

UNIVERSITY OF CAPE TOWN

SCHOOL OF ECONOMICS

**"SUCCESSFUL
FISCAL ADJUSTMENTS":
EMPIRICAL EVIDENCE
FROM SOUTH AFRICA**

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THE REQUIREMENTS FOR A MASTERS DEGREE IN
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ABSTRACT

From 1973 to 1997 South Africa's fiscal stance has undergone large fluctuations. The primary balance of the general government recorded a surplus of 3.8% of GDP in 1990 and a deficit equivalent to 4.5% of GDP in both 1977 and 1994.

This paper identifies ten episodes of fiscal adjustment, defined as a fiscal year during which the primary deficit was reduced by more than 1.5% of GDP. It then assesses the success of these episodes, according to the evolution of the debt ratio two or three years after the adjustment. In South Africa there have been two episodes of successful fiscal adjustment: in 1978 and in 1980.

The paper proceeds by analysing the size and the composition of the various fiscal adjustments. It shows that successful fiscal adjustments are generally smaller than unsuccessful ones. On the taxation side, successful adjustments rely mainly on non-tax revenue, whereas unsuccessful ones record large increases in direct taxation. Generally the adjustment is mostly felt on the expenditure side. As in most developing countries, capital expenditure is the main target for cuts. However, the size of the reduction in capital expenditure is smaller in successful adjustments. Furthermore, these adjustments record spending cuts in all categories of expenditure, contrary to unsuccessful contractions. It seems that successful adjustments rely on temporary tax increases and permanent spending cuts.

The behaviour of macroeconomic variables shows that fiscal adjustments do impact on the economy. It is striking to notice that, in the short-term, growth picks up with the adjustment. This might be due to wealth, credibility, expectational and competitiveness effects, which more than offset the negative aggregate demand impact of reduced public deficits.

Over the medium-term, successful fiscal adjustments are followed by higher growth rates, lower interest rates, higher inflation, rising private demand and an

appreciation of the currency. For unsuccessful adjustments, all macroeconomic indicators display a downward medium-term trend.

Finally the analysis of the last adjustment, implemented over the period 1995-1996, shows many characteristics of a failed adjustment. The size of the contraction is very large. It relies mainly on increases in direct taxation and cuts in capital expenditure and subsidies. The medium-term impact of the fiscal contraction is disappointing, since growth is clearly slowing down.

The GEAR strategy incorporates a gradual approach to fiscal sustainability that does not qualify as a fiscal adjustment in this paper. However, a clear medium-term strategy to achieve fiscal discipline, as part of a broader policy package, could also play an important role in establishing credibility.

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INTRODUCTION

For sometime the role of fiscal policy has been the topic of intense and controversial debate. In the European Union, most countries are trying to qualify for the single currency and in order to achieve the prescribed deficit-to-GDP ratio, have to cut their budgetary imbalance. This policy sometimes leads to hardship, whereas in other cases, it results in a much-improved macroeconomic balance. Nevertheless, the fiscal targets defined in the Maastricht Treaty have highlighted the important contribution played by fiscal policy in the economy. But the debate is not confined to developed countries. In the developing world, many governments are also becoming increasingly aware of the effects of their fiscal stance on the creation of a growth-enhancing and sustainable path to development. International organisations often provide guidance to countries facing macro-economic imbalances and fiscal adjustment is generally part of the intervention. In transition economies, such as the East-Asian countries, it has been realised that fiscal policy indeed plays an important part in the overall economic balance. In a globalised economy, financial markets can closely scrutinise government policies and react to them rapidly and in a strong way.

South Africa is, of course, not untouched by the debate. The current government has committed itself to delivering basic socio-economic infrastructure to the previously disadvantaged communities. At the same time, the country is trying to regain a place in the global economy. In both respects, fiscal policy can be expected to play a significant role.

This paper aims to contribute to the present debate surrounding the impact of fiscal policy by presenting *empirical evidence* on the South African case. Indeed current economic theories do not yet provide a consistent framework that can model the various macroeconomic impacts of a reduction in the fiscal imbalance.

This paper relies mainly on the methodology developed in Alesina and Perotti (1995, 1996) and in McDermott and Wescott (1996). It begins by in defining an episode

of fiscal adjustment in terms of size and duration. In South Africa, ten episodes of fiscal contraction were identified over the period 1973-1997.

The second step of the methodology consists of separating successful from unsuccessful fiscal adjustments. As one of the main aims of a fiscal contraction is to alleviate the debt burden, success is generally related to a subsequent reduction in the debt-to-GDP ratio. In South Africa, only two fiscal adjustments comply with the stated criteria of success. A comparison between South Africa's success rate and that of other countries is then made.

The third step is to carefully analyse the composition of the fiscal adjustment. Changes in taxation and expenditure have been identified as generating very different economic outcomes. Which categories of taxes and spending were targeted during fiscal adjustment episodes in South Africa? Is there a significant difference between successful and unsuccessful contractions? Are the results presented here similar to the ones reported in Alesina and Perotti (1995, 1996) and McDermott and Wescott (1996)?

The final step consists of assessing the short and medium-term macroeconomic impacts of the fiscal adjustments. Is there a clear pattern of economic response to fiscal contraction? Or, are there significant differences between successful and unsuccessful episodes? What are the potential linkages between the composition of spending cuts or tax increases and the changes in growth, consumption, investment, net exports, inflation and competitiveness?

The findings on the first nine adjustments are then used to analyse more thoroughly the latest episode of fiscal contraction, which was implemented over a two-year period (1995 and 1996). According to the chosen definition of success, it is too early yet to qualify it as successful or not. But the patterns of the latest adjustment can be compared with the findings of the previous contractionary episodes and the results will assess the extent to which the composition of this fiscal adjustment can contribute to improving the macroeconomic climate in South Africa. At a time when the demands

from the electorate and the requirements of the global economy are pressing, contradictory views on fiscal policy could be overcome by empirical findings, which show that a fiscal contraction can actually be growth enhancing.

The inferences gained from this paper will provide policy makers with useful indications on how to deal with a future fiscal imbalance, so that growth is not penalised. As any other democratic government, the South African government is particularly concerned that potential short-term negative macroeconomic consequences might arise from a fiscal adjustment and this paper will assess the extent to which these concerns are justified. It will also help private agents to evaluate the success chances of a proposed fiscal contraction.

This paper is divided into six chapters. Chapter 1 summarises theoretical arguments concerning the reduction of fiscal deficits. It explains the workings of the standard Keynesian model as well as the Neo-Classical contribution. It points out the different macro-economic impacts that changes in various categories of expenditure and taxation can generate. Chapter 2 reviews the empirical work related to the two main issues discussed in this paper: the composition of the adjustment and its macro-economic implications for the economy. It presents the various studies that inspired this paper.

Chapter 3 introduces various fiscal indicators and data that allow for the definition of an episode of fiscal adjustment in South Africa. The extent of the success of these different contractions is assessed here. Chapter 4 analyses the composition of the adjustments by reviewing changes in taxation and expenditure. It investigates differences between successful and unsuccessful adjustments. Chapter 5 deals with the impact of the various kinds of fiscal contraction on a range of key macro-economic variables. Chapter 6 examines in more detail the latest fiscal contraction (1995-1996), as this adjustment will give some valuable insight into the recent workings of the South African economy.

CHAPTER 1

THEORETICAL OVERVIEW

The theories on fiscal policy have dealt mostly with the size of the budgetary imbalance, the way it is financed and the impact it has on economic growth. Public deficits influence growth through their effect on the utilisation of resources, on the rate of capital accumulation and on the political and economic credibility of the government. They can be financed through local borrowing, foreign borrowing or money creation.

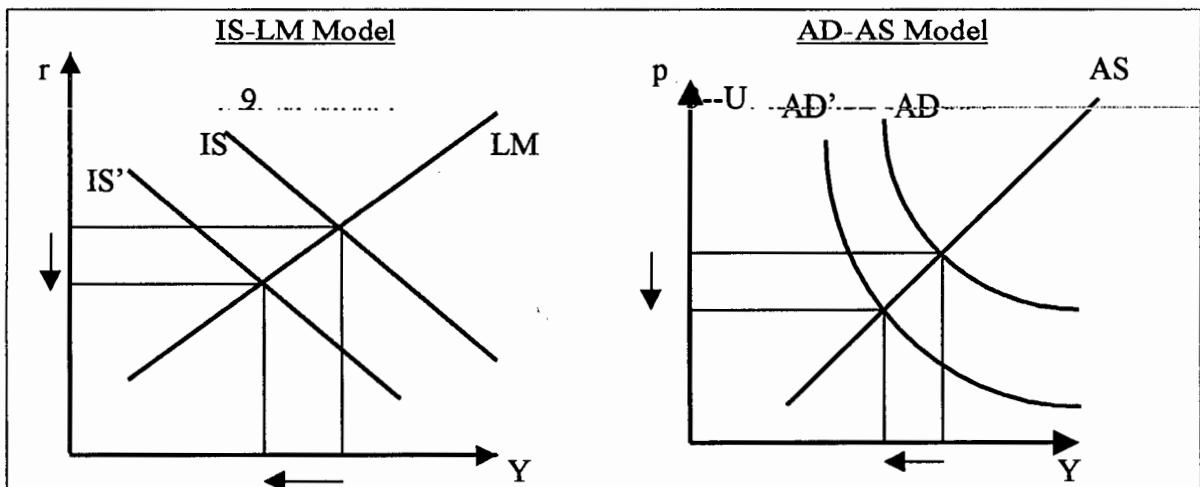
This paper is specifically aimed at determining the short to medium-term macroeconomic impacts of a fiscal adjustment. It is faced with three problems. First, almost all theoretical studies and models deal with expansionary fiscal policies. Models explaining in detail the impact of a once-off deficit reduction are very rare. As it is probable that the impacts of a fiscal expansion and a fiscal contraction are not symmetrical, a review of the mainly expansionary fiscal theories is not adequate. Second, there are many issues (identification problem, endogeneity, expectations, role of accompanying policies, time frame, ...) that remain outstanding in the theoretical literature. Finally, this paper analyses short to medium-term impacts of a reduction in the fiscal imbalance and it is beyond its scope to assess the long-term, inter-generational impacts of the episodes of fiscal adjustment. So, this paper will only briefly review the main and basic theories regarding the composition and economic impacts of a *once-off reduction* in the level of deficit. The main focus of this paper remains the empirical analysis of the South African episodes of fiscal adjustment.

The first section of this chapter focuses on the theoretical impact on economic activity of an aggregate reduction of the public deficit. The main models developed over the past decades are summarised and their most important implications for growth highlighted. The role of expectations will also be analysed. The second section discusses in more detail the economic impact of a change in the composition of several categories of expenditure and taxation. As the more recent literature has emphasised, the “how” is at least as important as the “how much”.

1.1 Deficit Reduction

According to the Keynesian theory, governments should manage their expenditure and revenue in order to smooth out the economic fluctuations. During a recession the state should increase its spending so as to alleviate the slump in aggregate demand. The reduction in the level of production and employment could be minimised by an active fiscal policy. An expansionary fiscal policy boosts growth, because private agents anticipate a higher demand and start investing. Thus an increased budget deficit has a multiplier effect on growth. But the opposite is true for a fiscal contraction, as is shown in Figure 1. This hypothesis argues that an adjustment either through lower government spending or through increased taxes will directly reduce aggregate demand and current disposable income. This will impact negatively on present consumption and output, through the multiplier effect. Spending cuts, particularly on public investments, tend to be more recessionary than tax increases. Another example is that a reduction in transfers does not have an immediate impact on production, but only on disposable income and as such is not as damaging as a cut in investment. Thus the ultimate size of the impact on growth depends on the composition of the adjustment.

Figure 1: Fiscal Contraction According to the Keynesian Theory



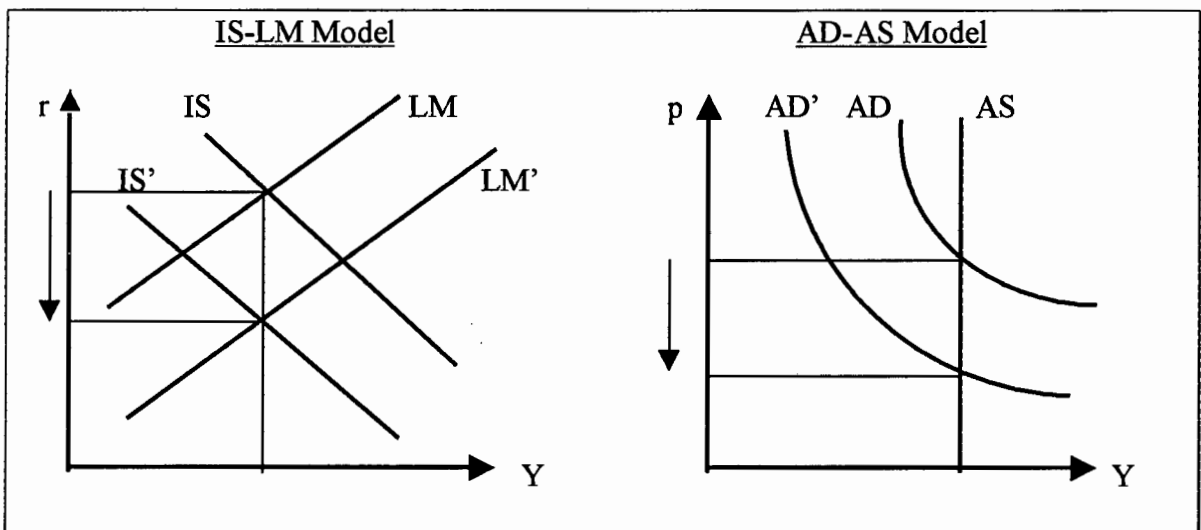
Note: IS, LM, AD and AS are the original curves. IS' and AD' represent the fiscal contraction.
Source: Adapted from Natrass (1997).

9 u In the Neo-Classical model, fiscal policy merely has a transitional effect on the rate of growth. Steady state growth is driven by exogenous factors (dynamics of the

00 9
regulation technological progress etc) A reduced public deficit is compensated for

by a similar rise in investment demand. As illustrated in Figure 2, the real economy is left unaffected by a fiscal contraction, while the interest and inflation rates drop. Even if different tax and expenditure systems may be important determinants of the level of output, they are unlikely to have an impact on the rate of growth.

Figure 2: Fiscal Contraction According to the Neo-Classical Theory



Note: IS, LM, AD and AS are the original curves. IS', LM' and AD' represent the fiscal contraction.
 Source: Adapted from Nattress (1997).

The transitional effect on growth is not as clear-cut as the Keynesian model predicts. Indeed three other mechanisms are likely to offset the traditional Keynesian effect. These are the wealth, credibility and expectational effects.

If a country experiences large fiscal imbalance and decides to take drastic action to reduce the deficit and to improve its solvency, it may be rewarded with a lowering of its risk premia. Private agents may consider that the government might indeed be less likely to depreciate its public debt via higher inflation and even less likely to default. The reduction in interest rates, which results from the credibility impact of the fiscal contraction, can thus generate positive crowding-in effects on private investment and consumption (particularly of durable goods).

Furthermore, if a reduction in government spending signals a permanent reduction in the future tax burden for firms and households, these agents perceive that their permanent income has increased. This will trigger higher private spending. Thus improved expectations on the fiscal stance generates a positive wealth effect. Both these impacts will support economic growth.

Recent endogenous growth models reconsider the role of fiscal policy. As reported by Engen and Skinner (1992), targeted spending (for example, on research, education and infrastructure) have permanent growth effects through the generation of positive externalities. It results in a large complementarity of private and public spending. There also seems to be a “size effect” by which a large amount of public spending and investment allows for rapid technological improvements. Thus a reduced deficit leads to lower growth because externalities are not crowded in.

Finally according to the Ricardian Equivalence Theorem, a reduction in the public debt level does not impact on private consumption and aggregate savings. Indeed private agents fully discount the reduction in future taxes, resulting from the deficit cut. Their lifetime consumption pattern remains unchanged and the reduced public dissaving will be entirely offset by a fall in private saving. Thus fiscal policy is completely irrelevant. But this theorem is generally rejected on the basis of its strong assumptions and for various empirical reasons.¹

In summary, the theoretical impacts of an episode of fiscal contraction differ according to schools of thoughts. In the short to medium-term, a fiscal adjustment could have the following negative impacts on growth:

- a decrease in aggregate demand,
- a reduction of crowding-in effects (fewer externalities due to lower expenditure),

¹ For contradicting views and empirical evidence, see Barro (1989), Bernheim (1989), Buiter (1985) and Leibfritz *et al.* (1994).

but also the following positive impacts on growth:

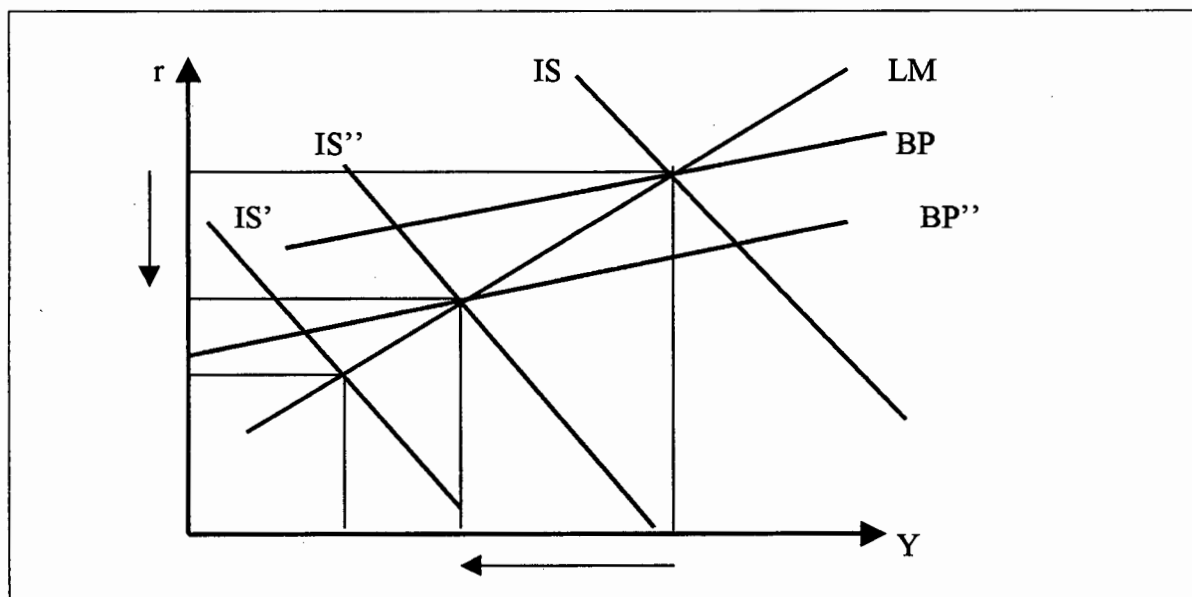
- a reduction of the crowding-out effects (because of reduced financing needs),
- an increase in crowding-in effects (because of increased economic credibility and improved expectations),
- a positive wealth effect (if permanent income is increased).

Thus an episode of fiscal contraction creates some short-term economic instability, as these effects contradict themselves and the aggregate impact is difficult to assess at the start of the adjustment.

A smaller budget deficit lowering aggregate demand impacts as well on the trade

sector. The IS/LM/BP model, presented in Figure 3, is used to assess the impact of a contractionary fiscal policy in an open economy, with flexible exchange rates. The fiscal contraction will first shift the IS curve to IS' . As the interest rate drops, foreign capital flows out of the country and lowers the demand for domestic currency. The exchange rate depreciates, which improves the competitiveness of exports and decreases the demand for imports. Thus the contractionary impact on the local economy is softened.

Figure 3: Fiscal Contraction in an Open Economy with Flexible Exchange Rates



Note: IS, LM and BP are the original curves. IS' represents the fiscal contraction. IS'' and BP'' illustrate the subsequent automatic adjustments.

Source: Adapted from Natrass (1997).

The theoretical effect of a reduced deficit on most economic variables is not easy to assess, since it depends on the nature of the financing of the deficit. A reduced monetisation of the deficit generally leads to lower inflation, whereas a reduction in bond issues lowers interest rates, thus contributing to positive wealth effects. Furthermore if the new fiscal stance is more credible, the risk premium diminishes and the interest rate drops. This move can crowd in private demand, and particularly private investment. Thus the IS curve could shift outwards and a contractionary fiscal policy could result in an increased output. These adjustments are known as expansionary fiscal contractions.

A cut in public deficit will also impact on the labour market and influence the external competitiveness of the economy. These impacts cannot be primarily qualified in relation to the size of the fiscal contraction but principally in relation to the composition of the adjustment. They will be reviewed in the following section.

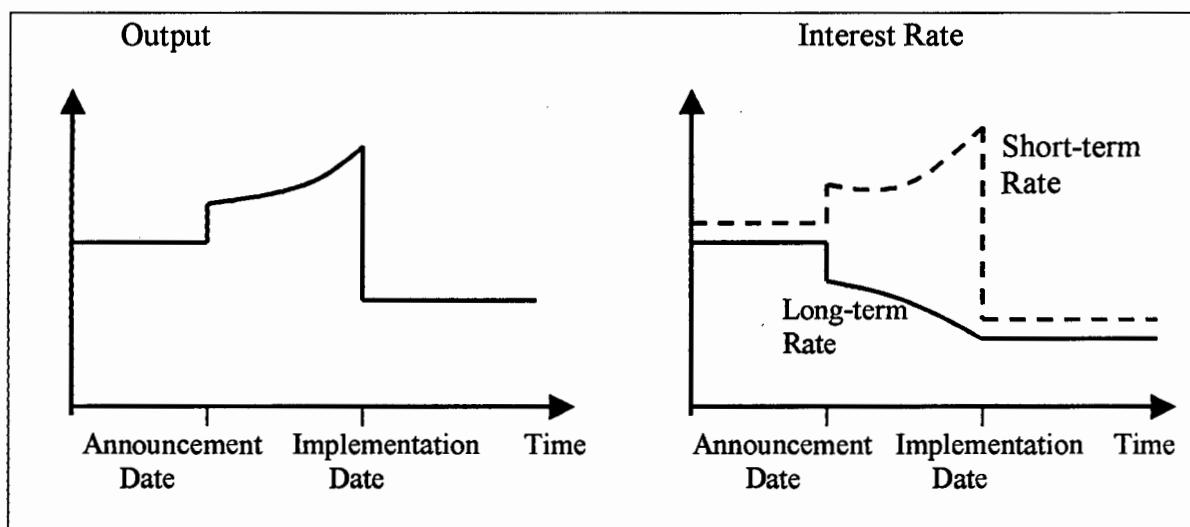
It is also essential to incorporate the role of expectations in the theoretical analysis. Changes in exogenous variables can either be anticipated or not, and can be perceived as permanent, transitory or reversible. There are basically two main schools of rational expectations² when dealing with the impact of fiscal policy.

On the Keynesian side, expectations can be incorporated in the term structure of the interest rates. Buiter (1985) shows that the short-term interest rate is the expected return on long-term debt, so that the present long-term interest rate represents a forward-looking average of current and future expected short-term rates. Thus an unanticipated and permanent cut in spending or increase in taxes will have the same impact as the one presented in Figure 1. But the unexpected announcement of a future fiscal contraction could have a present expansionary impact. In fact, between the announcement and the implementation date, there is every incentive to demand more. Furthermore, the long-term interest rates should decrease, since expected future short-term rates should fall,

² This paper only considers rational expectations, since the alternative specifications of expectations have been subjected to a wide range of criticisms.

following the fiscal contraction. Investment and output should rise in the short-term. Figure 4 illustrates this phenomenon.

Figure 4: Effects of an Anticipated Future Tax Increase



Source: Adapted from Buiter (1985)

Figure 4 clearly shows that, in the short-run, a fiscal contraction can have an expansionary impact, due to expectations. But, when the fiscal adjustment is implemented, output will adjust according to the IS/LM model depicted in Figure 1. These developments can be extended to the open economy with perfect capital mobility and flexible exchange rates. An anticipated future fiscal contraction will have short-term expansionary effects, since the exchange rate depreciates, because of the expectation of future lower domestic interest rates.

Another example of the role of expectations in a Keynesian framework is that the immediate impact of a permanent increase in taxation could be expansionary, since there is the anticipation that future deficits will be lower and that short-term and long-term interest rates will fall. The response of investment to lower interest rates could be strong enough to offset the contractionary fiscal stance.

According to the permanent income hypothesis and the life-cycle hypothesis, individuals maximise their utility over time by averaging out their consumption. They

plan their consumption behaviour over a relatively long period of time. Thus the role of fiscal policies will be minimised.³ A tax change, and particularly a temporary one, will have a negligible impact on permanent income. Furthermore, the government is expected to satisfy its "intertemporal budget constraint".⁴ Whereas almost all models analyse the impact of fiscal expansion, this paper attempts to model the effect of a fiscal contraction. However, if it is rational to expect that a present tax cut should be followed by a tax increase tomorrow, is it rational to expect that a present tax rise to comply with the intertemporal budget constraint will be followed by a future tax cut? Until now, this question has not been answered in the form of a comprehensive theoretical model. The next section of this paper presents partial theories with regard to the economic impact of a fiscal adjustment. The role of expectations will generally be highlighted.

1.2 Composition of the Adjustment

Besides the overall size of the deficit cut, Alesina and Perotti (1995, 1996) and McDermott and Wescott (1996) have highlighted that the composition of the adjustment can generate very different economic outcomes. Tax increases or spending cuts do indeed have distinct implications for growth. Furthermore, the government's choice of manipulating certain categories of expenditure or taxation instead of others is likely to have important consequences on the sustainability⁵ and the credibility of the fiscal adjustment. The composition of the fiscal adjustment is a matter of utmost importance because of the following effects:

- Expectational effect. For example, spending cuts of the same size might be conducted on different categories of expenditure, but some will have more lasting effects because they deal with structural imbalances (such as unemployment benefits and pensions). Thus the composition of the adjustment, as well as the resulting long-term size of the public sector, will influence expectations about the future level of taxation.

³ Shaw (1984).

⁴ It is defined as the fact that the government would be solvent if its present stock of debt were equal to the present value of all future primary surpluses.

⁵ In this paper, fiscal sustainability refers to government's ability to maintain fiscal policies indefinitely. In short to medium-term horizons, fiscal sustainability is threatened when the budget deficit becomes excessively high. Following Biggs (1997c), it argues that current trends in public expenditure and taxation should not lead to macroeconomic instability, which would in turn necessitate a change in the fiscal stance.

- **Credibility effect.** Even though it is difficult to assert ex-ante the credibility of an adjustment, a government that tackles politically sensitive components of expenditure such as wages or social security programmes heralds its strong commitment to the adjustment.⁶
- **Competitiveness effect.** Some fiscal instruments (government consumption, labour tax, indirect tax) are more likely than others to impact on the supply side of the economy, on the labour market and on the exchange rate. The response of the trade sector to the adjustment will have important consequences for the overall success of a fiscal adjustment.

Thus a policy of deficit reduction does not have to generate adverse demand effects if the adjustment is suitably implemented and composed, and if agents respond positively to the adjustment measures.

1.2.1 Taxation

It has been widely demonstrated that reducing the budget deficit via a present rise in distortionary taxes has negative real effects.⁷ For example, the strong disincentives of a rise in capital income taxes include negative wealth effects and reduced output. Furthermore, the Ramsey rule of optimal taxation suggests that a higher level of taxation leads to a disproportionate loss in economic efficiency even if tax distortions are equalised. However Ludvigson (1996) suggests that even the prospect of future distortionary taxation might prove not to be contractionary, as the reduction of the net return to saving, which discourages capital formation, might be outweighed by a present increase in work effort and output.

Another way through which a tax rise could impact positively on growth is through its expansionary effects on private consumption. This phenomenon can be

⁶ Nicoli Nattrass and Tania Ajam commented that for investments to pick up, it must be the case that no negative results (social unrest, strikes, increased criminality) follow politically sensitive spending cuts. It is clear that a fiscal adjustment is of such importance that it needs both the government's commitment and the society's approval.

⁷ In general these models assume that the alternative means of financing the deficit is by raising future lump sum taxes. For an empirical study on OECD countries, see Leibfritz *et al.* (1997).

explained in two ways. In cases where a present rise in taxation leads to a drop in an already high public debt ratio, households and firms might expect that less damaging taxes will fall on them in the near future. This stabilising fiscal policy also reduces uncertainty and thus decreases precautionary savings. In a similar vein, Blanchard (1990) argues that as a tax cut will have to be compensated for in the near future because of the accrued interest payments and if the debt ratio is already high, a tax cut increases the probability of default. This leads to a reduction in the present discounted value of the future income of the private sector. The opposite effect is probable in the case of a tax rise. It is reported by Artus (1993) that in countries with a high debt-to-GDP ratio, private agents anticipate the rise in taxation. In such a situation a policy aimed at reducing the public debt will not have recessionary impacts because households and firms will use their savings to pay for the new taxes.

A change in the different categories of taxation has distinct impacts on growth. For example, the main disincentive of income taxation is the negative wealth effect it generates. An increase of the corporate income tax lowers the net rate of return to private investment. Thus investment spending is less attractive, which has a detrimental effect on the growth potential of the economy. But a rise in direct taxation will also modify incentives to work and impact on the aggregate supply.

A rise in the level of indirect taxation, particularly consumption taxes, affects the rate of growth, through the distorting impact it has on the relative price of consuming today instead of tomorrow, and the incentive to accumulate capital.

Alesina and Perotti (1994) report that an increase in household taxes and social security contributions leads to a fall in competitiveness, because increased fiscal pressure results in higher wage demands from the unions. This effect will be particularly relevant in countries where unions can manage to pass on tax increases to wages but fail to incorporate a financial value to improved benefits on the expenditure side resulting from tax increases.

1.2.2 Spending

Bertola and Drazen (1993) develop a model of intertemporal optimising behaviour. They assume that public spending rises according to a stochastic process and thus leads to a deficit. In reaction to the resulting fiscal imbalance, private agents expect that the current fiscal deficit will have to be corrected, once a “trigger point” is reached. This correction can either take the form of reduced spending or increased taxation. For low but increasing levels of spending, they observe a non-linear negative relationship between government spending and private consumption, so that private demand is only partially crowded-out. This is because consumers do not internalise fully the potential future increase in taxation, as the correction might be done on the expenditure side. Once the “trigger point” is reached and if expenditure is adjusted so that the fiscal imbalance is removed, then private consumption jumps up because of the wealth and expectational effects. But if taxes have to be raised because of a lack of political commitment to adjust and to control spending, private consumption drops.

Thus, spending cuts can be expansionary because they induce expectations that future public spending and therefore taxes will be lower. This decreases the present discounted value of future taxes and leads to a rise in current private spending. On the contrary, once the “trigger point” is reached and deficits are reduced through tax increases, the probability of subsequent spending cuts is reduced and, as a result, the present discounted value of future tax increases, leading to a fall in output. The authors argue that the expectation view of fiscal policy is able to explain the future behaviour of private agents and the macro-economic impacts following a fiscal contraction.

Changes in the various categories of expenditure are likely to have diverse economic impacts. Alesina and Perotti (1994) argue that a cut in social transfers improves competitiveness, by reducing the bargaining power of the unions.

When it comes to cuts in the government wage bill, Alesina and Perotti (1996) argue that a reduction in public employment shifts the aggregate demand for labour and thus leads to a fall in unit labour costs and a depreciation of the currency.

According to them, a cut in the non-wage government consumption does not generate the same outcomes because both the private and the public sectors have a similar propensity to spend on the goods and services which are included in the definition of non-wage government consumption. A reduction in government consumption will impact on growth only if it affects the productivity of the private sector.

If the government has a lower propensity to spend on imports than the private sector, a cut in public expenditure could increase the pressure on the balance of payments and imply a corresponding depreciation of the real exchange rate. However, as shown by Matin (1992), a shift in the composition of the adjustment towards higher public consumption expenditure (with obviously lower capital expenditure, which is generally more import-intensive) tends to appreciate the currency. The impact on the exchange rate of the size and the composition of the fiscal adjustment is of crucial importance, especially when it is coupled with trade liberalisation.

Easterly and Rebelo (1993) report that the share of public investment (in transport and communication at least) is positively correlated to growth, through its impact on the productivity level of the private sector. Since public and private investments are complement, reducing the deficit through cuts in public capital expenditure lowers growth. But as Easterly and Schmidt-Hebbel (1993) remark, public investment can also be concentrated in activities that substitute directly for private investment. They report as well that a cut in public investment improves the trade balance, since capital is often imported.

CHAPTER 2

FISCAL ADJUSTMENTS AND INTERNATIONAL EVIDENCE

The studies on the composition and the success of fiscal contraction episodes are relatively new. Economists used to study fiscal expansions or changes in the overall stance of the fiscal policy. It was not until the early nineties that the first analyses of budgetary contractions were conducted, mainly because of the need for European countries to comply with the Maastricht criteria. As the Maastricht Treaty sets a threshold on budget deficits of 3% of GDP, a majority of European countries had to reduce their fiscal imbalance. Thus the ways in which the deficits had to be lowered without penalising growth became a major issue for European governments.

In the first studies dealing with episodes of budgetary contraction, fiscal policy was discussed as part of a broader economic overview. For example Dornbusch (1989) looks at the contribution of the fiscal contraction in the Irish stabilisation plan of 1982-1984. The budget deficit was dramatically reduced with the primary balance moving all the way into surplus. This fiscal contraction had the textbook Keynesian effect: aggregate demand dropped while output and employment fell. Expenditure switching policies, such as a depreciation of the real exchange rate or a lowering of the real interest rate, were not allowed to operate. Relative labour costs rose significantly preventing exports from rising and smoothing away the impact on production and employment. The negative outcome of the stabilisation programme was due to the way in which this fiscal contraction plan was conducted, that is the deficit reduction was mainly achieved through higher levels of taxation. The tax structure became even more inefficient as the rise in marginal income tax rates provided a strong disincentive to work and the rise in commodity taxes reduced living standards. It resulted in a sharp decline in investment, unemployment reached record levels, and the debt-ratio continued its worrying upward trend. Bertola and Drazen (1993) argue that the absence of a significant cut in government spending, when this had come to be expected, was the major cause for the sharp drop in private consumption and the eventual failure of this adjustment.

Giavazzi and Pagano (1990) study Denmark's and Ireland's second sharp fiscal contractions in the 1980s and show that such a move can be expansionary. Their fiscal correction programmes relied heavily on cuts in government consumption and public investment, whereas increases in net taxes resulted more from output growth. The expected private consumption decline was not as important as the normal Keynesian relationship predicted. The explanation is that large fiscal contractions had a substantial impact on consumer's expectations and on investment through improved credibility with regard to the government's ability to manage the economy. The public tended to expect a lower future tax burden and, through the increased expected lifetime disposable income, boosted its present consumption. The study particularly points out that reduced expected corporate taxation can bolster investment spending.

With specific reference to the United States, Bohn (1991) estimates that a high deficit has always been corrected via a combination of tax increases and spending cuts. Both hypotheses of tax-and-spend and spend-and-tax have been validated by data extending over two centuries, from 1792 to 1988. Around one third of all changes in government spending are reported to be permanent and to signal similar changes in taxes. If economic agents expect a rise in public spending, it is thus likely to be compensated for by a rise in taxation.

Buiter *et al.* (1993) reports that fiscal adjustment needed by European countries in order to qualify for the final phase of the EMU will reduce growth. He summarises three model simulations, which show particularly that for countries requiring major deficit reductions, the effect on growth is negative, even though interest rates are cut. However, he recognises that Germany's monetary policy plays a major role in these models. For example, if the Bundesbank adopts a loose monetary policy at a time when the German government implements its tight fiscal policy, this combination will then minimise the output and employment costs of achieving convergence towards the EMU criteria.

Bartolini, Razin and Symarsky (1995) model the macroeconomic effects of fiscal consolidation in the G7 countries and show that a deficit reduction leads to transitional

short-term output losses. This is due to the reduction in aggregate demand and the increased dependency on distortionary taxes. But the recovery will be quicker and stronger for countries that rely on increases in indirect taxes and cuts in spending, when compared to countries relying more on labour and capital taxes.

In a second paper, Giavazzi and Pagano (1995) reiterate that the impacts on private demand (private consumption and investment) are the key ingredients for an adjustment to be successful. They argue that changes in the primary deficit and in government consumption have non-monotonic effects on private demand. A large or persistent reduction of these two indicators tends to be associated with an increase in private demand, whereas the correlation is negative when the correction is of "normal" dimension. By analysing the experience of 19 OECD countries, they report that when cumulative changes in the public deficit represent more than 5% of GDP, the correlation with private demand does not correspond to the Keynesian theory. The same non-monotonic relationship is observed between government consumption and private demand, but with normal Keynesian impacts dominating in the smaller range of 2% of GDP. However the non-Keynesian effects seem to be more detectable in the case of fiscal contraction than in the case of fiscal expansion. They find that a non-monotonic relationship exists as well between changes in taxes and transfers and changes in private demand. These results seem consistent with the model developed by Bertola and Drazen (1993).

Studies on the impact of a fiscal deficit in developing countries are less common. Easterly and Schmidt-Hebbel (1993), for example, mainly discuss the impact the level of fiscal deficit has on macroeconomic performance in ten developing countries. They do, however, highlight some interesting facts about changes in the fiscal balance. They observe that a change in public investment has different implications for private investment depending on their mutual substitutability or complementarity. They also show that a cut in the budget deficit is the main contributor to a rise in national savings. This in turn improves the external balance. They acknowledge that fiscal adjustments contribute strongly to the external adjustments.

Other studies are conducted on countries undergoing structural adjustment programmes, under the guidance of the IMF. Nashashibi *et al.* (1992) and Schadler *et al.* (1993) report that low-income countries typically experience both a large fiscal imbalance and narrowly based tax systems and that they rely on foreign grants and loans before engaging in structural reforms. Parts of these reforms were aimed at strengthening the financial position of these countries as well as improving the efficiency of the public sector. Revenue was increased through broadening the tax base, introducing VAT or improving tax administration, and expenditure (subsidies, wages) was marginally reduced. Capital expenditure was broadly unchanged, whereas cuts in current expenditure were difficult to achieve, because of rising needs for improved health, education and infrastructure. Positive performances were recorded by countries, which undertook large-scale reforms and suffered least from weakening terms of trade. But it took time before these measures impacted positively on growth. Both studies claim that the fiscal aspect of the adjustment was not as important as the other structural reforms.

Subsequent IMF-sponsored studies, such as Schadler *et al.* (1995) and Mackenzie *et al.* (1997), emphasise that developing countries experiencing the best growth- and welfare-enhancing profile after a fiscal adjustment are those which avoid cutting expenditure with high rates of return, rely on targeted cuts in subsidies and transfers, reform their tax system, strengthen their administrative capacities and restructure their public enterprises. Expenditure on health, education, public investment and social infrastructure (water, sewerage) can foster productivity growth through the complementarity between public and private investment and the provision of basic conditions for entrepreneurial activity and long-term investment. Broadly-based sales tax, like VAT, with a single rate and few exemptions, excise taxes on petroleum products, alcohol and tobacco, and simple forms of income tax and corporate tax with moderate rates, were identified as conducive to growth and development. The effect of the tax system on investment was found to be minimal with the main influence being political stability. Public wage and hiring freezes were ineffective and reversed. According to Mackenzie *et al.* (1997) changes in spending and taxes can be unsustainable at first, but they need to be replaced by sustainable measure in the medium-term.

These former studies highlighted the need to assess more comprehensively the links between the composition of the fiscal adjustment and its impact on growth. The subsequent papers are looking for the type of adjustment, which would generate strong enough positive expectational, competitiveness and credibility effects to overcome the negative aggregate demand impact. The basic methodology was to qualify an episode of fiscal contraction (in terms of size and duration), define success (generally according to the evolution of the debt ratio after the adjustment) and apply these thresholds to a group of countries. Then, once they found which adjustments were successful, they analysed in detail the composition of the adjustment and its impact on various macro-economic variables.

In a cross-country analysis of fiscal adjustments in 20 OECD countries over the period 1960 to 1992, Alesina and Perotti (1995) are the first to focus on the way in which fiscal adjustments are conducted. They find that the size of the deficit cut does not seem to influence the rate of success of the adjustment.⁸ But they report that budgetary corrections have been achieved mainly through tax increases. They suggest that increases in expenditure during expansionary fiscal episodes tend to be permanent and set the stage for subsequent tax rises. They report that the composition of the adjustment is crucial: successful adjustments tend to be characterised by large cuts in all categories of expenditure (particularly spending on transfer programmes and government wages but also on investment) and by cuts in direct taxes on households and social security taxes, while indirect taxes and direct taxes paid by business are actually increased. On the other side, unsuccessful episodes rely mainly on increases in all categories of taxation and, on the spending side, only on cuts in public investment. They conclude that an adjustment that avoids dealing with cuts in the welfare state and in government wages and employment has almost no chance of being successful. Finally, they observe that deficit cuts are far more likely to happen when the economy experiences strong growth. Moreover, tight adjustments initiated in non-recessionary years are twice as prone to success as those initiated during recessions.

⁸ They do not discuss the initial size of the deficit.

A more comprehensive paper by Alesina and Perotti (1996)⁹ confirms their previous findings, especially when it comes to the difference in the composition of successful and unsuccessful adjustments. They highlight that cuts in government wages and transfers represent more than 50% of the expenditure cuts in the case of successful adjustment, whereas this share is below 20% in unsuccessful episodes. They also report that the rate of growth of government employment drops significantly during successful adjustments. In a second part, they analyse the macroeconomic consequences of fiscal adjustments. In the two-year period preceding successful episodes, GDP growth is lower than in unsuccessful cases, but the rate of growth increases significantly during and after successful adjustments. Successful adjustments are also characterised by a stable unemployment rate, the occurrence of an investment boom and a superior performance of net exports. The authors suggest that an important channel determining the success rate of an adjustment is through the impact the composition of the fiscal contraction has on unit labour costs in unionised and open economies. A fall in unit labour costs before and during a successful adjustment has been observed. Whereas a nominal devaluation has been observed in most adjustments, it seems that a depreciation has an impact on competitiveness only in successful cases, meaning that the composition of the adjustment (cuts in government wages) is essential.

McDermott and Wescott (1996)¹⁰ reinforce the previous findings, even though their methodology differs somewhat. GDP growth and employment show positive trends when successful adjustments are implemented. The increased growth results more from a rise in investment than from a rise in consumption. They support the view that a large adjustment, showing a strong commitment to fiscal discipline, is more likely to revive confidence and boost growth. When it comes to the composition of the adjustment, they report that expenditure cuts, particularly on government wages and social security benefits, are more likely to lead to success. In contrast to Alesina and Perotti (1996), they find that in successful cases, the currency tends to appreciate and the trade balance worsens, suggesting that the successful adjustments did not benefit from a devaluation-

⁹ Their sample consists of 20 OECD countries over the period 1960-1994.

¹⁰ They study 20 OECD countries from 1970 to 1995.

driven growth in net exports. They sustain that a substantial fiscal contraction effort is a necessary condition for a successful debt-reduction outcome. The main characteristics of a failed adjustment are: smaller size of the deficit reduction, increased public employment, rising social security spending and transfers, leading to a rise in interest rates and a drop in growth and investment.

A study by the OECD (1996) concentrates on episodes of structural deficit reduction of more than 3% of GDP taking place continuously over consecutive years. It identifies the circumstances in which a fiscal contraction takes place. In most cases the budget deficit amounted to at least 3% of GDP, the government indebtedness was rising, the inflation rate was increasing, the current account deficit was widening and the economy was overheating. Thus the electorate not only pushed the government to act but it was also more willing to accept the adjustment programme. The fiscal correction always involved a rise in taxation (direct tax increases) and in most cases a reduction in expenditure (mainly on investments but also on consumption). Most episodes were concurrent with active monetary policy easing. Current account balances improved in three-quarter of the adjustments. Disinflation occurred in the same number of cases. But the picture is not as clear-cut for the other variables. In over half the episodes, the real interest-rates rose and the exchange rate appreciated, while growth and employment patterns varied widely. On the whole, there does not seem to be a relationship between the size or the pace of the adjustment and its impact on growth. These results are seen as encouraging by the OECD at a time when fiscal imbalance has to be reduced. They argue that, because inflation and inflationary expectations are much lower now, there is more scope for an accommodative monetary policy to support growth and employment. Furthermore fiscal contraction contributes to an improved external balance. Unfortunately this study does not provide an index of success.

A recent study conducted on 40 developing countries over the period 1975-1995 by Biggs (1997a) analyses their pattern of spending cuts. Unlike OECD countries, he finds that successful and unsuccessful adjustments in developing countries cannot be explained by a significant difference in the composition of expenditure cuts. He reports

that when expenditure is cut, it is mainly through a sharp decline in public investment. He explains that developing countries might be less able than developed countries to tackle politically sensitive expenditure and thus do not cut wages and transfers. However, he argues that developing countries are more likely to be successful in curbing their deficit than developed countries, because a deficit reduction *per se* might have stronger expectational and credibility effects. He acknowledges that his definition of success is not comparable with the ones used in previous works.

Finally Haque and Sahay (1996) look more specifically at the impact of government wage cuts on the fiscal imbalance and on the macro-economic environment in developing countries. They show that a real wage reduction in the public sector can affect key government activities such as tax collection and the regulation and supervision of markets. Public sector efficiency is likely to be affected and rent-seeking activities will be pursued by civil servants. For example, they argue that there is a strong link between low civil service salaries and higher levels of tax evasion. Because the public sector plays an important role in the economy, a real wage reduction will impact negatively on the growth rate. However, most studies previously quoted tend to support the view that public spending is relatively inefficient as reduced public expenditures, particularly on wages, subsidies and transfers, tend to lead to a rise in GDP growth. Thus a reduction in the overall size of the fiscal imbalance should be concomitant with an improvement in the efficiency of the public sector. The opportunity costs between the last unit of spending in the public and the private sector do not seem to be equalised yet in most countries. An in-depth study of the efficiency of the public sector is beyond the scope of this paper¹¹, but this aspect of public policy should not be disregarded.

¹¹ For more details about the efficiency of public spending and taxation in South Africa, see Biggs (1997b) and Siebrits (1996).

CHAPTER 3

THE SOUTH AFRICAN EXPERIENCE: 1973 - 1997

This chapter introduces the main concepts and definitions used to analyse the evolution of fiscal policy in South Africa. It also presents the major indicators of fiscal stance. The last part of the chapter combines the proposed framework with the available data to identify and qualify the various episodes of fiscal adjustment.

3.1 Time Frame

The set of data on South Africa covers the period 1973 to 1997. The unavailability of some major data restricts the time period. Nevertheless, data on the last 24 years do give a reasonably accurate picture of the composition and macro-economic impacts of fiscal adjustment episodes. The other similar studies¹² cover a time period of 25 to 34 years. This study operates with annual figures ending with the March quarter, for two reasons. The budget is a yearly programme, and in South Africa the fiscal year ends with the March quarter. Furthermore, it is crucial that data covering the budgetary period correspond exactly with the data coverage of macro-economic variables. Thus this paper presents data according to the fiscal year.¹³

However, the coverage of a time period of 24 years is not immune to the Lucas critique, which relates to the temporal consistency of the structure of any economy and of the comparability of the impacts of macro-economic policies, in this case fiscal policy. It is evident that the present state of the South African economy, as well as its position in the world economy, have changed substantially since 1973. In the first chapter, expectational, credibility and competitiveness effects were identified, alongside the direct impact on the aggregate demand, as the main channels through which fiscal policy affects the real economy. It is probable that the amplitude and the significance of each of these effects have been altered, as the structural conditions affecting the economy have

¹² Alesina and Perotti (1995, 1996) and McDermott and Wescott (1996).

¹³ When a data relates to 1997, it includes the 96.2, 96.3, 96.4 and 97.1 quarters.

changed. The era of sanctions, including the debt crisis as well as a policy of import-substitution, followed by the advent of a democratic government, the opening-up of the economy and the increasing pressure from globalisation without doubt did impact on the economic regime.

Furthermore, the present ideological environment interprets fiscal imbalance as a sign of mal administration, and international markets have the financial power to sanction a country in a much more dramatic way than twenty years ago. The “pensée unique” prevailing today even seems to question the need for an active fiscal policy. Thus the pressure to adopt a policy package acceptable by the international financial community has increased. Recently, it seems that not only does fiscal policy contribute to destabilising the national economy but also, as Abedian (1997) demonstrates, that globalisation destabilises fiscal policy, particularly in small open developing economies.

However, these regime changes were not discussed at all by the authors of the other empirical studies. Each assumed that no structural and institutional changes have happened since 1960 (Alesina and Perotti, 1995 and 1996) or since 1970 (McDermott and Wescott, 1996).¹⁴ This is highly unsatisfactory and could have been dealt with, for example, by splitting the time frame into sub-periods.

As far as the present paper is concerned, it focuses on a single country and thus cannot deal in an appropriate way with the impacts of regime changes. The number of observations on South Africa is too limited for a division of the time frame into two sub-periods to result in a satisfactory degree of significance. However, the trends in macro-economic and fiscal indicators will be analysed thoroughly, with special emphasis on the most recent fiscal adjustment episode using insights extracted from previous adjustments and the new world economic dispensation.

¹⁴ These authors examine fiscal adjustment episodes over different phases of the business cycle. But this is done in order to analyse the relationship between growth and success, and not to accommodate the Lucas critique.

3.2 Definition of Fiscal Adjustment

An episode of fiscal contraction or fiscal adjustment will now be defined, keeping in mind that this study concentrates on discretionary changes in the fiscal stance.

In a first step, the impact of the interest expenditure on the fiscal balance is removed. As was argued in the other studies, the interest component is not directly influenced in the short-run by fiscal actions and cannot be discretely manipulated. Furthermore the exclusion of the interest burden minimises problems of adjustment for inflation. The available indicator is the primary balance.

The second step deals with the influence of cyclical factors on the indicator of fiscal stance. There is a high degree of endogeneity between the fiscal balance and the level of economic activity. Revenue and expenditure are very sensitive to the business cycle and this cyclical impact should be removed. Indeed the aim of this study is to identify the composition and impacts of *discretionary* changes in the fiscal stance implemented by the government. But one major problem regarding South African data is the conspicuous absence of a measure of the cyclically adjusted fiscal balance.¹⁵ The non-existence of such a structural indicator is one of the points the most open to criticism in this paper. The uncorrected value of the primary deficit is indeed not a very reliable indicator of the stance of the fiscal policy and, in South Africa, the fiscal balance has been tracking fairly closely the evolution of the economic activity. Furthermore all the other studies referred to and taken as benchmarks to assess the South African situation use adjusted figures. The measure of structural fiscal deficit used by Alesina and Perotti (1995, 1996) and by McDermott and Wescott (1996) rely either on the Blanchard Fiscal Impulse (the deficit is corrected assuming that the unemployment level did not change from the previous year), on the OECD measure (expenditure is assumed to have grown

¹⁵ The closest indicator available is the "neutral-fiscal-policy stance" deficit, as graphically presented in SARB, *Annual Economic Report*, 1994, p.49. Although the methodology used looks similar to the OECD's, the reliability of this indicator is questionable and no precise data are provided. Furthermore it covers only the period 1983-1994.

with potential GDP while revenue follows actual GDP) or on the IMF indicator (benchmark year refers to a year when potential and actual output were close).¹⁶

However, structural figures themselves are not free from shortcomings and criticisms. Budgetary positions are generally corrected via the level of unemployment or the potential gross domestic product.¹⁷ In the case of South Africa both these figures are very problematic to estimate. Each and every organisation (government, private institutes and international agencies) has its own estimates and they vary significantly. More reassuring for this study, Alesina and Perotti (1995) report that the use of cyclically-unadjusted primary deficit figures does not have significant impacts on the findings, mainly because, if the focus is on relatively large changes in the budgetary balance, the results are only marginally affected by the business cycle. Furthermore, Easterly and Schmidt-Hebbel (1991) report that foreign and domestic shocks have only a minor impact on cyclical variation and structural changes in the primary balance. This is why this paper can rely on the unadjusted primary balance and still provide valuable insights on the workings of a fiscal adjustment in South Africa.¹⁸

The third step assesses the size, coverage and time period of the adjustment. It makes more sense to focus upon periods of very strong fiscal contraction, so that the influence of the business cycle is marginalised. Small discretionary changes are to be disregarded as well. Furthermore, it will be easier to detect changes in the composition of the fiscal stance and measure the impacts on the economy. But the cut-off points should not be set too high, otherwise the number of observations will be too limited for the tests to have enough power.

¹⁶ See Alesina and Perotti (1995).

¹⁷ For example, OECD (1994) recognises that the estimated structural budget balances must be interpreted with great caution, as they are surrounded by a considerable margin of uncertainty, particularly in economies undergoing substantial restructuring.

¹⁸ For example, Gibson and Van Seventer (1996) report that, over the last five years, only a third of the variation in the public deficit was due to the low level of output growth. This finding tends to show that the thresholds used in this paper are indeed wide enough for its results to be immune to large cyclical changes.

The data concerning fiscal policy cover figures for the general government. In South Africa, it includes the following:

- State Revenue Account,
- extrabudgetary accounts and funds of central and provincial governments,
- Provincial Revenue Accounts,
- universities and technikons,
- all the different types of local authorities.

This definition is useful because it takes into account all the different levels of government and as such transfers from the central government to local authorities or to social security funds are included in the data. This coverage of the public sector is rather important in the South African case because the old regime created an unprecedented institutional structure comprising “independent states” and “self governing territories”. The new constitution provides for some margin of provincial and local autonomy. Finally the use of figures at the level of general government allows for valuable and reliable comparisons with the other studies.

When it comes to the duration of the adjustment, one-year and two-year episodes are taken into account. Both these kinds of episodes are studied so that the South African results can be compared with the other empirical studies. One-year programmes might include episodes that were reversed the following year. But this could be the result of a deliberate political decision as well. With two-year episodes, multi-year adjustment programmes are captured. In the following sections, the tables disaggregate the episodes of fiscal adjustment according to the duration of the contraction.

Taking into consideration all the above-mentioned points, a fiscal adjustment or fiscal contraction is defined as:

- a one-year improvement in the primary balance of the general government of more than 1.5% of GDP or 0.5
- a two-year improvement in the primary balance of the general government of more than 2.5% of GDP with no reversals. 1% w

These definitions are not exactly the same as the ones used in Alesina and Perotti (1995, 1996) or McDermott and Wescott (1996), but they form a reasonable compromise. The quoted authors tried to check for the robustness of their findings by using alternative thresholds and found that their results were only marginally affected. The two-year rule allows for smaller but more consistent yearly improvements, so that it is not possible to qualify this rule as a more lenient one than the one-year rule. The OECD rule of dealing with any contraction of more than 3% of GDP would not have captured enough episodes in the case of South Africa, but all these episodes are included in this study.

3.3 Definition of Success

The final step is to define a successful adjustment. A fiscal contraction can be implemented for several reasons, such as lowering the inflation rate, stabilising the currency, alleviating the balance of payments constraint, stabilising the economy over the short to medium term or reducing the debt burden. Success should be measured in relation to the specific objectives it is aimed at achieving. But this would be particularly fastidious. One has to choose a single indicator of success and a deficit reduction is generally aimed at reducing the overall debt burden. Another problem is the absence of an alternative scenario: what would the economic environment be in the absence of the policy intervention? In this paper and again to make it more comparable with other studies, a successful fiscal adjustment is defined as:

- a reduction of at least 3 % of the debt-GDP ratio by the second year after the last year of fiscal contraction or,
- a reduction of at least 5 % of the debt-GDP ratio by the third year after the last year of fiscal contraction.

These thresholds are the same as those used by McDermott and Wescott (1996) and the second criteria is used in Alesina and Perotti (1995, 1996). One should keep in mind that movements in the debt-to-GDP ratio are often explained by changes in GDP and not directly by a reduction in the debt burden, following reduced deficits. For example, if a fiscal contraction induces a recession, the fall in income works against the

stabilisation of the debt-GDP ratio in two ways. On one side, it reduces the denominator of the ratio and, on the other, it adds to the public debt through the automatic fiscal stabilisers (rise in social expenditure and fall in tax revenue).

Furthermore, some exceptional sources of revenue, such as privatisation receipts, might be used to reduce the debt-ratio. Thus a change in the debt ratio can be caused by exogenous factors, not captured by the primary deficit. But privatisations are often part of a broader attempt at reducing the fiscal imbalance. However, some would argue that the sale of state assets is an easy solution. It could be viewed as a temporary one as it does not tackle structural imbalances. The problem of having to correct for these special receipts has not yet affected South Africa in a significant way. However, it has been indicated that part of the income generated by future privatisations (for example of Telkom and SAA) will be used to reduce the stock of the public debt. On the other side, exceptional expenditure might increase the debt ratio in a way unrelated to the current fiscal stance.

Table 1 presents the influence of two “exogenous” factors in the evolution of the debt ratio. The first column relates to the takeover of overdraft debts of the independent states (Transkei, Bophutatswana, Venda and Ciskei), while the second column shows the size of the transfers to the South African Reserve Bank to cover losses in forward exchange operations.

Table 1: Exceptional Expenditure in South Africa (% of GDP, 1993-1997)

Year	“Independent States”	SARB	Debt Ratio	Adjusted Debt Ratio
1993		2.6	44.5	41.9
1994		0.6	48.6	48
1995	3.0	0.9	54.6	50.7
1996	1.6		56	54.4
1997	0.7	0.4	55.7	54.6

Source: IMF (1997)

Table 1 shows that phenomena unrelated to the fiscal stance can actually distort the evolution of the debt ratio. However, in South Africa they do not have a significant influence.¹⁹ It is still very obvious that the significant rise in the debt-ratio over the period 1993-1997 proceeds mainly from rising deficits and a positive differential between interest and growth rates. Since these exogenous changes in the debt ratio do not affect significantly the thresholds presented in this section, they will not be taken into account in the analysis.

Another criticism is that the debt-ratio is a stock variable, whereas the primary deficit is a flow variable. To deal with this problem, Alesina and Perotti (1996) add to the previous rules the criterion that the average deficit over the three years following the fiscal contraction must be at least 2 % of GDP below the last year of fiscal adjustment. This criterion is especially well suited to eliminate episodes of fiscal contraction that are reversed in the following years. However, the mentioned study does not say which adjustments satisfy this particularly demanding definition. In the case of South Africa, no fiscal adjustment episode would qualify to such a rule.

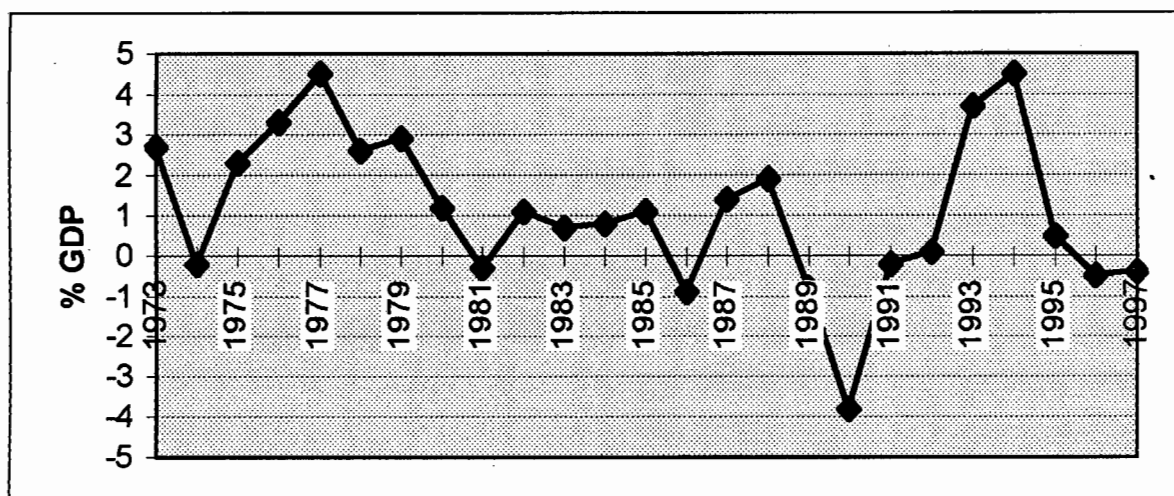
3.4 Fiscal Situation in South Africa

The behaviour of the unadjusted primary balance needs to be analysed first. As illustrated by Figure 5, the South African fiscal policy often displays a “stop-go” behaviour, with strong adjustments followed by large expansions (1974/1975, 1986/1987, 1990/1991). The average primary deficit is low at 1.1% of GDP and there are many instances where the primary balance is in surplus (1974, 1981, 1986, 1989, 1990, 1991, 1996, 1997). As in OECD countries and many developing countries, the rising interest burden has compelled the government to generate a positive primary balance. This has been the case since 1989, besides the strong expansionary episodes of 1993 and 1994. On the whole, the size and the behaviour of the South African primary deficit are quite

¹⁹ One should also take into account the recapitalisation of the public pension fund, which amounted to 1.7% of GDP over the period 1992-1997. The data for 1998 should also include a rise in the debt ratio of 0.2% of GDP due to the take-over of debts due by Namibia. Source: IMF (1997)

similar to the ones experienced in OECD countries.²⁰ On the contrary, developing countries such as Korea or Taiwan have been recording fiscal surpluses for decades, while South American countries have had to slash their deficit in a much stronger way than South Africa. Finally, developing countries relying extensively on earnings from a single export commodity (like oil, mineral or agricultural products) have seen their fiscal balance fluctuating in rather unhealthy proportions.

Figure 5: South Africa's Primary Deficit (% GDP, 1973-1997)



Sources: SARB (1994b) and SARB Quarterly Bulletin (various issues).

Even though Figure 5 illustrates the fact that the primary deficit was kept relatively low, it hides the phenomenon of “growth of government”, which is confirmed by Table 2. South Africa is in accordance with Wagner’s law, which states that the size of the public sector rises with per capita income.²¹

Table 2: Evolution of Selected Fiscal Indicators in South Africa (1973-1997)

	Expenditure	Revenue	Conventional Deficit	Primary Deficit
Annual Change (% GDP)	+ 0.38	+ 0.32	+ 0.06	- 0.12

Sources: SARB Quarterly Bulletin (various issues) and SARB (1994b)

²⁰ Alesina and Perotti (1995) provide a description of the evolution of budget deficit in OECD countries.

²¹ For an explanation of Wagner’s Law and its relevance for South Africa, see Black and Dollery (1989).

As shown by Table 2, and despite the fact that its conventional deficit has increased only slightly over the period 1973-1997, South Africa is clearly experiencing rising levels of public spending and taxation. As illustrated by Figure 6, total general government expenditure represents now almost 40% of GDP, whereas this ratio was as low as 26.3% in 1974. If South Africa is to be compared with other developing countries, then the proportion of public spending is relatively large.²² But it still is below most OECD countries, mainly because they have a much more extensive social security system.

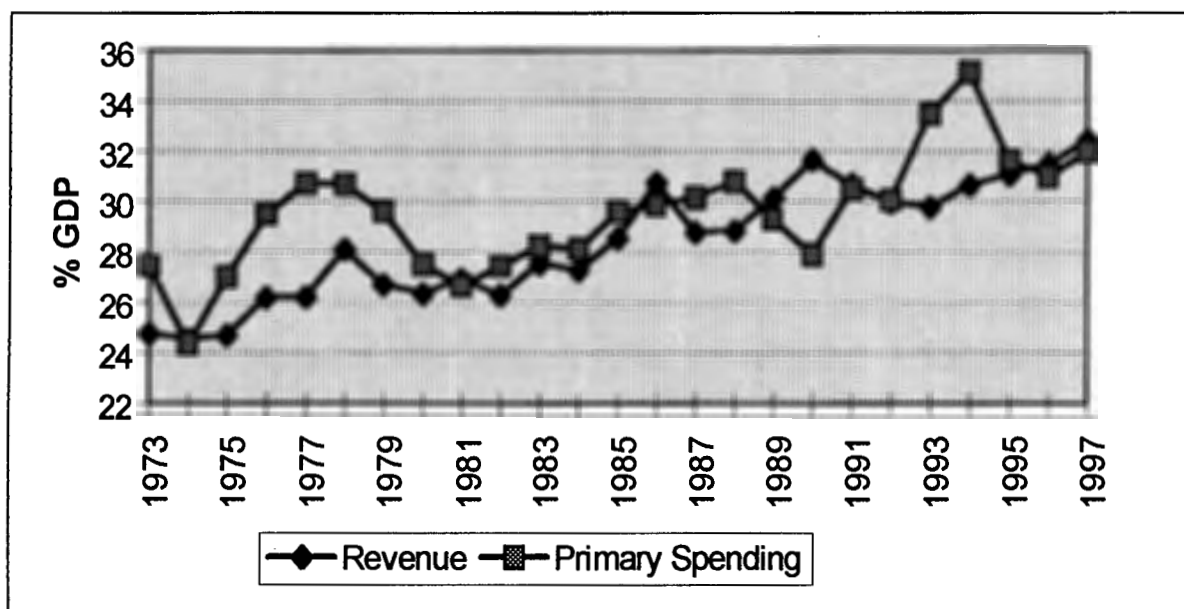
South Africa's overall taxation level stands now at 33.5% which is still below most developed countries (social security contributions are significantly lower), but above the average for developing countries. Contrary to most sub-Saharan countries, South Africa has been able to broaden its taxation base and increase its revenue in such a way that Stotsky and WoldeMariam (1997) argue that, according to its tax effort, South Africa is making a very substantial use of its taxable capacity.²³

The relative importance of expenditure and taxation in South Africa tends to support the argument that the size of the public sector is already significant and that efficiency gains could fairly easily be realised (Stuart, 1997). Furthermore since 1982, the relationship between taxation and total expenditure has not been stable, leading to the fact that the fiscal stance up to at least 1995, is unsustainable (Biggs, 1997c). Another indication of the growing burden of public expenditure is reflected by the rapid rise in interest payments. This category of spending is rising at an average annual rate of 0.18% of GDP. It means that all the other categories of public expenditure have been allowed to increase at a more moderate rate of 0.20%, far below the 0.32% increase in taxation.

²² Stuart (1997) reports that South Africa's expenditure ratio is approximately 5% above the average for countries with the same level of per-capita GNP.

²³ Fallon and Pereira da Silva (1994) agree with this view and report that increasing the tax rates might lead to higher tax evasion and increased emigration. On the contrary, Adelzadeh (1996) argues that South Africa is undertaxed by 3% of GDP, but he admits that the current taxation structure is inefficient, and according to Biggs (1997c) its econometric methodology is doubtful.

Figure 6: Primary Expenditure and Revenue in South Africa (% GDP, 1973-1997)



Sources: SARB Quarterly Bulletin (various issues) and SARB (1994b)

Besides illustrating the phenomenon of growth of government, Figure 6 also shows that primary expenditure is far more volatile than revenue.²⁴ Black and Dollery (1989) report that taxation increased in a monotonic way, implying either that the business cycle has no impact on taxation or that taxes are modified in a pro-cyclical way.

The final point that has to be made in this overview of SA's fiscal position is the evolution of the public debt ratio. It fluctuated between 30% and 40% of GDP until 1992. Since then, the ratio has escalated dramatically and stands now at 55.7%. Several factors affect the change in the debt ratio to GDP. A fall in this ratio may be due to:

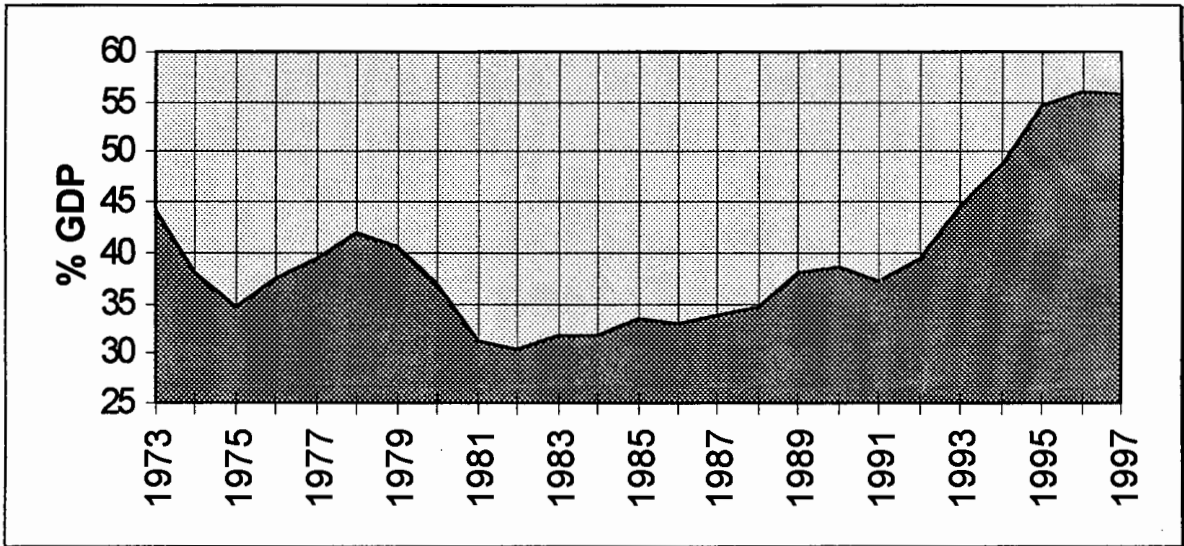
- a positive difference between real economic growth and real interest rates,
- a positive primary balance.

²⁴ The same phenomenon has been observed in developed countries, according to Masson and Mussa (1995). But this contrasts with a large number of developing countries where earnings arising from taxes on one export product (oil, mineral or agricultural goods) can make up to 60% of total revenue. These countries are particularly vulnerable to changes in world prices. The well diversified export structure, the absence of export taxes and the fact that the private sector is the main exporter contribute to the lower variability in tax revenues in South Africa.

The period 1973-1982 was characterised by strong growth and very low (often negative) interest rates. The debt-ratio followed the trend set by the primary balance and reached its historic low in 1982. Between 1980 and 1992 the primary deficit was kept below 2% of GDP, but the difference between real economic growth and real interest rate shrunk. The upward trend of the debt ratio was very moderate. Since 1990, the real interest rate has outstripped the growth rate quite significantly. This phenomenon, combined with a large fiscal expansion in 1993 and 1994, led to a dramatic increase of 17.4 % of the debt ratio from 1991 to 1995. Since then the primary balance is positive and the higher growth rate has reduced the gap with the real interest rate.

As shown by Figure 7, South Africa's public debt ratio is still relatively low by international standards. For example, it satisfies the Maastricht criteria that sets the limit of the debt-to-GDP ratio at 60%.²⁵

Figure 7: South Africa's Debt-to-GDP Ratio (1973-1997)



Sources: SARB Quarterly Bulletin (various issues) and SARB (1994b)

²⁵ out of the fifteen member states, only three (Luxembourg, the UK and France) are below this threshold.

3.5 Episodes of Fiscal Adjustment in South Africa

A fiscal adjustment was defined as a reduction of 1.5% of the primary deficit in case of one-year adjustments or as a reduction of 2.5% of the primary deficit in case of two-year adjustments. Table 3 shows the evolution of the South African primary balance in percentage of GDP from 1973 to 1997.

Table 3: South Africa's Primary Balance (% GDP, 1973-1997)

1973	- 2.65		1986	0.89
1974	0.20		1987	- 1.41
1975	- 2.30		1988	- 1.93
1976	- 3.33		1989	0.84
1977	- 4.51		1990	3.78
1978	- 2.60		1991	0.17
1979	- 2.91		1992	- 0.07
1980	- 1.15		1993	- 3.71
1981	0.27		1994	- 4.47
1982	- 1.13		1995	- 0.54
1983	- 0.69		1996	0.48
1984	- 0.82		1997	0.45
1985	- 1.05			

Sources: SARB Quarterly Bulletin (various issues) and SARB (1994b)

According to Table 3, South Africa recorded seven cases of one-year fiscal adjustments and three cases of adjustments, which took place over a two-year period.²⁶ Table 4 lists the episodes of fiscal adjustment and displays the size of the deficit cut.

²⁶ According to the "neutral-fiscal-policy-stance deficit" (1983-1994), the following episodes represent a fiscal contraction: 1986, 1989, 1990, 1989-1990 and 1994. They are all included using the "unadjusted primary balance", the only difference being the last episode. But this might be due to estimations made for 1994.

Table 4: Fiscal Adjustment Episodes in South Africa (as % of GDP)

1974	-2.85		1990	-2.94
1978	-1.91		1995	-3.93
1980	-1.76		1980-1981	-3.18
1986	-1.94		1989-1990	-5.71
1989	-2.77		1995-1996	-4.95

Sources: SARB Quarterly Bulletin (various issues) and SARB (1994b)

Note: 1980-1981 represents a fiscal adjustment taking place over a two-year period, 1980 and 1981.

As confirmed by Table 4, and out of 25 observations, there are 7 annual episodes of strong fiscal contraction, which represents an adjustment rate of 28%. Compared with OECD members, South Africa is one of the countries that experienced the largest number of one-year fiscal adjustments. Over the same time period, Greece and Norway recorded eight adjustments, Italy six and Belgium, Denmark, Finland, Portugal and Sweden all five.²⁷ When it comes to two-year episodes, South Africa's three adjustments are in the average, below Italy (6) and Sweden (6) but at par with Belgium, Denmark, Greece, Ireland, Portugal and Spain. Thus South Africa is less consistent in dealing with its fiscal policy than OECD countries and its episodes of fiscal contraction are not as long lasting. This might be due to the fact that South Africa's debt ratio is not as high as most of the quoted countries and as such the government did not consider it necessary to engage in multi-year programmes of fiscal adjustment.

Once the contraction episodes have been identified, they need to be qualified as successful or not. The rule is that the debt-ratio should have decreased either by 3% by the second year after the episode or by 5% by the third year. Table 5 summarises the qualification of the ten fiscal adjustments.

²⁷ OECD (1997)

Table 5: Successfulness of South Africa's Fiscal Adjustments

Year of fiscal adjustment	Debt Ratio at T	Debt Ratio at T+2	Debt Ratio at T+3	Success
1974	38.1	37.5	39.3	NO
1978	41.8	36.8	31.1	YES
1980	36.8	30.3	31.7	YES
1986	32.8	34.5	38.1	NO
1989	38.1	37.2	39.5	NO
1990	38.6	39.5	44.5	NO
1995	54.6	55.7	(na)	NO
1980-1981	31.1	31.7	31.8	NO
1989-1990	38.6	39.5	44.5	NO
1995-1996	56.0	(na)	(na)	pending

Sources: SARB Quarterly Bulletin (various issues) and SARB (1994b)

Note: (na) not available

Table 5 shows that, out of ten episodes of fiscal contraction, only two adjustments are successful, seven are unsuccessful and the most recent two-year episode cannot be qualified yet. It should be highlighted that the two rules come up with exactly the same results.²⁸ The two successful adjustments occurred in 1978 and 1980. There are very close episodes at a time period characterised by relatively low real interest rates and strong growth. Similarities and differences between these two successful episodes, as well as between the successful and the unsuccessful ones, will be investigated in more detail in the next chapters.

Finally, South Africa's success rate can be compared with the results obtained in other similar studies. The results are shown in Table 6.

²⁸ The use of an alternative measure of the debt burden, the debt plus financial guarantees-to-GDP ratio, presented in Biggs (1997c), depicts the same picture of success, as well.

Table 6: Comparison of Success Rates

	South Africa	Alesina and Perotti (1995)	Alesina and Perotti (1996)	McDermott and Wescott (1996)	Biggs (1997)
Number of episodes	9	52	62	62	92
Number of Success	2	14	16	14	32
Percentage of Success	22%	27%	26%	23%	35%

According to Table 6, South Africa does not seem to be an outlier when it comes to success. It might be less successful than Denmark or Ireland, but its success record is more impressive than those of Greece, Belgium or Portugal. However one should remember that the definition of an adjustment and of its success differs in every study.

CHAPTER 4

COMPOSITION OF FISCAL ADJUSTMENTS

One aim of this paper is to identify which kinds of adjustments are successful. Are there certain common rules that South Africa must fulfil in order to adjust successfully? Is the size of the adjustment an important determinant of success? What categories of revenue or expenditure should be modified, and in which direction?

To assess the size of these discretionary changes and analyse the South African fiscal situation, two sets of indicators are used. First a contraction episode deals with the magnitude of the changes that took place between the last year before the adjustment and the year of the adjustment. Second medium-term policy changes are compared according to three time periods:

- the average of the two year period before the adjustment (called “before”),
- the year of adjustment or the average of the two-year episodes (called “during”),
- the average of the two-year period after the adjustment (called “after”).

This methodology captures the circumstances in which the adjustment takes place, the nature of the adjustment and its short to medium-term consequences. It does not seem to make sense to reduce the “after” period to a one-year impact because large adjustments, as the ones studied here, should have a strong and lasting impact. Extending the “after” period to a three-year analysis is also disregarded as other independent events or policies may dilute the impact of the fiscal adjustment. This methodology is used by Alesina and Perotti (1996) and it answers reasonably well the problem of the lags with which fiscal policy works. The impact of such measures is seldom instantaneous but it does not take more than two years to affect the economy. So, by averaging the two years following the adjustment, the effect of fiscal policy should be satisfactorily captured.

4.1 Size of the Fiscal Adjustments

Is the size of the fiscal contraction a necessary requirement for an adjustment to be successful? Empirical studies tend to have divergent opinions on the question.

Alesina and Perotti (1995, 1996) report that the size of the fiscal correction is not significantly different in cases of successful or unsuccessful adjustments. On the contrary, McDermott and Wescott (1996) argue that successful adjustments are indeed larger. Table 7 presents the South African situation when it comes to the size of the fiscal contraction.

Table 7: Size of South Africa's Fiscal Adjustments (% of GDP)

	Fiscal contraction in % of GDP
All episodes	- 2.51 (0.76)
Successful adjustments ^a	- 1.84 (0.11)
Unsuccessful adjustments ^b	- 2.89 (0.70)
Two-year episodes ^c	- 2.23 (0.90)

Sources: Calculated from data in SARB Quarterly Bulletin (various issues) and SARB (1994b)

Note: Standard deviation is shown in parenthesis.

^a Successful adjustments are the 1978 and 1980 episodes.

^b Unsuccessful adjustments comprise the 1974, 1986, 1989, 1990 and 1995 episodes.

^c The two-year episodes are the 1980-1981 and 1989-1990 adjustments.

As reported in Table 7, in South Africa successful fiscal adjustments are significantly smaller in size than unsuccessful ones. Furthermore, all fiscal corrections larger than 2% of GDP are unsuccessful. In these cases, the contractionary impact of the reduction in aggregate demand seems to be too strong to be compensated for by positive expectational, credibility and competitiveness effects. Thus the policy implication is that the "big bang" approach to cutting fiscal deficits is detrimental to growth.

If a large fiscal contraction is not a recipe for success, what ingredients are needed to successfully curb deficits? Table 8 gives part of the answer. The circumstances in which a fiscal contraction is implemented are a major factor for success. As depicted by Figure 5, page 32, all episodes of fiscal contraction besides the 1990 one were pursued when the primary deficit was high and rising. However, for an adjustment to be successful the fiscal situation has to be quite dramatic with primary deficits reaching dangerously high levels that are in the region of 3% of GDP. Thus it appears that

concerns about the size of the fiscal imbalance is needed for an adjustment to be successful. In this situation, fiscal corrections had to be implemented so that the short to medium-term economic situation could be stabilised. The unsuccessful 1995 adjustment needs to be dealt with in more detail. It was preceded by strong expansionary episodes (1993 and 1994) resulting in a primary deficit well above the danger level and, as in the case of the two successful adjustments, required urgent fiscal correction. Even if it did not satisfy the required definition of a successful adjustment, it did succeed in stopping the rapid rise of the debt ratio.

Table 8: Evolution of South Africa's Primary Balance (% GDP)

	Before	During	After
All episodes	- 2.44 (1.13)	0.37 (1.89)	- 0.59 (1.45)
Successful adjustments	- 3.34 (0.82)	- 1.88 (1.03)	- 1.23 (1.13)
Unsuccessful adjustments	- 2.17 (1.31)	1.04 (1.64)	- 0.40 (1.87)
Two-year episodes	- 2.21 (0.77)	0.94 (1.94)	- 0.43 (0.68)

Source: Calculated from data in SARB Quarterly Bulletin (various issues) and SARB (1994b)

Note: Standard deviation is shown in parenthesis.

The other interesting fact reported in Table 8 is that the trend after the adjustment is an important determinant of success. In successful cases (1978 and 1980) the primary deficit continues its downward trend, whereas in unsuccessful episodes it increases again significantly. Once again the exception is the 1995 episode, after which the primary balance turned into surplus. The policy implication is that a "stop-go" fiscal policy seems particularly detrimental to success.

In conclusion, a successful fiscal contraction in South Africa is characterised by comparatively smaller deficit cuts, the prevalence before the adjustment of a perceived unsustainable fiscal position that is high and rising primary deficits, and the fact that the primary balance is made to remain on a downward trend after the adjustment. The situation is seen as critical if the primary deficit reaches 3% of GDP. In its study, the OECD (1996) reports also that virtually all cases of fiscal adjustment were undertaken

when the actual deficit was above 3% of GDP. It is quite surprising that the other studies on successful adjustments do not consider it worthwhile to analyse the fiscal position before the adjustment. If a deficit is reduced from 9% to 6% of GDP, its credibility and expectational effects might be more substantial than when a fiscal balance turns from -1.5% to +1.5%. Thus the circumstances in which the adjustment takes place ought to influence its success as well.

4.2 Composition of the Fiscal Adjustments

It has been ascertained that the size of the fiscal contraction was not an element of success. Therefore, does the composition of the adjustment matter? This section focuses on aggregate levels of expenditure and revenue. The figures are related to primary expenditure and to total revenue and grants of the consolidated general government respectively. They are presented as ratios of GDP. Because of data constraints the figures are not cyclically adjusted. Figure 6, page 34, shows the evolution of these two series over the period 1973-1997, and Table 9 reports the change in aggregate primary expenditure and revenue for the different categories of adjustment.

Table 9: Composition of South Africa's Fiscal Contraction (% GDP)

	Fiscal Contraction	Expenditure	Percentage of Contraction	Revenue	Percentage of Contraction
All episodes	- 2.51 (0.76)	-1.59 (1.22)	63%	0.92(0.95)	37%
Successful	- 1.84 (0.11)	-1.07 (1.45)	58%	0.77(1.56)	42%
Unsuccessful	- 2.89 (0.70)	-1.85 (1.50)	64%	1.04(0.96)	36%
Two-year	- 2.23 (0.90)	-1.46 (0.25)	66%	0.76(0.93)	34%

Source: Calculated from data in SARB Quarterly Bulletin (various issues) and SARB (1994b)

Note: Standard deviation is shown in parenthesis.

As illustrated in Table 9, the major part of the adjustment falls on the expenditure side. This might be due to the higher volatility of spending in South Africa. Nevertheless it is an encouraging result. In comparison, OECD countries relied mostly on tax increases according to McDermott and Wescott (1996) and Alesina and Perotti

(1995), whereas in their subsequent paper Alesina and Perotti (1996) found that higher taxes and lower spending amounted for almost the same proportion of the adjustment.

At the aggregate level, the composition of the fiscal contraction is not significantly different in cases of successful or unsuccessful adjustments. Contrary to most other studies, spending cuts tend to represent a larger share of the adjustment in unsuccessful episodes. Out of the nine adjustments, eight recorded a reduction in expenditure, the only exception being the unsuccessful 1986 episode. On the revenue side, it should be highlighted that in two cases overall taxation was actually lowered. This happened for the successful 1980 adjustment.

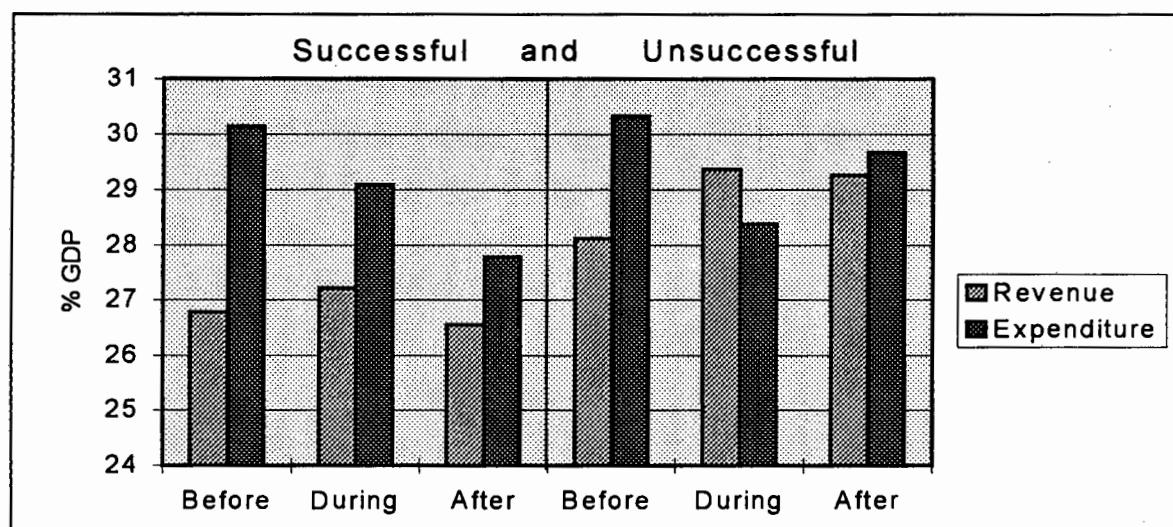
As the high standard deviation coefficient shows, the composition of the two successful adjustments is completely different. In 1978, taxation increased by 1.87% of GDP while spending was only marginally reduced (-0.04%). On the contrary, the 1980 adjustment relied entirely on large spending cuts (-2.10%), while taxes were actually lowered by 0.34% of GDP.

The difference in the aggregate composition of successful and unsuccessful adjustments is not striking. The South African situation is not as clear cut a case as was found for the OECD countries. Following McDermott and Wescott (1996), the contraction episodes can be split into two categories: adjustments that relied mostly (60% or more) on revenue increases and those relying mostly (60% or more) on spending cuts. The first group consists of two episodes (1978 and 1986), while the second includes four episodes (1974, 1980, 1995 and 1980-1981). In each category there is a successful adjustment. McDermott and Wescott (1996) identified seven successful episodes relying on expenditure cuts, but also six successful adjustments based mainly on revenue increases. Thus the South African situation might not be that unusual.

It has been mentioned that, even once the fiscal adjustment is over according to the chosen definition, the fiscal correction has to be sustained if it is to be successful. Surely, this must be reflected as well in the way spending is reduced and taxes raised.

For example, once-off spending cuts are most unlikely to lead to a successful reduction of the debt ratio. Figure 8 highlights this phenomenon.

Figure 8: Revenue and Spending in Successful and Unsuccessful Adjustments



Source: Calculated from data in SARB Quarterly Bulletin (various issues) and SARB (1994b)

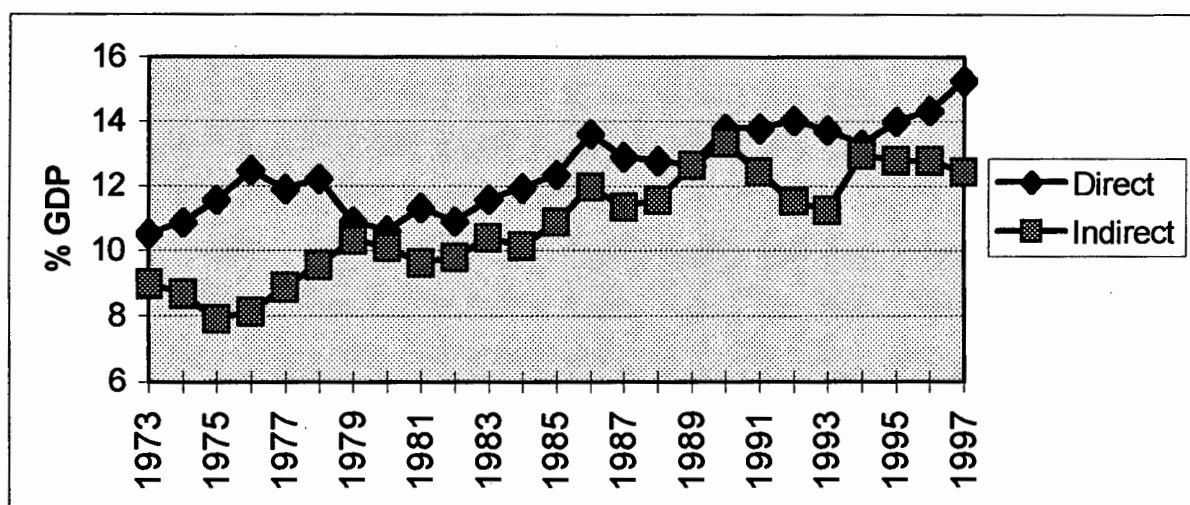
As shown by Figure 8, in successful cases, the level of taxation after the adjustment is very close to its original figure, even though the two successful adjustments moved in opposite direction during the adjustment. The successful 1980 adjustment is the only case where taxes were reduced significantly and remained at that lower level. In unsuccessful contractions, the revenue ratio rises during the adjustment and stays significantly above the original level in all cases but the 1980-1981 episode. It seems that, in successful cases, the change in taxation was understood by economic agents to be temporary, that it was geared towards redressing the momentary fiscal imbalance. In unsuccessful episodes, the increased taxation was made permanent by the government. Furthermore, even with increased growth recorded after successful adjustments, the taxation ratio does not rise. But the difference is even more obvious on the spending side. In the two successful contractions, the reduction in aggregate expenditure carried over during the next two years. In all failed cases, the level of spending increased again after the adjustment, sometimes dramatically. In half the unsuccessful episodes, the spending ratio was even higher after the adjustment than before.

A closer look at the circumstances surrounding the adjustment gives a clearer indication that in the South African situation, the commitment for fiscal adjustment by the government is a major factor for the stabilisation to be successful. A short-lived adjustment does not trigger credibility nor encourage positive expectations. A next step to identifying success is to disaggregate the categories of revenue and expenditure. This is discussed in the following two sections.

4.3 Revenue

The composition of changes in revenue might give a better indication of the successfulness of an adjustment. Based on the availability of data, three major categories of revenue are analysed: direct taxes on income, indirect taxes and non-tax revenue (earnings arising from property, fees and administrative charges). This latter source of revenue still accounts for 14.3% of total revenue, which represents 4.6% of GDP. This section gives also a closer look at some specific taxes, such as Value Added Tax (VAT), customs and excise, corporate tax and personal income tax. Figure 9 highlights the evolution of revenue collected through direct and indirect taxes. South Africa, contrary to most developing countries, has always relied more on direct taxation, but both groups exhibit a rising trend as percentage of GDP.

Figure 9: Direct and Indirect Taxation (% GDP, 1973-1997)



Source: SARB Quarterly Bulletin (various issues) and SARB (1994b)

Over the period 1973 to 1997, Figure 9 shows that direct taxation increased by 4.74% of GDP, indirect taxation by 3.48% of GDP. During the same period, non-tax revenue decreased slightly (-0.31% of GDP). The episodes of fiscal contraction make up a major part of these increases. During the eight years of fiscal adjustment, their relative share of GDP rose by 4.07%, 2.34 % and 1.05% respectively. So that, when it comes to the overall burden of taxation on the economy, the increases implemented during the contraction episodes represent 96% of the overall rise in taxation. Table 10 indicates which kinds of taxes were modified during the adjustment episodes.

Table 10: Tax Modifications in South Africa

1974	reduction of various indirect taxes
1978	15% temporary surcharge on imports, higher sales duties
1980	reduction of surcharge on imports to 12.5% lowering of personal income tax rates
1981	abolition of surcharge on imports further lowering of personal income tax rates
1986	import surcharge of 10% rise of two points of GST elimination of tax arrears and tax concessions on non-mining companies
1989	rise in fuel levy, increase in import duties on cars graded system of surcharges on imports
1990	rise of one point of GST rise in excise duties and in fuel levy abolition of exemption of surcharge on imports of capital goods (level reduced to 15%) loan levy of companies to amount to 10% of income tax paid
1995	temporary transition levy on income tax higher excise duties

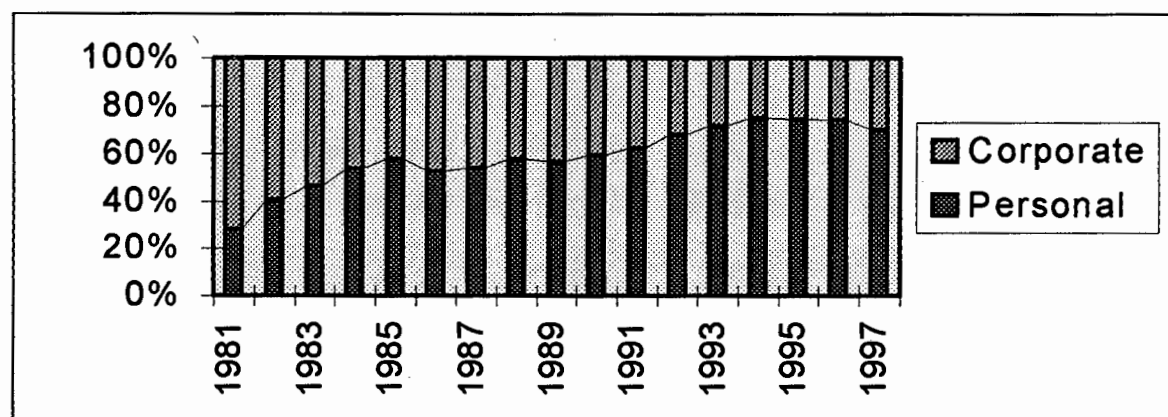
Source: SARB Annual Economic Report (various issues)

Table 10 indeed shows that during most episodes of fiscal adjustment the government manipulated taxation. Hence, it cannot be said that changes in the taxation ratio to GDP were only caused by cyclical effects.

4.3.1 Direct taxation

There are two major components of direct taxation: personal income tax and corporate tax. As shown in Figure 10, these two taxes display significant differences in their evolution since 1981, the first year for which the breakdown is available. The rise in importance of the personal income tax as a share of total direct taxation is even more dramatic as the ratio of direct taxation to GDP has been increasing as well. Between 1983 and 1997, its share as percentage of GDP doubled to reach an all time high of 10.58% of GDP. This happened even though the government repeatedly stated that it was committed to lowering the share of this tax in the economy. On the contrary, corporate taxes have been on a decreasing trend until 1994. Since then its share of GDP has risen slightly to 4.54%.

Figure 10: Composition of Direct Taxation (% , 1981-1997)



Sources: SARB Quarterly Bulletin (various issues) and SARB (1994b)

From Figure 10, it can be said that personal income tax is the single major source of revenue for the government. As reported by Biggs (1997b), the share of personal income tax as a percentage of GDP and its marginal rate are relatively high by international standards. But the highly skewed income distribution in South Africa and

the slow adjustment of tax brackets to inflation are largely responsible for the fact that this tax is a heavy burden for a small number of individuals.²⁹ The maximum marginal rate had been decreasing since 1979, but it was increased again in 1995 to 45%. Corporate tax has shrunk quite significantly, following the declining importance of the gold industry. With the re-entry of South Africa in the world economy and the advent of globalisation, Abedian (1997) argues that it is highly unlikely that receipts from the corporate tax can be increased.

How were aggregate direct taxes affected during an adjustment episode? Unfortunately the detailed data for direct taxes on households and firms are too partial to manifest a reliable significance. For example, the two successful adjustments of 1978 and 1980 are out of the available sample. Nevertheless Table 11 highlights the changes in direct taxes during fiscal adjustments.

Table 11: Composition of Changes in Direct Taxation (% GDP)

	Direct Taxes	- personal	
		- personal	- corporate
All episodes	0.45 (0.53)	0.34 (0.46)	0.36 (0.49)
Successful	0.02 (0.42)		
Unsuccessful	0.67 (0.60)	0.33 (0.52)	0.42 (0.54)
Two-year	0.36 (0.21)	0.39	0.12

Source: Calculated from data in SARB Quarterly Bulletin (various issues) and SARB (1994b)

Note: For the desaggregation into personal and corporate taxes, only five observations are available (1986, 1989, 1990, 1995, 1989-1990). Standard deviation is shown in parenthesis.

Table 11 confirms that increases in direct taxes were largely used in cases of unsuccessful adjustments. Indeed, all failed contractions showed large increases in direct taxation (besides the 1989 adjustment). Also of interest is the fact that over the period 1981-1997, the unsuccessful episodes correspond exactly to the number of years when the corporate tax ratio was raised (1986, 1989, 1990, 1995). These episodes contradict the decreasing long-term trend of this specific tax. Furthermore, the rise in taxes on firms was accompanied by a similar rise in taxes on households.

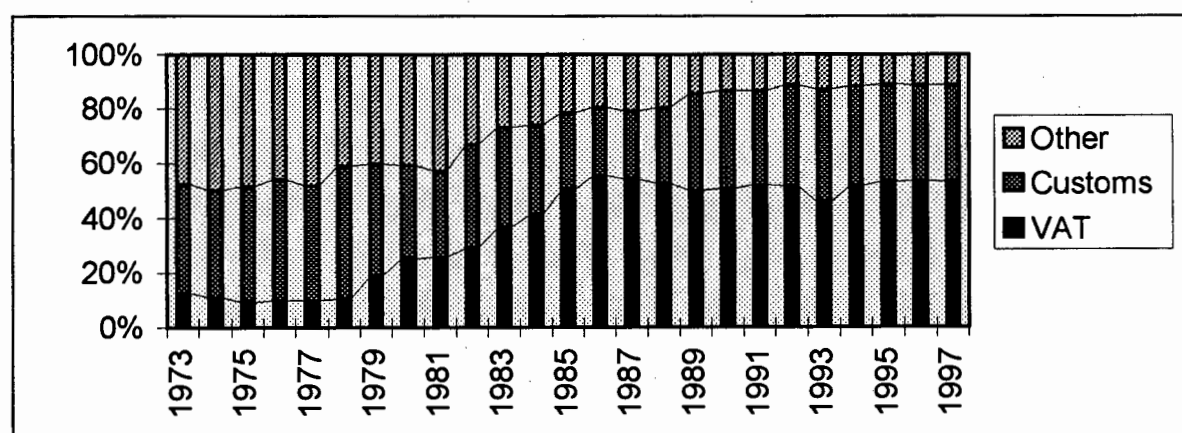
²⁹ Black and Dollery (1989).

It should be remembered that in 1980 and 1981 the gold price reached record levels in US\$ terms. These two years were identified as adjustment episodes. But in 1980, the taxation ratio as well as the direct taxation ratio dropped, emphasising that the adjustment was entirely composed of expenditure cuts. The same phenomenon, although of a smaller amplitude, was observed for the 1981 adjustment. Thus increased receipts from gold mining were compensated for by reduction in personal income tax rates. There was then a political will not to let revenue rise. The fact that, even under favourable exogenous circumstances, the government chose to reduce expenditure should have generated strong positive expectational and credibility effects.

4.3.2 Indirect Taxation

The major components of indirect taxation are Value Added Tax (VAT, previously GST), customs and excise duties and the fuel levy. As Figure 11 shows, VAT has become the major indirect tax. Since 1985 it accounts for around half the indirect revenue collected and its share as percentage of GDP has risen to just below 7%. Customs and excise taxes remained fairly constant over the period, with a drop in the mid-1980s and a subsequent resurgence since 1989. These taxes account for 4.5% of GDP. Finally the other indirect taxes (surcharge on imports, fuel levy, stamp duties and fees, transfer duties, ordinary levy) have seen their relative share drop considerably to represent only 1.5% of GDP.

Figure 11: Composition of Indirect Taxation (% , 1973-1997)



Source: SARB Quarterly Bulletin (various issues) and SARB (1994b)

Figure 11 confirms that VAT has become an increasingly important provider of revenue for the South African government. Even though it is inequitable, its qualities as an efficient and broad-based tax have been attractive enough to make it the second largest source of revenue. Furthermore, it has been argued that the tax system should be as efficient as possible and that it is through public spending that redistributive policies are to be implemented. South Africa, following a worldwide trend, has increased its VAT rate several times to stand now at 14%.

Were indirect taxes altered substantially in cases of fiscal contraction? Table 12 gives the evidence for the aggregate indirect taxes, as well as more specific indications on VAT and Custom and Excise.

Table 12: Composition of Changes in Indirect Taxation (% GDP)

	Indirect Taxes	- VAT/GST	- Custom and Excise
All episodes	0.37 (0.63)	0.35 (0.39)	0.17 (0.72)
Successful	0.24 (0.64)	0.36 (0.32)	0.08 (1.19)
Unsuccessful	0.48 (0.68)	0.37 (0.52)	0.23 (0.64)
Two-year	0.27 (0.88)	0.31 (0.06)	0.10 (1.00)

Source: Calculated from data in SARB Quarterly Bulletin (various issues) and SARB (1994b)

Note: Standard deviation is shown in parenthesis.

It is rather difficult to extract precise inferences out of Table 12 because the standard deviation coefficients are quite high. However, it indicates that indirect taxes have been manipulated in a rather uncoordinated manner in the different adjustment episodes. There are four cases (1974, 1980, 1995 and 1980-1981), in which the share of indirect taxes as a percentage of GDP has actually been lowered. All the other episodes have experienced rather large increases in this ratio. In all but one contraction episode, VAT has manifested an increase in its ratio to GDP. The behaviour of custom and excise duties tends to be much more volatile. They were reduced in five episodes and there are only two episodes of significant rise (1978 and 1989).

Tables 11, 12 and 13 tend to indicate that the relative changes in direct and indirect taxation differed between successful and unsuccessful adjustments. Indeed, five of the seven unsuccessful episodes relied mainly on rises in direct taxation. In the two successful cases the relative amount of direct taxes dropped. The two successful episodes are the only ones that relied mainly on increases in non-tax revenue.

Table 13: Composition of the Changes in Revenue

	Revenue	Direct	%	Indirect	%	Non-tax	%
All episodes	0.92	0.45	49%	0.37	40%	0.10	11%
Successful	0.77	0.02	3%	0.24	31%	0.51	66%
Unsuccessful	1.04	0.67	64%	0.48	46%	-0.11	-10%
Two-year	0.76	0.36	47%	0.27	36%	0.13	17%

Source: Calculated from data in SARB Quarterly Bulletin (various issues) and SARB (1994b)

Note: Standard deviation is shown in parenthesis.

From Table 13, it seems that an adjustment relying mainly on increases in non-tax revenue is more likely to be successful because its combined impact on competitiveness and expectations is not too disruptive, since the fiscal imbalance is reduced in a way that does not affect production or consumption patterns in a damaging proportion. However, when direct and indirect taxes are raised, the credibility of the adjustment is put in doubt because it shows that the government is not willing or able to reduce public spending. Private agents perceive that the state's involvement in the economy will continue to grow and negative expectations about an ever-increasing tax burden develop. Finally, such an adjustment impacts negatively on the capacity of the economy to compete internationally.

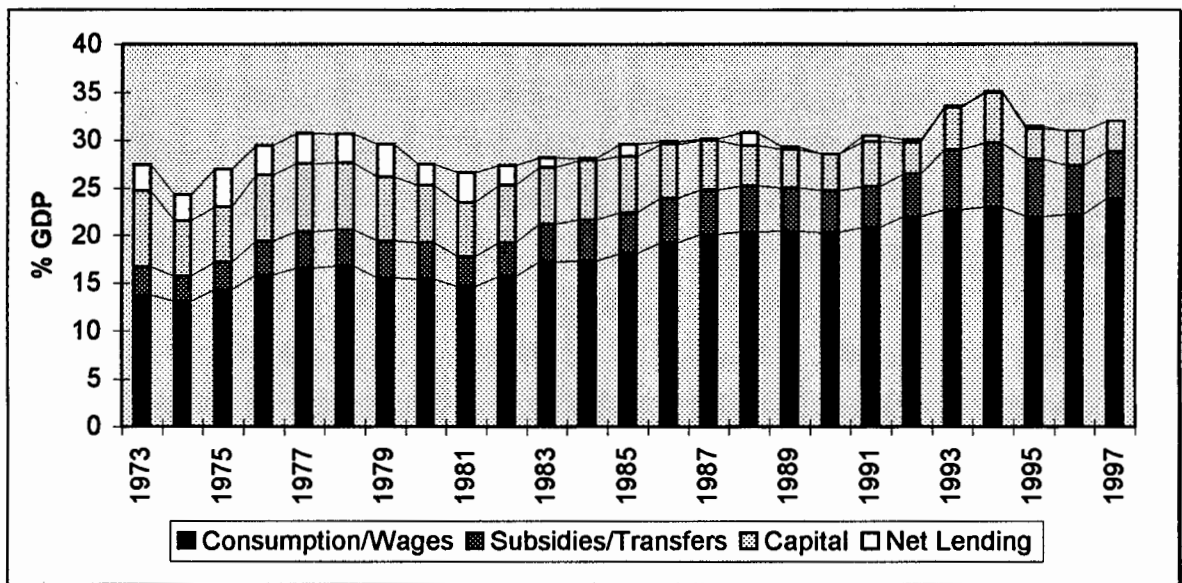
4.4 Primary Expenditure

As explained in Chapter 3, this analysis relies on primary expenditure, that is expenditure excluding the interest charge, which is assumed to be exogenously determined. As illustrated by Figure 6, primary expenditure is more volatile than revenue, so that a disaggregation of government spending into several categories could give an even better picture of a successful adjustment. Primary public spending can be

divided into three groups: current expenditure, capital expenditure and net lending. Primary current expenditure is further split into four categories: consumption expenditure (goods and services), remuneration of employees, subsidies and transfers.

The data are based on figures compiled by the SARB under two different headings: “consolidated general government” and “current income and expenditure of general government”. The former provides at the same time a broader and more internationally comparable picture of the evolution of the fiscal stance. The latter allows for a more detailed analysis of the four categories comprising current expenditure.³⁰ Figure 12 shows the evolution of the composition of public spending over the period 1973 to 1997.

Figure 12: Composition of South Africa’s Primary Expenditure (% GDP, 1973-97)



Sources: SARB Quarterly Bulletin (various issues) and SARB (1994b)

³⁰ Unfortunately, the figures provided by these two sources of information do not correspond. This paper relies mainly on figures provided by the tables on “consolidated general government”. However, the data on “current income and expenditure of the general government” are used in the sections 4.4.2 to 4.4.6 as they do include statistics for the remuneration of employees, which is of particular importance for this paper. The author would like to thank Riaan Hattingh of the SARB for his help in providing the relevant quarterly data.

As illustrated in Figure 12, the composition of primary spending has changed dramatically in 24 years.³¹ One cause of major concern is the dramatic reduction in capital expenditure. Whereas in 1973 it made up for 29.2% of total primary spending, it now represents a paltry 9.9%. These resources have been entirely redirected towards the consumption of goods and services, including the remuneration of employees (+24.8%). This category of spending seems to have the strongest “automatic” tendency to increase, as it reaches an all time high of 74.9% of total primary spending in 1997. The relative share of transfer and subsidies was kept in a narrow range between 12% and 16% of total spending, with noticeable exceptions in 1993, 1994 and 1995 (19%). These categories of spending have not only become more important as a share of total spending, but also as a share of GDP. Finally the proportion of spending on net lending has dropped from 9.8% in 1973 to less than 1% since 1993.

In international comparison, South Africa’s pattern of expenditure is quite similar to the one observed in developing countries: government consumption makes up for the largest proportion of primary spending, while subsidies and transfers are still quite small. The relative difference in the South African composition of expenditure with regards to the OECD countries has to be kept in mind throughout the following sections because the studies that form the basis of this paper were conducted on this group of countries.

Finally and before moving to a detailed analysis of the various components of primary expenditure, it has to be highlighted that, while the ratio of primary expenditure to GDP rose by 4.57% between 1973 and 1997, it was actually cut by an impressive and cumulative 12.23% of GDP during the eight years of fiscal adjustment.

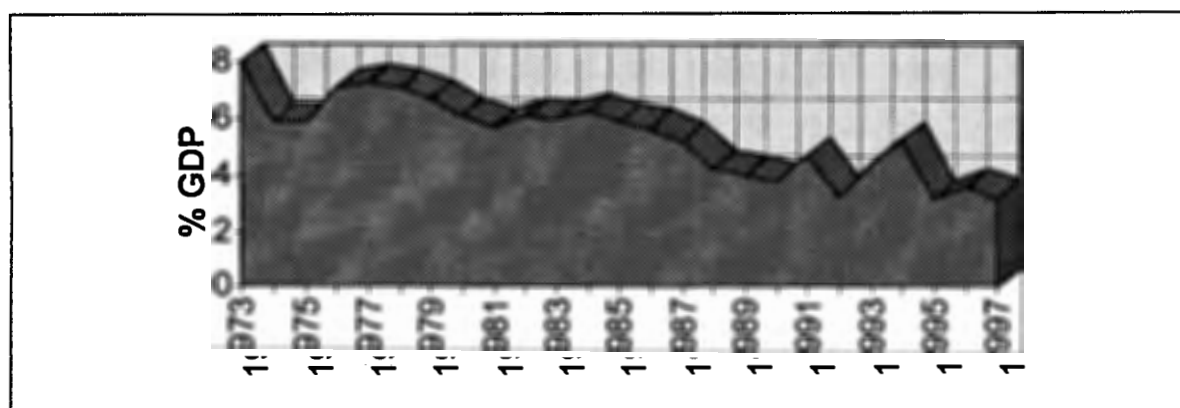
³¹ Interest payments as percentage of total general government expenditure rose from 6.7% in 1973 to 16.8% in 1997.

4.4.1 Capital Expenditure

In the South African situation, as is the case in most developing countries, a common feature of episodes of fiscal contraction is the fact that the government relies extensively on capital expenditure cuts.³² Programmes aimed at maintaining infrastructure are postponed and new capital projects are delayed. Even though these decisions penalise growth, South Africa has been pursuing such policies because these cuts are far less visible to the electorate than reductions in wages or transfers. During the apartheid era, the public sector provided one of the main sources of employment for the Afrikaners, and in the new South Africa, the government is strongly committed to affirmative action policies and has agreed on a transitional sunset clause for civil servants.

As shown by Figure 13, capital expenditure has been reduced from 8% of GDP in 1973 to a present share of 3.18%. Out of the fifteen fiscal years exhibiting a drop in capital expenditure, seven concern the episodes of fiscal adjustment. Its current share is the second lowest level ever recorded.

Figure 13: Capital Expenditure (% GDP, 1973-1997)



Sources: SARB Quarterly Bulletin (various issues) and SARB (1994b)

³² Biggs (1997a). Schadler *et al.* (1993) provides more specific information about low-income countries, Ter-Minassian and Schwartz (1997) about Latin American countries and Eken *et al.* (1997) about Middle East and North African countries.

Figure 13 is worrying, since the empirical studies on OECD countries (Alesina and Perotti 1995, 1996 and McDermott and Wescott 1996) have shown that failed adjustments relied more heavily on cuts in public investment than successful ones. More than any other category of expenditure, capital spending generates positive externalities and complements private investments. Gibson and Van Seventer (1996) report that, in South Africa, a rise in the public investment-to-GDP ratio of 1% leads to a rise in the private investment-to-GDP ratio of more than 4%. Furthermore the credibility and the sustainability of the fiscal tightening programme depend on the composition of the cuts. If public investment projects are targeted instead of more politically sensitive categories such as subsidies, transfers and wages, the credibility and expectational effects of the contraction are likely to be small. But the quality of public investments matters as well. Money spent on “white elephants” is not likely to trigger positive reactions by the markets.³³

Table 14 confirms that in all adjustment episodes capital expenditure was reduced. But successful adjustments relied less heavily on capital expenditure cuts, not only in relation to total expenditure cuts, but also in absolute value. Furthermore it seems that the actual ratio of capital spending to GDP determines success as well. During the two successful adjustments, this ratio remained over 6%, while it was never kept above that threshold in unsuccessful cases. The largest reductions in public investment were recorded in 1974 (-2.15% of GDP) and in 1995 (-2.10%), which is a cause of concern for the sustainability of the latest adjustment. Moreover, the present level of capital expenditure is about half the threshold recorded in episodes of successful adjustments.

³³ See Tanzi and Davoodi (1997) on relationship between capital expenditure and corruption.

Table 14: Relative Share of Capital and Current Expenditure Cuts

	Capital Exp. (% GDP)	Share of total expenditure cuts	Current Exp. (% GDP)	Share of total expenditure cuts
All episodes	- 0.72 (0.82)	45%	- 0.87 (0.69)	55%
Successful	- 0.43 (0.34)	40%	- 0.64 (1.11)	60%
Unsuccessful	- 0.98 (1.06)	53%	- 0.87 (0.76)	47%
Two-year	- 0.35 (0.21)	24%	- 1.11 (0.18)	76%

Source: Calculated from data in SARB Quarterly Bulletin (various issues) and SARB (1994b)

Note: Current expenditure includes net lending. Standard deviation is shown in parenthesis.

As Table 14 shows that capital expenditure represents a large proportion of total expenditure cuts, it should be said that public investments on social infrastructure (education, health, housing, water) can also have a positive effect on growth. Samson (1997) argues that a big push in social infrastructure investment can overcome both demand and supply constraints. However, these results are questionable on two grounds: the availability of data (percentage of the health budget that can be qualified as “social infrastructure”) and the efficiency of public spending in these sectors (opportunity costs of public investment in relation to private investment). Schadler *et al.* (1995) also emphasises that spending on operation and maintenance is of crucial importance for development. This paper concentrates on the economic classification of government expenditure and it is beyond its scope to analyse changes in the functional classification of public spending.

Finally, through its contribution to growth, capital expenditure generates also more taxes. Therefore growth-enhancing spending participates more to the stabilisation of the fiscal balance, as it increases the taxation base.

4.4.2 Current Expenditure³⁴

Table 15 details the changes brought about by the fiscal adjustment on the current expenditure side of the budget. It shows that these cuts are not very large as a proportion of GDP. In comparison to OECD countries,³⁵ South Africa has not cut its current expenditure in a significant way. The main contributor to the contraction consists of subsidies and this is a common feature of all adjustments. The difference lies in the fact that successful adjustments rely on cuts in all categories of current expenditure, including cuts in the public wage bill. This table will be analysed in more detail in the following sections.

Table 15: Composition of Changes in Current Expenditure (% GDP)

	Government Consumption	Remuneration of Employees	Subsidies	Transfers
All episodes	0.03 (0.31)	-0.02 (0.27)	-0.18 (0.18)	0.05 (0.28)
Successful	-0.02 (0.34)	-0.14 (0.04)	-0.13 (0.07)	-0.04 (0.14)
Unsuccessful	0.09 (0.37)	0.01 (0.36)	-0.20 (0.24)	0.16 (0.34)
Two-year	- 0.06 (0.28)	0.03 (0.15)	-0.17 (0.16)	-0.11 (0.18)

Sources: Calculated from data in SARB Quarterly Bulletin (various issues) and SARB (1994a)

Note: Standard deviation is shown in parenthesis.

In accordance with Alesina and Perotti (1996), Table 15 shows that combined cuts in wages and transfers in successful cases make up more than half the adjustment on the expenditure side. In their study this ratio was below 20% in unsuccessful contractions, whereas in the South African case, this ratio is even negative, meaning that these two components of spending actually increased during the fiscal contraction. The implication for policy makers is that cuts in wages and transfers is of major importance for credibility and expectational effects to allow for the adjustments to be growth-enhancing.

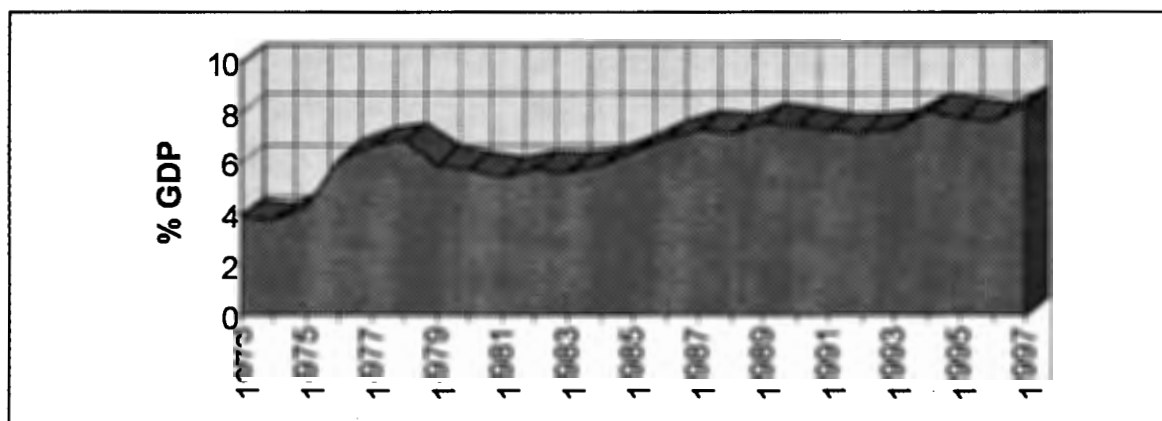
³⁴ Data used are those published under "current income and expenditure of general government".

³⁵ Alesina and Perotti (1995, 1996) and McDermott and Wescott (1996).

4.4.3 Government Consumption

This category includes the consumption by the general government of intermediate goods, services and fixed capital as well as indirect taxes less the sales of its commodities and direct investment. It excludes wage remuneration. As shown by Figure 14, government consumption shows a steady upward trend over the period 1973-1997.

Figure 14: Non-Wage Government Consumption (% GDP, 1973-1997)



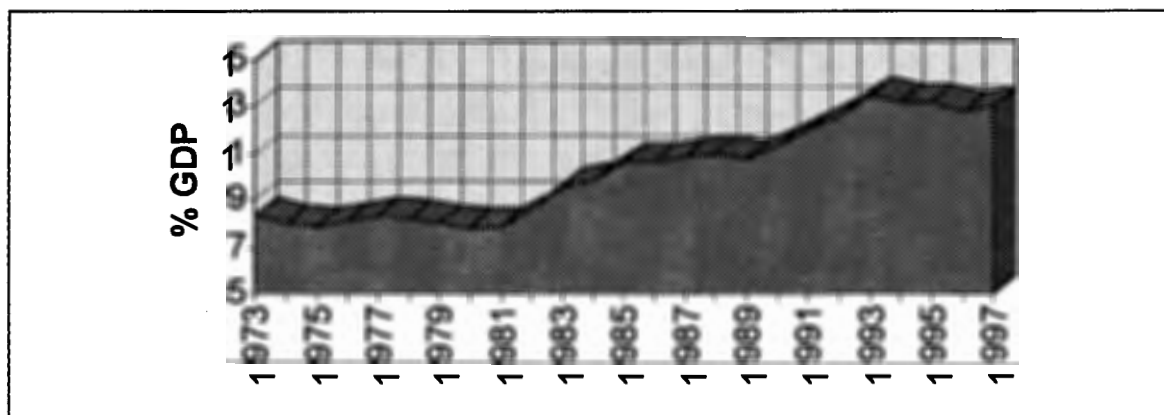
Sources: SARB Quarterly Bulletin (various issues) and SARB (1994a)

Figure 14 records that government consumption in South Africa has reached its peak in 1997. But its behaviour does not display any significant difference between successful and unsuccessful adjustments. Thus this category of spending does not appear to have played a role in episodes of fiscal contraction. In the light of the other studies, this result is rather surprising. In OECD countries, non-wage government consumption was always reduced more decisively in successful adjustments, although it never represented a large proportion of total spending cuts.

4.4.4 Remuneration of Employees

The remuneration of employees consists of gross salaries, wages and allowances in cash or in kind. As illustrated in Figure 15, the public wage bill has risen to 12.99% of GDP in 1997 and it is the major component of current expenditure.

Figure 15: Remuneration of Employees (% GDP, 1973-1997)



Sources: SARB Quarterly Bulletin (various issues) and SARB (1994a)

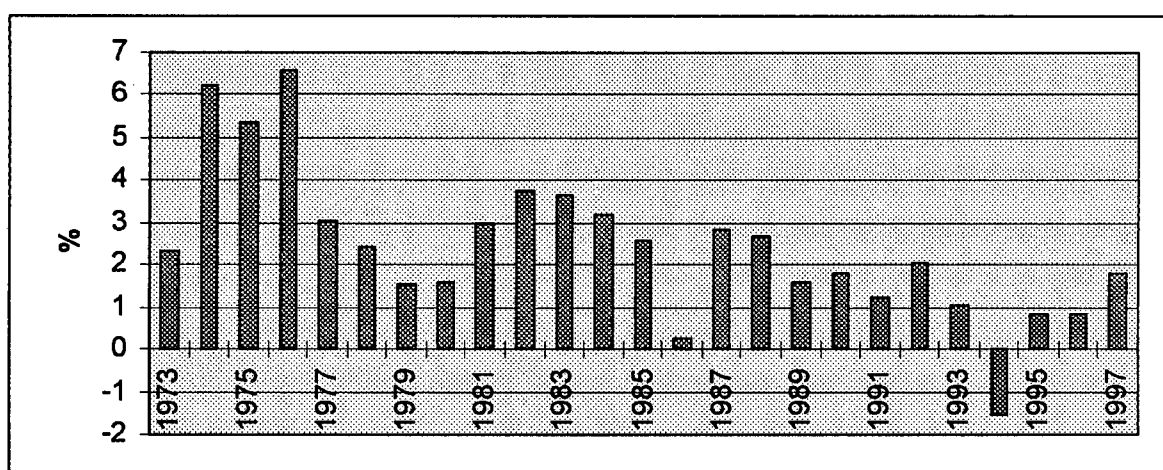
Figure 15 shows that the major increases were recorded over two periods of poor economic performance (1982-1985 and 1990-1993), when public sector employment was used as a cushion while the private sector was not able to create jobs.³⁶ Indeed, public sector employment is one of the main political tools used by the government. This category of spending represents fairly accurately the discretionary changes that the government wants to implement. It should be noticed that, since the peak reached in 1993 at 13.51% of GDP, the ratio of the remuneration of employees is slowly hedging downwards. However this behaviour repeats the trends observed over the previous periods: an increase in the wage bill during a period of low growth is not compensated by a subsequent and similar drop when the economy recovers. As argued by Gibson and Van Seventer (1996), it is possible that the large and rising share of the public wage bill has crowded-out other more productive components of public expenditure.

³⁶ Gordon (1997) calculates that, in South Africa and over the period 1961-1993, the average elasticity of employment with respect to output is 1.0 in the government sector, while it is only 0.4 in the non-government sector.

Table 15 gives an interesting indication of the difference between successful and unsuccessful adjustments. It is of particular significance that both successful adjustments (1978, 1980) recorded a drop in the ratio of the remuneration of employees. However, the wage bill remained fairly constant for the unsuccessful adjustments. This basically confirms the findings by Alesina and Perotti (1995, 1996), McDermott and Wescott (1996) and OECD (1997). It also highlights the fact that tackling a sensitive aspect of the budget generates credibility effects.

More than the actual value of the remuneration of employees, one fundamental characteristic of a successful adjustment as identified by Alesina and Perotti (1995) and McDermott and Wescott (1996) is that the share of public employment (both in the labour force and in total employment) remains essentially constant, while in unsuccessful contraction it rises. The South African situation is rather problematic to assess as data on employment are particularly subject to criticism. Figure 16 displays the evolution of public sector employment. One must bear in mind that even data on public employment are questionable, as revelations about ghost civil servants, redundant public servants or unaccounted staff abound.³⁷

Figure 16: Public Sector Employment (% change, 1973-1997)

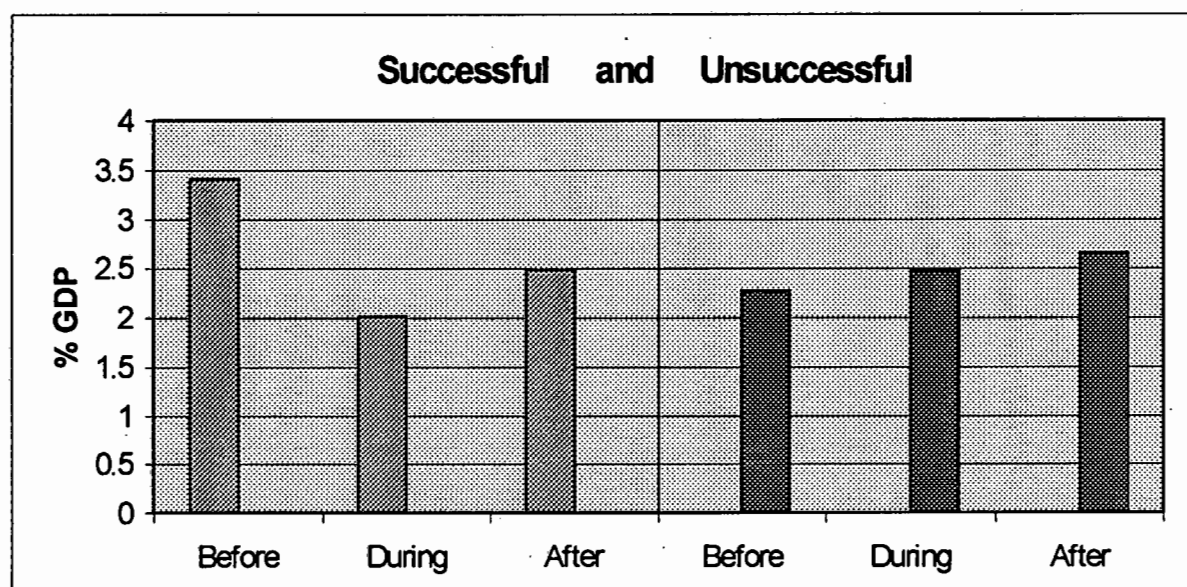


Source: SARB Quarterly Bulletin (various issues)

³⁷ For example, Bateman (1997) reports that civil servants were overpaid R 1 billion, between April 1993 and September 1994. Actions are sometimes taken, as reported by O'Grady (1998) in the Northern Province.

As shown by Figure 16, the rate of increase in public employment has slowed over the last twenty years.³⁸ More interestingly, there is a significant difference between successful and unsuccessful contractions. As illustrated in Figure 17, successful adjustments record a significant drop in the rate of increase of public employment during the adjustment by comparison to the previous period. Thus government was seen as tackling the fiscal imbalance in a relatively serious way. However, unsuccessful adjustments record a continuous upward trend in this figure. Furthermore, as reported by Alesina and Perotti (1995), reducing government employment, instead of wages, enhances the credibility of the adjustment as it can have much longer lasting effects. Employment cuts are more difficult to reverse than wage reductions. Finally, a smaller public workforce with relatively higher real wages is likely to be more efficient or less disruptive for the economy as a whole than an over-staffed and underpaid bureaucracy.³⁹

Figure 17: Growth of Public Employment in Periods of Fiscal Adjustment



Source: Calculated from data in SARB Quarterly Bulletin (various issues)

³⁸ However, as Siebrits (1996) reports, the government's share of formal sector employment has increased significantly. According to Gordon (1997), average growth in government employment was five times higher than the average growth in non-government employment over the period 1971-1993.

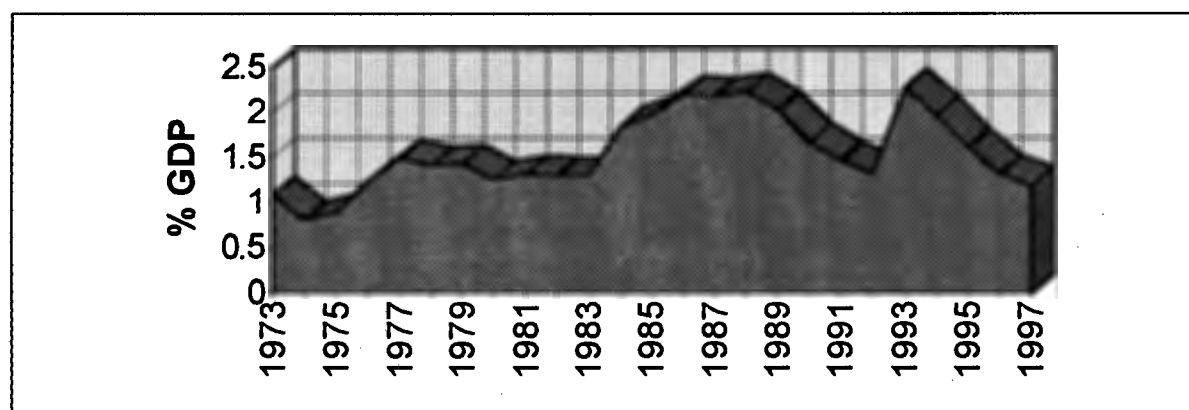
³⁹ In South Africa, it is widely acknowledged that there is room to improve the productivity and the effectiveness of the civil service. Wage increases in specific sectors such as health, police, education or tax administration might not have kept up with similar private sector occupations.

Thus it seems that even though the total wage bill-to-GDP ratio has increased due to combined real wage rises and employment creation, successful contractions tended to contain employment growth, rather than reduce the total wage bill. This approach is probably more conducive to continued proper functioning of public services.

4.4.5 Subsidies

Subsidies represent all grants made by the general government to private industries and public corporations. As shown by Figure 18, they still represent a very limited proportion of primary government expenditure and of GDP. And it does not seem that this ratio will rise in the future, as some public corporations are in the process of being privatised.

Figure 18: Subsidies (% GDP, 1973-1997)



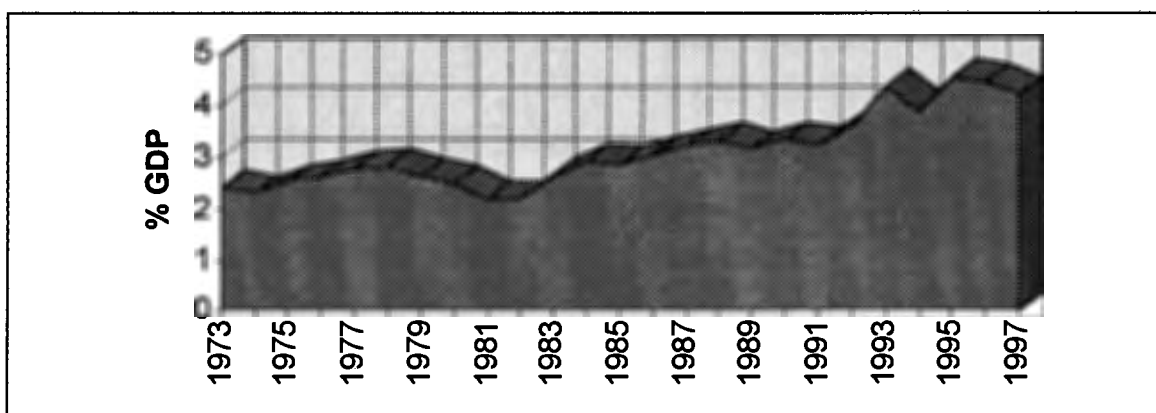
Source: SARB - Quarterly Bulletin and SARB (1994a)

Even though one can infer from Figure 18 that the subsidies-to-GDP ratio is too low to contribute significantly to fiscal adjustment, cuts in subsidies have been commonly used in South Africa in the past. Out of the nine episodes, eight recorded a drop in the subsidies-to-GDP ratio. There is no significant difference between successful and unsuccessful adjustments. Even though subsidies are a small proportion of total expenditure, these cuts did make up a non-negligible portion of the adjustment, as reported in Table 15, page 58.

4.4.6 Transfers

Transfers include social security benefits, social assistance grants, transfers to private non-profit institutions, transfers to the rest of the world as well as other transfers. In South Africa, they still represent a far lower proportion of public expenditure than in OECD countries.⁴⁰ However, transfers have been rising almost continuously since 1973. The periods of economic recession do not appear clearly in Figure 19. Instead of using social security transfers as automatic stabilisers, the government relied more on policies of expansion of employment in the public sector.

Figure 19: Transfers (% GDP, 1973-1997)



Sources: SARB Quarterly Bulletin (various issues) and SARB (1994a)

As illustrated by Figure 19, besides the sharp rise in transfers in 1995 due to the new constitutional development, the episodes of fiscal adjustment record small changes in the transfers-to-GDP ratio. But this relatively insignificant category of expenditure cannot contribute to a large extent to a future fiscal adjustment.

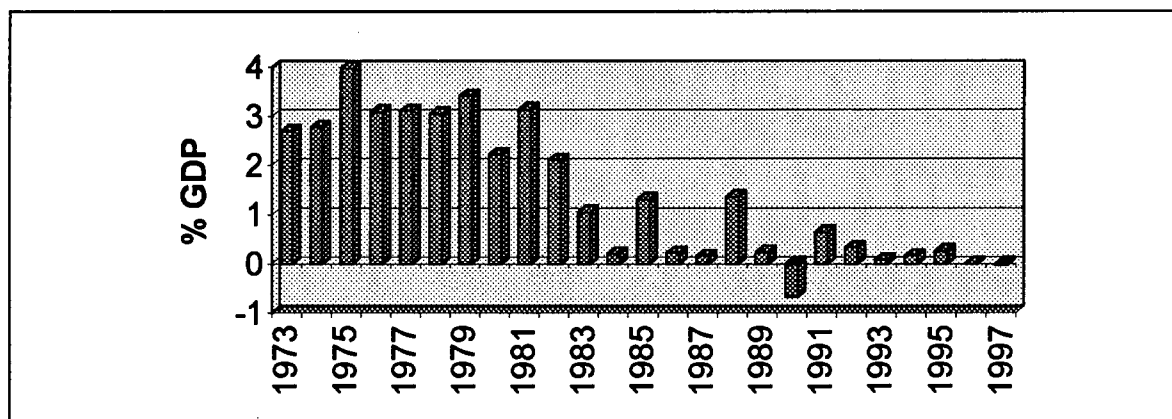
4.4.7 Net Lending

Net lending measures recoveries of loans and advances made by the government to parastatals, private enterprises or pension funds. In general, central government acts as

⁴⁰ OECD (1997) and Alesina and Perotti (1996).

a financial intermediary. As in a large number of developing countries, this fiscal function used to account for a non-negligible but highly volatile portion of public spending. However, Figure 20 illustrates the clear trend towards lowering the amount of financial assistance given by the state. Since 1992, net lending represents less than 0.3% of GDP.

Figure 20: Net Lending (% GDP, 1973-1997)



Sources: SARB Quarterly Bulletin (various issues) and SARB (1994b)

There are no significant differences in the evolution of net lending between successful and unsuccessful adjustments. On average, net lending has been reduced by just over 0.5% of GDP. On closer inspection, one can see that these reductions have been almost equally split between large cuts (around 1% of GDP, thus accounting in these cases for a large proportion of the total fiscal adjustment) and unchanged practices. Finally it should be noticed that this group of expenditure can no longer contribute to any future fiscal adjustment.

4.5 Primary Expenditure and Fiscal Adjustment

In summary, primary expenditure in South Africa is much more volatile than revenue. Over the eight years of fiscal adjustment, expenditure was cut by 12.23% of GDP, while revenue increased by 7.46% of GDP. Cuts in capital expenditure (6.07% of GDP) and in net lending (3.24%) represent more than three-quarters of the total adjustment on the spending side. Public investment was generally reduced more

decisively in cases of unsuccessful adjustments. Thus lowering capital expenditure is seen as penalising growth because it does not allow for positive externalities and for complementarity effects to be generated. These kinds of cuts are not likely to trigger positive expectational and credibility effects. Finally, the stock of public investment seems to have reached alarmingly low levels.

Current expenditure was tackled in a rather less significant way, mainly because of the political sensitivity of the components of this spending category. Subsidies were cut in almost all episodes of fiscal adjustment. It is only in cases of successful contraction, that all components of current expenditure were reduced. Cuts in the remuneration of employees were quite significant. This was achieved mainly through the containment of public employment. This kind of adjustment is likely to generate positive expectational and credibility effects as these cuts are less likely to be reversed in the near future.

CHAPTER 5

MACROECONOMIC IMPACT OF FISCAL ADJUSTMENTS

This chapter analyses the economic impact of the fiscal adjustment episodes in South Africa. How does the composition of an adjustment influence the evolution of the economic activity? Is a successful adjustment more growth-enhancing than an unsuccessful one? What are the effects on the trade balance, the exchange rate, and unit labour costs? Are there significant differences between successful and unsuccessful contractions? In this chapter and as explained earlier in chapter 4, the impacts of fiscal contraction are assessed over a two-year period. Thus the time frame is divided between three periods:

- “before” illustrates the situation prevailing over the two years preceding the adjustment,
- “during” relates the immediate impact of the adjustment, be it of a one-year or two-year duration,
- “after” shows the medium-term impacts of the fiscal contraction, by averaging the data for the two years following the adjustment.

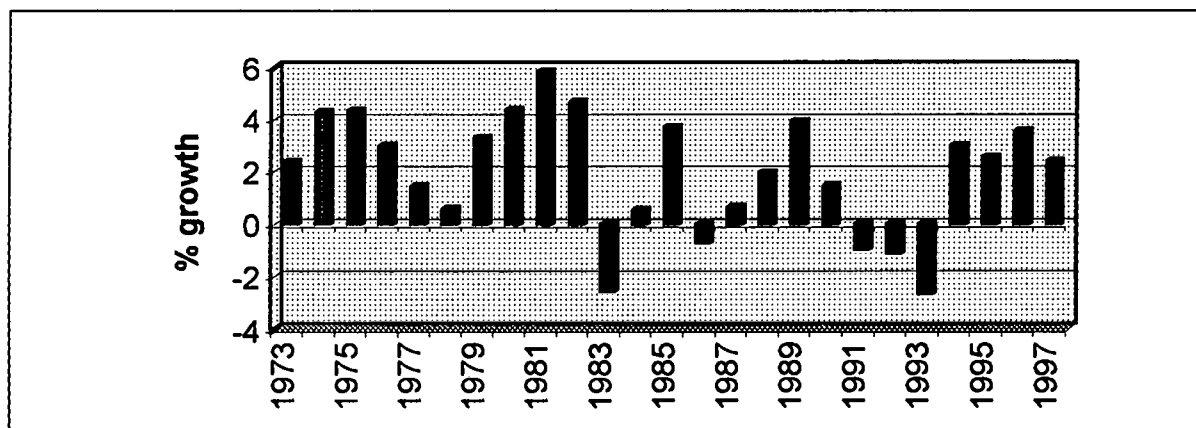
Obviously there are many factors affecting the real economy in South Africa, and it is rather difficult to isolate the impact of fiscal policy on a large set of variables. But significant discretionary fiscal contractions such as the ones dealt with in this paper do have a measurable impact in the given state of the economy. Here the causality is assumed to run from the changes in fiscal policy to the impact on various economic variables. In other words, the budgetary stance is being exogenously determined.⁴¹ If there are outliers, or if the results display too many differences with those presented in the other related empirical studies, the particular circumstances pertaining to such situations will be investigated.

⁴¹ This assumes “*ceteris paribus*”. Obviously this approach would have been more accurate had it been possible to generate a full macro-economic model of the South African economy. Since this paper relies on the methodology developed by Alesina and Perotti (1995, 1996) and McDermott and Wescott (1996), and, as previously argued, the chosen threshold of 1.5% of GDP for a one-year adjustment and of 2.5% for a two-year adjustment should eliminate any fiscal contraction due only to an improvement in the economic activity.

5.1 Impact on Growth

Figure 21 illustrates the evolution of GDP-growth in South Africa since 1973.

Figure 21: South Africa's GDP-Growth (1973-1997)



Source: SARB Quarterly Bulletin (various issues)

Figure 21 shows that negative growth rates were recorded in five instances. However, and as shown in Table 16, the behaviour of South Africa's GDP-growth in episodes of fiscal adjustment is somewhat surprising. Fiscal contractions tend to have a concurrent positive impact on growth. The effect of a reduction in aggregate demand due to lower primary deficits does not show up consistently in the data on GDP-growth. Indeed, out of the nine adjustments, only three (1978, 1986 and 1990) experience this normal Keynesian behaviour. It should be highlighted that these three adjustments are the only ones that rely proportionately more on tax increases.⁴² The abnormal short-term behaviour of growth in the other adjustments could be explained by different factors that outweigh the Keynesian impact: wealth, credibility and expectational effects, exogenous fluctuations and the state of the world economy. The explanation will be more comprehensively presented as the results of this whole chapter are investigated. Exogenous influences such as changes in the price of gold or droughts are not considered in detail in this analysis. As to the impact of the state of the world economy it will be dealt with in a subsequent paragraph.

⁴² See page 44. For the 1990 adjustment, 52% of the contraction was also recorded on the taxation side.

Table 16: Evolution of the GDP Growth Rate (% change)

	Before	During	After
All Episodes	1.87 (0.86)	2.69 (1.95)	1.81 (2.24)
Successful	2.08 (0.20)	2.47 (2.69)	4.55 (1.00)
Unsuccessful	1.89 (1.17)	2.30 (2.02)	1.43 (1.92)
Two-year	1.62 (0.45)	3.90 (1.70)	0.02 (1.48)

Source: Calculated from data in SARB Quarterly Bulletin (various issues).

Note: Standard deviation is indicated in brackets.

In the medium-term, however, it is clear from Table 16 that only successful fiscal adjustments contribute to higher growth. Whereas growth nose-dives following unsuccessful adjustments, higher GDP growth rates are recorded after successful ones (1978, 1980). The two exceptions are the unsuccessful episodes of 1974 and, more interestingly, of 1995. Therefore, the sustainability of the fiscal adjustment is crucial for improved growth. Section 4.1 underlined that the 1978, 1980 and 1995 adjustments all exhibited a continuation of the downward trend in the primary deficit after the adjustment, whereas once-off fiscal contractions do not generate positive credibility effects. Furthermore, and unlike all other adjustments, the 1995 contraction was implemented and managed by a new democratically elected government. Its positive outcome may thus be due to the combined credibility of the new political dispensation and the fiscal adjustment.

Another remark is that all episodes of fiscal contraction were implemented in situations where the economy was experiencing a moderate real growth. Thus fiscal adjustments are not successful simply because they are initiated in a period of high growth. One significant outlier is the 1995 adjustment which followed a two-year period of very low growth (0.2%). But no episode of fiscal contraction was carried out in a recessionary year.⁴³

⁴³ Alesina and Perotti (1995) observe that in recessionary years, governments are 2.5 times less likely to implement a fiscal contraction.

Table 16 also implies that a fiscal contraction appears to have a destabilising impact on the economy. It has been observed that the initial growth situation was very similar in all cases of adjustment. But as illustrated by the higher standard deviation ratios, the behaviour of the real economy diverges significantly during and after the adjustment.

These results are similar to the ones recorded in Alesina and Perotti (1996) and McDermott and Wescott (1996), except for the simultaneous impact of the fiscal contraction in unsuccessful adjustments. GDP-growth is still positive in South Africa, whereas it drops more rapidly in OECD countries. Thus it seems that in South Africa private agents are more myopic than in OECD countries, in the sense that any fiscal adjustment consisting mainly of lower expenditure generates short-term positive expectation and credibility effects. Because the adjustment is not sustained, and as the implications of the composition of the fiscal contraction are internalised, they behave like their OECD counterparts.

Another factor influencing growth in South Africa is the state of the world economy. Table 17 takes this effect into account, by indicating the difference between South Africa's real growth rate and that of the OECD's, which is its major trading partner. South Africa's poor growth record is illustrated by the many negative signs in this table.

Table 17: Evolution of SA's Growth Rate in Comparison to OECD Growth Rate

	Before	During	After
All Episodes	-1.64 (0.47)	-1.00 (1.74)	-0.42 (2.30)
Successful	-1.48 (0.85)	-1.35 (2.36)	1.21 (2.28)
Unsuccessful	-1.55 (0.46)	-1.36 (1.68)	-0.69 (2.51)
Two-year	-1.98 (0.15)	0.28 (1.74)	-1.36 (2.14)

Source: Calculated from data in SARB Quarterly Bulletin (various issues)

Note: A negative sign indicates that SA's growth rate is lower than OECD's growth rate. Standard deviation is indicated in brackets.

The results of Table 17 confirm the ones presented in the previous table. Fiscal adjustments are implemented in a sluggish growth environment. South Africa does not need to record faster growth than the world average for its adjustment to be successful.

The normal Keynesian impact does not function in the short-term, but in the medium-term successful adjustments clearly trigger higher growth. The magnitude of the improvement is as large as in the case where only South Africa's growth rate is considered, meaning that the impact of the world economy was rather small. However, in unsuccessful cases, there is some catch-up with regards to the OECD growth rate. This is likely to be due to the lower growth rate experienced in OECD countries, as Table 16 indicated a drop in South Africa's real growth rate after unsuccessful adjustments.

5.2 Impact on Employment

As far as one considers South Africa's employment data as reliable, there is a sizeable difference between successful and unsuccessful adjustments. As Table 18 shows, successful contractions promote employment in a much stronger way than unsuccessful adjustments.

Table 18: Evolution of Employment in Non-Agricultural Sectors (% change)

	Before	During	After
All episodes	0.94 (1.53)	1.69 (2.30)	1.29 (2.19)
Successful	1.14 (2.08)	0.82 (2.91)	3.09 (1.92)
Unsuccessful	0.93 (1.73)	1.70 (2.63)	0.86 (2.21)
Two-year	0.76 (1.53)	2.53 (1.78)	0.56 (2.62)

Source: Calculated from data in SARB Quarterly Bulletin (various issues)

Note: Standard deviation is indicated in brackets.

The results presented in Table 18 follow closely the findings for GDP-growth. However, it appears that since the late 1980s, the structural capacity of the economy to

create jobs has been significantly reduced.⁴⁴ Part of this structural problem might be due to lower public capital expenditure, and it should be remembered that these cuts were particularly strongly implemented in unsuccessful contractions. Thus all the most recent adjustments (1989, 1990, 1995 and 1989-1990), which are unsuccessful ones, recorded a drop in the employment rate after the fiscal contraction.

5.3 Impact on Inflation

It can be expected that one of the government's tools to fight inflation is the reduction of the fiscal imbalance. However this motive does not seem to have played a major role in the decision to implement a fiscal adjustment programme as the inflation rate before the adjustment is very close to the average recorded over the period 1972-1997.

As illustrated by Table 19, the Consumer Price Index displays a surprising slight upward trend after the adjustment: there is no visible disinflation.⁴⁵ In cases where economic growth improved, reduced public deficits were unable to contain the underlying rise in prices. In other cases, it might be that the fiscal contraction was accompanied by an easing of monetary conditions. This has also been observed in the OECD (1996) study. Interestingly, it reports that, during a fiscal adjustment, an accommodative monetary policy could more easily be used to support economic activity, now that inflation and inflationary expectations are low in these countries. However, South Africa seems to be still building up its credibility in this regard. The simultaneous fiscal and monetary tightening experienced for the last fiscal adjustments (1995 and 1995-1996) resulted in one of the few episodes where inflation was lower after the contraction. What is remarkable in such circumstances is that growth remained positive.

⁴⁴ South African Republic (1995) reports that the labour absorption capacity of the economy has collapsed.

⁴⁵ In South Africa, public deficits are mainly financed through borrowing and not money creation. Thus a reduced deficit will not impact significantly on money creation and should not contribute to lowering inflationary pressures.

Table 19: Evolution of the Consumer Price Index (%)

	Before	During	After
All episodes	12.28 (3.14)	12.84 (2.70)	13.71 (2.52)
Successful	11.30 (0.95)	11.99 (2.11)	13.36 (1.77)
Unsuccessful	12.13 (3.68)	12.74 (3.54)	13.40 (3.33)
Two-year	13.64 (4.26)	13.95 (0.03)	14.83 (0.16)

Source: Calculated from data in SARB Quarterly Bulletin (various issues)

Note: Standard deviation is indicated in brackets.

As reported in Table 19 and in conjunction with the fact that most adjustments rely more on expenditure cuts, but contrary to Leibfritz *et al.* (1994), it seems that not only tax rises, but also expenditure cuts, do increase inflationary pressures. This is a surprising result and it will need to be researched further.

5.4 Impact on the Real Interest Rate

Table 20 shows the evolution of the real interest rate on 10-year government bonds. The behaviour is very erratic as shown by the high standard deviations. Thus it does not seem that fiscal policy, and particularly a fiscal contraction, has a preponderant impact on the change of the real interest rate. As argued by Kahn (1991), interest rates in South Africa are determined according to changing policy objectives, so that there is no direct connection between fiscal deficits and interest rates. The advent of an eventual "crowding-in" or credibility effect due to lower deficits cannot be clearly supported by the data on interest rates. Furthermore, it is difficult to interpret a lowering of the real interest rates, as it might be the result of two different phenomena: improved financial credibility or weaker economic activity. As reported by OECD (1996), the understatement of the real interest rate prior to the adjustment might also explain why the real interest rate fails to decline after the adjustment.

Table 20: Evolution of the Real Interest Rate (Long-Term, %)

	Before	During	After
All episodes	0.61 (1.76)	0.55 (3.55)	1.22 (3.24)
Successful	- 0.93 (1.08)	- 1.89 (3.27)	-2.47 (0.01)
Unsuccessful	1.68 (1.60)	1.99 (3.32)	2.89 (2.91)
Two-year	- 0.55 (0.54)	- 0.63 (4.57)	- 0.09 (2.16)

Source: Calculated from data in SARB Quarterly Bulletin (various issues)

Note: Standard deviation is indicated in brackets.

However, if any lower deficit does not automatically lead to lower interest rates, a more careful analysis of Table 20 reveals that real interest rates are indeed much lower after successful adjustments, possibly implying that credibility effects did function. In the unsuccessful cases, the rates are always higher after the adjustment, except for the 1986 adjustment. It is particularly worrying to note that real interest rates after the 1995 adjustment are at a record 7.66%. Thus the penalisation for not having adjusted successfully is severe in terms of higher interest rates and, it seems, on the rise. The tightening of the monetary policy, the recent integration of South Africa into the world economy and the need to attract foreign capital and investment all contribute to pushing up the interest rates. It is likely that financial markets do punish failed adjustments in a stronger way than before and that they would rather witness smaller but longer lasting improvements in the fiscal balance than a highly unstable fiscal path.

McDermott and Wescott (1996), Alesina and Perotti (1995) and OECD (1996) do not find a strong relationship between fiscal adjustment and the behaviour of real interest rates. Only Alesina and Perotti (1996) report a significant rise in interest rates after unsuccessful adjustments. On the basis of their results it is difficult to understand how they can argue that successful fiscal contractions generate positive credibility effects, whereas they can only support the case that failed adjustments do have a negative impact on credibility. In the South African situation, the fact is that real interest rates after the two successful adjustments are negative and significantly lower than after any other adjustment. However, it is doubtful that in the present economic dispensation, a successful fiscal adjustment would result in negative real interest rates.

5.5 Impact on Private Investment

Hawkins (1997) identifies successful adjusters as those countries where high and sustained levels of efficient private investment are recorded. As reported by Easterly and Schmidt-Hebbel (1993), fiscal policy impacts on private investment through its effects on public investment, public deficit and the user cost of capital.⁴⁶

The evolution of gross domestic fixed investment by private agents, as shown in Table 21, is indeed a good indicator of successful fiscal adjustment as the promotion of investment spending through reduced public deficits leads to higher growth rates. It will show if deficit cuts reduce crowding-out effects, free up resources for the private sector, and generate a credible economic climate conducive to increased investments.

Table 21: Evolution of Private Investment (% change)

	Before	During	After
All episodes	0.00 (4.19)	5.91 (10.74)	3.71 (8.16)
Successful	- 1.86 (1.51)	0.01 (8.16)	12.30 (13.36)
Unsuccessful	1.68 (5.13)	5.65 (13.02)	1.26 (5.06)
Two-year	- 2.36 (0.80)	12.47 (4.71)	1.23 (7.89)

Source: Calculated from data in SARB Quarterly Bulletin (various issues)

Note: Standard deviation is indicated in brackets.

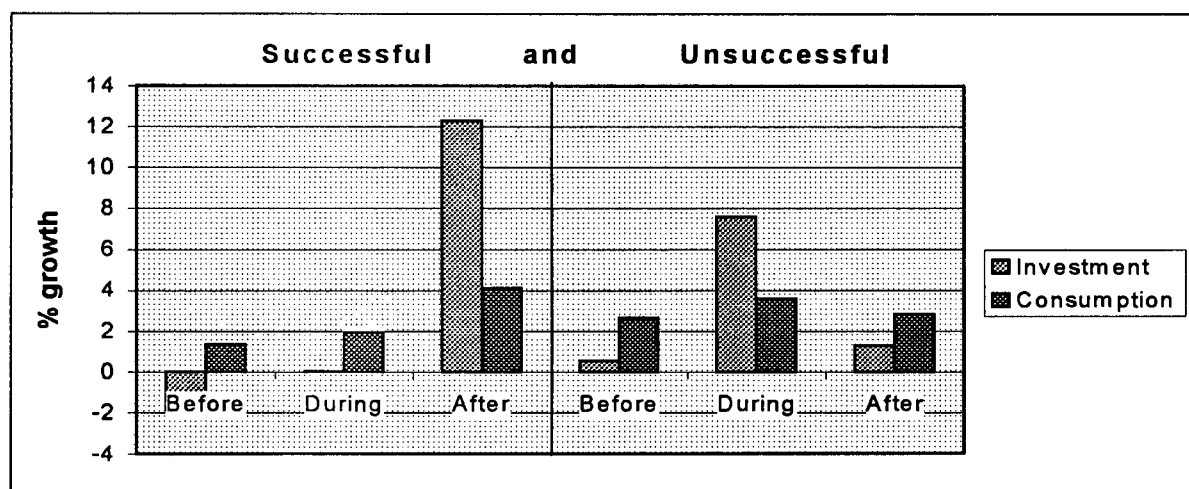
Table 21 examines the change in gross domestic fixed investment by private agents. The volatility of that indicator is reflected in the high standard deviation ratios. It should be acknowledged that in seven episodes, private investment experienced a downward trend before the fiscal contraction. The average presented in the first column of Table 21 is strongly biased by the 1990 episode, which was preceded by a huge rise in investment of 10.67%. If this figure is excluded, the average drop in investment before an adjustment is 1.33% (1.31) and before unsuccessful ones 0.56% (1.18). It should also be highlighted that reduced deficits indeed tend to “crowd-in” private investment as in seven

⁴⁶ The user cost of capital is determined by the real interest rate, the price of investment goods and investment incentives.

cases out of nine investment grew significantly during the adjustment. This is a clear sign of positive credibility about the fiscal adjustment. However, three cases (1978, 1986 and 1990) recorded a drop in the growth rate of private investment. For example, in 1986 private investments plunged by an impressive 16.49%. These episodes are the ones when the largest proportion of the adjustment fell on the taxation side. More precisely, in 1986 and 1990, the corporate tax-ratio-to-GDP increased. Furthermore, as shown by Table 10, page 47, the introduction or the increase of the import surcharge seems to be one of the main culprits for the reduced levels of private investment. Thus the disincentives of higher taxation (negative wealth, expectational and competitiveness effects) overpowered the benefits of reduced deficits (credibility effect).

Only two contraction episodes managed to record an increase in the growth rate of private investment after the adjustment and these are the two successful ones (+8.61% in 1978 and +15.96% in 1980). Three unsuccessful episodes showed an absolute rise in the stock of investment just after the adjustment, but by the second year after the fiscal adjustment the growth rate turned negative. The only exception is the 1995 episode, where the growth rate of private investment was 15.26% during the adjustment, followed by positive, but decreasing, growth rates of 10.75% (1996) and 6.64% (1997). Figure 22 highlights the evolution of the two components of private demand.

Figure 22: Private Investment and Consumption in Episodes of Fiscal Adjustment



Source: Calculated from data in SARB Quarterly Bulletin (various issues)

The results illustrated by Figure 22 are not entirely consistent with the ones extracted from Alesina and Perotti (1995, 1996) and McDermott and Wescott (1996), where an investment boom was recorded only in successful adjustments. Even though the higher volatility of private investment in South Africa might play a role, it could be that fiscal adjustments *per se* were interpreted by the local private business enterprises as a credible enough sign and did fulfil their expectations that the size of the public sector was to be kept in check. However, as the fiscal contraction was reversed and as its composition became clearly understood, private agents changed their expectations accordingly and adjusted their investment levels.⁴⁷ This could further be supported by evidence from developing countries, which show that private investment is insensitive to real interest rates.⁴⁸ Indeed in this study the erratic behaviour of real interest rates fails to explain the general increase in private investment.

5.6 Impact on Private Consumption

In comparison to private investment, private consumption is far less volatile and has been growing almost constantly in real terms. It displays the same tendencies during and after the adjustments, as shown in Table 22. First, private consumption rises, except in cases where the contraction was achieved through increased taxation (VAT/GST and direct taxes), as disposable income drops. Then the growth rate in private consumption decreases in cases of unsuccessful adjustments, as expectations and credibility are altered. On the other hand, in successful cases private consumption continues its upward trend.

⁴⁷ It is acknowledged that investment decisions are also affected by wages, productivity levels, the exchange rate, profitability and political stability. But the evidence from OECD countries, reinforced by the South African experience is a rather strong indication that investments react to fiscal policies.

⁴⁸ Easterly and Schmidt-Hebbel (1993).

Table 22: Evolution of Private Consumption (% change)

	Before	During	After
All episodes	2.34 (1.69)	3.21 (3.45)	3.07 (2.35)
Successful	1.33 (1.24)	1.92 (3.02)	4.10 (5.15)
Unsuccessful	3.00 (1.82)	2.99 (4.22)	2.99 (1.51)
Two-year	1.71 (1.77)	5.07 (2.11)	2.26 (2.25)

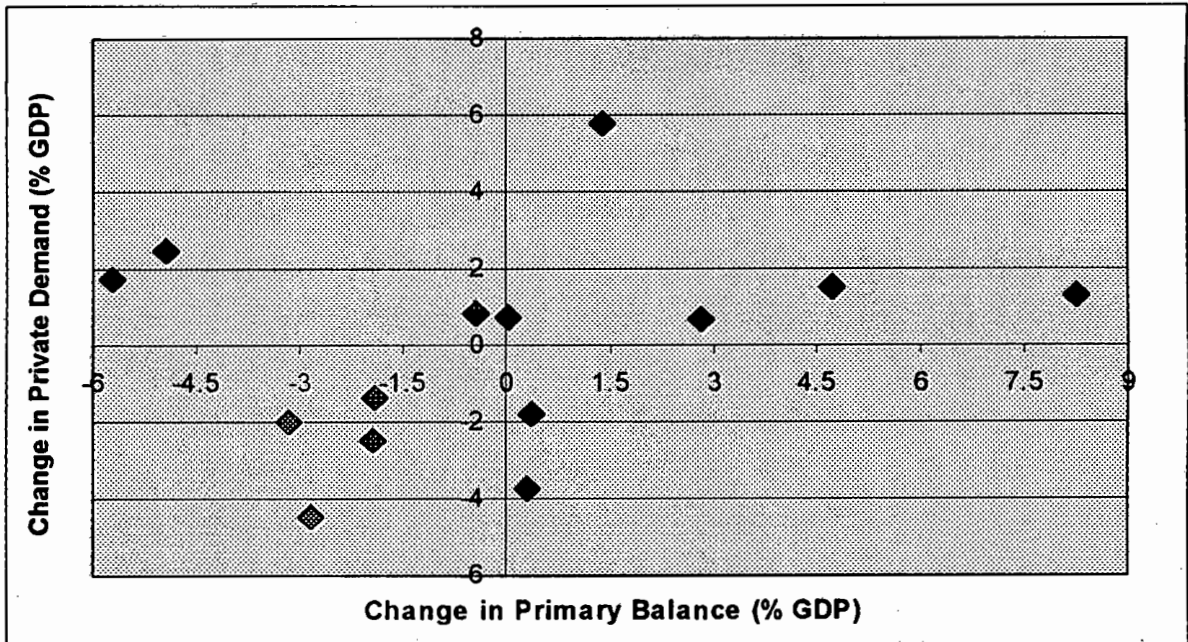
Source: Calculated from data in SARB Quarterly Bulletin (various issues)

Note: Standard deviation is indicated in brackets.

It should be noted that the relationship between the interest rate (Table 20) on the one side, and private investment (Table 21) and consumption (Table 22) on the other, does not appear to be always consistent with economic theory. There is a significant asymmetry. For example, in most cases where the real interest rate is negative or dropping, the wealth effect works according to the theory, that is the drop in the interest rate triggers higher consumption and investment spending. However, the opposite is not true for positive and rising real rates of interest. The best illustration is the 1995 episode, where real interest rates of 3.27%, 6.76% and 7.66% respectively were recorded before, during and after the adjustment. The corresponding figures for the growth rate of private investment were -0.71%, 15.26% and 8.69% and for the growth rate of private consumption -0.06%, 3.93% and 4.01%. This puzzling result could be due to high expectational and credibility effects of the last fiscal contraction implemented by the new government.

Finally, the analysis made by Giavazzi and Pagano (1995) on the relationship between changes in the fiscal balance and private demand (sum of private investment and consumption) is applied to the South African case. Figure 23 tends to confirm that a non-linear relation exists between these two variables. It is particularly evident that the standard Keynesian effect of fiscal policy works only in a "normal" range of changes in the budgetary balance.

Figure 23: Changes in the Primary Balance and Private Demand



Source: Calculated from data in SARB Quarterly Bulletin (various issues)

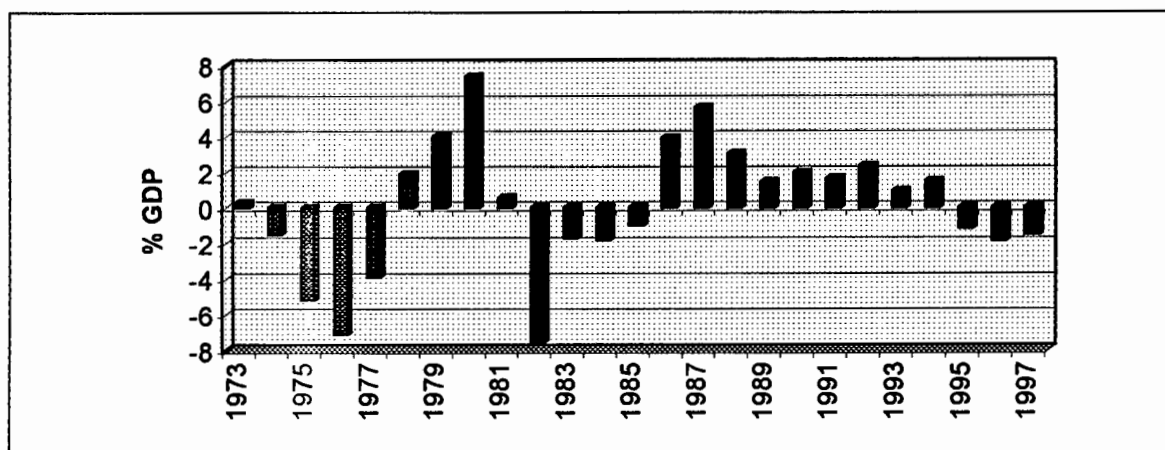
Note: Each point represents a fiscal policy “stance”, defined as a period in which the primary balance changed in the same direction without interruptions. A “stance” consists of a single observation if the change in the primary balance lasts for one year only; if instead the fiscal impulse keeps the same sign for several consecutive years, the observation cumulates the change in fiscal balance and in private demand.

As shown in Figure 23, in the South African case, the “normal” range runs from a contraction of 4% of GDP to an expansion of 2% of GDP. Therefore, it looks as if a large fiscal contraction cannot be associated with a “normal” decrease in private demand, as credibility and expectation effects compensate for the negative aggregate demand impact. On the other hand, a large expansionary fiscal policy seems to crowd-out private demand because the linear relationship does not materialise when deficits are increased by more than 2% of GDP.⁴⁹

5.7 Impact on the Current Account

Figure 24 illustrates the evolution of South Africa's current account balance.

⁴⁹ Giavazzi and Pagano (1995) find that, for OECD countries, the “normal” range in which the Keynesian effect works on private demand is plus or minus 5% of change in the structural deficit.

Figure 24: Current Account Balance (% GDP, 1973-1997)

Source: SARB Quarterly Bulletin (various issues)

As shown in Figure 24, the current account deficit was very significant in 1976 and in 1982. From 1986 until 1994, it was always in surplus, mostly to alleviate the foreign debt crisis. But as Table 23 illustrates, the current account balance was seldom in a critical position when a fiscal contraction was adopted. The earlier adjustments (1974 and 1978) were the only ones showing a current account deficit. Before the 1978 adjustment the trade deficit reached 5.49% of GDP and the economy needed to be cooled down to avoid a balance of payments crisis. This fiscal adjustment relied heavily on tax increases, and particularly on trade taxes. It came after the failed 1974 adjustment, which, through reduced public expenditure, did not manage to improve the trade balance.

Table 23: Evolution of the Current Account (% GDP)

	Before	During	After
All episodes	0.94 (3.40)	2.18 (2.71)	- 0.02 (4.13)
Successful	- 1.28 (5.95)	4.63 (3.89)	1.10 (6.49)
Unsuccessful	0.75 (2.80)	0.94 (2.27)	0.05 (4.08)
Two-year	3.63 (0.99)	2.83 (1.61)	- 1.32 (4.67)

Source: SARB Quarterly Bulletin (various issues)

Note: Standard deviation is indicated in brackets.

Table 23 also highlights that the current account improves significantly during the adjustment. Thus there is a strong contribution of fiscal adjustment to external

adjustment. This is particularly obvious in cases where taxes (customs and excise duties, direct taxation) were raised. And that pattern continues after the adjustment. The 1978, 1986 and 1990 adjustments all record healthy surpluses after the contraction, whereas in most other cases the trade balance worsened significantly (1974, 1980, 1980-1981, 1995). In these cases, it seems that higher growth led to rising imports. Finally, and as observed in OECD (1996), the current account balance improved, despite the lack of strong pattern in the response of real interest rates or real exchange rates.

5.8 Impact on the Real Exchange Rate

The evolution of the real exchange rate is often seen as a major factor contributing to a successful adjustment. However, in South Africa the picture is rather blurred, as illustrated by the high standard deviation ratios shown in Table 24. Furthermore, the erratic evolution of the exchange rate is not entirely reflected by similar changes in the current account balance.

Table 24: Evolution of the Real Exchange Rate (% change)

	Before	During	After
All episodes	1.99 (5.83)	0.33 (8.68)	2.14 (4.63)
Successful	0.57 (0.59)	4.32 (3.66)	3.36 (0.88)
Unsuccessful	1.11 (6.67)	-2.67 (10.24)	2.53 (5.81)
Two-year	5.60 (7.71)	3.86 (8.29)	- 0.07 (4.70)

Source: SARB Quarterly Bulletin (various issues)

Notes: A negative sign reflects a depreciation of the rand. Standard deviation is indicated in brackets.

As presented in Table 24, the exchange rate in unsuccessful episodes does not exhibit a clear pattern in the response of the fiscal adjustment. Generally, a large movement in one direction was compensated for in the next period. Only one episode (1986) was preceded by a large devaluation of the exchange rate. In successful cases, the behaviour is more uniform, with a continuous appreciation of the real exchange rate over the entire period. This might be explained by the rising current account surplus and by capital inflows due to the credibility of the adjustment.

Alesina and Perotti (1996) and McDermott and Wescott (1996) also report the wide variety of behaviour of the exchange rate. Whereas the general trend is that fiscal adjustment leads to an appreciation of the exchange rate, most studies point out that several adjustments (successful and unsuccessful) were preceded by a large devaluation, which might have helped improve the competitiveness of the economy. However, a more accurate measure of competitiveness needs to be introduced. The next section presents the unit labour cost.

5.9 Impact on Unit Labour Cost

Unit labour cost is one of the main measures of competitiveness and can be influenced by two factors: the nominal exchange rate (in countries with nominal rigidities) and the evolution of real wages. In the South African case, it is quite clear that the main influence on unit labour costs is through the real wage. In almost all contraction episodes, real wages and unit labour costs moved in the same direction. The pressure exercised by real wages was contained in six adjustments, including the two successful ones. More surprisingly this behaviour was also observed in cases where taxation was increased. Finally, it should be noticed that the wage flexibility was higher over the earlier part of our sample: since 1987, real wages did not fluctuate annually by more than 2 % both ways.⁵⁰

Table 25 confirms that sizeable improvements in unit labour costs were made during almost all fiscal contractions. However, they are generally not sustained, the only exceptions being the 1978 and 1995 adjustments. In the latter case, the main reason is the sharp drop in the value of the rand, as the real wage continued its rising trend.

⁵⁰ In 1995, real wages were raised by 3.8%.

Table 25: Evolution of Unit Labour Costs (% change)

	Before	During	After
All episodes	- 0.51 (2.03)	- 2.48 (2.78)	0.90 (3.50)
Successful	0.05 (4.51)	- 3.88 (2.96)	- 1.20 (5.70)
Unsuccessful	- 0.42 (0.99)	- 1.78 (3.04)	0.55 (2.26)
Two-year	- 1.27 (2.64)	- 2.83 (3.12)	3.88 (4.21)

Source: SARB Quarterly Bulletin (various issues)

Note: Standard deviation is indicated in brackets.

It is rather difficult to explain the behaviour of unit labour costs in South Africa by looking at the composition and the successfulness of the fiscal adjustment, as the two do not seem to be correlated. The impact of fiscal contraction on the supply side and on the cost of firms is still very much unexplained. This question raises interesting prospects for future research. Here it can only be hinted that fiscal adjustments improve expectations and enhance the credibility of the future fiscal stance, and thus a temporary sacrifice could be accepted by the workforce and the trade unions. Wages are adjusted upwards once the composition of the adjustment is fully internalised.

CHAPTER 6

THE 1995-1996 FISCAL ADJUSTMENT

The last fiscal adjustment relates to the period 1995-1996. It cannot yet be qualified as successful or not, because the debt criteria are not observable. However the findings of the previous chapters will be used to evaluate its chances of success. As said in section 3.1, the economic and political environment has changed over the last twenty years and this new situation needs to be incorporated in the analysis presented below.

6.1 Composition of the Adjustment

As illustrated by Table 26, the 1995-1996 adjustment is much larger than any of the successful adjustments, which is a major cause of concern.

Table 26: Composition of the 1995-1996 Adjustment (% GDP)

	1995-1996	Unsuccessful	Successful
Size of adjustment	- 2.48	- 2.70 (0.76)	- 1.84 (0.11)
Expenditure	- 2.06	- 1.74 (1.24)	- 1.07 (1.45)
Revenue	0.42	0.96 (0.88)	0.77 (1.56)

Source: SARB Quarterly Bulletin (various issues)

Note: Standard deviation is indicated in brackets.

But Table 26 also presents the composition of the contraction. It is interesting to note that, as in most episodes, the contribution of expenditure reductions and revenue increases was asymmetrical. In this case, spending cuts make up 83% of the contraction and the increase in revenue is very moderate. The detailed breakdown of the adjustment will be analysed in the next sections.

The behaviour of various fiscal variables before and after the adjustment was identified as being crucial for the successfulness of the contraction. As Table 27 illustrates, the latest adjustment was implemented in a situation of budgetary crisis, with the primary deficit reaching dangerously high levels. There were talks that South Africa

was entering the debt trap, as the previous government did lose control over spending. But the characteristics of this adjustment are not all very promising.

Table 27: Evolution of Several Fiscal Indicators Around the 1995-1996 Adjustment

	Before	During	After
Primary Balance (% GDP)	- 4.09	- 0.03	0.45
Taxation (% GDP)	30.22	31.29	32.43
Expenditure (% GDP)	34.31	31.32	31.99

Source: SARB Quarterly Bulletin (various issues)

Note: The "after" period only relates to 1997, as data for 1998 are not yet available.

Certainly, the primary balance continues to improve after the adjustment, but this is the result of a significant rise in the tax burden. As recorded in Table 27, the taxation-to-GDP ratio is more than 2% higher after the adjustment and it reaches its all-time high. Furthermore, expenditure is on the rise again. These trends were identified as not being conducive to success and they illustrate the continuous growing size of the public sector. The present government appears unable or unwilling to reverse the long-term rising trend of expenditure and taxation.

6.2 Taxation

Even though the taxation burden did not rise by a large amount during the adjustment, the way in which it was increased is worrying. As shown by Table 28, the adjustment took place through a sharp rise in direct taxation. Personal income taxes and corporate taxes both rose significantly. The adoption of a temporary transition levy on income tax played a significant role in this fiscal adjustment.

Table 28: Composition of Changes in Revenue (% GDP)

	1995-1996	Unsuccessful	Successful
Direct Taxation	0.52	0.58 (0.51)	0.02
- personal	0.34	0.34 (0.46)	
- corporate	0.17	0.36 (0.49)	
Indirect Taxation	- 0.10	0.42 (0.67)	0.24
- VAT	0.07	0.35 (0.43)	0.36
- Custom/Excise	- 0.13	0.19 (0.67)	0.08
Non-Tax Revenue	0.00	0.02 (0.25)	0.51

Source: Calculated from data in SARB Quarterly Bulletin (various issues)

Note: Standard deviation is indicated in brackets.

On the other hand, Table 28 shows that revenue from custom and excise duties continued to drop, as the country lowered its tariffs. Thus, the ratio of indirect taxation to GDP declined, whereas non-tax revenue remained unchanged. The composition of the increase in taxation is unlikely to trigger positive wealth effects, as the disincentives of higher direct taxation are obvious. However, the rise in the taxation ratio was announced by the government as being temporary. As reported in Table 27, the rise in taxation is indeed permanent. This is another characteristic of a failed adjustment.

6.3 Spending

Table 29 summarises the main changes of public spending for the 1995-1996 adjustment. Capital expenditure was sharply reduced, once again. In 1994, it represented 5.26% of GDP and it was cut down to 3.62% in 1996. The combination of the size of the cut and of the low stock of capital expenditure is a major cause of concern for the chances of success of this adjustment. The quantity and the quality of the public infrastructure are being eroded year after year. Furthermore, it is probable that private investments cannot be crowded-in on the same scale as previously.

Table 29: Composition of Changes in Expenditure (% GDP)

	1995-1996	Unsuccessful	Successful
Capital Expenditure	- 0.82	- 0.79 (0.91)	- 0.43 (0.34)
Current Expenditure	- 1.24	- 0.94 (0.64)	- 0.64 (1.11)
Government Cons.	- 0.20	0.04 (0.33)	- 0.02 (0.34)
Remuneration	- 0.13	0.02 (0.30)	- 0.14 (0.04)
Subsidies	- 0.33	- 0.19 (0.21)	- 0.13 (0.07)
Transfers	0.30	0.08 (0.32)	- 0.04 (0.14)
Net Lending	- 0.08	- 0.62 (0.54)	- 0.62 (0.80)

Source: Calculated from data in SARB Quarterly Bulletin (various issues)

Note: Standard deviation is indicated in brackets.

However, as reported in Table 29 and on a more positive note, the main components of current expenditure were also tackled in a relatively significant way, at least when compared to the previous episodes. As in successful adjustments, the wage bill was lowered, while cuts in government consumption and subsidies were even larger. Public sector employment rose only slightly (0.83 %) during the adjustment. The combination of a reduced wage bill and increased public employment resulted in a drop of real public wages. This is worrying for several reasons. As shown earlier, government plays an increasingly important role in the economy. An underpaid and demoralised civil service can resort to absenteeism, corruption or moonlighting, which affects the overall productive capacity of the economy. Furthermore, and specially related to the present situation, the South African government is engaged in a process of transforming the economy and the society. To manage this efficiently it must attract skilled personnel and compensate them accordingly. Finally, with the concurrent trade liberalisation and the economic upswing, wages in the private sector are likely to rise rapidly and public salaries should be keeping up, if the public sector is to retain competent employees.

The only category to record an increase in its GDP ratio is transfers, as it was used to finance the new constitutional order, so that this rise can be viewed as temporary. And as said earlier, changes in net lending could not contribute to the adjustment in a strong way.

Thus the 1995-1996 could have been seen as a long-lasting effort to curb the natural tendency of a growing public sector, as all spending categories were reduced or recorded once-off increases. Unfortunately, the momentum was not sustained, as in 1997 the wage bill resumed its upward trend following the agreement reached in the Central Chamber of the Public Service Bargaining Council.⁵¹ GEAR also provides for increases in the remuneration of civil servants and proposes to finance it through a large-scale change in the composition of public expenditure.⁵² Unfortunately, the 1997 data show that non-wage consumption reached record levels, whereas subsidies and transfers were modestly lowered, and capital expenditure was cut further.

6.4 Macroeconomic Impacts

The 1995-1996 adjustment was implemented at a time of relatively low growth. South Africa's economy was recovering from a long recession and the fiscal imbalance had reached alarmingly high levels. However, at the same time, the country was experiencing a dramatic political change. The level of sympathy towards the new South Africa was unprecedented. Furthermore, the new government did assure local and international communities as well as financial markets that its economic policy had changed and moved towards market-friendly practices. So the positive expectations and the high credibility of the new dispensation could have had a large effect on the macroeconomic impacts of the adjustment. It is indeed the only contraction implemented by the new government and many structural characteristics did change. SA's improved perception was reflected by the lifting of all sanctions, large long-term capital inflows⁵³, the oversubscription of its international bonds and higher business confidence indices. Table 30 summarises the economic environment before the contraction as well as during its implementation, and the data after the adjustment.

⁵¹ A detailed account is given in Siebrits (1996). Improvements in real salaries should have been matched by resources freed from the process of "rightsizing". On the contrary, employment levels in the public sector rose by 1.8% in 1997.

⁵² In South African Republic (1996), Appendices 8 (Managing the Public Sector Wage Bill) and 14 (The Prospects for Government Employment) are of particular interest.

⁵³ The two-year period preceding the April 1994 elections was characterised by capital outflows worth R 22.8 billion. By contrast the two-year period following the elections (1994Q3 - 1996Q2) recorded R 29.3 billion worth of capital inflows, with long-term inflows amounting to R 27.2 billion. Source: SARB Quarterly Bulletin (various issues).

Table 30: Macroeconomic Impacts of the 1995-1996 Adjustment

	Before	During	After
GDP growth (%)	0.17	3.04	2.40
Employment growth (%)	- 2.02	0.16	- 1.09
Inflation rate (%)	10.99	8.44	8.14
Real Interest Rate (%)	3.28	7.24	7.60
Private Investment growth (%)	- 0.71	13.00	6.64
Private Consumption growth (%)	- 0.06	4.26	3.42
Current Account (% GDP)	1.21	- 1.49	- 1.52
Real Exchange Rate (% change)	- 1.77	- 0.76	- 10.77
Unit Labour Cost (% change)	- 1.55	- 0.73	- 2.86

Source: SARB Quarterly Bulletin (various issues)

Note: The "after" period only relates to 1997, as data for 1998 are not yet available.

As Table 30 illustrates, the 1995-1996 contraction presents many similarities with the other unsuccessful adjustments. Even though the actual values are relatively good, the trends are typical of a failed adjustment. As observed in cases where expenditure cuts represent the major part of the contraction, the negative Keynesian effect does not dominate *during* the adjustment. Growth rises rapidly, as do private consumption and private investment. The investment boom is particularly impressive and confirms positive expectations. The employment figure does not improve significantly, as it seems more and more that employment growth is being uncoupled from output growth. The current account is allowed to move into deficit as capital inflows rise substantially. Inflation drops during the contraction, but this is mainly the result of the very tight monetary policy stance adopted by the Reserve Bank. One of the most striking features of this adjustment is that, even under circumstances of combined restrictive fiscal and monetary policies, growth is still positive. However, the economic indicators for the period *after* this adjustment have all the characteristics of a failed adjustment. Output, investment and consumption all show decreasing growth trends. And the preliminary results for 1998 are likely to confirm the downward trends in many variables. The real exchange rate depreciated markedly after the adjustment, which helped keep down unit labour costs. But the improved competitiveness of exports has not been sufficient to

reduce the deficit on the trade balance. Monetary policy continues to be tight, with real interest rates rising to record levels. As a result, this episode is one of the very few (1989, 1995) recording a lower inflation rate after the contraction. Thus the non-accommodating monetary policy will have an important impact on the successfulness of the 1995-1996 contraction. However, it is not the only determinant factor, as in 1997 the taxation pressure rises to record levels. These two policy decisions, as well as the problems encountered in implementing the Growth, Employment And Redistribution (GEAR) programme, are significantly reducing the prospects for this adjustment to be qualified as successful, according to the definition used in this paper.

Looking ahead, the GEAR document proposes a gradual reduction of the deficit ratio, as part of a broad plan of economic development. Thus this approach to redressing fiscal imbalance would not be captured in this paper. It does not mean that it cannot be a successful strategy. In particular, and as argued by Schadler *et al.* (1995), a revenue-neutral improvement in the structure of taxation and expenditure, which does not show up in any aggregate measure of fiscal stance, can entail significant gains in economic efficiency. Here, it was highlighted that a "stop-go" fiscal policy is one of the major destabilising factors influencing the economy. This paper also shows that most of the time large contractions do not generate standard negative aggregate demand effects. Finally, it is possible that the relatively slow pace of fiscal adjustment will put pressure on politicians not to miss the fairly modest fiscal targets and will require a very effective implementation. Indeed if a deficit reduction of 2% of GDP in one year was missed by 0.3%, it is likely that private agents would not react in the same way as if the envisaged reduction of 0.5% of GDP turned out to be a reduction of only 0.2%.

It is encouraging that the GEAR strategy highlights similar trends as being conducive to sustainable growth. Capital expenditure needs to be increased, while government consumption is to be reduced. The right sizing of the public service workforce should allow for a moderate real wage rise. Finally, the taxation-to-GDP ratio should be stabilised, preferably through reforms of the personal income tax.

CONCLUSION

This paper indicates that a reasonably large and consistent deficit reduction can generate encouraging economic outcomes: not only is growth positive during a fiscal contraction, but in most cases growth picks up with it. If the fiscal adjustment is of reasonable size, between 1.5% and 2% of GDP, the negative impact on aggregate demand can be compensated for by positive credibility, expectational and wealth effects. This result shows that in the short to medium term, fiscal policy does actually impact on the real economy. However, as has been observed in OECD countries, the composition of the fiscal adjustment matters more than the size of the budgetary cuts.

In South Africa, the major part of the adjustment tends to fall on expenditure. In every fiscal adjustment episode, capital expenditure is cut. However, in successful contractions, the relative size of these cuts is smaller and the actual level of public investment is kept above 6% of GDP. Net lending is also reduced significantly. Interestingly, the main component of spending, current expenditure, remains almost untouched during fiscal adjustments. Spending on government consumption, subsidies, transfers and wages is not tackled in a significant way because of the heavy political significance of these components of spending. Only in cases of successful adjustments are all categories of current expenditure lowered. Furthermore, the "natural" tendency of increased public workforce is moderated. However, it seems that in the short-term, *any* fiscal contraction mainly composed of expenditure cuts generates positive credibility, expectational and wealth effects.

On the revenue side, the difference between successful and unsuccessful adjustments is more striking. The former are characterised by large increases in direct taxation, whereas the latter, when they rely on tax rises, record an increase in non-tax revenue. Indirect taxation is dealt with in an uncoordinated manner. It is interesting to observe that the three episodes of fiscal contraction, which resulted in a lower growth rate, are the three relying essentially on tax increases. Thus adjustments through increased taxation cumulate four combined negative impacts: the aggregate demand is

reduced and this effect is magnified by negative credibility, expectational and wealth effects, as the taxation-to-GDP ratio is raised. Also if the tax increase is maintained over time, the negative response of consumption and investment will grow stronger.

On average, successful adjustments manage to rely on temporary rises in taxation and on permanent cuts in spending. The opposite is recorded for unsuccessful contractions, with the revenue-to-GDP ratio significantly higher after the adjustment and the expenditure-to-GDP ratio bouncing back to previous levels. Thus a "stop-go" policy is particularly detrimental to a successful fiscal adjustment. Only sustained contractions do generate positive credibility and expectational effects over the medium-term. If the fiscal adjustment is not sustained, the short-term positive response to the fiscal contraction by private agents will be reversed in the following years.

The 1978 and 1980 adjustments are qualified as successful because the debt-to-GDP ratio was lowered by a significant margin two or three years after the fiscal contraction. This is the chosen definition of success, as it appears that most cases of fiscal adjustments were implemented at a time when the fiscal position was unsustainable, with high and rising primary deficits. The growth rate of the economy is very similar before any adjustment, but the contraction has a destabilising impact on the economy, as is shown by the substantially diverging growth rates after the adjustments.

It is interesting to note that during a fiscal contraction there is no significant difference between successful and unsuccessful adjustments. Short-term economic effects differ according to the composition of the adjustment. For example, in cases where expenditure is cut, the contractionary fiscal policy does not dampen the recovery in private sector investment and consumption. On the contrary, they both experience a boom, which is of a very impressive size in the case of private investment.

Even if successful fiscal adjustments have varying short-term impacts, as the composition of the fiscal contraction differs, the medium-term impacts (one to two year effects after the adjustment) are similar: growth is boosted significantly, real interest rates

are lowered, private consumption and investment rise considerably, employment levels improve and the exchange-rate appreciates. As in most episodes, the inflation rate rises surprisingly. By comparison, in unsuccessful adjustments, all macro-economic indicators display a medium-term downward trend, once the composition of the adjustment is internalised: growth slows down, private investment and consumption do not keep their initial positive response to the adjustment and the current account moves back into deficit.

The last adjustment (1995-1996) shows most characteristics of a failed adjustment. The size of the fiscal contraction is very large. Even if spending cuts are relatively larger than tax increases, the contraction was mainly achieved through rises in direct taxation and cuts in public investment and subsidies. Furthermore, the revenue-to-GDP ratio reaches its all-time high in 1997 and expenditure is rising again. It contributes to the perception that the public sector will continue to expand. And even if the short-term macroeconomic impact is positive, the aftermath of this adjustment is disappointing: GDP growth is marginally down, employment figures are a major cause of concern, growth rates of investment and consumption are not sustained. Monetary policy is not particularly accommodating as the real interest rate rises to unprecedented levels. The only expenditure-switching policy to accommodate for the fiscal contraction is the depreciation of the real exchange rate, which helps improve the competitiveness of the economy.

It has been emphasised that cuts in public investment, transfers, subsidies and net lending are not a valid option anymore. The future budgetary corrections on the expenditure side will have to deal with politically sensitive areas such as the remuneration of public employees and the delivery of public goods and services. Any adjustment on the revenue side is unlikely to help redress fiscal imbalances and generate positive macroeconomic outcomes. The current government macroeconomic framework, GEAR, does not advocate for large fiscal deficit reductions, which is understandable, since the primary balance is now positive. It remains to be seen if this gradual approach to fiscal sustainability can generate strong expectational and credibility effects. But this

paper emphasises that a clear medium-term strategy to achieve fiscal sustainability plays an important part in establishing credibility. However, it should be emphasised that growth and employment will not be brought about by a single policy instrument, but by a coherent policy package.

Finally, there are still many areas that require further investigation. It is often difficult to isolate the individual contribution of fiscal adjustment to output growth. The higher growth rate might be a product of the accompanying policies or of exogenous influences and not only of the specific composition of cuts in the budget. The transmission mechanisms between fiscal policy and activity are also complex. For example, links between the composition of expenditure cuts or tax increases and the impact on unit labour costs need to be disentangled, especially at a time when South Africa's economy is moving away from a policy of inward-orientation to export-promotion. The structure of the labour market impacts on competitiveness and contributes to the crowding-in effects of the fiscal contraction. More could also be said about the correlation and the causality between taxation, savings and investment. The influence of monetary policy while a fiscal adjustment is being implemented needs to be scrutinised. Another interesting topic that requires further investigation in the South African situation is the suggestion that if severe income disparity hinders economic growth, then the redistributive effect of a fiscal contraction will also impact on economic growth. A qualitative study should also be conducted to see whether changes in taxation and expenditure, beyond the change in the size of these categories, affect the quality and the efficiency of the public administration and lower the distortionary impacts of taxation.

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