-capital ratios and higher-than-average capital-labor ratios. The result was slower growth in output and employment. Furthermore, overinvestment in the parastatal sector has led to substantial underused capacity.

**Figure 5:**

![Graph showing output produced by unit of capital over time for South Africa](image-url)
The productivity of capital (that is, the output-to-capital ratio) is higher in the private sector than in parastatals. The difference in absolute terms between the output-to-capital ratio in the private sector (about 0.6) and that of parastatals (less than 0.2) is particularly striking. Capital productivity shows a general declining trend (-0.9 percent a year for the private sector and -0.6 percent for the parastatals) in 1961-92.

In 1961 the private sector accounted for 53.4 percent of total capital stock, but by 1980, the figure was 42.3 percent. In the 1960s government experienced the fastest growth in its capital stock, but in the 1970s and first half of the 1980s, this distinction belonged to parastatals. The biggest parastatal investments were in transport (railways and ports) and in telecommunications and electricity. The result is substantial excess capacity in major utilities such as the railways and in some sectors in manufacturing, for example iron, steel and synthetic fuels.

The redirection of capital stock away from the private sector towards parastatals has had a big impact on GDP growth. When more investment resources are allocated to sectors with lower productivity, there is a depression in the level and rate of growth in GDP. This effect was particularly strong in the second half of the 1970s and in the early 1980s.

It is also likely that policies have contributed to declining capital productivity within the private sector (see Figure 5.). Such policies have included high depreciation allowances for tax purposes and special programs such as those enjoyed by the motor vehicle industry. In addition, the most capital-intensive sector, mining, receives special tax advantages, while large-scale agriculture benefited for many years from subsidized and officially-supported prices. Within manufacturing, the cost of capital is lower in the more capital-intensive industries, and this may have encouraged a re-channeling of investment towards industries with low capital productivity.

**Insufficient Improvement in Skills**

There is huge inequality in skills across different parts of the labor force in South Africa. The occupational structure of black and white workers is highly unequal. South Africa's total labor force is relatively uneducated and unskilled compared to other countries at a comparable stage of development. Given the overall capital-intensity of South Africa, there is a clear imbalance between the 'quality' of labor and the size of the capital stock. Although some upgrading of labor force skills has taken place recently, this imbalance has persisted. One cause of reduced economic growth is that labor input has failed to keep pace with capital growth.

Movements in the racial composition of employment give a first approximation of changes in the skills mix over time. By this measure, the quality of workers in wage employment changed little in the 1970s and mid-1980s, as white and black rates of employment growth were roughly similar. As white employment grew slightly faster than that of blacks in the latter half of the 1980s, labor quality improved by this measure. This understates true labor quality improvements, however, as the educational attainment of blacks increased. The number of blacks in the labor force with little or no education fell markedly from 1970-85, although at diploma and degree level little changed. Occupational
surveys of employees also suggest that skill levels have increased in the past 20 years. In administrative, professional and clerical occupations (for selected years between 1960-85), the skill levels of Asians and Coloreds grew more quickly than those of other groups. The growth in white skills was slowest. While this indicator is crude, it is consistent with the view of the National Manpower Commission which estimates that blacks as a percentage of high-level manpower increased from 25.5 percent in 1965 to 35.6 percent in 1989.

Even after adjusting for improvement in labor quality through increased education, growth in labor input has failed to keep pace with growth of capital stock. It is estimated that capital grew 2.3 percent faster per annum than labor input over 1970-85. This result is entirely consistent with the decline in capital-productivity.

Returns (in terms of additional growth) to raising the skills of the labor force, and in particular those of blacks, are likely to be high. In the past, economic upturns have always been quickly accompanied by shortages of skilled labor. There can be little doubt that renewed economic growth in South Africa will have the same consequences, and that skill accumulation should become a policy priority.

Deterioration in the Work Input of Unskilled Labor

There is a strongly-held view in South Africa that the work effort of the unskilled workforce has deteriorated. There are two plausible reasons. First, the environment in which many black workers live has become less attractive. This may have reduced their effectiveness in the workplace. Second, there has been a dramatic increase in workdays lost through strikes and other types of industrial action.

One effect of apartheid-related controls on the urban influx was to break up many families, with breadwinners in the towns and cities and other family members back in the homelands. This has changed considerably; African urbanization has mushroomed in the townships. However, Africans, in particular, but also Asians and Coloreds, still live long distances from urban centers and places of employment. Black workers often have a long journey to and from work, and many Africans still commute daily from the homelands. It has been estimated that their average commuting distance is as much as three times that of unskilled workers in more developed countries. Distorted patterns of residential location could be expected to raise the supply price of black labor, and to lower the effectiveness of such workers through increased fatigue. The locational structure is hardly conducive to development of the informal sector. Women are especially adversely affected, given their greater need to work near the home.

The rights of African workers to organize in trade unions were progressively restricted between 1953 and 1959. That changed substantially in 1979, when registered African unions were re-legalized. The effect has been staggering. In 1980, only about 1.2 percent of African employees were union members; by 1990, it was more than 30 percent. This has been accompanied by a surge in the number of strikes involving Africans and the total of workdays lost. In 1980, about 175,000 workdays were lost; by 1992, this figure stood at nearly 1.7 million.

South African employers often claim that industrial unrest is an important impedi-
ment to future expansion. 'Labor problems' are often cited as the most common cause of greater capital intensity. One possible interpretation is that industrial conflict has widened the margin between the perceived cost of employing a worker and the wage paid.

Rising Cost of Labor

In the natural growth path of a country such as South Africa the surplus resource (unskilled black labor) is absorbed quickly into productive employment. Such a path is hampered, however, if the real wage of unskilled labor rises before the labor surplus is exhausted or if the cost of capital is artificially lowered. This raises capital intensity, lowers capital productivity and slows growth in output and employment. In South Africa both growth-inhibiting influences have occurred.

Under apartheid, highly-paid jobs were almost exclusively the preserve of whites. Black access to the formal sector was restricted to unskilled jobs, and black wages were much below those of whites (see Figure 7). As the apartheid system broke down and various social pressures came into play, black wages started to rise. Various influences have put upward pressure on the African wage -- increased strike activity; the decline and abolition of influx controls; and the tendency for African real wages to move towards white real wages. Earlier work indicates that movements in the real black wage contributed to the slowdown in employment growth over 1970-85 (see Figure 6). In the absence of such changes, it is estimated that employment of blacks and real GDP would have been, respectively, about 14 percent and 3 percent higher in 1985. Although important, the historical change in relative factor prices can only account for a minor part of declining employ-

4. The Future Policy Framework

For higher growth, South Africa must revive the private sector and, at the same time, maximize employment growth and narrow income differentials between blacks and whites. It must also redress massive inequalities in access to public services and facilities, and in land ownership. The suggested policy framework outlined here focuses on the medium-to-long run. There will be other short-run problems of economic management, although these will be less severe the more rapidly the framework is implemented.

The main policies should be:

- Encouraging rapid growth in skilled labor, particularly by upgrading semi-skilled and unskilled workers;
- Encouraging a reorientation of manufacturing towards exports;
- Emphasizing job creation in small businesses and in agriculture;
- Restructuring government expenditure by raising investment in infrastructure and public services, targeting the poor and underprivileged, and restricting the growth of recurrent spending to meet budgetary targets;
- Maintaining prudent fiscal and monetary policies.

This policy strategy will only be successful if there is a major revival in private investment. If sufficient private investment is available, then sustained per-capita growth becomes a reality. Direct foreign investment
should be encouraged, and the regulatory framework should present no obstacles to new ventures. The visible implementation of redistributive policies through greater public investment should improve social stability. But it is equally important that investors should not be discouraged by a opaque and ever-changing policy framework.

Transparency, stability, and credibility -- all these matter as much as policies. To stimulate growth, the single most important ingredient is investor confidence. Political and economic uncertainties are disincentives to invest. Investor confidence will only materialize if policymaking is transparent and there are no sudden and unexpected shifts in economic policies. Just as the new governments in the transition economies of Eastern Europe have a window of opportunity, so South Africa's new government has a unique opportunity to introduce sustainable, consistent, and credible economic policies -- and to thus encourage political stability.

Past policy regimes have not met these criteria. Subsidies and tax incentives have been applied unevenly and non-transparently. The system of trade protection has accommodated the needs of large corporations. These shortcomings should be remedied.

Skill Accumulation

On the supply side, expansion of skilled labor is needed to make growth sustainable and ease the upward pressure on wages as the economy moves back to full capacity. This will have positive effects on GDP and employment growth. It is likely to increase capital productivity by removing the major constraints that effectively linked skill accumulation to growth in white labor supply. Skills upgrading should also encourage rapid growth in the employment of unskilled labor, as the returns are higher when complemented by greater skills of other workers. This will counteract inflationary pressure from growing white wages and (perhaps) reduce black wage growth as pressure for catching-up is reduced. Most important this will lead to a substantial increase in income equality. This would arise from faster wage employment growth among blacks and greater stimulus to the informal sector; higher average wages among blacks arising from skills-upgrading; and lower wage growth among skilled (mainly white) workers.

Education and training in South Africa are inadequate for improving income redistribution and for assuring future growth. Recently greater emphasis has been placed on reallocating expenditure towards education; this will probably continue under any new administration. However, investment on a much broader basis is needed to provide good social returns and be consistent with higher growth in the long-run. The quality of education for children of disadvantaged groups should be improved, while the balance between technical and general education at higher levels should be closely monitored.
Figure 6:

**SOUTH AFRICA - Percentage of Unskilled Labor Force out of Wage Employment (left scale) & Real Wage of Unskilled Labor (in 1985 Rands per month) (right scale)**

<table>
<thead>
<tr>
<th>Year</th>
<th>Unemployment Unskilled Labor</th>
<th>Real Wage Unskilled Labor</th>
</tr>
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<tbody>
<tr>
<td>1965</td>
<td>25.00%</td>
<td>40.00%</td>
</tr>
<tr>
<td>1970</td>
<td>30.00%</td>
<td>45.00%</td>
</tr>
<tr>
<td>1975</td>
<td>35.00%</td>
<td>50.00%</td>
</tr>
<tr>
<td>1980</td>
<td>40.00%</td>
<td>55.00%</td>
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<tr>
<td>1985</td>
<td>45.00%</td>
<td>60.00%</td>
</tr>
<tr>
<td>1990</td>
<td>50.00%</td>
<td>65.00%</td>
</tr>
</tbody>
</table>

Figure 7:

**SOUTH AFRICA - Real Wages in 1985 Rands/Month**

- **Skilled Labor**
- **Unskilled Labor**
Returns from education will take years to emerge. Given the need for economic growth to resume as quickly as possible, the skills of the labor force should be upgraded through training. At present, the position is dire. The number of apprentices did not increase in the 1980s. Only about 9,000 were indentured in 1990, of whom 6,700 were whites. While some 280,000 people were trained on public and private courses in 1990, much of this training took a week or less.

A serious upgrading of skills can only come about through the private sector supported by long-term strengthening of the education system. But such training is likely to be geared to the short-term needs of the firm and may be of limited social value. One solution could be through a pact between major employers and the trade unions. Employers would agree to upgrade workers through training, and the unions would agree to limit strikes and other industrial action. Some promising initiatives are already underway along these lines.

Productivity Growth Through Exports

A reorientation of the private sector towards exports should provide a consistent source of aggregate demand and promote growth through greater production efficiency. The economy has been mainly driven by domestic demand and has been increasingly susceptible to problems of demand insufficiency since the early 1970s.

Exports both influence and contribute to higher growth. First, an export-oriented path is associated with increased productivity, as existing factors of production are used more efficiently in response to external competition and to the need to be more cost-efficient. There may also be economies of scale. Second, there may be gains from reallocation from less-efficient to more-efficient sectors. Third, firms are forced to upgrade capital and labor to compete in world markets. Competition through external trade is an important source of the development of skills and helps producers keep abreast of new production techniques. The positive externalities from technological diffusion and the transmission of ideas are important for continued growth. A more internationally comparable set of domestic prices in tradable goods should mitigate efficiency losses from South Africa’s oligopolistic production structure.

In the short-run, South Africa’s manufacturers may sustain growth in exports; in the medium-to-longer-term, export growth will inevitably mean expanded capacity. This will take place only if the private sector has a clear idea of the direction of policy and faith in the government’s commitment. If South Africa wishes to stimulate investment in export activities, the government must articulate its strategy for the external sector, while allowing sufficient time for the private sector to make the necessary adjustments. Such a strategy might include a commitment to export-led growth; a policy package to give exporters free access to inputs used in export manufacturing; offsetting the anti-export bias associated with continued import protection; and a plan for rationalizing tariff schedules and reducing protection. Important steps are being taken in these directions by the recent agreement with the GATT. The system is, however, unchanged at present.

South Africa’s most urgent task in international trade is to address the anti-export bias inherent in its policies. Two-thirds of the disadvantages that South African exporters suffer relative to foreign competitors stem from the higher prices they pay for manufac-
The experience of East Asian exporters suggests that trade policies should be biased in favor of exports. At a minimum trade policies should be neutral.

Export neutrality is easier to achieve with totally free trade. In South Africa, it has often been inextricably linked with import liberalization. The two are not synonymous. It is possible to have export neutrality while maintaining protection. To achieve neutrality, there are two separate tasks. First, all exporters must have free access to imported inputs. Second, incentives to export must be brought more in line with incentives to produce for the domestic market. Exporters should be helped to gain access to high-quality inputs at world market prices. This requires some liberalization but not necessarily greatly-reduced protection. To ensure that future investments are directed by the needs of international competitiveness, a credible, time-bound program should be introduced to lower tariffs on protected industries over the medium-term. In reviewing import tariffs, three problems need to be tackled swiftly: unevenness in the duty schedule; an unduly complicated tariff structure; and a highly unstable tariff schedule.

South Africa's average import duty is not high by developing country standards. While a lower average rate would make industry more internationally competitive, the present high unemployment and stagnating economy make such a course undesirable. South Africa needs to make protection transparent and rationalize the import duty schedule -- streamlining the tariff schedule, under which all tariffs would be converted into ad valorem rates.

There is no justification for continuous changes to the tariff schedule. The cost (in uncertainty for the economy and the administrative burden) is large. Business can adapt to bad policies but it cannot adjust to an uncertain policy environment. The schedule could be greatly simplified with similar tariffs for similar goods. Such changes would probably increase equity by reducing evasion and make the system less susceptible to pressure from special interest groups.

There are several ways of achieving free access such as free trade zones, bonded warehouses, duty exemption and drawback schemes. Exporters should be allowed to choose from these alternatives. However, it is desirable that a general duty-drawback system be established for all exporters. South Africa needs a streamlined, automatic, duty-drawback (or rebate) scheme explicitly independent of any suggestion that exporters should first shop for local inputs before importing.

**Job Creation**

The need for more jobs is crucial. Finding work for the skilled should be relatively easy but for unskilled workers unemployment is likely to remain high for some time. It is critical in terms of efficiency and equity that unemployment be reduced quickly. Public works schemes will help. So, too, will encouraging the growth of small-to medium-size firms and a shift to more labor-intensive agriculture.

Recent work by the World Bank suggests that small businesses are constrained by a narrow range of market opportunities and by limited access to finance. Deregulation has already removed the biggest restrictions on market entry. But new market infrastructure closer to central business districts where purchasing power is concentrated is needed. Available and appropriate financial services should be expanded.
Despite its relatively low share in GDP, agriculture is important as a source of future employment. A fundamental change in agricultural policies is needed to remove existing distortions, such as subsidies on rural credit in the commercial farm sector biased against small-scale farmers. A rural restructuring program without expropriation of land from existing owners should transfer a significant share of agricultural land to small-scale black farming. International experience suggests that such a program would be most effective if it relied on the existing land market, but incorporated strong affirmative action by broadly-targeted injections of purchasing power. A shift towards smaller-scale agriculture does not impede agricultural growth.

Reviving Government Investment

The resources needed to redistribute public services adequately are considerable. It will cost around R8 billion to provide sufficient extra classrooms for those children now enrolled and those out of school. The cost of urban renewal will be even greater. In the Witwatersrand area alone, the total cost of providing additional water, sanitation, and electricity could be R6 billion-R10 billion.

The priority is to revive government investment as a percentage of GDP to the levels of the 1970s and to control growth in recurrent spending consistent with fiscal targets. How precisely can this be done? Any future government will decide its own priorities. But in the initial stages much new spending will go to urban infrastructure in deprived areas -- sanitation, water supply, roads, garbage collection, and domestic electrification -- and to the social sectors (new schools and classrooms and local clinics). But the locational distortions introduced under apartheid should not be extended. It is also important that the rural sector is not neglected, otherwise there could be excessive rural-urban migration.

New public investment should not concentrate on inefficient and highly capital-intensive major parastatals. Nor should it be directed to infrastructure in white areas, although maintenance should be spread across all existing infrastructure. Where possible, preference should be given to labor-intensive public works projects. Where the public sector is the contractor, wages of unskilled workers should be paid at informal sector rates -- about one-half of those in the formal sector.

Feasible growth in government investment could result in impressive redistribution if real recurrent expenditure growth is held at about 2 percent annually. Given a private investment revival and the successful implementation of supply-enhancing policies, redistributive public investments could amount to around R14.9 billion per year over 1994-2005 at 1992 prices. This is equivalent to an annual average of about 3.2 percent of GDP.

Prudent Fiscal and Monetary Policies

Within this framework, it will be essential to follow prudent fiscal and monetary policies. Exceeding the limits of a sustainable fiscal position will lead to inflation and balance-of-payments problems. There can be little doubt that private investors will regard high fiscal deficits in the early years of a new government as a negative signal. This will apply very strongly to investors abroad. On monetary policy, which has generally been well-managed, there are two warnings. First, it seems unwise to stimulate the economy through a return to the negative real interest regime that prevailed in 1973-83. That would encourage increased capital-intensity, raise investment-to-output ratios, and put more strain
on the balance of payments. It would do nothing to create jobs. Second, it could be disastrous if a future government monetized the fiscal deficit; this would accelerate inflation. The social consequences of that would be disruptive. The authorities need to also consider the consequences for the real economy of quickly reducing inflation much below its present level.

Even with such a highly redistributive expenditure program, there is room for restraint on growth in recurrent spending. This has been almost entirely driven by growth in wages and expenditures on goods and services. The rise in wages is explained by rapid growth in the number of government employees, while, in the rest of the economy, employment fell slightly over the past 10 years. Administrations in the homelands and elsewhere have been increasingly overstaffed. In 1981-92, the number of employees in central government and provincial administrations grew by about 34 percent; in the self-governing territories it grew by 118 percent.

Importance of Social stability

No economic program in South Africa can succeed unaccompanied by increased social stability. If gains from growth are not perceived by the community at large as being distributed equitably, social unrest will re-emerge, and political and economic stability will be undermined. Higher growth without redistribution cannot work in a future South Africa; for this reason, the redistributive aspects of a future growth process are particularly important. The South African economy has some initial advantages -- spare capacity, excellent infrastructure, and low external debt. There is no reason why, given the right economic environment and policy framework, the economy should not be able to re-establish positive per-capita GDP growth. The sustainability of this will require a commitment by all the major players in the country to implement a coherent and redistributive economic strategy.

5. Simulating Sustainable Growth: Effect of Specific Macro Policies

The policy recommendations outlined here are likely to create a wide series of repercussions in the economy. While "back-of-the-envelope" calculations are often useful when looking at short-term effects, an examination of the behavior of key economic variables for the longer-term requires a more rigorous approach. With this in mind, a macroeconomic model has been constructed capable of simulating future scenarios for the South African economy under different conditions.

A Macro Model for South Africa

The model is based on a set of econometric equations estimated for the years, 1960-92. The aim in constructing this model was to identify the main quantitative relationships that have driven the South African economy over this period, and to then use these to examine the consequences of different policies and changes in exogenous factors that affect the economy. As in most macroeconomic models, the structure is relatively aggregated in that the various sub-sectors of the economy are not dealt with in the greatest possible detail. The model nevertheless predicts all conventional national income values and many more. In total, the model comprises around 300 identities and equations of which 45 econometric equations were estimated using time-series data. The treatment of the product market in the model permits an evaluation of both demand-stimulating and supply-raising measures.
Most macroeconomic models can be classified as either demand-constrained (Keynesian) or supply-constrained (Neoclassical). The present model can switch between these two regimes. The basic approach is that the model decides for each year, whether a demand or a supply constraint is binding upon the economy, and then solves for the various macroeconomic variables accordingly. The model can be used to measure the economic impact of specific measures and policies (a new tax policy, different sizes of public investment programs) or to identify the variables and policies that will be critical if the country is to attain sustainable high growth.

**How Can Public Investment Revive the Economy?**

The central approach here is to use the model to examine the economic effects of launching hypothetical redistributive public investment programs of different sizes over and above recent public investment levels, and to then judge their sustainability and feasibility. We investigate the maximum sustainable size of a public investment program under three scenarios. In all three, recurrent expenditure growth is assumed below recent levels. Figure 8 illustrates GDP growth under these scenarios.

A set of simulations with the model concentrates on this one major question: "How much public investment can South Africa afford?" The answers vary according to the assumptions made. The central conclusions that emerge are that the affordable level of public investment will be higher (and linked to):

- the greater the recovery in private investment;
- the more success achieved in implementing supply-enhancing policies through faster skills accumulation and export promotion; and
- the more favorable the external environment.

If high levels of private investment re-emerge, and supply-enhancing policies are put in place, there are feasible growth paths for South Africa that are high by past standards (above 5% per annum), sustainable (low inflation, stable fiscal account, low and stable debt-to-GDP ratios) and redistributive. Under these paths, substantial public investment programs are affordable. But if a revival in private investment does not emerge, and there are no supply-enhancing policies, the economy will continue down a recessionary path. In such a case, attempts to introduce new and redistributive public investments will quickly run into fiscal and/or balance-of-payments crises.

In particular, over the period, 1994 - 2001, total cumulated government investment could be as high as R. 22 billion at 1985 prices in the lower growth case, and R. 35 billion if faster growth is achieved through supply-enhancing policies -- average investment levels equivalent to 1.9 percent and 2.7 percent of GDP respectively. These figures compare with the historical low of 1.5 percent of GDP allocated to government investment in 1992. These figures represent additional Government investment, over and above the 1993 level, averaging R1 billion at 1985 prices per year over 1994-2001 in our lowest case scenarios. A substantially higher level of government investment could be accommodated under our best case scenario (an additional R2.3 billion at 1985 prices annually during the 1994-2001 period, and an additional R7.3 billion in 2002-2005).
Reducing the Social Backlog

How much of the social backlog of capital expenditures can be eliminated by the maximum affordable public investment program?

Here one needs to compare the latest estimate of the size of the social backlog with the results of the scenarios. The results indicate that under all three scenarios, an additional R. 12 billion at 1992 prices can be spent during the first 4-years of the new dispensation. South African sources estimate the size of the social investment backlog to amount roughly to R. 46 billion. If this estimate is correct, then about a quarter of the total backlog can be addressed during the first 4 years of the new Government.

Over the following 4 years, 1998-2001, the remainder of the backlog could be cleared under the best-case scenario. However, if the macroeconomic situation is less favorable and closer to that of the lower-case scenario, then the room for maneuver is obviously more restricted, and only about 13 percent of the remaining backlog could be cleared. The lower scenario would thus imply that less than 40 percent of the estimated backlog of capital expenditures would be addressed in the first 8 years of the new administration.

Foreign Finance

How much long-term foreign finance would the economy need? Under the best-case scenario, the foreign financing requirements of
the economy would be modest in the early years of these programs. During 1994-97, the economy requires finance essentially to cover existing debt repayment and increase the level of reserves but can rely on existing current account surpluses. These long-term financing needs then rise over subsequent years as the current account moves into deficit. But given substantial growth in the economy, long-term external financing requirements would never go much over 1 to 2 percent of GDP in any given year before 2001. Under the lower-case scenarios however, the external financing requirements would be much more severe.

Dangers of Excessive Wage Increases and Fiscal Indiscipline

Another set of simulations focused on wage issues. While it is tempting to imagine that fast redistribution could be attained by simply encouraging large wage rises for unskilled workers, the evidence here suggests otherwise. A simulation of the effects of a once-and-for-all wage increase of 5 percent above the rate of inflation in 1995 followed by persistent real wage resistance indicated that not only would employment growth be slowed, but that real wages would actually be at a lower level by the turn of the century than in the absence of such an increase. Excessive wage increases are eventually self-defeating. Inevitably, such a high rise in the money wage would stimulate inflation and raise the fiscal deficit by increasing the cost of employing workers in government service.

Fiscal indiscipline, as represented by excessive government expenditure, could have even worse results, particularly, if, as seems likely, this were accompanied by a fall in private investment. Under this scenario, growth in GDP and employment would decline, and the economy would soon face mounting public and foreign debt and faster inflation. Although doubtless motivated by the best of intentions, such excessive expenditures would eventually work to the disadvantage of most of the population.

6. Concluding Remarks

The results of the various simulations with the model seem to support the conclusion that a healthy climate for private investment is essential. Without this, sustained growth will not take place. The simulations also seem to support the policy framework outlined -- supply-enhancing policies will have a big impact if the conditions are right. As always, the results are sensitive to the specification of the model and to the assumptions made in the simulations. But it is hoped that these results will assist the debate regarding the policies to be followed. One thing is clear: South Africa could have an attractive future, but the right policy mix is needed to achieve this.