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Stuck in Low GEAR? Macroeconomic Policy
in South Africa, 1996-1998

John Weeks
Central for Development Policy & Research
School of Oriental & African Studies
London

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Despite its ideology while in opposition, once in power the ANC government implemented an orthodox macroeconomic policy which stressed deficit reduction and a tight monetary policy, combined with trade liberalisation. The stated purpose of this package (the Growth, Employment, and Redistribution programme, so-called GEAR) was to increase economic growth, with a 4.2 rate programmed for 1996-2000. At mid-term of the programme, growth remained far below this target. The GEAR's lack of success cannot be explained by unfavourable external factors; rather, the disappointing performance seemed the result of fiscal contraction and excessively high interest rates.

1. Introduction

In 1995, the African National Congress (ANC) took power in South Africa after a long struggle against apartheid. The macroeconomic policies followed during the subsequent years were of interest beyond the country itself. The ANC was a coalition of several groups, and its ideology during the anti-apartheid struggle, if not predominantly Marxist, was well left of centre. Not withstanding this ideology, the ANC government almost immediately implemented a typically 'orthodox' macroeconomic policy: fiscal deficit reduction through expenditure restrain and a tight monetary policy, along with rapid trade liberalisation.[1] There were at least two interpretations of this policy approach by the new government: 1) that a left-of-centre government had shaken off old ideology and pragmatically adopted a macro framework consistent with global economic realities;[2] and 2) that the government had embarked upon an ideologically-generated neoliberal policy, which would undermine the goal of redressing the gross inequalities of the apartheid period.

While economic analysis cannot resolve this political debate,[3] it can evaluate whether the South African 'experiment' with neoliberal macro policy achieved its purpose: strong economic growth that would lay the basis for reduction of unemployment and a more equitable distribution of income and wealth. The experience of one country does not necessarily provide lessons for other countries;

South Africa does provide an instructive case study of orthodox macroeconomic policies. The South African case is all the more interesting, because of the clarity of the economic debate on the eve of the post-apartheid government.[4]

In March 1996, the South African Ministry of Finance announced its budget, which lay the basis for a five-year programme announced in June of that year, the Growth, Employment and Redistribution programme (the so-called GEAR). The programme predicted the growth rate to average 4.2 percent for 1996-2000. While modest in absolute terms (barely two percent per capita), this rate represented an ambitious target in context: GDP had expanded at a meagre 2.3 percent over the previous two years (i.e., since the new government had assumed power).

The GEAR came two years after the formal end of a regime whose economic policy sought to ensure that the benefits of growth would accrue to the white minority. For the last decade of apartheid little growth occurred to distribute, inequitably or otherwise. Though observers may differ on the causes of slow growth, there can be no disagreement that the performance over the 1980s was dismal. From 1980 through 1993 per capita gross domestic product rose in only four years, and only in one after 1984, for an annual average decline of almost one percent for the fourteen years. The major problems of the South African economy in the mid-1990s were: 1) to increase the rate of economic growth, 2) to increase the rate of investment in order to stimulate growth and modernise production, and 3) to achieve these in a manner that would bring about increased wage employment, better wages for those in employment, and greater equality in the distribution of income and wealth. These wre the primary goals in the 1994 White Paper (the Reconstruction and Development Programme, RDP), which set the broad framework of the new government's economic and social policy.

Progress towards the first goal, economic growth, was achieved during 1993-1995: in 1993 the economy grew at slightly over one percent, a substantial improvement upon the negative rate the previous year, but well below population growth. For the first time in four years per capita income did not fall in 1994, and in 1995 there occurred an increase outside the margin of statistical error. The three percent growth rate, a considerable improvement, must be placed in broader context. At the implied rate of per capita growth, it would have required over eighty years for income per head to double, and the possibilities for redistribution at the margin through government expenditure would be virtually nil.[5] In other words, a three

percent rate of growth for the South African economy represented an extremely low aspiration.[6] This was lower even than the performance of Latin American economies in the early 1990s,[7] much less the ASEAN countries in those years, all of which grew at annual rates in excess of three percent.[8] However, given the virtual growth stagnation of the last ten years of apartheid, economic performance during 1994 and 1995 could justifiably be interpreted as a harbinger of a stronger recovery in the future, once the benefits of the end of externally-imposed sanctions had worked their way through the economy. In any case, the South Africa economy in 1996 was not beset by substantial imbalances that called for stabilisation measures. Inflation during these two years was below ten percent (half its rate in the early 1990s), and the external current account deficit was more than balanced by long term capital flows.

In addition to establishing macroeconomic guidelines for monetary, fiscal and exchange rate policy, the government in 1994 faced the task of re-allocating expenditure and settling priorities to redress a century of discrimination and repression of civil and economic rights. In the literature on growth, especially over the last fifteen years, there has been a presumption, usually explicit, that getting 'macro fundamentals right' is the pre-condition for success in all other policies. It was not clear that this hierarchy of policy levels was appropriate for South Africa. The 'macro fundamentals right' priority was propounded, especially by the IMF and the World Bank in Latin American and sub-Saharan countries (World Bank 1994a), in the context of extreme internal and external imbalances: high rates of inflation (often triple digits) and volatile real exchange rates. The South African economy had not suffered from such instabilities. Since the end of the Second World War, the inflation rate in no year was above the mid-twenties, the nominal exchange rate had been stable with only moderate nominal devaluations, and balance of payments pressures were contained without crisis management. The imposition of stabilisation, in the sense of a deflationary programme to redress imbalances and restore lost investor confidence, did not appear necessary. In the South African case macroeconomic policy could be the servant, rather than the master, of the redress of inequalities and poverty that were the legacy of apartheid.

2. The Growth Scenario in GEAR

It is in this context that the GEAR could be assessed. The point of departure for the assessment is the RDP White paper of 1994, which stressed two key goals: 1) the creation of employment, and 2) the 'alleviation of poverty, low wages and extreme inequalities in wages and wealth generated by the apartheid system...[to] ensure that every South African has a decent living standard and economic security' (RDP, 1994, p. 20). In February 1996 the GEAR confirmed the first, stressing the goal of 'a competitive economy which creates sufficient jobs for all workseekers' (GEAR 1996). The GEAR document set the specific targets of six percent growth of GDP by 2000 and annual job creation of 400,000. For the programme period 1996-2000, these goals implied an average GDP growth of 4.2 percent and average annual increase of non-agricultural employment of 2.9 percent (GEAR 1996, appendix 4, where these are discussed in detail). Throughout the document one finds an emphasis upon fiscal and monetary 'discipline', defined to include reduction of the fiscal deficit, low inflation, and a stable real exchange rate between the Rand and major trading currencies.

Not withstanding some similarities, there appeared a striking difference between the GEAR and the RDP documents. In the 1994 White Paper great emphasis is placed upon the need for the government to bring about a more equal distribution of income. In its discussion of economic policy, the White Paper stated:

> [T]he RDP takes the view that neither economic growth by itself or redistribution on its own will resolve the serious crisis in which South Africa finds itself...[Government policy] will involve the promotion of a more equitable pattern of growth, an equitable distribution of assets...[as well as] the maintenance of macro-economic stability. (RDP 1994, p. 22)

The RDP Development Strategy paper provided concrete targets for redistribution, most notably a doubling of the national income share of the poorest twenty and forty percent of households by 2005. This goal represented a radical proposal, as can be demonstrated by a simple calculation. If South Africa's GDP grew at 4.2 during 1996-2000 (as projected by the GEAR) and sustained six percent during 2001-2005 (also as projected), this would imply an average growth of 5.1 percent for the ten years. The RDP Development Strategy document reported that the poorest forty percent received nine percent of national income in the mid-1990s. In order for this to double in ten years, the incomes of the poorest forty percent would have to grow at 7.2 percent annually, while the incomes of the other sixty

percent would grow at only 3.7 percent. Achieving these differential growth rates would require a dramatic shift of investment toward the poorest forty percent, and probably a substantial increase in the progressivity of the personal income tax. It would also imply an increase in the wage share in national income, because there were relatively more wage earners (formal and informal) in the bottom forty percent of households than in the top sixty percent (Standing, Sender & Weeks 1996, pp. 18-23, chap. 10).

In contrast to the RDP document, the GEAR did not mention reducing inequality as a policy goal; rather, it stressed decreasing unemployment, which the RDP considered necessary but not sufficient ('our growth path must ensure more equitable distribution of incomes', RDP 1996, p. 8).[9] A careful reading of the GEAR suggests that its recommended growth scenario implied an increase in inequality. For 1996-2000, it called for real wage growth of about one percent per annum, with an associated rate of growth of employment of 2.9 percent. This would result in a growth of the total wage bill of 3.9 percent per annum. Since this was below the projected rate of growth of national income as a whole, the share of income going to employees would fall.[10] Further, the logic of the goal of the GEAR to stimulate 'labour-intensive' employment seemed to imply that much of the employment growth would be at wages below the prevailing market average.[11] This implied a further depressing effect on real wage growth and, thus, on the wage share. While there are countries in Africa for which a decline in the wage share might not imply an increase in inequality (because average wage incomes are above average non-wage incomes), South Africa was not among them. With regard to taxation, a necessary policy instrument for improving income distribution over a period as short as ten years, the GEAR document judged that 'the combined effect of recent tax reforms has probably been roughly neutral with respect to the overall burden' (Appendix 9). No proposals are made to increase the redistributive effect of the tax structure.

The GEAR document organised its policy proposals around two sets of projections for 1996-2000, the 'base scenario' and the 'integrated scenario'. The former was described as that associated with the performance of the economy under the policy framework prevailing in mid-1996, and latter as the outcome if a number of policies were changed ('reforms'). The most important policy changes were increased public sector investment, faster deficit reduction and more rapid tariff

liberalisation. The document maintained that these policy changes would result in an increase in the average GDP growth rate for the five years, as well as an increase in export growth.

Perhaps the most important issue for analysing the likely success of the GEAR was whether the programmed rate of growth was consistent in terms of aggregate demand and supply. In the abstract, the total output of a country is determined by its productivity capacity, and the maximum growth rate of output is determined by the rate of increase of that capacity. The degree to which the capacity is utilised is determined by the effective demand for output. In theory (and practice), there are four sources of expenditure to increase effective demand: household consumption, private investment, state expenditure, and net expenditure from abroad (exports minus imports). If one treats consumption as determined by income itself, effective demand can be reduced to three elements: private investment, state expenditure, and net exports. Would the policies proposed in the GEAR increase private investment, state expenditure, and net exports sufficiently to raise the GDP growth rate to an average of 4.2 percent per annum for 1996-2000?

The overall policy stance of the GEAR with regard to aggregate demand was succinctly summarised in a paragraph:

> In brief, government consumption expenditure should be cut back, private and public sector wage increases kept in check, tariff reform accelerated to compensate for the depreciation and domestic savings performance improved. These measures will counteract the inflationary impact of the exchange rate adjustment, permit fiscal deficit targets to be reached, establish a climate for continued investor confidence and facilitate the financing of both private sector investment and accelerated development expenditure. (GEAR 1996, sub-section 'Accelerated Growth')

The GEAR document recognised the need to programme a set of policies to generate the demand stimulus to bring about the projected rate of growth of 4.2 for 1996-2000. It argued that 'growth is mainly the result of steady increases in fixed investment and manufactured exports.' Private investment was targeted to grow at an annual rate of 11.7 percent and public investment at slightly over seven percent. These investment growth rates represented more than a doubling for the private sector and a near a trebling for the public, compared to the 'base scenario' (which would have slower deficit reduction and fewer supply side reforms). The increase in government investment could be directly implemented, while the increase in private investment would be the indirect effect of policies to 'establish a climate for

continued investor confidence'. It is not strictly correct to say that growth would be mainly the result of increases in investment *and manufactured exports.* Table 1 provides calculations of the relative importance of the elements of the fiscal stimulus.

At the bottom of the table is the target rate of growth, 4.2 percent. If we consider the impact of exports first (next-to-last row), we see that the fiscal effect of external trade would be *negative.* The GEAR's integrated scenario projected an *increase* in the ratio of the external current account deficit to GDP, from 1.4 percent, to 2.4 percent. This, according to the document, would be the result of increased GDP growth drawing in more imports compared to the 'base scenario' growth rate of three percent. Since expenditure on imports represents non-expenditure on domestic production, the result of an increase in the current account deficit relatively to GDP represented a net depression of domestic demand, of -0.2 percentage points (compared to the targeted aggregate stimulus of +4.2). Public investment, at the discretion of the central government, would impart a quite small positive stimulus of +0.5 percent, which when combined with the negative effect of net exports, sums to a stimulus of +0.3. Since public 'consumption' (recurrent expenditure) was pegged as nineteen percent of GDP for the period, its demand effect would be induced by the rate of growth itself. This would leave private investment to fill the gap in the fiscal stimulus (i.e., after accounting for positive public investment and negative net exports). On the basis of the target rate of GDP growth of 4.2 percent, private investment would necessarily contribute 3.9 percentage points of the fiscal stimulus.

This rather tedious calculation exercise yields the following conclusion: virtually all of the fiscal stimulus necessary to achieve the rate of GDP growth projected by the GEAR would come from private investment (ninety-three percent of the total stimulus). As Table 1 shows, the vehicle for stimulating private investment was reduction of the fiscal deficit, which was predicted to reduce real interest rates, and the fall in interest rates would provoke a rise in private investment. This presumption was based upon 'crowding out': when the state borrows to finance a deficit, it competes with the private sector for saving, and thus raises interest rates.[12] If there was empirical evidence to suggest that crowding out was important in South Africa in the 1990s, the GEAR document did not include it. An influential economic model of South Africa assumed the opposite, that

government investment, even when financed by borrowing, would *increase* private investment (van Seventer & Gibson 1995).

If one accepted that crowding out was important in South Africa, there remained a potential inconsistency in the GEAR deficit-interest rate-investment chain of causality. The key to the fiscal stimulus was a lower real interest rate; at the same time, the model assumed that the external current account would deteriorate. Other things equal, this would tend to weaken the Rand, which could provoke the Reserve Bank to act independently to raise interest rates. The GEAR document sought to square this circle by predicting an increase in foreign direct investment to cover the increased current account deficit. Thus, the growth rate projected by the GEAR was based on a number of empirically unverified assumptions: 1) that crowding out was an important phenomenon in South Africa, 2) that deficit reduction would result in a fall in the interest rate, 3) that an increased current account deficit would be consistent with a lower interest rate, and 4) that a lower interest rate will impart a strong stimulus to private investment.

[Table 1 goes here]

3. Comparing Goals and Outcomes for GEAR

If one dates the implementation of the GEAR from the third quarter of 1996, then it had run almost half its course by the end of the third quarter of 1998, establishing an appropriate moment for assessing performance. A 'mid-term' review is provided in Table 2, which shows the various targets by year and outcomes, through the third quarter of 1998 for most variables. For the central goal of the GEAR, growth of GDP, the actual performance fell far short of target, 1.0 percent compared to 3.4 (see Figure 1). Worse still, from the middle of 1996, the growth rate declined almost continuously, below one percent for each quarter from 1997.3 through 1998.3.[13] Given that the growth of output was less than a third of its target (and below the rate of population increase), one is not surprised to discover that the GEAR did not realise its employment target. Indeed, the rate of growth of private, recorded ('formal') employment was negative.

In contrast to these failures, deficit reduction through 1998.3 came close to its target, an actual minus 4.7 percent of GDP, compared to the targeted minus 4.3

(with the 1998 target met within one-tenth of a percentage point). Along with success in deficit reduction, the GEAR was associated with a sharp drop in inflation, which during the first ten months of 1998 fell to two-thirds of the target.[14] However, the purpose of deficit and inflation reduction, as discussed above, was to bring down the real interest rate. This purpose was not realised: far from falling to four percent, the real bank rate rose, to over ten percent. To the extent that the reduction in inflation could be attributed to the GEAR, the government may have undermined, rather than enhanced, the prospects for achieving its growth target. A close textual reading of the GEAR suggests that the government intended that its policies would provoke a structural reduction in the inflationary tendencies of the economy. That is, policy sought to reduce inflation *without compressing the growth rate*.

To test the hypothesis that the GEAR was associated with inflation reduction, a simple hypothesis test was carried out. Our purpose is not to specify the 'true' inflation model for South Africa, but rather to test the GEAR argument. The inflation rate is specified as a function of the 'world' rate of inflation, the real GDP growth rate, and a shift variable for the GEAR periods ('dummy' variable). The 'world' rate of inflation is approximated by the average for five major industrial countries,[15] lagged one quarter. Thus,

$$\rho_t = p(\rho^w_{t-1}, g_{t-1}, G)$$
where ρ^w_{t-1} = the 'world' rate of inflation,
g_{t-1} = South Africa's GDP growth rate, and
G = value of unity for all periods after the second quarter of 1996.

The test is for all periods beginning with the first quarter of 1990 (see Figure 1 for a plot of quarterly inflation and growth rates). The results are reported in Table 3. The statistics support the allegation above, that the South African economy was not characterised by high structural inflation. They can be interpreted to imply that were 'world' inflation zero and growth zero, the residual rate of inflation would be slightly less than six percent.[16] The dummy variable for the GEAR proves highly significant, though its coefficient is small, implying a downward shift in inflation of 1.5 percentage points. The relationship between GDP growth and inflation is *negative*: for these thirty-five quarters, the economy was characterised by a 'stag-flation' interaction, in which lower growth was

associated with higher inflation. This could be interpreted as benign (stimulating growth reduces inflation). However, it implies that a downward shift in the growth-inflation curve results in a lower inflation rate for any GDP growth rate, *but also a lower GDP growth rate for any inflation rate* (by five percentage points in this case). This perverse outcome might be called 'the GEAR Shift', in which a structural reduction in the rate of inflation was achieved through a structural reduction in the rate of GDP growth. This suggests that inflation reduction as such was not the appropriate policy response in South Africa in the 1990s.

[Table 2 goes here]
[Figure 1 goes here]
[Table 3 goes here]
[Figure 2 goes here]

4. Do External Factors Explain Under-performance?

Governments may formulate sound policies for growth, but have their best efforts thwarted by circumstances beyond their control. At mid-term, the growth performance of the South African economy was well below GEAR targets. This section considers the extent to which this under-performance might be explained by external economic forces beyond the control (and perhaps beyond the reasonable expectations) of the South African government. To sustain this hypothesis, one cannot merely assert it. A credible test requires a specification of the South African growth rate that includes the effect of external economic influences, which can be inspected for quantitative impacts.

Figure 3 provides a first step towards evaluating the External Factors Hypothesis, showing the quarterly rate of growth of the South African economy, and the cross-country average for five major industrial economies (France, Germany, Japan, the United Kingdom, and the United States of America). Inspection of the chart shows that South Africa's growth rate closely tracked the average rate for the five industrial economies from the last quarter of 1994 through the third quarter of 1996 (the announcement of the GEAR was in June of that year). However, in

subsequent quarters, the South African growth rate fell well below that for the major economies. While the chart casts doubt upon the External Factors Hypothesis, it does not represent a rigorous test. As before, we seek not the 'true' growth model of the South African economy, but a model that tests the allegation that external factors undermined the GEAR.[17] To produce such a test, we begin by assuming that at the outset of GEAR the South African economy was operating with excess capacity.[18] If this assumption is accepted, then it follows that growth would be determined by demand factors. Demand factors are divided into two categories, exogenous and endogenous. Thus,

$$g_t = g(\gamma_t, \eta_t)$$
where γ_t = demand exogenous with respect to income and expectations, and
η_t = demand endogenous with respect to private expectations.

Exogenous demand is specified as real export growth and net demand creation by government, with the latter approximated by the fiscal deficit as a portion of GDP. Should it be the case that crowding out were an important phenomenon, the fiscal deficit would prove to be non-significant or demand depressing (fiscal expansion cancelled by the crowding out of private investment).

$$\gamma_t = \gamma(x_{t-1}, Df_{t-1})$$

Endogenous demand consists of private investment, determined by investor expectations. To test the hypothesis that the GEAR was undone by external factors, we assume that expectations are based upon signals from the world economy: 1) the rate of growth of the world economy (approximated by the average growth rate of five major industrial countries), and 2) the variability of that growth (measured by the standard deviation across the five countries). It is predicted that investment is positively related to the former and negatively to the latter.

$$\eta_t = \eta(g^*_{t-1}, \varphi_{t-1})$$
where g^*_{t-1} = the quarterly rate of growth across five major industrial countries, and
φ_{t-1} = the standard deviation of that average growth rate.

Substitution yields the following estimating equation (with variables identified by acronyms):

$$SAGRW_t = \alpha_o + \alpha_1[GRW5MIC]_{t-1} + \alpha_2[STDEV5MIC]_{t-1} + \alpha_3[XPRGRW]_{t-1} + \alpha_4[SADF]_{t-1} + \varepsilon$$

The statistical results are reported in Table 4, where all variables are significant and of the predicted sign. An increase in export growth or the fiscal deficit (measured as negative) imparts a demand stimulus, which increases the rate of growth. The 'world' rate of growth is positively related to South Africa's growth rate, while its variation enters negatively. The allegation that GEAR might have been undone by external factors can now be inspected, since external factors appear to play a significant and substantial role in determining the growth rate. One presumes that the argument is that world market conditions deteriorated during the GEAR, compared to the pre-GEAR period. To estimate this effect, 'world' GDP growth and its standard deviation are averaged for the ten quarters prior to GEAR, then substituted into the model to achieve a simulated counterfactual. When this is done, the impact on South Africa's growth rate is virtually nil: a simulated growth rate for 1996.3 through 1998.3 of 0.96 percent per annum, compared to the actual outcome of 1.03 percent (see Table 3, bottom two cells). This results because 'world' growth was virtually the same in the two periods, and the variance of that growth was slightly higher after the second quarter of 1996.

In contrast to the non-impact of 'world' growth, the model implies that deficit reduction had a substantial growth-depressing effect. When the average fiscal deficit for 1993.3-1995.4 is substituted for the GEAR period deficits,[19] and actual 'world' growth, its variance, and actual export growth are used, the simulated outcome is a growth rate for the South African economy one percentage point higher than the actual; i.e., a doubling of the growth rate.[20] This result is consistent with the earlier finding that inflation reduction under the GEAR was achieved at the cost of lower growth. Some might argue that a higher deficit would have placed an interest payment burden on the government which would have required reduction of expenditure in other areas (e.g., social expenditure). However, the level of the deficit which would have raised growth by one per cent (about eight percent of GDP) would have been substantially lower than that viewed as sustainable by the World Bank in a 1993 document on the South African economy.[21]

Further doubt is cast on the External Factors Hypothesis if one compares South Africa's growth rate with that of middle-income 'newly-industrialising' countries (NICs). In Figure 4, the difference between South Africa's quarterly growth rate and the growth rate across ten major NICs is presented as a percentage (negative) of the average growth of the latter, from 1990.1 through 1998.3 (thirty-five quarters).

During 1990-1992, the difference was consistently one hundred percent or more, then after mid-1992 dropped sharply, with the difference approaching zero at the end of 1993. For the twelve quarters before the GEAR, the relative difference between South African's growth rate and that of the NICs averaged minus fifty percent. It averaged ninety percent over the quarters after the GEAR was introduced. From the third quarter of 1996 (when the proportion fell to minus sixty percent), GEAR-associated growth declined in every quarter but one, relatively to the NIC average.

There may be tests that support the External Factor Hypothesis. However, the ones presented here indicate that South Africa's performance was considerably worse than for other middle income countries, and worse than would be predicted on the basis of world market conditions. By inference, this conclusion directs attention to the macroeconomic policy of the South African government to explain the declining growth rate after early 1996; i.e., to the GEAR itself. As discussed above, it would appear that intrepid deficit reduction, through its associated demand compression, fostered a lower growth rate. Another likely candidate for growth reduction was the high interest rates, nominal and real, during the GEAR. That these interest rates were high cannot be contested. If one accepts the so-called Golden Rule that real interest rates should approximate the long-run rate of increase of per capita income,[22] then real interest rates during the GEAR were distorted by a factor of three.[23] Real interest rates around ten percent far exceed what would be necessary to ensure absence of 'financial repression', and should impart a contractionary effect on private sector consumption and investment.

As a variation on the External Factors Hypothesis, it might be argued that the Reserve Bank had high interest rates thrust upon it. A statistical exercise comparing international interest rates to South African rates suggests otherwise. Table 5 reports a test of the hypothesis of a link between external and domestic interest rates. The South African nominal bank rate is specified as a function of nominal rates averaged across five major industrial countries, the domestic rate of inflation, and, again, a shift variable for the GEAR. The model assumes policy behaviour on the part of the Reserve Bank in which nominal rates are adjusted to maintain a positive real rate of interest (inflation adjustment), with further adjustment required when nominal rates change in world money markets (to manage short-term capital movements). The results are highly significant and indicate that the Reserve Bank tended to *over*-compensate for changes in world interest rates (an elasticity greater than unity), and

under-compensate for inflation (elasticity of .2). For the GEAR period there is a statistically significant upward shift in nominal interest rates of four percentage points (holding inflation and world interest rates constant). The result of these policies, with the rate of inflation falling, was to generate highly distorted real interest rates (see Figure 5).[24]

[Table 4 goes here]
[Table 5 goes here]
[Figures 3, 4, 5 go here]

5. Shifting GEAR(s) for Growth

Beginning in early 1996, the South African government embarked upon a macroeconomic policy that explicitly emphasised fiscal austerity: deficit reduction and pegging taxation and expenditure as fixed proportions of GDP. After this policy had run half its course (through the third quarter of 1998), the government could claim to have successfully reduced the fiscal deficit, and successfully brought inflation down to single digits. However, the policy was also associated with the lowest annual and quarterly growth rates since 1993. It would appear that this virtual collapse of growth under the GEAR cannot be explained by world market factors. Economic indicators for the major industrial countries were not significantly different before and during the GEAR period; and South Africa's growth rate declined compared to growth in other middle income countries.

While many factors influenced the performance of the economy during 1996-1998, there is a *prima facie* case that the GEAR policy package made a significant contribution to the collapse of growth in South Africa, due to its emphasis on deficit reduction. Numerous economists predicted this unfortunate outcome, as early as 1995, when government statements indicated a shift towards orthodox fiscal policy.[25] These predictions did not merely comprise negative attacks; several commentators proposed concrete alternatives to the austerity of the GEAR. Perhaps the most detailed alternative was the report of the Macroeconomic Research Group (MERG 1993), which proposed a prudently expansionist fiscal policy, combined with an accommodating monetary environment from the Reserve Bank.[26] This and other

alternatives, within a broad Keynesian framework, were rejected. While it is not possible to judge the success of what was not done, it is not difficult to assess the failure of what was done.

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Data Annex

The table below provides the sources for the quarterly data used in Tables 1-5, and Figures 1-5.

Country	Variables	Source
South Africa	GDP growth, inflation, employment, real wages, central bank rate, exchange rate, fiscal deficit, export growth	Reserve Bank of South Africa, *Quarterly Bulletin* (various issues) and Reserve Bank web site
Major industrial countries (France, Germany, Japan, United Kingdom, United States)	GDP growth, inflation, central bank rate	Datastream (on-line data base); IMF, *International Financial Indicators* (web site)
Newly industrialising countries (Argentina, Brazil, Chile, Mexico, Peru, Hong Kong, Korea, Philippines, Singapore, Turkey)	GDP growth	Argentina (IMF Financial Indicators, CD ROM, Ministry of the Economy, Public Works & Services, web site) Brazil, Chile, Mexico, Peru (Economic Commission for Latin America & the Caribbean, web site; Datastream) Korea, Philippines, Singapore, Turkey (Datastream)

Table 1: Policy Action for Demand Stimulation in the GEAR Macro Strategy (1996)

Type of Expenditure	Principal Determinants ->	Determinants in the GEAR->	Policy Action Affecting ->->	Transmission Mechanism ->	Fiscal stimulus in the 'integrated' scenario
Household Consumption	Income, interest rates	Income, interest rates	none	not relevant	derivative from GDP growth
Private Investment	interest rates, profit expectations	interest rates, 'confidence'	deficit reduction ->->	lower interest rate ->	+ 3.9 pct pts (93 % of total)
Public 'Consumption'	Government Policy	Government Policy	Pre-determined portion of GDP	[direct]	derivative from GDP growth
Public Investment	Government Policy	Government Policy	Pre-determined rate of growth	[direct]	+ 0.5 pct pts (11.4% of total)
Net Exports (X-M)	External demand, exchange rate, competitiveness	unspecified supply side reforms	unspecified supply side reforms	???	-0.2 pct pts (-4.4% of total)
Growth target (1996-2000)					**+4.2 pct points**

Note: The fiscal stimuli in the last column are based upon the national income accounting identity,

$$GDP = C + I_{pr} + I_{pub} + G + X_n$$

where C is household consumption, I_{pr} is private investment, I_{pub} is pubic sector investment, G is government 'consumption', and X_n (X-M) is net exports. This converts into growth rates (in lower-case letters), assuming consumption a function of income and government expenditure a constant portion of GDP:

$$g (1 - [G/GDP] - [C/GDP]) = i_{pr}[I_{pr} /GDP] + i_{pub}[I_{pub} /GDP] + x_n[X_n/GDP]$$

The GDP growth rate is the weighted average of the growth rates of investment and net exports. The ratios G/GDP, and X_n/GDP are given in the GEAR document, and the ratios C/GDP, I_{pr}/GDP, and I_{pub}/GDP were calculated from the Reserve Bank, *Quarterly Bulletin* (average for 1991-1995, adjusted for rates of growth during 1996-2000). This calculation gives an average growth rate of 4.16 percent for 1996-2000, which rounds off to the rate in the GEAR projection.

Table 2: Macroeconomic Indicators, GEAR Targets & Performance, 1996-1998

GEAR Targets	1996	1997	1998	1999	2000	Average 1996-00	Through 1998.3*
1. GDP growth	3.5	2.9	3.8	4.9	6.1	4.2	3.4
(actual)	*2.5*	*1.1*	*-0.5*	■	■	■	*1.0*
2. Inflation	8.0	9.7	8.1	7.7	7.6	8.2	**8.7**
(actual)	*7.3*	*7.7*	*5.5*	■	■	■	***7.1***
3. Employment growth (private)	1.3	3.0	2.7	3.5	4.3	3.0	2.3
(actual)	*-2.4*	*-3.3*	*-8.7*	■	■	■	*-3.3*
4. Real Wage growth (private)	-0.5	1.0	1.0	1.0	1.0	.7	.4
(actual)	*0.2*	*2.0*	*8.8*	■	■	■	*2.5*
5. Real Bank rate*	7.0	5.0	4.0	3.0	3.0	4.4	5.6
(actual)	*7.7*	*7.5*	*10.9*	■	■	■	*8.8*
6. REER (change in)	-8.5	-0.3	0.0	.0	.0	-1.8	-3.5
(actual)	*-3.3*	*2.6*	*-7.6*	■	■	■	*-2.6*
7. Fiscal deficit	-5.1	-4.0	-3.5	-3.0	-3.0	-3.7	**-4.3**
(actual)	*-5.3*	*-5.2*	*-3.7*	■	■	■	***-4.7***

Source: GEAR 1996, Reserve Bank of South Africa, *Quarterly Bulletins* & Web site (up-dated March 1999).

Notes: All indicators are through the third quarter of 1998, except: employment and real wages (2nd quarter); inflation and the real bank rate (include the first month of the 4th quarter).

*The source describes this item as the 'bank rate'; however, it clearly refers to the *real* bank rate. Numbers in **bold** type indicate targets met or exceeded. Black boxes indicate periods in the future as of date of this paper.

Table 3: Growth and Inflation in South Africa, 1990.1 –1998.3

(dependent variable: rate of consumer inflation)

Variable (log values)	Coefficient	Std error	Significance
Constant	.058	.011	**.000**
SAGRW(t-1)	-.305	.175	**.092**
INF5MIC(t-1)	1.791	.349	**.000**
GEAR	-.015	.008	**.044**

Regression Statistics:			
R^2(adj) =	.742		
F-stat =	30.690		
	(.000)		
D-W =	1.844		
DF =	31		

Variables:
  SAGRW = quarterly real GDP growth, current period
  GEAR = assumes value of unity, 1996.3 … 1998.3

Table 4: Regression Estimation of Quarterly GDP Growth
of the South African Economy, 1990.3 – 1998.3
(dependent variable: quarterly, seasonally adjusted real GDP)

Variable (log values)	Coefficient	Std error	Significance
Constant	-.025	.012	**.037**
GRW5MIC(t-1)	.772	.333	**.028**
STDEV5MIC(t-1)	-.004	.002	**.064**
XPGRW(4tqMA)(t-1)	.128	.048	**.013**
SADF(t-1)	-.277	.119	**.028**
Regression Statistics:			
R^2(adj) =	.424		
F-stat =	6.879		
	(.001)		
D-W =	1.510		
DF =	28		
Growth rates,1996.2-1998.3 (percentages): 1. Observed outcome	1.03		
2. Simulation, 5MIC, (1993.3-1995.4)*	0.96 **(-.07)**		
3. Simulation, Fiscal deficit, (1993.3-1995.4)**	2.03 **(+1.0)**		

Variables:
  GRW5MIC(t-1) = cross-country average of growth rates of France, Germany, Japan, United Kingdom, United States of America, lagged one quarter
  STDEV5MIC(t-1) = standard deviation of growth rates across the five countries, lagged one quarter
  XPGRW(4qtMA)(t-1) = moving average of real export growth, 4 previous quarters (t-1 through t-4)
  SADF(t-1) = fiscal deficit as a proportion of GDP, t-1

Notes:
  *Using actual values for fiscal deficit and export growth, but 1993.3 – 1995.4 (ten pre-GEAR quarters) averages for GRW5MIC and STDEV5MIC.
  **Using actual values for XPGRW, GRW5MIC and STDEV5MIC, but 1993.3 – 1995.4 average for the fiscal deficit.

Table 5: Regression Estimation of South Africa's Nominal Interest Rate,
1990.1-1998.2
(dependent variable: Treasury bill rate)

Variable (log values)	Coefficient	Std error	Significance
Constant	.010	.009	.282
NIR5MIC(t-1)	1.406	.175	**.000**
SAINF(t-1)	.209	.086	**.022**
GEAR (1996.3 … = 1)	.040	.004	**.000**
Regression Statistics:			
R^2(adj) =	.874		
F-stat =	67.246		
	(.000)		
D-W =	1.342		
DF =	29		

Variables:
   NIR5MIC(t-1) = cross-country average of nominal treasury bill rate for five major industrial
countries, lagged one quarter
   SAINF(t-1) = consumer inflation, t-1
   GEAR = assumes value of unity, 1996.3 … 1998.2

[1] Michie and Padayachee write,

> How could one characterise the overall economic policy of the ANC-led Government in the first two years after elections? ...[As] maintaining an orthodox economic stabilisation package: monetary and fiscal conservatism was employed to bring down even further the inflation rate, government spending, and the deficit to GDP ratio. (Michie & Padayachee 1998, p. 625)

[2] This interpretation is found in Nomvette, Maasdorp & Thomas (1997), and is discussed in Section 4, below.

[3] A survey of the debate is found in Michie and Padayachee (1997, see also Fine and Padayachee 1998). In their introduction to the book, the editors place emphasis upon the constraints to economic policy resulting form the nature of the political settlement that facilitated majority rule:

> We would argue that in the process of negotiations, certain concessions were made by the ANC in respect of economic issues which, however important they may have been to the political settlement, did serve to blunt the movement's economic weapons [and] close down certain policy options... (Michie & Padayachee 1997, p. 11).

[4] The neoliberal position was stated in the last major economic policy document of the apartheid government (Republic of South Africa 1993) and an IMF report slightly later (IMF 1994). The heterodox position was argued in MERG (1993), a report commissioned by the ANC leadership, but never formally endorsed.

[5] The World Bank in its 1994 report on poverty in South Africa says:

> ...[N]either government transfers nor increased growth are sufficient in themselves to reduce poverty...Unless growth is revived on a sustainable basis, the jobs and resources needed to better the long-term prospects of the poor will not materialise. Yet any revival of growth that fails to achieve visible redistribution and poverty reduction is likely to falter under the pressure of growing social unrest. (World Bank 1994b, pp. 1-2)

[6] The Governor of the Reserve Bank has made it clear that a three percent growth rate was not satisfactory:

> ...3 per cent per annum...is not good enough for South Africa...In the longer term, South Africa needs persistent economic growth, and then also at levels even higher than what was attained over the past two years. (Stals, September 1995, p. 5)

[7]Of the seven Latin American countries with populations over ten million, five had growth rates greater than three percent during 1990-1994. The exceptions were Mexico and Peru, which grew at 2.2 and 2.8, respectively (Inter-American Development Bank 1995, Table B-2).

[8] According to World Bank statistics (World Bank 1995, pp. 164-65) the East Asian and Pacific countries grew at 7.8 percent per annum during 1980-93. The World Bank's measure of South Africa's per capita income places the country in the 'upper-middle income' category. In 1995 there were twenty-two countries so defined. If one excludes the four formerly-centrally-planned countries among them, of the remaining eighteen, fourteen grew faster than South Africa over the same period, and five grew in excess of five percent per annum (Mauritius, Malaysia, Chile, Oman, and South Korea).

[9] The GEAR's policy framework showed striking similiarities to that propounded in a report issued by the South African white business community, *Growth for All* (South Africa Foundation 1996). The similarity is pointed out by Nattrass (1997), and by Michie and Padayachee (1998, p. 627), who describe *Growth for All* as 'damned' by critics for 'its vulgar free-market approach' (p. 626).

[10] Using the growth rates of wages and employment in the 'Integrated Scenario Projections' of the GEAR document (Appendix 4), the wage share in GDP declines from 53 percent in 1995 to 50 percent in 2005 (wage share data from Reserve Bank of South Africa, *Quarterly Bulletin*, March 1996, p. S-100).

[11]See Appendix 15 and the discussion of the 'employment elasticity of output' in different sectors.

[12]The central role of 'crowding out' in the Macro Strategy projections is presented in Appendix 5 of the document.

[13] Actual growth performance fell well short of pessimistic projections. Michie and Padayachee note that in early 1997, growth for that year was 'expected at best to be 2.5%' (Michie & Padayachee 1998, p. 631), instead of the GEAR target of 2.9. In the event, the rate proved to be 1.1 percent.

[14] Though the rate of inflation rose in the second half of the year.

[15] These are France, Germany, Japan, the United Kingdom, and the United States of America. See annex for discussion of data and sources.

[16] The elasticity of South African inflation with respect to 'world' inflation is rather high, 1.8, which some might interpret as further evidence of structural inflationary pressures.

[17] Culpability was assigned to external factors by the Minister of Finance, Trevor Manuel, in November 1998: 'Since April [1998] the global economy has been rocked again and again;

inevitably, we have not been immune to these shocks'(*Financial Times*, 3 November 1998, p. 10).

[18]Capacity utilisation in manufacturing in 1981 was measured to be ninety percent. It fell to an average of 84 percent for 1985, and 78 percent for 1993, then recovered to 83 percent in mid-1995. These numbers should be treated with some caution (see MERG 1993).

[19] The average for 1993.3 through 1995.4 was minus 7.9 percent of GDP, while the average for 1996.3 through 1998.1 was minus 5.9.

[20] This conclusion is similar to that generated by the van Seventer and Gibson simulation model (van Seventer & Gibson 1995).

[21] See World Bank (1993) and Adelzadeh (1997). The World Bank considered a short term deficit of twelve percent viable, which would be reduced by growth. For a discussion of deficit reduction through faster growth, see Standing, Sender and Weeks (1996, chap. 2).

[22] This means that the rate of time preference would be equal to the rate at which real consumption per head increases in the long run.

[23] The real bank rate during 1996.3 through 1998.2 averaged 8.8 percent (with private capital market rates substantially higher). If, as the GEAR proposed, the sustainable growth of GDP was about five percent, then sustainable per capita growth would be less than three percent.

[24] Pillay provides a detailed analysis of monetary policy in the 1990s (Pillay 1997).

[25] For example, MERG (1993), Standing, Sender & Weeks (1996), van Seventer & Gibson (1995), COSATU (1996), and Samson (1997).

[26] The MERG report called for a politically-accountable Reserve Bank.