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Adjustment for Growth

The African Experience

Michael T. Hadjimichael, Michael Nowak,
Robert Sharer, and Amor Tahari



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The following symbols have been used throughout this paper:

. . . to indicate that data are not available;

— to indicate that the figure is zero or less than half the final digit shown, or that the item does not exist;

– between years or months (e.g., 1991–92 or January–June) to indicate the years or months covered, including the beginning and ending years or months;

/ between years (e.g., 1991/92) to indicate a crop or fiscal (financial) year.

"Billion" means a thousand million.

Minor discrepancies between constituent figures and totals are due to rounding.

The term "country," as used in this paper, does not in all cases refer to a territorial entity that is a state as understood by international law and practice; the term also covers some territorial entities that are not states, but for which statistical data are maintained and provided internationally on a separate and independent basis.

I Overview

Evangelos A. Calamitsis and Pierre Dhonte

During the past two decades, sub-Saharan Africa has lagged behind other developing regions in economic performance. However, the important overall indicators of performance have masked wide differences among subgroups of countries in the region. On the whole, African countries that have effectively implemented comprehensive adjustment and reform programs have shown better results. The divergence in performance among the various country groups has primarily reflected differences in their policy response to the deterioration in the terms of trade, as well as in progress made toward promoting macroeconomic stability, improving external competitiveness, and alleviating structural and institutional impediments to private sector activity.

The adjustment experience of sub-Saharan Africa has demonstrated that to achieve gains in real per capita GDP an expansion in private saving and investment is key. Total and private saving and investment are still too low in relation to GDP to finance a satisfactory and sustainable expansion in output. Furthermore, in view of the modest share of foreign direct investment currently channeled to sub-Saharan Africa and of the need to reduce dependence on foreign aid, more resources required to boost economic growth will have to be generated by the domestic private sector. Thus, the domestic private sector is essential in accelerating output growth and narrowing the gap in per capita incomes relative to other developing countries.

Accordingly, public policies need to be aimed at creating an environment conducive to private sector development. A critical issue in this regard is the extent to which changes in public policies can effectively stimulate private saving and investment in the region.

The four papers presented below are part of an effort to examine this question. They comprise a cross-country analysis and three case studies. The cross-country analysis assesses empirically the role of public policies in stimulating private saving and investment in sub-Saharan Africa in 1986–92. This analysis reveals that (1) policies effective in stimulating private saving and investment include those that keep the rate of inflation low, reduce macroeconomic uncertainty, promote financial deepening, and lower the external debt burden, (2) measures that promote structural reforms and reduce the fiscal deficit (without lowering government investment) help to raise private investment, and (3) declines in government saving are only partially offset by increases in private saving.

The case studies discuss the experiences of three countries during periods of adjustment efforts: Ghana in 1983–91, Senegal in 1978–93, and Uganda in 1987–94. These papers were prepared in the course of the policy dialogue between the Fund and member countries; the first two were also part of a set of background studies to a recent wider survey of experience.

The three case studies show that while these countries have made considerable progress, they still have a long way to go. In Ghana, the economy could have benefited significantly more "if inflation had been brought under control and if a wider range of structural adjustment measures had been implemented earlier." In Senegal, "economic growth has remained erratic and saving and investment ratios have been relatively low." Finally, Uganda "still needs to raise both its domestic saving and its investment efforts and to rigorously pursue structural reform programs." All this underlines the need to take fully into account the medium-term nature of the adjustment and reform process.

The overall message, nevertheless, is positive. All three case studies indicate that progress has been made in enhancing an efficient use of resources, while the uneven success in mobilizing domestic resources should be seen as a call for more sustained and consistent policies. Indeed, as brought out in the cross-country paper, public policies aimed at keeping the rate of inflation low, reducing economic uncertainty, and promoting financial deepening can have significant and positive effects on private saving and investment. Appropriate policies can improve growth prospects, provided programs are, from the start, firmly and constantly imbedded in a medium-term perspective.

II Cross-Country Analysis

Michael T. Hadjimichael and Dhaneshwar Ghura

The experience of sub-Saharan African countries in recent years has demonstrated that achieving gains in real per capita incomes requires more private saving and investment.[1] Nonetheless, saving and investment ratios in sub-Saharan African countries are significantly lower than in other developing countries and still too low to support a sustainable expansion in output and employment. For example, the ratios to GDP of total saving and investment in sub-Saharan Africa during 1986–92 amounted to 11.8 percent and 18.6 percent, respectively, as compared with 24.5 percent and 25.7 percent for developing countries in general (IMF (1994)). World Bank estimates indicate that an investment to GDP ratio of about 25 percent is needed by sub-Saharan African countries to maintain a sustainable economic growth rate of about 6 percent. In addition, recent developments in the theory of endogenous growth have established positive long-run effects on growth stemming from increases in the investment ratio, and much of the recent empirical evidence in the growth literature has found strong, positive, significant, and robust effects on economic growth from increases in investment ratios.[2] Thus, in the period ahead, sub-Saharan African countries will be challenged to raise their investment ratios to boost economic growth and to close the gaps in regional economic performance. However, given the limited foreign direct investment in sub-Saharan Africa and the growing demand for the limited international foreign assistance funds, more resources needed to finance investment in the region will have to come from domestic sources.[3] Accordingly, public policies need to be directed at establishing an environment conducive to the development of the indigenous private sector; such policies will also be needed to attract foreign direct investment.

In broad terms, private saving and investment depend on institutional and economic factors, including economic endowments, the level of human capital and of per capita income, the administrative, legal, and institutional framework, and the stance of financial policies. In many African countries, the expansion of private investment has traditionally been impeded by structural and institutional constraints, government intervention, overvalued exchange rates and high cost structures, unstable macroeconomic conditions, and limited confidence in the direction of government policies. While public policies are not the only determinant of private saving and investment, they certainly are important. In this context, with the view to gauging the relative importance of public policies, this paper empirically investigates the effectiveness of public policies in stimulating private saving and investment in sub-Saharan Africa. This issue has received only limited attention in empirical studies on the experience of sub-Saharan Africa.[4] This paper uses data from a large sample of countries in the region during 1986–92 to perform the empirical analysis. The results indicate that policy measures that keep inflation low, minimize macroeconomic uncertainty, promote financial deepening, and reduce external debt are effective in raising private saving and investment. Also, measures aimed at lowering fiscal deficits, without lowering government investment, and at promoting structural reforms encourage private investment.

The rest of the paper is laid out as follows. First, an outline identifies broad trends in the behavior of

[1]See, for example, the studies by Corbo and Fischer (1991), Hadjimichael and others (1995), Hussain and Faruquee (1994), IMF (1993a and 1993b), Khan (1990), Maastricht (1990), Nsouli (1993), Patel (1992), Schadler and others (1993), and World Bank (1989, 1991, and 1994).

[2]Indeed, the paper by Levine and Renelt (1992) finds that the rate of investment is one of the few variables that are robustly correlated with growth for a group of developed and developing economies. See also the papers by Barro (1989) and Fischer (1991).

[3]Foreign direct investment in developing countries was estimated at around US$134 billion during 1991–93, with the bulk (about 78 percent) flowing into Asian and Latin American countries, while only about 3 percent went to Africa.

[4]A recent article by Oshikoya (1994) is an exception as regards the behavior of private investment in Africa; however, his study included only six countries from sub-Saharan Africa. The bulk of the empirical investigation has been conducted with data from Asia and Latin America, mainly because of the availability of data for these regions.

saving and investment in sub-Saharan Africa during 1986–92 and highlights problems with the data. A discussion follows of the channels identified in the theoretical literature through which public policies and other factors can affect private saving and investment. Then the empirical methodology is outlined and the estimation results are summarized. Finally, some conclusions and policy implications are presented.

Trends in Saving and Investment

National accounts estimates of private saving and investment in developing countries suffer from major weaknesses, as they are usually obtained as residuals. Typically, direct measures of private saving from household and corporate surveys are not available, while in most sub-Saharan African countries available national accounts data are rudimentary, subject to significant deficiencies, and cover mainly the output side of the economy. The data used in this paper were obtained from the African Economic Trends database, compiled by the African Department of the IMF since 1985. These data are based on national sources where available, or on estimates by the IMF staff based on various indicators. To ensure consistency across countries, private investment is calculated as the difference between total gross investment and government investment; as a consequence, this measure of private investment includes investment by public enterprises for which no separate data are invariably available. Similarly, gross national saving is obtained as the sum of gross domestic investment and the external current account balance, and domestic (or domestically generated) saving is calculated by subtracting official transfers (foreign grants) from national saving.[5] Private saving is derived as the difference between total saving and government savings; the measurement of government savings is based on budgetary data for the central government. Thus, the estimates of private saving and investment are bound to be affected by deficiencies in the data for aggregate investment, the balance of payments, and the government budget. The data weaknesses relate mainly to problems in classifying aggregate expenditure as consumption or investment, difficulties in measuring private capital flows, and distortions in the official exchange rates.[6] Also, the measures for saving and investment would be affected by shifts in the coverage of the government sector over time, and by differences in definitions across countries. Owing to these deficiencies and the associated weaknesses in testing the implications of theoretical models on the behavior of saving and investment, the results of empirical investigation need to be interpreted with caution.

In addition to looking at sub-Saharan Africa as a whole, this paper considers several analytically interesting subgroups of countries, based on criteria related to institutional arrangements and economic performance (Table 2-1). The first criterion is membership in the CFA franc zone, given the limitation that this membership poses on the use of nominal exchange rate adjustments as an instrument of policy. During 1986–92, CFA franc countries had to rely entirely on internal adjustment measures to address the adjustment needs resulting, inter alia, from a major worsening in their external environment. The differentiated economic performance of the CFA franc countries as a group in comparison with the other African countries has had a distinct influence on the performance of sub-Saharan Africa as a whole. The second criterion relates to ex post economic performance. The countries of sub-Saharan Africa are divided into two groups, depending on whether they have achieved on average positive or negative (nonpositive) real per capita GDP growth during 1986–92. Under the third criterion, countries are divided into three distinct groups depending on their need for or the implementation of appropriate adjustment policies. A small group of sub-Saharan African countries has been characterized in recent years by relatively low internal and external imbalances (countries with low macroeconomic imbalances); broadly speaking, these countries implemented appropriate policies during 1986–92 and did not need to adopt major adjustment programs with or without support from the IMF. The remaining countries have been classified in two other groups, depending on whether or not they adopted broadly appropriate policies under IMF-supported adjustment programs for at least three years during 1986–92 (sustained adjusters and countries with protracted macroeconomic imbalances). Admittedly, this criterion may contain some judgmental considerations, particularly as some countries were not able to maintain satisfactory performance throughout 1986–92.

Table 2-2 summarizes the evolution of total domestic and private saving and investment for 39 countries in sub-Saharan Africa during 1986–92. Several interesting patterns can be detected from

[5]This definition of domestic saving differs somewhat from the conventional national accounts concept of domestic saving, in that the latter also excludes nonfactor incomes and private transfers. The measurement of private transfers in sub-Saharan Africa is subject to several limitations, however, as these transfers may very well reflect current nonfactor payments transactions, which are normally included in domestic savings.

[6]See the paper by Deaton (1990) for an overview of these shortcomings.

Table 2-1. Sub-Saharan Africa: Analytical Country Groups[1]

	SSA	CFA	NCFA	PPC	NPC	LOW	IMB	SUS
Benin	×	×			×			×
Botswana	×		×	×		×		
Burkina Faso	×	×		×			×	
Burundi	×		×	×				×
Cameroon	×	×			×		×	
Cape Verde	×		×	×			×	
Central African Republic	×	×			×		×	
Chad	×	×		×			×	
Comoros	×	×			×		×	
Congo	×	×			×		×	
Côte d'Ivoire	×	×			×		×	
Equatorial Guinea	×	×		×			×	
Ethiopia	×		×		×		×	
Gabon	×	×			×		×	
Gambia, The	×		×	×				×
Ghana	×		×	×				×
Guinea	×		×	×			×	
Guinea-Bissau	×		×	×			×	
Kenya	×		×	×				×
Lesotho	×		×	×				×
Madagascar	×		×		×		×	
Malawi	×		×		×			×
Mali	×	×		×				×
Mauritius	×		×	×		×		
Mozambique	×		×	×				×
Namibia	×		×	×		×		
Niger	×	×			×			×
Nigeria	×		×	×			×	
Rwanda	×		×		×		×	
São Tomé & Príncipe	×		×		×		×	
Senegal	×	×		×				×
Seychelles	×		×	×		×		
Sierra Leone	×		×		×		×	
South Africa[2]	×							
Swaziland	×		×	×		×		
Tanzania	×		×	×				×
Togo	×	×			×			×
Uganda	×		×	×				×
Zaïre[2]	×							
Zambia	×		×		×		×	
Zimbabwe	×		×		×	×		
Total	41	14	25	22	17	6	19	14

[1]The abbreviations are as follows: SSA: total sub-Saharan Africa; CFA: CFA franc countries; NCFA: Non-CFA franc countries; PPC: countries with positive average per capita growth during 1986–92; NPC: countries with negative average per capita growth during 1986–92; LOW: countries with low macroeconomic imbalances; IMB: countries with protracted imbalances; and SUS: sustained adjusters. Only the sub-Saharan African countries covered by the African Department of the IMF are included in this study owing to the availability of a consistent database for this group of countries. However, Angola and Liberia are excluded owing to data limitations. Djibouti, Mauritania, Somalia, and Sudan are covered by the IMF's Middle Eastern Department.

[2]South Africa and Zaïre are excluded from the analytical subgroups of countries and the empirical investigation.

these data.[7] Both the ratios for private saving and investment followed generally upward trends during 1986–92 for sub-Saharan Africa as a whole. However, these aggregate trends masked major differences in the behavior of private saving and investment for the various country groups. Thus, for example, the positive per capita growth countries

[7]The data for nominal GDP and aggregate saving and investment for the various country groups have been derived as the sum of the levels of the relevant variables for individual countries, expressed in U.S. dollars at current exchange rates. This aggregation method ensures the consistency between changes in fiscal balances, sectoral saving and investment balances, and the external current account balance.

Table 2-2. Trends in Saving and Investment, 1986–92[1]
(In percent of GDP)

	1986	1987	1988	1989	1990	1991	1992	Average 1986–92	S/I Ratio[2] 1986–92
Total domestic saving									
Sub-Saharan Africa	10.3	11.6	10.9	12.0	14.0	13.3	11.9	12.0	65.6
CFA franc countries	12.8	12.0	8.6	8.1	7.1	7.2	6.1	8.8	49.6
Non-CFA franc countries	9.3	11.3	12.1	13.9	17.6	16.4	15.0	13.7	73.4
Positive per capita growth countries	9.8	11.9	12.4	15.5	19.0	18.8	17.3	15.0	77.3
Negative per capita growth countries	11.1	11.3	9.0	7.5	7.6	6.0	5.0	8.2	48.6
Sustained adjusters	8.6	10.2	10.6	10.2	11.1	11.5	9.8	10.3	55.4
Protracted macroeconomic imbalances countries	9.0	10.4	8.8	10.7	13.9	12.2	10.9	10.8	62.5
Low macroeconomic imbalances countries	29.4	23.8	24.3	24.0	22.0	23.0	21.4	24.0	105.3
Total investment									
Sub-Saharan Africa	17.0	18.3	18.7	17.5	18.4	19.4	18.8	18.3	
CFA franc countries	22.8	21.3	19.1	16.1	15.1	15.5	14.8	17.8	
Non-CFA franc countries	14.6	16.5	18.5	18.1	20.2	21.3	21.0	18.6	
Positive per capita growth countries	15.3	16.8	18.8	19.0	20.7	22.6	22.3	19.4	
Negative per capita growth countries	19.5	20.0	18.6	15.4	15.5	15.1	14.2	16.9	
Sustained adjusters	14.3	18.0	18.8	19.7	20.7	20.2	18.3	18.6	
Protracted macroeconomic imbalances countries	18.0	18.2	17.8	15.4	16.2	17.9	17.9	17.3	
Low macroeconomic imbalances countries	18.8	19.4	23.8	23.1	25.1	24.8	24.5	22.8	
Private saving									
Sub-Saharan Africa	8.1	10.9	11.6	11.8	12.8	11.8	12.1	11.3	
CFA franc countries	9.7	12.2	12.1	12.8	10.4	10.2	10.2	11.1	
Non-CFA franc countries	7.5	10.2	11.4	11.3	14.0	12.7	13.1	11.5	
Positive per capita growth countries	6.1	9.9	11.0	11.8	13.8	13.0	13.5	11.3	
Negative per capita growth countries	11.1	12.2	12.4	11.6	11.5	10.3	10.3	11.3	
Sustained adjusters	9.9	10.2	9.0	8.7	10.3	9.9	10.4	9.8	
Protracted macroeconomic imbalances countries	4.9	9.9	11.7	12.2	13.8	12.3	12.4	11.0	
Low macroeconomic imbalances countries	30.2	20.4	18.2	17.4	13.5	14.1	14.5	18.3	
Private investment									
Sub-Saharan Africa	8.4	9.2	10.2	9.7	10.6	10.8	10.3	9.9	
CFA franc countries	13.9	11.2	12.8	11.1	10.1	11.1	10.8	11.6	
Non-CFA franc countries	6.2	8.0	8.9	9.0	10.9	10.6	10.0	9.1	
Positive per capita growth countries	6.3	8.1	8.9	9.9	11.4	11.5	10.8	9.6	
Negative per capita growth countries	11.5	10.5	11.9	9.3	9.6	9.8	9.6	10.3	
Sustained adjusters	7.7	10.6	10.8	10.9	12.3	12.0	11.0	10.8	
Protracted macroeconomic imbalances countries	8.0	8.1	8.9	8.0	8.6	9.1	8.9	8.5	
Low macroeconomic imbalances countries	14.5	11.8	16.1	15.8	17.4	16.5	15.7	15.4	

Source: IMF, Economic Trends in Africa database, August 1993.
[1]See Table 2-1 for the countries included in each subgroup of countries. Note that South Africa and Zaïre are excluded from all groups of countries.
[2]In percent.

experienced generally increasing ratios of total (and private) saving and investment during 1986–92. The opposite was true for the negative per capita growth countries and the CFA franc countries. Also, broadly speaking, the movements in saving and investment were quite closely linked for the various country groups. Thus, countries that have maintained generally high (low) ratios of private and total investment also have maintained high (low) ratios of private and total saving. The countries with low macroeconomic imbalances recorded higher average ratios of saving and investment than the other subgroups. Also, the

positive per capita growth countries registered higher average ratios of saving and investment than the countries with negative per capita growth. The average ratio of saving to investment was quite high for the positive per capita growth countries in comparison with that of the other subgroups.

This paper empirically investigates the factors that can explain this diversity in the performance of private saving and investment among the various groups of countries in sub-Saharan Africa. To this end, an econometric investigation is carried out below; to help with the interpretation of the results of this analysis, the next section provides a review of the theoretical underpinnings of the determinants of saving and investment in developing countries.

Theoretical Considerations

The existing theoretical models of private investment can be classified under some broad categories, including the accelerator model, the expected profits model, the neoclassical model, and the Tobin's Q model.[8] However, certain special characteristics of developing countries make the empirical testing of these theoretical models in the context of developing economies rather difficult.[9] As data limitations preclude the estimation of structural models, empirical studies have tended to use with success semi-reduced form frameworks to investigate the determinants of investment in developing countries. In particular, studies have examined the effects of macroeconomic policies on private investment, while controlling for the economic environment; in this context, macroeconomic policies were perceived to be among the main factors that influence the dependent variables in structural models of private investment.[10]

In addition, several studies have investigated the factors that affect saving in developing countries, although not many of them have specifically investigated the relationship between macroeconomic stability and saving.[11] Most of these studies use variants of the life-cycle model of the behavior of household saving, developed by Ando and Modigliani (1963). The basic premise of the life-cycle model is that individuals save mainly to smooth their consumption path over time in accordance to their anticipated lifetime income. Subsequent extensions of the basic life-cycle model of saving have incorporated the idea that individuals also save for bequest motives and for unexpected expenses.[12] According to the general life-cycle hypothesis, household saving depends on lifetime income, wealth, and the expected returns on savings. In such a framework, government policies that affect these variables would be expected to also affect saving. In addition, the age structure of the population, typically measured by the ratio of population defined as dependent (under 15 and over 64 years) to total population (age dependency ratio), is another important determinant of saving. The larger the proportion of the working age population in a country, the larger the aggregate lifetime income and aggregate saving. Also, an implication of the life-cycle hypothesis is that the rate of output growth has a positive effect on saving.[13] In addition, countries that are at a higher stage of development can save a higher proportion of their income.

The following subsections review briefly the main transmission channels of the influence of macroeconomic policies and other factors on private saving and investment.

Macroeconomic Policies and Uncertainty

A stable macroeconomic environment could be defined as one in which inflation is low and predictable, the exchange rate is near its equilibrium level, the government budget is well managed, the budget deficit relative to GDP is at a reasonable level (consistent with a stable ratio of public debt to GDP), and the use of central bank credit to finance the budget deficit is kept at a minimal level. Macroeconomic stability sends important signals to the private sector about the direction of economic policies and the credibility of the authorities' commitment to manage the economy efficiently. Such stability, by facilitating long-term planning and investment decisions, encourages savings and capital accumulation by the private sector.

[8]For an overview of these models, see Rama (1993).

[9]These characteristics include limited monetization of the economies, underdeveloped capital, financial and foreign exchange markets, large informal sectors, and complex administrative and institutional structures that raise transactions costs.

[10]The bulk of these studies find that macroeconomic policies and uncertainty affect private investment in ways consistent with certain theoretical regularities, suggesting that policies that foster a stable macroeconomic environment, lower macroeconomic uncertainty, and make clear the rules of the game are conducive to increased private investment. See, for example, the papers by Cardoso (1993), Greene and Villanueva (1991), Larrain and Vergara (1993), and Servén and Solimano (1993).

[11]See the studies by Aghevli and others (1990), and Schmidt-Hebbel, Webb, and Corsetti (1992) and the studies cited in them.

[12]See, for example, Blanchard and Fischer (1989).

[13]Empirical studies that have included output growth in saving functions have invariably found it to have a significant positive coefficient. See, for example, Collins (1989), Fry (1978, 1980, 1986, and 1989), Giovannini (1983 and 1985), and Mason (1988).

Macroeconomic Uncertainty

Excessive volatility in key macroeconomic variables and uncertainty about the outlook for these variables make it difficult and costly for economic agents to extract the correct signals from relative prices—such as the real returns to investment—and thus lead to inefficient allocation of resources (Barro (1970 and 1976)). In addition, recent papers indicate that uncertainty can discourage investment, given the irreversible nature of investment decisions (e.g., Bernanke (1983) and Pindyck (1993)). According to these papers, as capital goods are not very mobile once installed, investors would be expected to exercise their option of waiting for new information in an uncertain environment. In such an environment, even small changes in the degree of uncertainty can have large effects on private investment.

Inflation

The direction of the effects of inflation on saving and investment is ambiguous in the theoretical literature. According to the Tobin-Mundell effect, higher anticipated inflation leads to a lower real interest rate and causes portfolio adjustments away from real money balances toward real capital; hence, a higher anticipated inflation would be expected to lead to higher real investment. However, in the case of developing countries with underdeveloped capital and financial markets, the direction of portfolio adjustments would most likely be from real money balances to real assets, which are not usually included in private investment, or to assets denominated in foreign currency through capital flight. Thus, higher anticipated inflation in these countries would lower private investment and saving. Also, in the context of developing countries, inflation may serve as an indicator of the authorities' commitment to a stable macroeconomic environment. The presence of high and variable inflation rates would be expected to lower the credibility of the authorities vis-à-vis the private sector and reduce the returns on private savings and investment, thereby lowering these aggregates. In addition, in the cash-in-advance models (e.g., Stockman (1981)), anticipated inflation, by raising the cost of capital, lowers capital accumulation.

Fiscal Policy

The extent of government involvement in the economy and the government's ability to create an environment conducive to private sector development through its tax policy and investment decisions have received considerable attention in the development literature.[14] The empirical literature has focused on the budget deficit as a measure of the government's borrowing requirement and on government investment. Other things being equal, a higher budget deficit will crowd out the private sector investment as a result of lower access to bank credit or higher real interest rates, and a more appreciated exchange rate. Government investment is used to account for the government's contribution to capital accumulation and the adequacy of basic economic and social infrastructure. Although higher deficits may crowd out private investment, the way fiscal imbalances are corrected matters for private capital accumulation. Reductions in unproductive government expenditure would, if viewed as permanent by the private sector, reinforce the credibility of economic policies, and thus would be expected to stimulate private investment. If fiscal imbalances are corrected by curtailing government investment, private investment would be reduced, given the complementarity between public and private investment. Although a large fiscal deficit may be indicative of an unstable macroeconomic policy stance, some authors (e.g., Krueger (1991) and Sala-i-Martin (1991)) have argued that large deficits could be symptomatic of more fundamental microeconomic policy distortions. In this context, inappropriate microeconomic policies, by introducing distortions in resource allocation and use, slow down economic growth for a given level of resources. If the growth rate falls below a politically acceptable level, governments may embark on expansionary fiscal policies in an attempt to revive economic activity, thus raising the budget deficit ratio.

A rising budget deficit is likely to be associated with declining government saving.[15] In the theoretical literature, the effects of changes in government saving on private saving are ambiguous. According to the simple Keynesian view, an increase in government consumption increases income by a "multiplier effect." An increase in income, in turn, raises private saving. However, in an intertemporal environment where expectations are important, current government fiscal actions can affect the current and future time paths of macroeconomic variables, including private saving and investment. If the private sector expects an increase in future tax liabilities, current and future private consumption and saving would change depending on the income and substitution effects of these liabilities. The income effect of an increase in tax liabilities would lower consumption in all periods, whereas the substitution effect would encourage consumption in the current period.

[14]For a survey, see Lindauer and Velenchik (1992).

[15]For the sample of countries in this paper, the correlation coefficient between government saving and the budget deficit is –0.81.

In such an intertemporal framework, the "Ricardian equivalence" theory (Barro (1974)) suggests that in anticipation of an increase in future tax liabilities following a decline in contemporaneous government saving, private saving increases by an equivalent amount so that national saving remains unaffected.[16] Thus, according to this view, changes in government deficits would not be expected to affect national saving. In fact, the Ricardian equivalence theory maintains that for a given higher level of public expenditure, a temporary switch from tax finance to bonds finance will not alter real variables in the economy. This is because forward-looking economic agents, having full knowledge of the government's budget constraint and using the same discount rate as the government, know that at some future time taxes would have to be increased. Hence, as economic agents are assumed to be concerned about the well-being of their heirs, they raise their saving to leave bequests, so that the welfare of these heirs is not reduced when taxes actually increase at some point in the future. However, in the context of developing economies, the strict conditions required for the Ricardian equivalence theory to hold (such as the existence of perfect capital markets, the absence of liquidity constraints, the lack of uncertainty about the future course of fiscal policy, and the equality between public and private discount rates) are unlikely to be met. Thus, contrary to the Ricardian equivalence hypothesis, private saving would most probably not offset fully an increase in fiscal deficits.[17]

Exchange Rate Policy

Exchange rate policy has received significant attention in the adjustment efforts of developing countries. Devaluation seeks to correct an overvaluation, thereby improving external competitiveness by inducing a real depreciation.[18] However, changes in the real exchange rate have ambiguous effects on investment.[19] On the one hand, a real depreciation raises the cost of imported capital goods and, since a large part of investment goods is imported in developing countries, depresses private investment, especially owing to a fall in investment in the nontradable goods sector. On the other hand, however, a depreciation of the real exchange rate, by raising profitability in the tradable goods sector, would be expected to stimulate private investment in that sector.

Structural and Institutional Reforms

Although macroeconomic stability is a necessary condition for sustained economic growth, it must be supplemented by structural and institutional reforms. Such reforms are necessary to enhance economic incentives and improve the allocation of resources, as well as remove impediments to private sector development. Structural policies include those aimed at improving efficiency and resource allocation and those aimed at expanding the productive capacity of the economy (Khan (1987)). The first category of policies includes measures to reduce the wedges between prices and marginal costs, which typically arise from price controls (on interest rates, exchange rates, and agricultural prices), imperfect competition, subsidies and tax exemptions, distortive taxes, and exchange and trade restrictions. In recent years, many sub-Saharan African countries have implemented in varying degrees a broad range of structural reforms. These measures have included the restructuring and privatization of public enterprises; the lifting of controls on retail and producer prices and on marketing arrangements for agricultural products; the liberalization of the exchange and trade system; the lifting of interest rate controls, the introduction of government financial instruments, the restructuring of commercial banks, the introduction of strengthened prudential requirements, and other financial sector reforms; the implementation of tax reforms to broaden the tax base and strengthen economic incentives and promote equity; administrative reforms to strengthen the economic management capacity of the public sector; the introduction of legal reforms; and the simplification of the administrative requirements or procedures for private sector activities.[20]

[16]Seater (1993) provides a detailed survey of the issues related to the Ricardian equivalence.

[17]The empirical evidence to date tends to reject the Ricardian equivalence hypothesis in the context of developing countries (e.g., Corbo and Schmidt-Hebbel (1991), Haque and Montiel (1989), Raut and Virmani (1990), and Rossi (1988)). In the context of developed economies, many of the early studies also tended to reject the Ricardian equivalence. However, Seater (1993) notes that many of these studies have major weaknesses, such as misspecified equations, simultaneity bias, measurement problems, and spurious correlations due to the use of nonstationary series. Recent studies in the context of developed economies, using more appropriate econometric techniques and better data, tend to support "approximate" Ricardian equivalence.

[18]Many sub-Saharan countries have by now adopted more flexible exchange rate arrangements. The term "devaluation" here is used to refer to the array of policies, including exchange rate policies, that aim at maintaining the actual real exchange rate close to its equilibrium rate. For a detailed review of exchange rate policies in developing countries, see Aghevli and others (1990).

[19]See, for example, the paper by Lizondo and Montiel (1989).

[20]Given the complex nature of structural reforms, it is not possible to have a variable that accounts for them explicitly in empirical work. In the empirical section of the current study, an attempt is made to capture the effects of these reforms by the use of dummy variables for selected country groups. The sustained adjusters are considered to have made relatively more progress in the area of structural reforms than the countries with protracted macroeconomic imbalances during 1986–92.

Although in principle structural reforms make it possible to raise output for a given level of economic resources without reducing consumption, in practice the rewards from such policies may be felt with a lag, as factors of production move slowly from one sector (or activity) to another. In addition, special interest groups that benefit from the rent opportunities provided by existing price distortions may stand in the way of implementing structural reforms.

Other structural reforms include liberalization of administrative procedures for private sector activity and legal reforms. A common characteristic of countries with limited political rights and civil liberties is a lack of well-defined property rights and market-friendly legal institutions. The absence of these rights and institutions lowers the security for life and property and, as a consequence, reduces the rate of accumulation and the efficiency of factors of production, including human and physical capital. The lack of political freedom, therefore, is expected to lower private investment.[21]

Financial Intermediation

McKinnon (1973) and Shaw (1973) have emphasized the crucial role played by financial deepening in increasing the rate of domestic saving.[22] In addition, if financial deepening contributes to an increase in the expected profitability of capital, it would also be expected to encourage investment. Efforts toward financial liberalization include the lifting of ceilings on deposit and lending rates and making them more responsive to market conditions.[23] From the theoretical literature, the effect of a change in interest rates on saving and consumption is ambiguous because the income and substitution effects of such a change work in opposite directions. An increase in the returns on saving raises the stream of future income and wealth and thus is expected to raise current consumption. At the same time, the higher returns on savings are expected to encourage economic agents to raise saving because postponing current consumption would imply the possibility of larger future consumption out of current income. If the substitution effect of a rise in the returns on savings dominates the income effect, then an increase in interest rates would be expected to raise saving.

Although financial liberalization is expected to increase saving, it could be envisaged that such liberalization, by easing the liquidity constraints of households and business firms and lowering uncertainty as regards the future income stream, could potentially reduce the rate of domestic saving in the short term. This would occur especially if the easing of liquidity constraints made it less costly to finance consumption for a given level of aggregate income. However, if the liberalization efforts also succeeded in raising real income (say enhancing efficiency in the economy), the adverse effects on the rate of saving, if any, would be mitigated.

The empirical literature for developing countries does not provide a definitive answer to the ambiguity as regards the effects of changes in interest rates on the rate of saving.[24] The lack of a significant and robust relationship between real interest rates and saving in the context of developing countries may indicate more a measurement problem than a substantive problem with the existing theory about the role of financial intermediation. It is well known that savings data for developing countries are not very reliable. Also, during the time period used by most existing studies, interest rates in many developing countries were controlled and thus adjusted very slowly relative to economic fundamentals. Although the empirical evidence suggests that interest rate policies have small effects on saving rates, maintenance of negative real interest rates for prolonged periods could lead to a flight out of financial savings.

External Debt

A number of channels have been identified in the literature for the negative impact on private investment and saving of large ratios of external public debt to exports. Three of these channels are particularly relevant for the countries of sub-Saharan Africa. First, the resources used for servicing the debt crowd out public investment, which in turn discourages private investment, given the complementarity between these two types of investments. Second, the external debt ratio could be indicative of a "debt overhang," whereby high debt ratios lead economic agents to anticipate future tax liabilities for its servicing (Borensztein (1990a and 1990b) and Eaton (1987)). An increasing external debt ratio could induce these agents

[21]Some empirical studies have attempted to capture the effects of the political and institutional environment on growth performance. See, for example, the papers by Barro (1989), Fosu (1992), and Kormendi and Meguire (1985).

[22]Recently, the endogenous growth literature has been extended to investigate the effects of financial deepening and intermediation on growth. This literature has emphasized the important role that financial intermediation plays in improving the efficiency of investment, and thus in stimulating economic growth. The King and Levine (1992) survey studies investigating the empirical linkages between financial indicators (including the ratio of money to GDP) and economic growth.

[23]For a detailed review of interest rate policies in developing countries, see IMF (1983).

[24]Fry (1978 and 1980) provides empirical evidence to support a small but positive relationship between the real interest rate and aggregate saving. However, subsequent work by Giovannini (1983 and 1985) found Fry's results to lack robustness because they depended crucially on the experience with financial liberalization of the Republic of Korea. With a modified data set, Giovannini found negligible responses of aggregate saving to changes in real interest rates.

to transfer funds abroad, thus raising the implicit domestic cost of capital. Finally, uncertainty as regards the future stance on economic policies in response to an uncertain debt-service profile could also have deleterious effects on private capital formation.

Terms of Trade Changes

The effects of changes in the terms of trade on saving are also ambiguous in the theoretical literature.[25] In the models proposed by Harberger (1950) and by Laursen and Metzler (1950), a deterioration in the terms of trade, by lowering real income, lowers saving. Subsequent authors, using intertemporal models, have challenged the Laursen-Metzler-Harberger effect. For example, in a model proposed by Obstfeld (1982), saving actually increases with a deterioration of the terms of trade. In this model, the economy has a target level of real wealth; with a fall in real wealth following a deterioration of the terms of trade, saving is raised to maintain the targeted level of real wealth. Svensson and Razin (1983) and Persson and Svensson (1985) have noted that a change in the terms of trade has ambiguous effects on saving, depending on whether this change was temporary or permanent, or on whether or not this change is anticipated.

Foreign Assistance

The effects of an increased inflow of foreign assistance on private saving and investment is ambiguous. The increased availability of foreign assistance, by lowering liquidity constraints, could potentially encourage consumption, thereby lowering saving. Also, a branch of the literature on the real exchange rate, building on the "Dutch disease effect," has noted that foreign aid can have undesirable effects on economic performance.[26] When a large part of foreign aid is spent in the nontraded goods sector, the ensuing upward pressure on the domestic price of nontraded goods causes the equilibrium real exchange rate to appreciate, thus lowering external competitiveness. But the resulting improvement in the profitability of the nontraded goods sector induces labor to move out of export-oriented activities into service-oriented activities. A fall in labor supply in the export-oriented sector puts upward pressure on labor costs, thus lowering the profitability of this sector. The resulting decline in external competitiveness hurts export performance and, in turn, could depress investment in the tradable goods sector. Despite the Dutch disease effect, an inflow of foreign assistance is not always undesirable. Foreign assistance could also have beneficial effects, if it helps the development of economic and social infrastructure, thereby complementing private sector activities. The extent to which foreign aid is beneficial would depend on whether the positive effects of aid inflows dominate their adverse effects.

Empirical Framework and Results

Empirical Framework

A regression framework is used to gauge empirically the effects of public policies on the rates of private saving and investment, using pooled data for a sample of countries in sub-Saharan Africa during 1986–92. Each variable of interest (private saving and investment) is regressed on indicators of public policies, while controlling for the effects of other variables. However, as the data sample includes pooled time-series and cross-country data, a number of adjustments need to be made to correct for problems arising from country heterogeneity, time effects, and heteroskedasticity.[27] The estimation is carried out using a feasible generalized least squares (GLS) procedure.

The empirical specification for the private investment equation takes the form:

$$PIY = f(E^i, P^i, U, S), \quad (1)$$

where

- PIY = private investment as a ratio to GDP;
- E^i = a set of relevant economic and aggregate demand variables;
- P^i = a set of variables indicating the stance on macroeconomic and financial policies;
- U = a set of indicators of macroeconomic uncertainty; and
- S = a set of variables indicating the extent of structural and institutional reforms.

Table 2-3 gives the definitions and sources of the variables used in the regressions. The economic variables (E^i) include per capita economic growth (*YGPC*); external debt as a ratio to GDP (*DETX*); and overseas development assistance as a ratio to GDP (*ODAY*). The policy variables (P^i) include the rate of inflation (*INF*); fiscal deficit as a ratio to GDP (*DEFY*); government investment as a ratio to GDP (*GIY*); broad money as a ratio to GDP (*BMY*); and the percentage change in the real effective exchange rate (*RERG*). The variables that capture the

[25]See the papers by Persson and Svensson (1985) and Svensson and Razin (1983) for a summary of the issues related to the effects on saving of changes in the terms of trade.

[26]See van Wijnbergen (1996) for a theoretical exposition and empirical confirmation.

[27]See the Appendix for a discussion of how these issues are tackled in this paper. See Hsiao (1986) and Judge and others (1985), pp. 516–51, for a concise treatment of issues related to panel data.

Table 2-3. Definitions of the Variables[1]

PIY	Private investment as a ratio to GDP.
PSY	Private saving as a ratio to GDP, where private saving is defined as national saving (excluding grants) minus government saving (excluding grants). National saving is defined as the current account balance plus total investment.
GSY	Government saving as a ratio to GDP.
YGPC	Growth in per capita real GDP.
GIY	Government investment as a ratio to GDP.
RYPC$	Per capita real GDP, expressed in U.S. dollars.
DEFY	Overall budget deficit (including grants) as a ratio to GDP.
INF	Annual percentage change in the consumer price index (annual average rate of inflation).
INFSD	Standard deviation of INF during 1986–92. Note that this variable is time invariant.
RERG	Percentage change in the real effective exchange rate (REER). The data for the REER were obtained from the IMF's World Economic Outlook database. For each country, the REER is a weighted index of the nominal exchange rates adjusted for the differential between the domestic inflation rate and the rates of inflation in partner countries using a geometric weighting method (see Wickham (1987) for details). A positive value for *RERG* denotes an appreciation of the REER. Data for this variable for the full period 1986–92 are not available for Benin, Comoros, Equatorial Guinea, Guinea, Guinea-Bissau, Namibia, and São Tomé Príncipe.
RERGSD	Standard deviation of *RERG* during 1986–92. Note that this variable is time invariant.
BMY	Broad money as a ratio to GDP.
FINANCE	Dummy variable that takes a value of 1 if *BMY* is greater than the sample mean of 26 percent and 0 otherwise.
TTG	Percentage change in the terms of trade. Data for this variable for the full period 1986–92 are not available for Namibia.
DETX	External public debt as a ratio to total exports.
DETXSQ	*DETX* squared.
DEPEND	Dependency ratio, defined as the ratio to total population of those below 15 and over 64 years of age. The proxy used to measure *DEPEND* is the ratio to total population of the difference between total population and the labor force (*LABOR*). Data for *LABOR* were unavailable for São Tomé Príncipe, and Seychelles. The labor force was obtained from the World Bank, *World Tables* (various issues).
ODAY	Overseas development assistance as a ratio to GDP.
ODAYSQ	*ODAY* squared.
FREE	Index of political freedom and civil liberties, obtained from McColm and others (1991). The data for 1992 were provided by Dr. Joseph Ryan of the Freedom House (New York).
SUS	Dummy variable for countries judged as sustained adjusters during 1986–92. See Table 2-1 for the list of countries.
IMB	Dummy variable for countries with protracted imbalances during 1986–92. See Table 2-1 for the list of countries.
CFA	Dummy variable for CFA franc countries. See Table 2-1 for the list of countries.
NCFA	Dummy variable for non-CFA franc countries. See Table 2-1 for the list of countries.
PPC	Dummy variable for countries with an average positive per capita real GDP growth during 1986–92. See Table 2-1 for the list of countries.
NPC	Dummy variable for countries with an average negative per capita real GDP growth during 1986–92. See Table 2-1 for the list of countries.
LOW	Abbreviation used for the countries with low macroeconomic imbalances during 1986–92. See Table 2-1 for the list of countries.

[1]See Table 2-1 for a list of countries included in this paper. All data (except for the ones indicated) are from the Economic Trends in Africa (AETA) database.

effects of uncertainty (*U*) are the standard deviation of the rate of inflation (*INFSD*); and the standard deviation of the percentage change in the real effective exchange rate (*RERGSD*). In addition, qualitative variables are used to capture the effects of structural and institutional reforms and to account for the effects of certain special institutional arrangements among subgroups of countries and of progress toward political liberalization (*S*). In particular, dummy variables are used for the CFA franc countries (*CFA*); countries with protracted macroeconomic imbalances during 1986–92 (*IMB*); sustained adjusters during 1986–92 (*SUS*);[28] and an index of political freedom and civil liberties (*FREE*).[29]

[28]See Table 2-1 for a list of the countries included in each subgroup.

[29]The data for this index for the period 1986–91 were obtained from McColm and others (1991) and those for 1992 from Freedom House (New York). Briefly, the methodology used by McColm and others (1991) for the calculation of this index entails the rating of countries on a seven-point scale for levels of political rights and civil liberties; these ratings are summarized in terms of overall assessments as free, partly free, and not free. For the purpose of the current study, these three categories have been assigned the (arbitrary) numeric codes 2, 1, and 0, respectively. *Political rights* are defined as the rights to participate meaningfully in the political process, such as the right of all adults to vote and compete for public office, and for elected representatives to have a decisive vote on public policies. *Civil liberties* are defined as rights to free expression, to organize or demonstrate, and to a degree of autonomy such as is provided by freedom of religion, education, travel, and other personal rights.

Table 2-4. Sample and Subsample Means of the Variables[1]

Variables[2]	Groups[3] SSA	SUS	IMB	PPC	NPC	CFA	NCFA
PIY	11.73	12.82	10.02***	12.90**	10.22**	10.77	12.27
GIY	8.68	9.15	8.35	10.66****	6.12****	7.14****	9.54****
PSY	11.56	11.41	10.03**	12.06	10.91	10.89	11.93
GSY	–2.98	–0.44***	–8.07**	0.08***	–6.93***	–5.75***	–1.42***
YGPC	–0.08	0.34	–1.35**	1.78***	–2.49***	–5.75***	–1.42***
RYPC$	768.51	309.53***	685.44	809.99	714.87	815.41	742.25
INF	19.22	21.40	20.29	20.45	17.63	0.74***	29.57***
INFSD	10.69	12.90*	11.24	11.56	9.57	3.40***	14.78***
RERG	–4.80	–6.83*	–3.55	–6.35*	–2.80*	–1.48***	–6.54***
RERGSD	9.91	10.65	11.24***	9.68	10.21	5.67***	12.13***
DEFY	5.65	4.58*	8.45***	3.54***	8.39***	6.19	5.35
BMY	26.15	28.37**	23.90***	26.88	25.20	25.18	26.69
TTG	–4.19	–4.13	–5.76**	–3.32	–5.27	–4.43	–4.05
DETX	729.06	763.77	863.56**	854.08**	567.27**	413.78***	905.61***
ODAY	18.85	22.99***	20.07	20.81*	16.31**	15.10**	20.95**
DEPEND	56.23	54.99**	56.06	55.23**	57.53**	56.99	55.76
FREE	0.51	0.44	0.35**	0.60***	0.39***	0.28***	0.63***

[1]All means are unweighted averages during 1986–92; thus, they would differ from those given in Table 2-3. The symbols ***, **, and * beside the estimated means for the subsamples indicate that these means are statistically different from their relevant overall sample means at the 0.01, 0.05, and 0.10 levels of significance, respectively.

[2]See Table 2-3 for definitions of variables.

[3]The abbreviation SSA refers to sub-Saharan Africa. See Table 2-1, footnote 1, for the definitions of the other abbreviations.

The empirical specification for the private saving equation takes a similar form to that for private investment:

$$PSY = g(E^s, P^s, U, S), \quad (2)$$

where

PSY = private saving-to-GDP ratio;
E^s = a set of relevant economic and demographic variables;
P^s = a set of relevant macroeconomic policy variables; and
U, and S are as defined before.

The economic and demographic variables (E^s) include real per capita GDP expressed in U.S. dollars (*RYPC$*); *YGPC, DETX,* and *ODAY,* which are defined above; and the dependency ratio (*DEPEND*). The policy variables (P^s) include the rate of inflation (*INF*); government savings as a ratio to GDP (*GSY*); and a dummy variable to account for the effects of financial deepening (*FINANCE*).[30] The set of variables that measure uncertainty (U) and structural and institutional reforms (S) is the same as that used to estimate equation (1).

Preliminary Evidence

Before proceeding with a discussion of the regression results, an examination of the correlation coefficients between pairs of variables used in the regressions is informative. Table 2-4 gives the sample and subsample means of the variables used in the regressions and Table 2-5 gives the correlation matrix. Several of these correlation coefficients are statistically significant. As expected, the ratios to GDP of private saving and investment are significantly positively correlated, with a coefficient of 0.56. Therefore, it is not surprising that a number of the variables that are significantly correlated with private saving are also significantly correlated with private investment. Thus, both the ratios of private saving and investment are positively correlated with per capita growth, the level of real per capita GDP, and the ratios to GDP of government saving, broad money, and foreign assistance. They are negatively correlated with the rate of inflation, the budget deficit as a ratio to GDP, the standard deviation of inflation, and the standard deviation of the percentage change in the real effective exchange rate. However, the correlation between private saving and investment is not spectacularly high, indicating

[30]This variable takes a value of 1 if the level of broad money as a ratio to GDP (*BMY*) is greater than the sample mean of *BMY* (26 percent). The reason for using a qualitative variable instead of using *BMY* directly as done in estimating equation (1), is that a large proportion of private savings in sub-Saharan African countries takes the form of bank deposits, which is part of broad money. Thus, it would be inappropriate to use *BMY* as a continuous variable to estimate a private saving equation.

Table 2-5. Matrix of Correlation Coefficients for Pairs of Variables[1]

	GIY	PSY	GSY	YGPC	RYPC$	INF	INFSD	RERG	RERGSD	DEFY	BMY	TTG	DETX	ODAY	DEPEND	FREE	CFA	SUS	IMB	PPC
PIY	0.21***	0.56***	0.12**	0.14***	0.31***	–0.16***	–0.23***	0.08	–0.30***	–0.12*	0.30***	0.06	0.04	0.11*	0.01	0.07	–0.08	0.09	–0.19***	0.15**
GIY	1	–0.02	0.17***	0.23***	–0.07	0.03	–0.02	–0.08	0.03	0.00	0.17***	–0.01	0.48***	0.44***	–0.31***	–0.10	–0.22***	0.06	–0.06	–0.42***
PSY		1	0.20***	0.16***	0.28***	–0.23***	–0.28***	0.12*	–0.31***	–0.16***	0.27***	0.12**	–0.20***	0.20***	0.17***	0.18***	–0.05	–0.01	–0.16***	0.06
GSY			1	0.24***	0.27***	–0.06	–0.06	0.00	–0.18***	–0.81***	–0.02	0.08	–0.28***	–0.56***	0.12**	0.26***	–0.18***	0.16***	–0.43***	0.30***
YGPC				1	0.12**	0.04	0.03	–0.04	–0.08	–0.24***	0.04	0.11*	–0.005	–0.002	–0.04	0.19***	–0.28***	0.07	–0.28***	0.48***
RYPC$					1	–0.20***	–0.23***	0.14**	–0.30***	–0.24***	0.02	0.01	–0.16***	–0.31***	0.17**	0.16***	0.03	–0.33***	–0.08	0.04
INF						1	0.77***	–0.07	0.60***	0.10	–0.18***	–0.10	0.23***	0.16***	–0.05	0.14**	–0.41***	0.05	0.03	0.04
INFSD							1	–0.14**	0.74***	0.10*	–0.18***	–0.12*	0.22***	0.16***	–0.10*	0.11*	–0.35***	0.11*	0.03	0.06
RERG								1	–0.22***	–0.05	0.13*	0.11	–0.14**	–0.14**	0.27***	0.09	0.18***	–0.13*	0.08	–0.13*
RERGSD									1	0.23***	–0.09	–0.11*	0.28***	0.25***	–0.20***	0.02	–0.38***	0.06	0.17***	–0.02
DEFY										1	0.09	–0.12*	0.33***	0.43***	–0.15**	–0.24***	0.06	–0.11*	0.38***	–0.34***
BMY											1	0.09	0.25***	0.14**	0.29***	0.01	–0.06	0.13**	–0.17***	0.06
TTG												1	–0.06	–0.04	0.10	0.10	–0.01	0.00	–0.12**	0.08
DETX													1	0.64***	–0.21***	–0.13**	–0.24***	0.03	0.13**	0.15**
ODAY														1	–0.26***	–0.12**	–0.14**	0.16***	0.06	0.11*
DEPEND															1	0.34***	0.09	–0.15**	–0.03	–0.18***
FREE																1	–0.26***	–0.08	–0.24***	0.16**

[1]See Table 2-3 for the definition of the variables. The symbols ***, ** and * beside the estimated coefficients denote statistical significance at the 0.01, 0.05, and 0.10 levels, respectively.

perhaps a low average degree of financial intermediation for sub-Saharan Africa as a whole.

As regards the analytically interesting subgroups of countries, in comparison with the sample means for all countries, the countries with positive growth had a significantly higher private investment ratio, government saving ratio, foreign assistance ratio, external debt ratio, and index of political freedom.[31] They also had a lower budget deficit ratio and dependency ratio and a more depreciated real effective exchange rate. The countries with protracted imbalances had a significantly lower private investment ratio, private and government saving ratios, per capita growth rate, broad money ratio, and index of political freedom. These countries also had a higher budget deficit ratio and external debt ratio and a larger standard deviation of the percentage change in their real effective exchange rate. In addition, the sustained adjusters had a significantly higher government investment ratio, broad money ratio, external assistance ratio, and standard deviation of inflation and a lower budget deficit ratio, real per capita GDP, and dependency ratio. The average real effective exchange rate of the sustained adjusters as a group was also more depreciated. Finally, in comparison with sub-Saharan Africa as a whole, the countries of the CFA franc zone were characterized by lower levels of government investment and saving ratios, per capita real GDP growth, inflation, the standard deviations of inflation and the percentage change in the real effective exchange rate, external debt ratio, external assistance ratio, and index of political freedom. They also had a more appreciated real effective exchange rate.

Certain explanatory variables (such as the rate of inflation, the standard deviation of inflation, and the standard deviation of the percentage change in the real effective exchange rate) are highly correlated and thus contain largely the same information. In order to avoid the problem of multicollinearity, these variables are not included together in the same regression.

Estimation Results for Private Investment

The regression results for private investment are summarized in Table 2-6.[32] The estimated regressions explain a large proportion of the variation in the rate of private investment, as indicated by the estimated "goodness of fit" statistic suggested by Buse (1973).[33] Studies that have used panel data to examine the determinants of private investment have typically been successful at explaining a large fraction of the variations in the rate of private investment.[34] It is clear from the results that macroeconomic policies and uncertainty play an important role in explaining the behavior of the rate of private investment in sub-Saharan Africa. Once account is taken of the effects of macroeconomic policies, however, per capita GDP growth has no independent effect on the rate of private investment, supporting a similar result by Özler and Rodrik (1992), although the simple correlation between per capita growth and the rate of investment is positive and significant (Table 2-5).[35]

The effects of macroeconomic uncertainty, as measured by the standard deviations of the rate of inflation and the percentage change in the real effective exchange rate, are, as expected, negative and strong, confirming similar results by Servén and Solimano (1993) for a group of developing countries, and Larrain and Vergara (1993) for East Asia.[36] Thus, highly variable real effective exchange rates and inflation rates, which are indicative of uncertainties about the returns on investment or about the direction of the future course of economic policies, have deleterious effects on private investment. This finding confirms the theoretical predictions of irreversible investment models (e.g., Bernanke (1983)). The correlation matrix indicates that the standard deviation of the percentage change in the real effective exchange rate is positively and strongly correlated with the rate of inflation, the standard deviation of inflation, the government deficit ratio, and the external debt ratio. Thus, monetary and fiscal policies geared toward macroeconomic stabilization are expected to have beneficial effects on the rate of private

[31]Only the statistically significant correlation coefficients are mentioned.

[32]In an attempt to correct for simultaneity bias, the explanatory variables likely to contribute to this problem were entered with a lag in the regressions for the rates of private saving and investment.

[33]Under the GLS estimation procedure used in this paper, the conventional coefficient of determination loses its usual interpretation (Judge and others (1985), pp. 31–32). Buse (1973) has suggested an alternative measure for the goodness of fit for GLS models, calculated as the proportion of weighted variation in the dependent variable explained by the regression.

[34]For example, the studies by Servén and Solimano (1993) and Larrain and Vergara (1993) explained over 90 percent of the variation in the rate of private investment; Greene and Villanueva (1991) about 80–90 percent; and Cardoso (1993) and Oshikoya (1994), about 70 percent. The study by Özler and Rodrik (1992), however, explained only about 50 percent of the variation in the rate of private investment.

[35]The results provided by Greene and Villanueva (1991), Servén and Solimano (1993), Cardoso (1993), and Larrain and Vergara (1993) indicate that increases in per capita growth rates have a significant positive effect on the rate of private investment, even when account is taken of the effects of macroeconomic policies.

[36]Ghura and Grennes (1993) provide empirical evidence on the adverse effects of uncertainty on total investment as a ratio to GDP (and other indicators of macroeconomic performance) for a sample of sub-Saharan African countries during 1972–87.

Table 2-6. Estimates of the Private Investment Equation[1]
(Estimation method: generalized least squares)

Explanatory Variables	Regression Number (1)	(2)	(3)	(4)
Lag (*YGPC*)	0.079 (1.06)	0.042 (0.55)	0.102 (1.36)	0.008 (0.12)
Lag (*GIY*)	0.407*** (4.40)	0.419*** (4.64)	0.409*** (4.41)	0.397*** (5.38)
Lag (*INF*)	–0.035*** (4.82)	–0.032*** (4.61)	—	—
INFSD	—	—	–0.095*** (5.56)	—
RERGSD	—	—	—	–0.462*** (11.58)
Lag (*DEFY*)	–0.142** (2.51)	–0.086 (1.50)	–0.109* (1.84)	–0.009 (0.17)
Lag (*BMY*)	0.174*** (6.07)	0.162*** (5.59)	0.142*** (4.92)	0.137*** (5.43)
Lag (*RERG*)	0.004 (0.22)	0.013 (0.69)	–0.026 (1.22)	–0.017 (1.09)
Lag (*DETX*)	–0.001** (2.07)	–0.001** (2.12)	–0.001 (1.02)	1.5xE-4 (0.26)
Lag (*ODAY*)	–0.274*** (4.23)	–0.258*** (4.36)	–0.297*** (4.71)	–0.269*** (4.66)
Lag (*ODAYSQ*)	0.004*** (3.43)	0.004*** (3.49)	0.004*** (3.60)	0.004*** (4.11)
CFA	–3.58*** (6.08)	–3.08*** (5.42)	–3.37*** (5.48)	–4.62*** (8.66)
SUS	1.63*** (2.64)	—	1.83*** (2.84)	1.10* (1.78)
IMB	—	–2.39*** (3.36)	—	—
FREE	0.57 (1.46)	0.54 (1.42)	0.96** (2.42)	1.04*** (3.05)
Goodness of fit[2]	0.940	0.939	0.937	0.959
F-value[3]	170.5***	169.4***	156.5***	258.3***
N[4]	192	192	192	192

[1]See Table 2-3 for definitions of variables. The numbers in parentheses below the estimated coefficients are the absolute values of the *t*-ratios. The symbols ***, **, and * beside the estimated coefficients denote statistical significance at the 0.01, 0.05, and 0.10 levels, respectively. All the regressions include dummies for the years.

[2]Based on the coefficient of determination suggested by Buse (1973) for heteroskedastic models.

[3]*F*-value is the statistic for the test of the null hypothesis that the joint effect of all the variables included on the right-hand side of the estimated equation is zero.

[4]Number of observations used in estimation. Owing to data limitations on the real effective exchange rate, only 32 countries are included in the regressions. Data are available for the period 1986–92; however, one observation is lost with the one-period lag.

investment by lowering the degree of uncertainty as regards the future returns to private investment. Furthermore, the effect of inflation is negative and strong, indicating that inflationary policies are generally detrimental to efforts toward private capital accumulation. This result tends to support the predictions of the cash-in-advance models (e.g., Stockman (1981)) and the empirical findings of Greene and

Villanueva (1991) and of Özler and Rodrik (1992). In the context of African countries, Oshikoya (1994) found the effects of inflation to be negative in a group of three low-income economies but positive in a group of four middle-income economies.

The estimation results provide support for the complementarity between government and private investment, confirming similar results by a number of other studies.[37] Thus, government investment, by providing positive externalities, fosters private capital accumulation. In addition, the budget deficit ratio, a variable not typically considered by previous empirical studies, is found to have a significant negative effect on the rate of private investment, indicating a crowding-out effect (regression (1)), although this effect is not robust to the various specifications. For example, in regressions (2) and (4), the budget deficit ratio loses its statistical significance, although in regression (2) the coefficient for the budget deficit ratio is still significant at the 5 percent level for the one-tail test. As regards regression (4), the measure of uncertainty (*RERGSD*) is highly correlated with the budget deficit ratio. Thus, the regression that includes both *DEFY* and *RERGSD* suffers partly from multicollinearity and cannot detect an independent effect of *DEFY*. It can be concluded with some degree of confidence, however, that increases in budget deficits may be detrimental to private capital accumulation. Also, the results for the estimated coefficients for the budget deficit ratio and the government investment ratio combined imply that although lowering the deficit would be beneficial to private investment, achieving this objective by cutting government investment expenditure would be counterproductive.

The regression results confirm the beneficial effects of financial deepening on private investment, as depicted by the positive, significant, and robust effect of the ratio of broad money to GDP (*BMY*). The real interest rate was used as an additional variable to capture the effects of financial liberalization and deepening. This variable, however, was highly correlated with the rate of inflation (with a correlation coefficient of 0.96), indicating that during 1986–92 nominal interest rates in sub-Saharan African countries adjusted rather slowly to changes in economic fundamentals and that, on average, changes in inflation dominated movements in the real interest rates.[38]

In regressions (1) and (2) where no uncertainty variables are included, increases in the external debt ratio are found to lower private investment significantly, supporting similar results by a number of other studies.[39] This adverse effect could occur via a number of transmission channels, including the debt overhang effect. It appears, however, that the "uncertainty" channel dominates the impact of an increase in the debt ratio on private investment, as suggested by the results in regression (3) and (4). Once the standard deviation of inflation or the standard deviation of the percentage change in the real effective exchange rate is included in the regression, the debt ratio loses its significance, owing in part to multicollinearity. Thus, when account is taken explicitly of the effects of uncertainty, *DETX* does not have an independent effect on private investment.

Changes in the level of the real effective exchange rate seem in all regressions to have an insignificant effect on private investment, confirming similar results by Cardoso (1993), Larrain and Vergara (1993), and Servén and Solimano (1993). This result could simply reflect the theoretical ambiguity underlying the effects of real depreciations, with a positive effect on investment in the tradable goods sector canceling the adverse effect on investment in the nontradable goods sector. This result could also reflect the fact that investment reacts favorably to real depreciations with a long lag, an effect that cannot be adequately captured by the short time span covered by the data set used in the current study. Indeed, using data covering a longer time span for Chile, Solimano (1989) has found that private investment reacts adversely to a real depreciation in the short run, but positively over the medium term.

The regression results also suggest that progress in implementing structural reforms encourage private investment. The coefficient of the dummy variable for the sustained adjusters is significantly positive in all regressions, while the coefficients for the dummy variables for the CFA franc countries and the countries with protracted macroeconomic imbal-

[37]See, for example, the studies by Blejer and Khan (1984), Greene and Villanueva (1991), Servén and Solimano (1993), and Wai and Wong (1982) for a diverse group of developing countries; Cardoso (1993) for Latin America; Larrain and Vergara (1993) for East Asia; and Sakr (1993) for Pakistan. Oshikoya's (1994) results on the effects of public investment in Africa are not robust. The study by Özler and Rodrik (1992) found a crowding-out effect of government investment on private investment. Blejer and Khan (1984) and Sakr (1993) have also distinguished between government investment on infrastructure and other government investment; they found that the former has a larger positive impact on private investment, while the latter can actually lower private investment.

[38]Schmidt-Hebbel, Webb, and Corsetti (1992) also found the correlation between the rate of inflation and the real interest rate to be high for a group of developing economies. The rigidity of nominal interest rates in the context of sub-Saharan Africa has, aside from government controls, also been attributed to the oligopolistic nature of the domestic banking system; inadequate banking supervision; and thin domestic money, credit, and capital markets.

[39]See, for example, the studies by Borensztein (1990a and 1990b), Greene and Villanueva (1991), Oshikoya (1994), Özler and Rodrik (1992), Servén and Solimano (1993), and Larrain and Vergara (1993).

ances are significantly negative and large in absolute terms. As account has already been taken of differences in the policy stance, the macroeconomic environment, and the level of uncertainty, these dummy variables are most likely capturing the effects of the differentiated progress registered by these country groups in alleviating structural and institutional impediments to private sector development. Furthermore, the coefficient of the variable indicating progress toward political freedom and institutional reforms (*FREE*) is positive, albeit not robust;[40] this effect appears to be significant only when account is taken of macroeconomic uncertainty.

Finally, the regression results indicate that the effect of foreign assistance (*ODAY*) on private investment, an impact that has typically been ignored in the empirical literature, is nonlinear and negative at the sample mean. This somewhat puzzling result is in contrast with the simple correlation between *PIY* and *ODAY*, which is positive and significant. Thus, it would appear that once account is taken of the effects of other variables, increases in *ODAY* have adverse effects on *PIY*.

Estimation Results for Private Saving

The regression results for private saving (*PSY*) are summarized in Table 2-7. Again, as in the case of private investment, the estimated regressions explain a large proportion of the variation in private saving, as indicated by the estimated "goodness of fit" statistic suggested by Buse (1973). The results suggest that macroeconomic policies and uncertainty play an important role in explaining the behavior of private saving in sub-Saharan African countries. It should be noted, however, that once account is taken of the effects of macroeconomic policies, per capita GDP growth has no independent effect on private saving, although the simple correlation between per capita growth and private saving is positive and significant (Table 2-5).

The effects of macroeconomic uncertainty on private saving, as measured by the standard deviations of the rate of inflation and the percentage change in the real effective exchange rate (*INFSD* and *RERGSD*), are negative and strong. Thus, highly variable real effective exchange rates and inflation rates, by raising the uncertainty about future returns on savings or about the direction of the future course of economic policies, have deleterious effects on private saving. As in the case of private investment, monetary and fiscal policies that foster macroeconomic stability are expected to have beneficial effects on private saving by lowering uncertainty. The effect of inflation is negative and strong, indicating that inflationary policies are generally detrimental to private saving efforts. The papers by Gupta (1987), Lahiri (1989), and Schmidt-Hebbel, Webb, and Corsetti (1992) have also investigated the effects of inflation on saving in developing countries, but their results are mixed and generally statistically insignificant.

The effect of government saving (*GSY*), an indicator of fiscal policy, is negative, significant, and robust. According to the Ricardian equivalence theory, a fall in government saving would be fully offset by an increase in private saving so that aggregate saving remains unchanged. For the sub-Saharan African countries considered in this paper, however, only a partial offset is found. This result could be interpreted as either evidence against full Ricardian equivalence or indicative of partial Ricardian equivalence, or a Keynesian income effect.[41]

The estimation results provide support for the beneficial effects on private saving of financial liberalization and deepening, as depicted by the positive and significant coefficient of the dummy variable *FINANCE* in all regressions. This result is in sharp contrast with that presented by Schmidt-Hebbel, Webb, and Corsetti (1992), who found a significant negative relationship between household saving and the beginning of period ratio of broad money to income in a diverse group of developing countries; they interpret their result as evidence in favor of an increase in consumption (a decline in saving) following an easing of liquidity constraints or an increase in real wealth. In addition, the regression results confirm the adverse effects of a rise in the external debt ratio (*DETX*) on private saving. Several channels for such effects were indicated above. Contrary to the channel indicated for the case of private investment, it appears that the debt overhang channel has a dominating effect for the case of private saving, because, unlike in the case of private investment, *DETX* has a strong robust effect on private saving, even when account is taken of the effects of macroeconomic uncertainty. The residual adverse effect of *DETX* on private saving could be due to an anticipation of future tax liabilities in the presence of large debt ratios that encourage capital flight.[42]

[40]The effects of political systems on private investment have typically not been investigated in empirical studies. A notable exception is the study by Özler and Rodrik (1992) ,who found similar nonrobust results on the effects of political rights and civil liberties. However, these authors found a robust effect on private investment of an interaction variable between political rights and the world interest rate.

[41]See the papers by Corbo and Schmidt-Hebbel (1991) and Easterly and Schmidt-Hebbel (1993) for a similar interpretation.

[42]Haque and Montiel (1990) have shown empirically that capital mobility is indeed quite high in Africa, even in the presence of capital controls. They argue that capital flight in developing economies occurs mainly through overinvoicing of imports, underinvoicing of exports, bribery, and smuggling.

Table 2-7. Estimates of the Private Saving Equation[1]

(Estimation method: generalized least squares)

Explanatory Variables	Regression Number (1)	(2)	(3)	(4)
Lag (*YGPC*)	0.033 (0.43)	–0.025 (0.32)	0.001 (0.01)	–0.028 (0.35)
Lag (*RYPC$*)	0.006*** (15.48)	0.006*** (15.40)	0.006*** (14.33)	0.006*** (15.52)
Lag (*INF*)	–0.033*** (4.07)	–0.031*** (4.00)	—	—
INFSD	—	—	–0.102*** (4.57)	—
RERGSD	—	—	—	–0.286*** (5.52)
Lag (*GSY*)	–0.168*** (2.78)	–0.189*** (3.16)	–0.171*** (2.77)	–0.162*** (2.50)
FINANCE	6.29*** (8.85)	6.33*** (10.00)	5.98*** (7.93)	6.10*** (9.24)
Lag (*TTG*)	0.035* (1.67)	0.030 (1.45)	0.017 (0.77)	0.027 (1.16)
Lag (*DETX*)	–0.003*** (2.92)	–0.002*** (2.62)	–0.002** (2.15)	–0.003*** (2.86)
Lag (*ODAY*)	0.218** (2.23)	0.234*** (2.61)	0.178* (1.90)	0.333*** (3.66)
Lag (*ODAYSQ*)	–0.003* (1.92)	–0.003** (2.20)	–0.003* (1.69)	–0.0034* (1.95)
DEPEND	0.013 (0.20)	–0.001 (0.02)	0.006 (0.09)	–0.018 (0.25)
CFA	–3.11*** (4.24)	–3.11*** (4.54)	–3.28*** (4.17)	–4.91*** (6.63)
SUS	0.93 (1.32)	—	1.46** (1.91)	–0.89 (1.26)
IMB	—	–1.59** (2.13)	—	—
FREE	0.43 (0.80)	0.34 (0.72)	0.82 (1.45)	–0.39 (0.81)
Goodness of fit[2]	0.936	0.943	0.928	0.951
F-value[3]	161.0***	184.6***	140.1***	183.9***
N[4]	216	216	216	186

[1]See Table 2-3 for definitions of variables. The numbers in parentheses below the estimated coefficients are the absolute values of the *t*-ratios. The symbols ***, **, and * beside the estimated coefficients denote statistical significance at the 0.01, 0.05, and 0.10 levels, respectively. All the regressions include dummies for the years.

[2]Based on the coeffecient of determination suggested by Buse (1973) for heteroskedastic models.

[3]*F*-value is the statistic for the test of the null hypothesis that the joint effect of all the variables included on the right-hand side of the estimated equation is zero.

[4]Number of observations used in estimation. Owing to data limitations, only 36 countries are included in regressions (1)–(3), and 31 countries are included in regression (4). Data are available for the period 1986–92; however, one observation is lost with the one-period lag.

Thus, to the extent that private saving is an important source of funds for private capital accumulation, private investment would also be indirectly but strongly affected by an increase in *DETX*.[43]

There is some indication that progress in implementing structural reforms contributes to higher private saving. As in the regressions for private investment, the coefficients for the dummy variables for CFA franc countries and the countries with protracted macroeconomic imbalances are significantly negative. However, neither the sign nor the significance level of the estimated coefficient for the dummy variable for the sustained adjusters is robust. Also, the variable indicating progress toward political freedom and institutional reforms (*FREE*) is not statistically significant.

Changes in the terms of trade did not have a robust effect on private saving, although this effect is positive.[44] Also, the estimation results indicate that private saving rates are higher in countries at higher levels of development (measured by the real GDP per capita, expressed in U.S. dollars (*RYPC$*)).[45] The ability of an economy to mobilize domestic saving to finance investment activities depends in part on its level of development; thus, countries at low levels of development can devote fewer domestic resources to finance private investment. The age dependency ratio has an insignificant effect on the rate of private saving. A number of studies have investigated the effects of demographic factors on the rate of saving, but the evidence to date is not definitive and remains somewhat controversial.[46] It appears that the results are highly dependent on the sample and time period considered, the specification used, and the variables included or excluded. Finally, the effect of foreign assistance (*ODAY*) on private saving is nonlinear and positive at the sample mean, a result that is in contrast with the effect of foreign assistance on private investment, and with those found for aggregate saving by numerous other studies.

[43]The paper by Aghevli and others (1990), using data for 86 developing countries during 1982–88, found that countries without debt-servicing problems had significantly higher rates of national saving.

[44]In a pooled data analysis of eight African economies, Oshikoya (1994) found the effect of changes in the terms of trade on private investment to be insignificant.

[45]Similar results have been found for household savings by Schmidt-Hebbel, Webb, and Corsetti (1992), and for aggregate savings by Collins (1989), Fry (1978 and 1980), Leff (1969), and Ram (1982), among others.

[46]See the papers by Aghevli and others (1990), Collins (1989), Fry (1986), Lahiri (1989), Leff (1969), Mason (1988), Ram (1982), Rossi (1989), and Schmidt-Hebbel, Webb, and Corsetti (1992). See also the survey article by Hammer (1986).

Beta Coefficients

An indication of the relative importance of the independent variables in explaining the variability in private investment and saving can be obtained by the beta coefficients reported in Table 2-8. The variability of the real effective exchange rate exerted the largest relative impact on private investment during 1986–92, a result that lends strong support to the dominating effect of uncertainty proposed by the irreversible investment models. Uncertainty also exerted a relatively large adverse impact on private saving. Of the variables measuring the effects of policies, government investment and broad money exerted the largest relative impact on private investment. The results clearly indicate that although lowering the fiscal deficits would be beneficial to private capital accumulation, achieving this objective by cutting government investment would be largely counterproductive. Also, efforts toward financial liberalization and deepening would have a large beneficial impact on both private saving and investment, as indicated by the relatively large positive beta coefficients of *BMY* and *FINANCE*. A result that is in sharp contrast with the one found above is the impact of foreign assistance (*ODAY*) on both private saving and investment; the beta coefficients show a positive impact on private investment and a negative impact on private saving, as opposed to the opposite effects when evaluated at sample mean.[47] In addition, the level of development (*RYPC$*) exerted the largest impact on *PSY*, indicating that policies that help to raise the level of real per capita income would also be expected to have a large positive impact on private saving. Furthermore, the external debt ratio (*DETX*) exerted a relatively large negative impact on private saving. The effects of the other explanatory variables were relatively small.

Conclusions and Policy Implications

The empirical evidence on the effectiveness of public policies in stimulating private saving and investment in sub-Saharan African countries has been limited, owing mainly to lack of data on private saving and investment and of appropriate indicators of public policies. This paper has attempted to fill this void by undertaking an empirical examination of the effects of public policies on private saving and investment in sub-Saharan Africa with pooled time-

[47]The reversal in sign of the total impact of external assistance on private savings and investment seems to reflect the fact that the standard deviation of *ODAYSQ* is much smaller than that of *ODAY*, giving rise to a negative beta coefficient for *ODAYSQ* that is much larger in absolute terms than the positive beta coefficient for *ODAY*.

Table 2-8. Estimated Beta Coefficients

Explanatory Variables[1]	Dependent Variables: *PIY* Estimated coefficient[2]	*PIY* Estimated beta coefficient[3]	*PSY* Estimated coefficient[4]	*PSY* Estimated beta coefficient[3]
YGPC	0.079	0.039	0.033	0.015
RYPC$	—	—	0.006	0.662
GIY	0.407	0.245	—	—
INF	–0.035	–0.133	–0.033	–0.117
INFSD	–0.095	–0.167	–0.102	–0.167
RERGSD	–0.462	–0.438	–0.286	–0.252
DEFY	–0.142	–0.115	—	—
GSY	—	—	–0.168	–0.204
BMY	0.174	0.252	—	—
FINANCE	—	—	6.290	0.320
RERG	0.004	0.006	—	—
TTG	—	—	0.035	0.048
DETX	–0.001	–0.110	–0.003	–0.307
Foreign assistance		0.319		–0.196
ODAY	–0.274	–0.610	0.218	0.451
ODAYSQ	0.004	0.929	–0.003	–0.647
FREE	0.570	0.043	0.430	0.030
DEPEND	—	—	0.013	0.009

[1]See Table 2-3 for definitions of variables.

[2]The coefficients are from Table 2-6. All estimated coefficients are from regression (1), except for the coefficients for *INFSD* and *RERGSD*, which are from regressions (3) and (4), respectively.

[3]The beta coefficient of an explanatory variable *X*, for example, is obtained simply by multiplying the estimated coefficient of *X* by the standard deviation of *X*, and then dividing the resulting product by the standard deviation of the dependent variable.

[4]The coefficients are from Table 2-7. All estimated coefficients are from regression (1), except for the coefficients for *INFSD* and *RERGSD*, which are from regressions (3) and (4), respectively.

series and cross-section data for a sample of countries in the region during 1986–92. The estimation results are consistent with theoretical predictions and provide strong support for the important role that macroeconomic and other public policies can play in encouraging private saving and investment. The econometric evidence indicated that public policies aimed at keeping the rate of inflation low, reducing macroeconomic uncertainty, and promoting financial deepening can have significant and immediate positive effects on private saving and investment. The results indicated a particularly large adverse impact of macroeconomic uncertainty on private saving and investment, thus underscoring the importance of establishing and maintaining macroeconomic stability. The estimation results confirmed the potential for significant payoffs relating to the ongoing process of financial deepening in sub-Saharan African economies. The results also confirmed the deleterious effects on private saving and investment of increases in the ratio of external debt to exports, suggesting that strategies aimed at alleviating the debt burden of the region would help to raise private saving and investment.

In addition, measures aimed at restricting the budget deficit without lowering government investment and at promoting structural reforms would help to raise private investment. Although efforts to lower the deficit ratio to sustainable levels would stimulate private investment, doing so by cutting government expenditure on the economic and social infrastructure would be largely detrimental to these efforts. Thus, alternative means of lowering the budget deficit ratios need to be considered. In particular, as many sub-Saharan African countries are characterized by narrow tax bases, weaknesses in tax administration, and a proliferation of tax exemptions, significant potential exists for raising tax receipts through a broadening of the tax base, improvements in tax administration, and a rationalization of the tax system. Such reforms would allow an increase in government revenue and investment without necessarily raising tax rates that would tend to undermine private investment.

In the face of increasing competition for the limited international private direct investment funds, more of the resources for attaining satisfactory and sustainable growth rates in sub-Saharan Africa would have to be generated domestically. In this

context, the domestic private sector would have to play a major role. Accordingly, public policies would need to be aimed at creating an environment conducive to private sector development. The empirical findings of this paper indicate that maintenance of a stable macroeconomic condition is critical for the efforts toward mobilizing private saving and encouraging private investment, and thus toward laying the foundations for sustained economic growth.

Appendix: Empirical Methodology

When dealing with pooled time-series and cross-country data, the issues relating to country heterogeneity, time effects, and heteroscedasticity need to be addressed. Failure to account for these problems would result in biased and inefficient parameter estimates.

In regard to the treatment of country heterogeneity, the use of the least squares dummy variables (*LSDV*) procedure is quite common. This procedure, which is easily implementable in a regression framework, entails the inclusion of a dummy variable for each country in the sample and yields a different slope intercept for each country; these dummy variables can also account for the effects of omitted variables. However, two aspects of the empirical investigation of this paper preclude the implementation of this procedure. First, and most important, with the inclusion of time-invariant variables (*RERGSD* and *INFSD*) in the regression analysis, the *LSDV* procedure cannot be used because the vector of dummy variables would be perfectly collinear with these variables. Second, the inclusion of a large number of dummy variables for the large sample of countries (with a small number of annual observations for each country) included in the empirical analysis would lead to a large loss of degrees of freedom. The current study uses dummy variables for subgroups of countries to account for the possibility of fixed effects stemming from a priori information regarding the characteristics and institutional arrangements of these subgroups; these dummy variables are: *CFA*, *SUS* and *IMB*.[1] In addition, all multivariate regressions in this study were estimated with dummies for all the years of the sample period to account for time effects. Thus, since the regressions used six annual observations (one observation was lost with one lag, with data covering 1986–92) for each country, six dummies were included in each equation and the resulting regression equation was estimated without an intercept. The year dummies are expected to capture the effects of shocks that are common to all countries in each of the years, but which are not captured by other included variables.

Furthermore, the Breusch-Pagan (1979) test indicated the presence in the data sample of heteroskedasticity by country. To correct for this problem in the estimation of the regression equations, a feasible generalized least squares (GLS) procedure was implemented in two steps. First, an ordinary least squares (OLS) procedure was used to estimate the regression equation with pooled data; the residuals from this step were used to calculate the standard deviation for each country. Second the country-specific standard deviations were used to scale (weigh) all the included variables and an OLS procedure was applied again to the pooled transformed data to obtain the feasible GLS estimators. In most cases, the estimated standard errors of the coefficients derived from the feasible GLS step indicated significance at higher levels of statistical confidence than was the case under the OLS step.

[1]See Table 2–3 for the definitions of these variables. The variables *SUS* and *IMB* are not included together in the same regressions because they are almost collinear. Alternatively, one could use a "random-effects" procedure to account for country heterogeneity. The main disadvantage of this procedure is that if the unobserved effects are correlated with the included regressors, then the resulting estimators would be inconsistent. An assumption underlying the random effects procedure is that the group of countries under investigation is drawn at random from a given population.

III Ghana, 1983–91

Michael Nowak, Rifaat Basanti, Balazs Horvath, Kalpana Kochhar, and Roohi Prem

In 1983, after years of mismanagement, Ghana launched an economic recovery program (ERP). The country's response to the policies adopted during 1983–91 was impressive: severe fiscal imbalances were brought under control, a highly distorted exchange and trade system was liberalized, and inflation was lowered significantly. This was achieved without a contraction in domestic demand. A strong recovery in real growth allowed tangible increases in real per capita incomes, reversing a long decline, but private sector activity was still limited, and saving and investment performance was uneven. In reviewing Ghana's adjustment record, it should be noted that a real annual growth rate of 5 percent, which translates into 2 percent on a per capita basis, while impressive by sub-Saharan African standards, would not be sufficient to propel Ghana onto an accelerated growth path. At this rate of growth, it would take 30–40 years for Ghana to eradicate poverty (i.e., for the absolute poor to cross the "poverty line").[1]

This paper examines why output response was strong during the ERP, but private saving and investment lagged. The paper examines some factors that may have accounted for the investment and growth performance since 1975, with special emphasis on the ERP period. Ghana's growth performance responded well to the liberalization of the exchange and trade regime and the elimination of price controls. Sustained implementation of stabilization policies without reversals was also strongly supportive of growth. Nevertheless, inflation remained relatively high—at around 25–30 percent—and unpredictable, dampening the incentives for the private sector to save and invest. The public sector continued to dominate the economy, and despite a significant liberalization of the price system and the trade regime, critical structural adjustment reforms in the financial, parastatal, and agricultural sectors were implemented at a slow pace. Policies directed at the private sector, such as privatization and tax reforms, were started late in the adjustment period. Thus, a continued excessive public sector involvement in the economy sent to the private sector mixed signals that impeded its response.

In retrospect, Ghana's economy could have benefited significantly more if inflation had been brought firmly under control and if a wider range of structural policy measures in the earlier annual programs of the ERP had gone hand in hand with macroeconomic stabilization policies. Ghana's experience illustrates the need to make an early start with structural reforms in order to elicit the necessary private sector response. Recognizing the lessons from high-performing economies, and from experience during the ERP, Ghana's current strategy aims at actively removing the impediments to private sector saving and investment and reducing public sector involvement in the economy in order to achieve accelerated growth led by the private sector.

The paper is organized as follows. The following section looks at Ghana's long-term economic performance, contrasting the periods prior to and during the ERP. Then the paper discusses factors that may have influenced the path of saving, investment, and growth, particularly during the period of economic adjustment. The next section reviews progress in structural reforms and assesses the remaining structural obstacles to faster investment and output growth. Finally, the paper draws some conclusions and policy implications from the analysis.

Long-Term Economic Performance

Origins of the 1978–82 Crisis

At independence in 1957 Ghana was the world's largest cocoa producer, per capita income was the highest of all countries in sub-Saharan Africa, and its external reserves were equivalent to three years of imports. However, by 1982–83 Ghana's economy had virtually collapsed. Per capita income had dropped by one third from its level a decade earlier, and the country had depleted its foreign exchange reserves and incurred large external payments arrears. Inflation was running at 123 percent, and the parallel market exchange rate was over 20 times the

[1]See World Bank (1993a and 1995).

official rate, cocoa production had declined to less than one third of earlier levels.[2]

Long-term trends in economic performance in Ghana have been well documented in a number of studies.[3] In general, these studies have demonstrated that Ghana's economy responded well to episodes of liberalization even when they were brief, and declined precipitously when interventionist policies were intensified (Table 3-1). During the 1960s two main periods of civilian rule emphasized a greater role for public sector intervention in the economy, and during the 1970s a succession of military governments progressively intensified controls. Over the course of the 1960s and 1970s policies relied on direct public sector planning and intervention through the parastatal sector, controls on foreign exchange, prices, and credit, and quantitative restrictions on imports. These policies weakened the economy significantly. Government deficits increased, the balance of payments deteriorated, and inflation surged. Gross fixed investment declined steadily from 19 percent of GDP in 1961 to 9 percent by 1977, and real GDP growth, which had averaged 3–4 percent a year in the 1960s, came to a halt during 1972–77.

The period just prior to the ERP (1978–82) was one of persistent and severe economic decline and a succession of political crises with frequent changes in government. Overvalued exchange rates and price controls severely distorted the incentive system against agriculture in general and cocoa exports in particular. Export earnings fell to a low point of 7 percent of GDP, and external financing dried up as confidence in the economy declined. Price controls led to a proliferation of parallel markets, and the emergence of acute shortages of goods and services, foreign exchange, and imports. Even the parastatals in the industrial sector were affected by shortages of inputs and spare parts, which contributed to the collapse in investment and output. High fiscal deficits reflected a shrinking revenue base and contributed to high inflation.

To compound these difficulties Ghana experienced a severe drought in 1983, world cocoa prices had already started their decline, and more than 1 million Ghanaians who had been working in Nigeria during the oil boom were sent back home. On the eve of the ERP Ghana's financial and structural problems posed a formidable policy challenge.

[2]Cocoa production fell from 560,000 tons a year in 1965 to 400,000 tons by 1975 and 160,000 tons in 1983.

[3]See, for example, Leith (1974), Killick (1978), Stryker (1991), and Islam and Wetzel (1994). These studies analyzed the changes in economic policy in Ghana during distinct periods since independence, which generally mirrored changes in political regimes. The discussion here follows the same time periods prior to the ERP.

Adjustment, 1983–91

With the launching of the ERP in April 1983, the Government set out to shift away from economic controls and centralized regulation and in favor of a more liberal, market-oriented approach.[4] The ERP was supported by financial assistance from the Fund, the World Bank, and other multilateral and bilateral sources.[5] The key elements of the reform strategy were (1) a realignment of relative prices to encourage more productive activity, promote exports, and strengthen economic incentives; (2) a progressive shift away from direct controls and intervention and toward greater reliance on market mechanisms; (3) the early restoration of fiscal discipline, an increase in public saving, and reduced recourse to bank financing of the Government; (4) the rehabilitation of economic and social infrastructure; and (5) the implementation of structural and institutional reforms to enhance efficiency in the economy and encourage private saving and investment.[6]

The initial phase of the ERP, 1983–86, was essentially a period of economic stabilization. It featured exchange and price decontrol, a restoration of fiscal discipline, and discrete devaluations of the cedi, followed by the introduction of an auction-based exchange rate system. The economy responded well to the change in policy strategy and experienced a sustained recovery in growth, a sharp reduction in inflation, from 123 percent in 1983 to 33 percent in 1986, and an improvement in the overall balance of payments (Table 3-2, Chart 3-1). However, exports remained unduly concentrated in cocoa, and the economy was therefore vulnerable to swings in world cocoa prices. Structural and institutional rigidities persisted in the agricultural, financial, and parastatal sectors.

During the next phase of adjustment, 1987–91, the thrust of policies was broadened to encompass structural and institutional reforms. Most of the structural reforms were implemented gradually, building on the successful implementation of preceding reforms. The systematic dismantling of the control-oriented regulatory framework was difficult, given the legacy of the pre-ERP period and strong political opposition to reforms in such segments of the economy as the parastatal sector. Nonetheless, the structural reforms spanned a wide range. Foreign exchange bureaus

[4]See Abbey (1990).

[5]Ghana's adjustment policies were supported by three stand-by arrangements during 1983–87; an extended fund facility arrangement in 1987, which was replaced in the same year by a structural adjustment facility arrangement for 1987–88; and enhanced structural adjustment facility arrangements during the period November 1988–March 1992.

[6]See IMF Occasional Paper 86, Kapur and others (1991), for a more detailed description of policies implemented during the period of the ERP.

Table 3-1. Ghana: Selected Indicators of Long-Term Economic Performance, 1972–94
(Period average in percent, unless otherwise specified)

	Pre-Adjustment		Adjustment		Post-Adjustment
	1972–77	1978–83	1983–86	1987–91	1992–94
National income					
Real GDP growth	0.3	–1.6	3.6	4.8	4.2
Agriculture	–2.7	1.7	1.7	2.1	1.1
Industry	1.5	–11.0	5.6	6.4	4.3
Services	0.7	0.3	5.7	7.6	7.1
			(In percent of GDP)		
Shares in GDP					
Agriculture	49.7	52.9	52.4	46.4	41.5
Of which: cocoa	(10.8)	(9.1)	(7.4)	(6.9)	(6.1)
Industry	19.9	14.8	12.4	14.3	14.5
Services	30.5	34.3	37.9	42.0	46.5
Gross investment	10.3	4.9	7.5	14.7	14.5
Private	5.5	2.8	3.8	7.0	4.3
Public	4.8	2.0	3.7	7.6	10.2
Gross national savings	10.8	4.5	6.1	12.1	8.0
Private	13.0	8.5	5.2	6.7	4.0
Public	–2.2	–3.9	0.9	5.4	4.0
Central government accounts					
Fiscal balance (Narrow)	–10.0	–6.1	–1.7	0.7	–1.7
Fiscal balance (Broad)[1]	...	...	–2.8	–2.1	–6.2
			(In percent)		
Monetary system					
Broad money growth	36.9	38.9	55.9	33.9	42.2
Nominal lending interest rate[2]	11.8	18.3	21.9	25.9	26.4
Prices and exchange rates					
Inflation (CPI, end of period)[3]	116.4	122.8	24.6	18.0	24.9
Parallel market exchange rate premium[3,4]	568.7	223.3	142.2	0.4	—
Official exchange rate (cedis per U.S. dollar)	1.2	3.6	47.1	264.0	680.9
Terms of trade index (1985=100)	142.7	117.8	100.1	82.8	58.2
External sector					
Merchandise exports, f.o.b. (percent of GDP)	15.7	5.1	8.2	15.5	18.1
Merchandise imports, f.o.b. (percent of GDP)	12.6	4.5	8.5	19.1	26.2
Current account, including official transfers (percent of GDP)	0.6	–0.3	–1.4	–2.5	–6.5
Gross international reserves (months of imports)	2.0	3.3	2.9	2.7	3.2
External debt outstanding (percent of GDP)	22.4	8.9	29.2	56.7	75.9
External debt service (percent of exports)	6.4	15.5	43.7	50.2	29.4

Sources: Data provided by the Ghanaian authorities; and IMF staff estimates.

[1]Broad coverage from 1983 onward, which includes capital expenditure financial through external project grants and loans. Prior to 1983 no distinction was made between broad and narrow coverage.

[2]Commercial banks' unsecured lending rate.

[3]End period data related to last year of the subperiod.

[4]Defined as the market rate/official rate, in percent; end-period data.

were introduced in 1988, and the exchange system was further liberalized. A flexible producer pricing policy for cocoa was introduced, and reforms in the financial management of public enterprises were implemented. A major restructuring of the financial sector was initiated in 1990 with the removal of nonperforming assets from the portfolio of distressed banks. Toward the end of the ERP period, a number of initiatives for promoting the private sector were undertaken, including corporate income tax reforms in 1991. During this phase, economic performance continued to improve, GDP growth was sustained in the range of 5 percent a year, and exports continued to record strong growth, despite a cumulative decline

Table 3-2. Ghana: Selected Economic and Financial Indicators, 1983–94

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
	(Annual percentage change, unless otherwise specified)											
National income and prices												
Real GDP	–4.6	8.6	5.1	5.2	4.8	5.6	5.1	3.3	5.3	3.9	5.0	3.8
Consumer price index (annual average)	122.8	39.7	10.3	24.6	39.8	31.4	25.2	37.2	18.0	10.1	25.0	24.9
Consumer price index (end of period)	142.4	6.0	19.5	33.3	34.2	26.6	30.5	35.9	10.3	13.3	27.7	34.2
Money sector												
Broad money	38.1	72.1	59.5	53.7	53.0	43.0	26.9	18.0	19.9	52.9	27.4	46.2
Velocity (GDP/End-period M2)	8.8	7.7	6.1	5.9	5.6	5.6	5.9	7.2	7.6	5.8	6.0	5.4
	(In percent of GDP)											
Investment and savings												
Gross investment	3.7	6.9	9.6	9.7	13.4	14.2	15.5	14.4	15.9	12.8	14.8	15.9
Gross national savings	3.0	5.9	7.1	8.2	11.3	12.5	13.7	10.9	12.3	7.3	5.6	11.0
Government budget												
Surplus or deficit (–)[1]	–2.7	–1.8	–2.2	0.1	0.5	0.4	0.7	0.2	1.5	–4.8	–2.5	2.2
Revenue and grants	5.6	8.4	11.8	14.4	14.9	14.6	15.1	13.2	15.2	12.2	18.3	24.5
Total expenditure[1]	8.2	10.2	14.0	14.3	14.3	14.3	14.4	13.0	13.7	17.0	20.8	22.3
Broad surplus or deficit (–)[2]	–2.7	–2.3	–3.0	–3.3	–2.4	–2.8	–2.1	–2.2	–1.3	–8.1	–7.2	–3.4
External sector												
Current account balance[3]	–0.8	–1.0	–2.5	–1.5	–2.1	–1.7	–1.8	–3.5	–3.6	–5.5	–9.2	–4.9
External debt outstanding[4]	9.7	26.4	34.1	46.5	63.7	58.0	55.4	52.9	54.4	60.7	76.8	90.3
Debt service	0.7	3.3	5.8	6.7	10.8	12.5	9.8	5.8	4.5	4.0	7.1	6.9
Debt service/exports	31.9	40.4	54.7	47.8	58.3	68.0	58.1	37.0	28.9	25.1	35.7	27.4
Gross reserves (months of imports)	4.6	2.4	2.4	2.2	2.2	2.2	2.7	2.5	4.1	2.9	2.7	4.1

Sources: Data provided by the Ghanaian authorities; and IMF staff estimates and projections.

[1]Excluding capital outlays financed through external project aid.

[2]Including capital expenditure financed through external project aid.

[3]Including official grants.

[4]End-period data; including debt to the IMF.

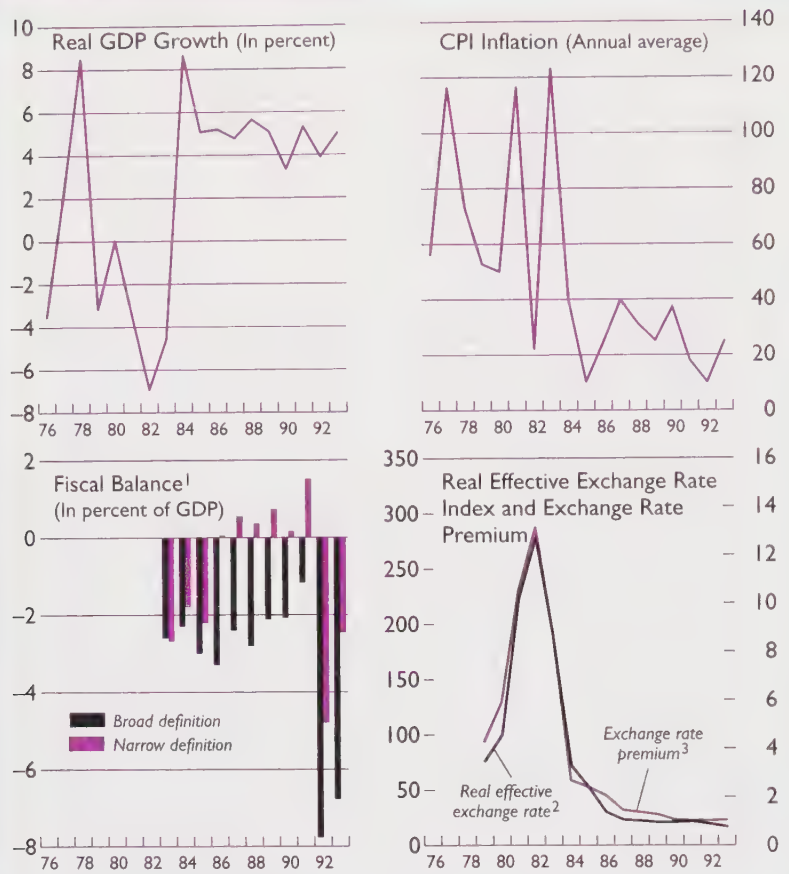
of 35 percent in the terms of trade. The overall balance of payments and the fiscal balance recorded surpluses throughout this period, and foreign reserves reached the equivalent of 4.1 months of imports in 1991. External arrears were eliminated as Ghana normalized its relations with creditors. The inflation rate, which remained in excess of 30 percent during 1986–90, was reduced significantly in 1991.

From the perspective of saving-investment balances, the turnaround during the ERP period was quite dramatic (Table 3-3). Between 1970 and 1983, saving and investment declined sharply, while during the ERP there was a reversal of these trends, although the improvement in saving stemmed entirely from better fiscal performance.

Recent Developments, 1992–94

After 1991, there was a marked downturn in economic performance. The year 1992 was a watershed in the political and constitutional history of Ghana: a new constitution was adopted in April, and presidential and parliamentary elections were held in November and December. In the run-up to multiparty elections, large increases in wages and in wage-related benefits were granted to public sector employees. Accordingly, the fiscal balance turned from a surplus of 1.5 percent of GDP in 1991 to a deficit of 4.8 percent in 1992 and was mainly financed by the banking system. Inflationary and balance of payments pressures intensified. The Government implemented policies in 1993–94 with the object of regaining control over public finances, but had only limited success in reducing the budget deficit, excluding foreign exchange receipts from the sale of public assets. Additional monetary impulses emanated from large balance of payments surpluses and from borrowing by the national petroleum corporation from the Bank of Ghana. As a result, the growth of broad money accelerated in 1994 to 46 percent, and inflationary pressures intensified. Both private

Chart 3-1. Ghana: Main Economic Indicators, 1976–93



Sources: Ghanaian authorities, IMF staff estimates; and Information Notice System.

[1]Broad coverage includes (narrow coverage excludes) captial expenditures financed by external project aid.

[2]Calculated using the official exchange rate for the cedi. 1980 = 100.

[3]Calculated as the ratio of the market cedi/US dollar exchange rate to the official exchange rate. Right-hand scale.

saving and investment declined, and government savings also fell. However, government investment remained strong and foreign investment increased, mainly in response to privatization of the mining industry and buoyant gold prices.

Long-Term Growth: Empirical Studies

This section attempts to identify the determinants of Ghana's long-term growth using three approaches based on endogenous growth models.[7] The first approach, based on cross-country analysis (Barro (1989)), relates the growth of real per capita income to rates of physical and human capital accumulation, and to the initial level of per capita income.[8] While the results do not directly capture the impact of policies, they do suggest that based on its factor accumulation over the sample period (1960–92), and its initial relative income gap, Ghana could have been

[7]Empirical studies based on these models typically rely on cross-country regressions. These include Barro (1989), Easterly and others (1993), Fischer (1993), King and Levine (1992, 1993), Kormendi and Meguire (1985), Levine and Zervos (1993), Mankiw, Romer, and Weil (1992), and World Bank (1993a).

[8]The accumulation of physical capital is measured by the share of investment in GDP, and of human capital by the initial primary and secondary school enrollment ratios and the population growth rate. The level of per capita income is usually measured relative to that in industrialized economies (to capture technological "catching up" effects).

Table 3-3. Ghana: Saving-Investment Flows, 1970–91
(In percent of GDP)

	1970	1983	1991	Change 1970–83	Change 1983–91
National saving	11.2	3.6	12.3	–7.6	8.7
Government	2.3	–1.8	6.1	–4.1	7.9
Nongovernment	8.9	5.4	6.2	–3.5	0.8
Investment	14.1	3.8	15.9	–10.3	12.1
Government	5.3	0.9	7.7	–4.4	6.8
Nongovernment	8.8	2.9	8.2	–5.9	5.3
External current account	–3.1	–0.8	–3.6	2.3	–2.8
Statistical discrepancy	–0.2	–0.6	—	–0.4	0.6

Sources: Statistical Service, Accra; and IMF staff estimates.

expected to grow substantially faster than it actually did. In Ghana's case, two thirds of the sample period (1960–82) was characterized by severe structural distortions, and the uncertainty of economic conditions and policies probably had a critical influence in lowering Ghana's growth.

The second approach was used to examine the influence of economic policies and external conditions on Ghana's long-term growth. This approach, based on an analysis of cross-country and time-series panel data (Fischer (1993)), explores the effect of macroeconomic and structural policies on output growth and the channels—total factor productivity growth and capital accumulation—through which these effects are transmitted.[9] The long-term rates of capital accumulation and economic growth in Ghana during 1970–92 were lower than the averages in sub-Saharan Africa and all developing countries as a group. This relatively poor performance reflected economic policies in Ghana that for most of the period were not supportive of growth, capital accumulation, and productivity gains, compared with these two groupings. The results averaged over the entire sample period (1970–92) indicate that Ghana's poor average long-term growth performance relative to other countries was not surprising, since a number of Ghana's macroeconomic policy factors during a significant part of the sample period were negatively correlated with growth, through both the investment and productivity channels: macroeconomic instability as measured by high inflation, policy rigidities, and uncertainty as captured by high levels of parallel market exchange rate premia, large budget deficits, and a significant deterioration in the terms of trade. The analysis also suggests that Ghana's relatively low growth during this period was associated with a low initial level of investment in human capital. Moreover, Ghana's rate of capital accumulation was likely to have been adversely affected by its high level of trade taxation and underdeveloped financial system.

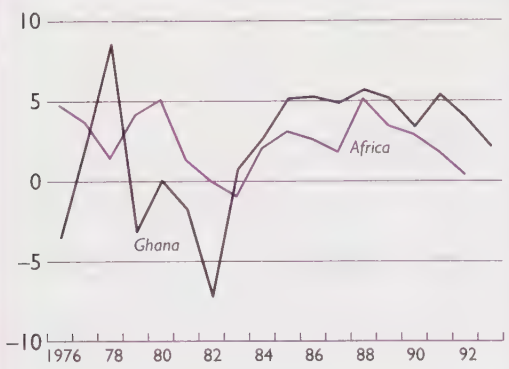
The third approach, based on Bruno and Easterly (1994), was used to differentiate Ghana's stronger growth record during the ERP from its long-term growth record.[10] This analysis indicates that Ghana's growth performance during 1970–82 (the pre-adjustment period) was significantly worse than the world average, after controlling for the long-term determinants of growth. However, during the ERP, growth shifted to rates markedly above the world average, and by somewhat more in the second phase (1986–91) of the adjustment program.[11] While Ghana's growth performance after 1991 did not improve compared with the 1986–91 period, it continued to be stronger than before the ERP. This may reflect the ongoing impact of the adjustment policies pursued under the ERP. The strengthening of growth since 1983 was significant even after

[9]More specifically, this approach examines the effects of several macroeconomic policy indicators—the inflation rate, the budget deficit-to-GDP ratio, and the parallel market exchange rate premium—and changes in the terms of trade. The effects of structural policies and distortions are explored using the following indicators: the initial primary school enrollment ratio, the ratio of broad money-to-GDP (as a measure of financial sector development), and the average trade tax rate (as a measure of the degree of protection or openness).

[10]This approach involves estimating the basic long-term "growth" regression (Barro (1989)) across a panel of countries and four relevant sub periods corresponding to Ghana's adjustment experience. The estimated equation was used to identify the difference between Ghana's per capita income growth and the world "average" after controlling for the long-term determinants of growth.

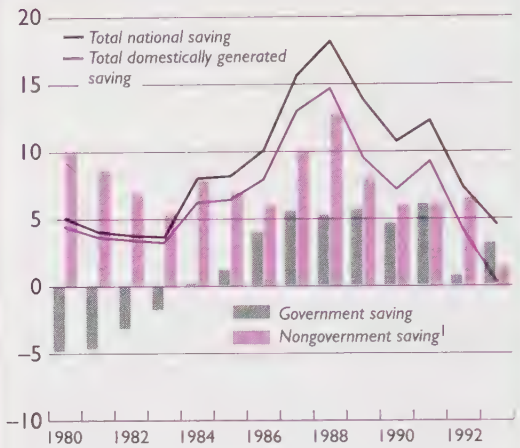
[11]Chart 3-2 shows this dramatic turnaround in Ghana's growth performance relative to Africa.

Chart 3-2. Ghana: Annual Growth Rate of Real GDP, 1976–93



Source: *International Financial Statistics Yearbook.*

Chart 3-3. Ghana: Composition of National Saving, 1980–93
(In percent of GDP; in current prices)



Sources: Ghanaian authorities; and IMF staff estimates.
[1]Includes private, public enterprises, and statistical discrepancy.

controlling for the investment variable. This result indicates that other determinants including productivity gains had contributed significantly to the shift in Ghana's economic performance. In particular, policy-related factors—especially the reduction in the parallel market exchange rate premium—were found partly to account for the growth differential between Ghana and the world average.

Indeed, estimates of total factor productivity growth for Ghana confirm that there was a significant rebound in productivity growth during the ERP period. After experiencing, on average, a decline at the rate of 1.6 percent during 1970–82, total factor productivity turned around dramatically and grew at a rate of about 3.2 percent during the ERP.[12] Moreover, these productivity gains were steady and sustained in both phases of the adjustment program. These productivity developments in Ghana compare quite favorably with sub-Saharan Africa, as well as several comparator countries in the region.

Investment and Output During Adjustment

In marked contrast to many developing countries, Ghana achieved a strong, and almost immediate, sustained recovery in output growth following the launching of adjustment policies under the ERP (Table 3-1, Charts 3-1 and 3-2). While the initial impressive economic recovery no doubt partly reflected a rebound from a prolonged period of extreme economic depression, the fact that higher growth rates persisted throughout the 1980s suggests that more fundamental factors were at work. The period of adjustment was also marked by a substantial recovery in public investment supported by concessional external inflows. At the same time, the revival of private investment and saving was slow and modest.

Saving

After falling to very low levels in the early 1980s, national saving rose significantly—from under 4 percent of GDP to 18 percent between 1983 and 1988 (Chart 3-3).[13] The recovery in saving during the first five years of the ERP mainly reflected a

[12]These estimates are based on purchasing power parity adjusted data. Alternative estimates (shown below) based on a Cobb-Douglas production function and actual investment and labor force data confirm these trends in total factor productivity developments during the pre-ERP and ERP periods. In addition, they indicate a slowdown in average total factor productivity growth in the postadjustment period relative to the ERP.

Average Total Factor Productivity Growth (*In percent*):

1976–82	1983–86	1987–91	1992–93
–2.57	2.22	2.48	1.37

[13]The increase in national saving benefited from large inflows of external grants. Movements in domestic saving were similar to those of national saving.

sharp turnaround in central government saving, from dissaving of over 4 percent of GDP a year on average in the preadjustment period to positive savings of more than 5 percent of GDP.[14] The private sector (including public enterprises) saving response to the adjustment program was slower and more modest. After 1988, saving fell sharply to below 5 percent in 1993, reflecting declines in both private (from 1988 on) and public saving (during 1992–93).

Firm evidence on the determinants of private saving in Ghana is scant and attempts to estimate directly a private savings equation were not successful, in part reflecting data difficulties. Nonetheless, econometric estimates of a savings function based on panel data for African countries suggest that the main determinants of the recovery in private saving between 1983 and 1988 were the sharp drop in the rate of inflation and the improvement in the terms of trade.[15] Although inflation was reduced sharply, it remained high and variable throughout the ERP and probably dampened saving by creating uncertainty about future returns on savings or the future course of policies. The decline in saving after 1988 is largely explained by the deterioration in the terms of trade. The steady rise in government saving under the ERP probably also had a negative impact on private saving throughout this period; however, available empirical evidence suggests that the increase in public saving was likely to be only partly offset by the drop in private saving.[16]

While one would expect a role for other factors such as interest rates to influence saving behavior, primarily through their impact on financial saving, however it is difficult to gauge the magnitude of their influence empirically. Moreover, because of likely measurement errors, it is probable that changes in financial saving may have led to a larger impact on measured than on true savings.[17] The increase in real interest rates during the ERP from sharply negative to mildly negative levels may have encouraged financial saving. On the other hand, several factors may have discouraged financial saving, including low returns as a result of high transactions costs and a lack of confidence in the banking system, reflecting the weak financial health of banks. High rates of inflation are also likely to have a considerable impact on the structure of saving. With only a limited range of domestic financial instruments available to investors until recently, and none yielding positive real returns before 1991, asset accumulation was confined to the hoarding of consumer durables or the acquisition of foreign currency.

Investment

During the latter half of the 1970s, both private and public gross fixed investment fell to minimal levels—reaching 2 percent and 1 percent of GDP by 1982, respectively, which was insufficient to offset capital depreciation (Chart 3-4).[18] Following the start of the ERP, the rate of public investment recovered strongly with the help of substantial foreign financing, and by the mid-1980s it had surpassed the levels achieved in the 1960s and 1970s. This investment was aimed at rehabilitating infrastructure, which had suffered years of neglect. In contrast, the recovery in private investment was more modest and uneven, and only during the second phase of the ERP (1987–91) were substantially higher rates of investment consistently attained. In 1992 and 1993, private investment slumped in the wake of slippages in the implementation of financial policies. The level of foreign direct investment (except in the gold sector) also remained very low throughout the entire period.

Econometric estimates of private investment indicate that policy-related factors had a considerable influence on the path of investment during the ERP (Chart 3-5). The most important impact of policies on private investment behavior was through their effect on macroeconomic instability and uncertainty. In particular, the estimated equations show that the parallel market exchange rate premium, which probably captures the influence of macroeconomic instability as well as the impact of foreign exchange controls, had a major adverse effect on private investment during 1976–83. This confirms the results of empirical analyses on the determinants of long-term growth discussed above. Moreover, the elimination of the exchange rate premium between 1983 and 1991 appears to have been by far the most important positive influence on the recovery of private investment over the course of the ERP.

In contrast, the econometric results do not provide any evidence that the rise in public investment fol-

[14]The fiscal policies underlying the performance of public savings are described in IMF Occasional Paper 86 (1991).

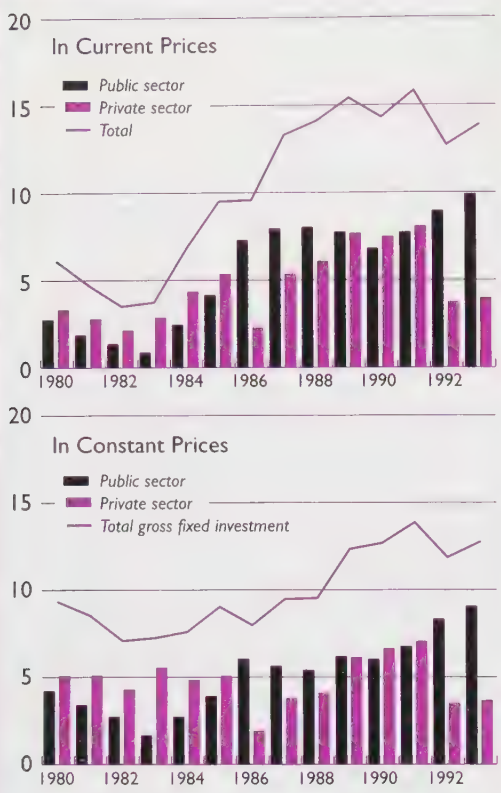
[15]See Hadjimichael and Ghura (1995) and Aryeetey (1993).

[16]The results of Hadjimichael and Ghura (1995) reject the hypothesis of full Ricardian equivalence, which predicts changes in public saving would be fully offset by changes in private saving; this result has been confirmed in several other studies for developing countries (e.g., Corbo and Schmidt-Hebbel (1993)). The presence of liquidity constraints is probably the most important reason for rejecting Ricardian equivalence; their role is in part evidenced by the significance of foreign saving in estimates of a private consumption function for Ghana (e.g., Islam and Wetzel (1994)).

[17]See Aryeetey (1993b).

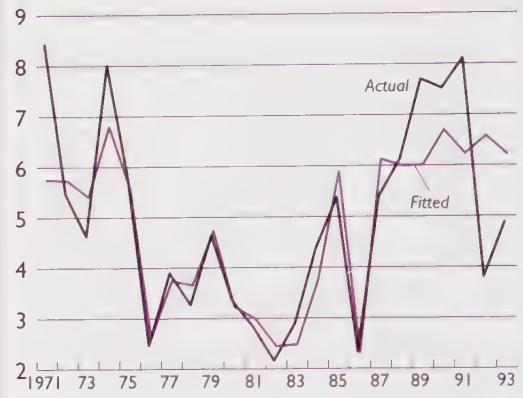
[18]In the absence of a reliable investment deflator for the whole period under consideration, the discussion in this section focuses on investment measured at current prices. In broad terms, the path of investment measured in either current or constant prices is broadly similar, except that the current measure shows a stronger recovery under the ERP, as a result of exchange rate effects on the relative price of investment goods.

Chart 3-4. Ghana: Gross Fixed Investment, 1980–93
(In percent of GDP)



Sources: Ghanaian authorities; and IMF staff estimates.

Chart 3-5. Ghana: Actual and Estimated Path of Private Investment, 1971–93
(In percent of GDP; in current prices)



Source: IMF staff estimates.

lowing the adoption of the ERP directly boosted private investment. On the contrary, it appears that public investment—whether at the Central Government level or including public enterprise investment—had a significant, albeit small, direct crowding-out effect on private investment.[19] Any beneficial impact of public capital spending on private investment, appears to have operated indirectly through its effects on aggregate demand, which (measured by lagged GDP growth) did provide a significant stimulus to investment—especially later in the adjustment process when economic activity recovered sharply.

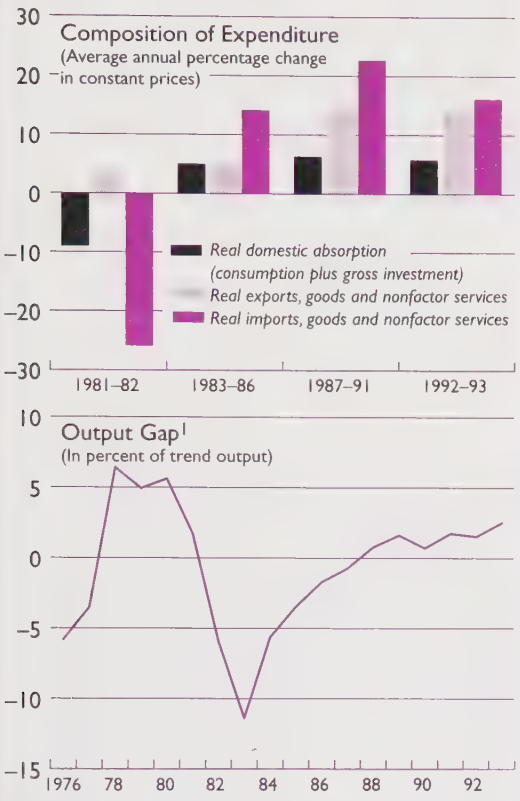
The available evidence on the effects of monetary conditions on private investment provides a mixed picture. Even though interest rates were controlled for most of the period (until 1991), which would suggest that credit rationing effects were important, the availability of credit was not found to have a statistically significant influence on private investment.[20] In contrast, real interest rates were statistically significant, which would suggest that the shift from highly negative to less negative real interest rates during the ERP would have had some dampening effect on private investors. It appears that the surge in private credit during 1984–86 (see next section) reflected, to a considerable extent, reintermediation of flows that had previously shifted to informal credit markets as a result of severe financial repression, rather than an effective increase in available credit. To some extent, the expansion of recorded credit during this period was also the result of a major broadening of the coverage of the monetary accounts.

External factors do not appear to have had a major impact on the private investment. Income effects

[19]The observed substitution effect may reflect the fact that, because of data limitations, the public investment variable in the estimated equation includes both infrastructural and other public investment. In addition, the crowding-out effect captured here may only be a short-term phenomenon.

[20]Other work, however, suggests that credit availability was a determinant of investment in Ghana. Survey evidence—for example, Steel and Webster (1991)—found that private entrepreneurs were strongly rationed in their access to credit, and Islam and Wetzel (1994) found a significant role for credit in an estimated investment equation. In general, however, caution is required in interpreting the econometric results on interest rate and credit effects, because of the impact of shifts in financial flows between informal and formal markets in response to changes in policy regimes.

Chart 3-6. Ghana: Growth of Expenditures and Output, 1976–93



Sources: Ghanaian authorities; and IMF staff estimates.
[1]Measured as the deviation between actual and estimated trend output.

stemming from export price fluctuations influenced the path of investment only to a small degree—possibly through effects on profitability, or by tightening or easing foreign exchange constraints on import of capital goods.

Other evidence suggests that a number of factors that could not be adequately captured in the estimated investment equation may have dampened private investment. Although there was a considerable improvement in the macroeconomic environment under the ERP, a significant degree of uncertainty and financial instability still remained and probably held back the recovery in private investment. Private investors may have taken a wait-and-see attitude in the face of the shift to a starkly different policy regime under the ERP, repeated policy and regulatory adjustments during the early years of the ERP, and fear of a return to earlier arbitrary policy actions, such as the confiscation of bank deposits in 1982 (see Aryeetey (1993a and b)). The persistence of high inflation, by creating uncertainties about future policies and financial returns, as well as obscuring relative price movements, may also have dampened private investment behavior throughout the ERP. Structural distortions and delays in addressing the problems of the financial and public enterprise sectors also appear to have been important influences delaying the recovery in private investment.

Mix of Stabilization Policies

This section examines the impact of stabilization policies on economic activity in Ghana during the ERP. Two important conclusions emerge from the analysis. First, financial policies did *not* squeeze domestic demand in the early part of the ERP; rather, they supported the strong recovery in output and domestic demand. In the later years of the ERP, financial policies were more restrained, but even then they did not exert a significant contractionary impact on economic activity. Second, expenditure-switching policies, which included a massive exchange rate correction, trade reform, and major domestic price realignments from the onset of the ERP, were successful in providing a strong stimulus to domestic output. Of course, one would not attribute the recovery in economic activity solely to macroeconomic policies—a renewal of external financing (largely in support of domestic policies) and positive exogenous shocks also contributed to the strength of the recovery in the first phase of the ERP.[21]

The process of stabilization and adjustment often involves some contraction in aggregate demand—which may delay or dampen a recovery in output and investment—until the positive impact of expenditure-switching policies on supply takes hold. Ghana, however, does not appear to fit this mold. While a measure of the output gap (the deviation between actual and an estimated potential or trend output) shows output below trend during 1983–86, this was a carryover from the earlier crisis years (Chart 3-6).[22] The recovery began immediately in 1983 and the output gap disappeared quickly through strong output growth. Moreover, real domestic absorption rose during the early years of adjustment. Import volumes also grew rapidly during this period, suggesting that neither were imports being unduly compressed by a contractionary squeeze on domestic demand nor were they acting

[21]In addition, part of the measured recovery likely reflected a shift in economic activity from informal to formal markets.

[22]Trend output is estimated by applying a Hodrick-Prescott filter to actual GDP. This univariate filter eliminates short cycles from the data on actual output in estimating trend GDP.

Table 3-4. Ghana: Central Government Budget Operations, 1983–93

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
Narrow Definition[1]						(In percent of GDP)					
Total revenue and grants	5.6	8.4	11.8	14.4	14.9	14.6	15.1	13.2	15.2	12.2	18.3
Tax revenue	4.6	6.6	9.5	12.2	12.7	12.3	12.3	10.8	12.4	10.0	12.9
Direct taxes	1.0	1.5	2.3	2.8	3.2	3.9	3.2	2.7	2.4	2.1	2.8
Taxes on domestic goods and services	0.9	2.1	2.6	3.8	3.5	3.7	3.7	3.5	5.4	4.3	5.6
Taxes on international trade	2.7	3.0	4.6	5.6	6.0	4.8	5.4	4.6	4.6	3.7	4.5
Nontax revenue	0.9	1.4	1.8	1.5	1.3	1.2	1.3	1.0	1.4	1.1	3.8
Grants	—	0.3	0.5	0.8	0.8	1.1	1.5	1.4	1.4	1.1	1.7
Total expenditure and net lending	8.2	10.2	14.0	14.3	14.3	14.3	14.4	13.0	13.7	17.0	20.8
Of which:											
Current exenditure	7.4	8.6	11.2	11.9	10.8	10.6	10.5	9.8	10.2	12.4	16.3
Capital expenditure	0.6	1.2	2.1	1.9	2.5	2.8	2.7	2.4	2.6	3.3	3.0
Narrow deficit	–2.7	–1.8	–2.2	0.1	0.5	0.4	0.7	0.2	1.5	–4.8	–2.5
Broad Definition[2,3]											
Total revenue and grants	5.6	8.8	12.4	15.9	16.7	16.1	16.8	14.6	16.7	14.1	20.8
Of which: Grants[2]	—	0.7	1.1	2.2	2.6	2.5	3.2	2.8	2.9	3.0	4.2
Total expenditure net lending	8.2	11.1	15.4	19.2	19.1	18.9	18.9	16.8	18.0	22.2	28.1
Of which: Capital expenditure[3]	0.6	1.9	3.3	5.0	5.4	5.8	4.9	4.8	5.1	6.8	8.1
Overall deficit	–2.7	–2.3	–3.0	–3.3	–2.4	–2.8	–2.1	–2.2	–1.3	–8.1	–7.2
Memorandum items:						(In percent)					
Output gap[4]	–11.4	–5.6	–3.5	–1.7	–0.7	0.8	1.6	0.7	1.8	1.5	2.5
Fiscal impulse[5]	...	0.1	0.7	0.4	–0.7	0.5	–0.5	–0.4	0.9	6.4	0.4

Sources: Data provided by the Ghanaian authorities; and IMF staff estimates.

[1]Excludes capital expenditure financed by direct project grants and loans.

[2]Includes external project grants. These data are subject to a certain degree of estimation error.

[3]Includes capital expenditure financed through external project grants and loans.

[4]Deviation of actual from potential output (calculated using the Hodrick-Prescott filter).

[5]Calculation described in text.

as a constraint on the recovery of economic activity (Chart 3-6); rather, the additional external financing that accompanied the adoption of the ERP appears to have helped ease a severe squeeze on imported inputs.

Fiscal policy supported the recovery of output and investment during the first phase of adjustment, through its effect on aggregate demand. A simple measure of the impact of fiscal policy on aggregate demand is given by the fiscal impulse (Table 3-4, and Chart 3-7).[23] On average, the fiscal impulse was small during 1983–91.[24] During the first phase of adjustment, when output was below trend, the fiscal impulse was mildly positive, and in the second adjustment phase it turned slightly contractionary when the output gap was positive. By contrast, in 1992–93, fiscal policy provided a strong expansionary stimulus that fueled inflationary pressures.

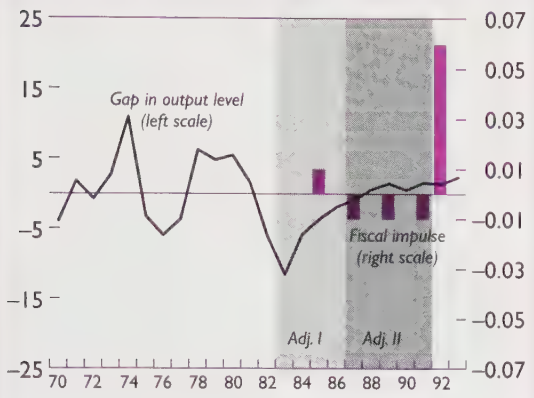
In broad terms, *monetary policy* appears to have accommodated the strong expansion in output after 1983, but at the cost of inflation that remained stubbornly high. Three indicators of monetary conditions are examined in order to assess the influence of monetary policy on the expansion of domestic demand, but interpreting all of them is complicated by the transition from a period of severe financial repression. One indicator is the level of real money

[23]The measure is based on the broad definition of the fiscal accounts, which include project expenditures financed directly by foreign loans and grants. The fiscal impulse measure is that used for industrial countries in the World Economic Outlook (see Heller and others (1986)). For an economy such as Ghana's this measure must be interpreted cautiously: "cyclical" influences on revenues and expenditures are likely to differ from those in industrial countries because revenue developments are likely to strongly reflect drought-related supply-side shocks in agriculture and terms of trade shocks. The fiscal impulse measure will therefore reflect, among other things, the extent to which supply-induced revenue windfalls (or shortfalls) are sterilized (or accommodated).

[24]Estimates of the fiscal impulse based on the broad coverage of the fiscal accounts (annual averages, in percent of GDP) are

1983–86	1987–91	1992–93
0.4	–0.4	3.4

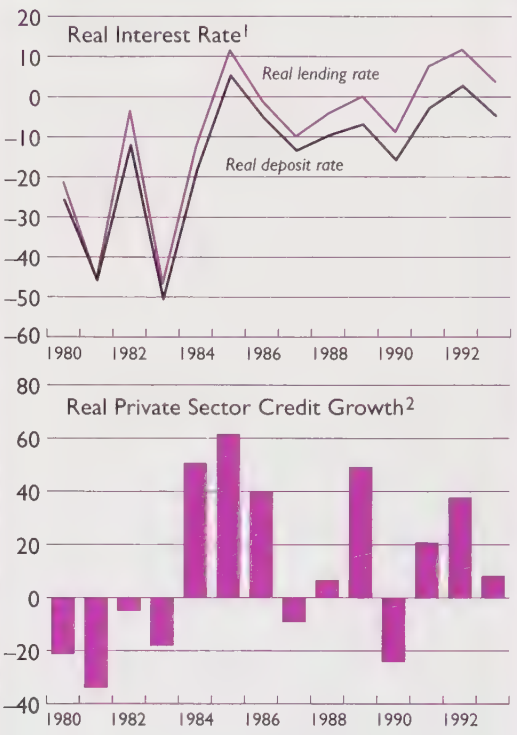
Chart 3-7. Ghana: Fiscal Impulse and Output Gap, 1970–92



Sources: Ghanaian authorities; and IMF staff estimates.

Chart 3-8. Ghana: Interest Rates and Credit Growth, 1980–93

(In percent)



Sources: Ghanaian authorities; and IMF staff estimates.

[1]Nominal deposit and lending interest rates, respectively, deflated by the consumer price index.

[2]Credit from the banking system to the private sector excluding crop financing, deflated by the consumer price index.

balances, which measures the availability of liquidity for the private sector. Real money balances rose during the early phase of adjustment and remained high until the late 1980s. Subsequently, the ratio rose again in 1992, indicating that excess liquidity probably reemerged, when fiscal expansion fueled a sharp increase in the growth of broad money. A second indicator is the level of real interest rates. During the period 1983–93, real interest rates increased considerably, but only reached positive levels in 1991 (following the liberalization of interest rates in 1989–90 (Chart 3-8)). A third indicator of the "tightness" of monetary conditions is the rate of growth of bank credit to the private sector measured in real terms.[25] During 1983–86, the rate of real credit expansion was high—on average, 29 percent a year, but this probably reflected in part a reintermediation of financial flows into the banking system. Real credit growth slowed considerably to an average annual rate of 6 percent in 1987–91, but subsequently accelerated sharply as financial policies were relaxed in 1992–93.

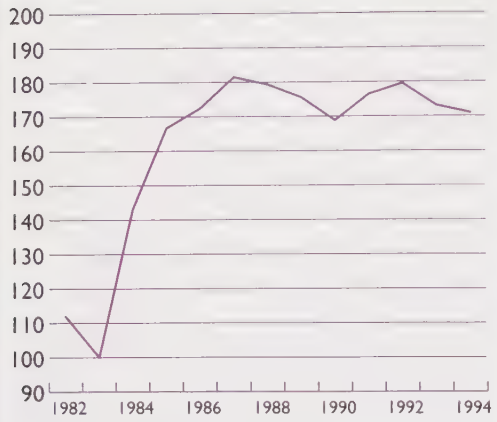
Exchange rate policy was a key component of the ERP, involving the correction of the massive initial overvaluation in the official exchange rate. This correction, together with a front-loaded trade reform program, significant price liberalization, and substantial adjustments in administered prices, succeeded in tilting price incentives in favor of the production of tradable goods. Following the correction of the initial imbalance, an auction market was established to allow market forces to determine the exchange rate, and by 1990 the foreign exchange market was unified.[26] In the event, this led to further nominal depreciation and a roughly constant real exchange rate. During this period the foreign exchange market was aided by substantial external inflows.

Because of a sizable parallel market in foreign exchange, movements in the official exchange rate or relative price measures, such as the real effective exchange rate (REER), may not be accurate indicators of changes in competitiveness. In fact, before 1988, when almost all imports became eligible for funding

[25]Private sector credit excludes credit to public enterprises and crop financing.

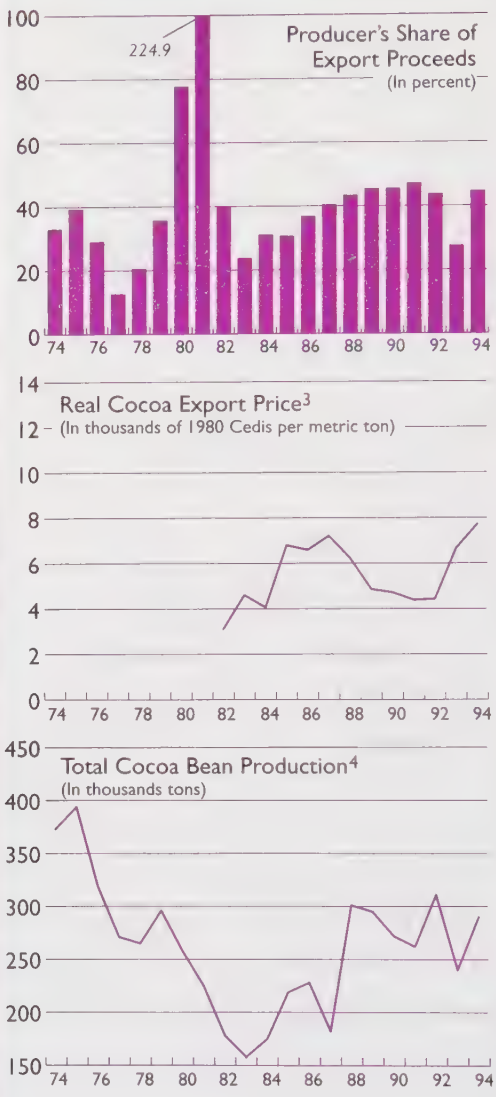
[26]Between April 1988 and April 1990 Ghana had a dual exchange rate system.

Chart 3-9. Ghana: Relative Price of Traded and Nontraded Goods, 1982–92[1]
(1983 = 100)



Source: IMF staff estimates.
[1]Based on components of the consumer price index.

Chart 3-10. Ghana: Cocoa Producer and Export Prices and Production, 1976/77–1994/95[1]



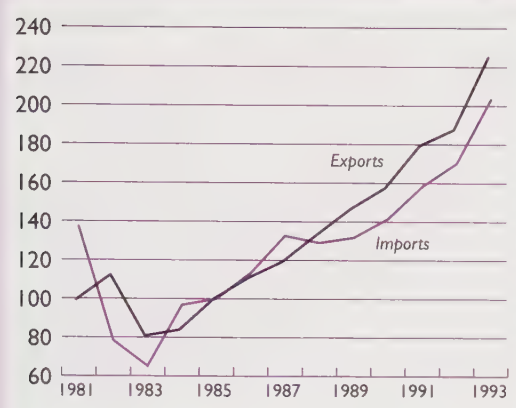
Sources: Ghanaian Cocoa Board; and IMF staff estimates.
[1]Crop year ending September 30th.
[2]Calculated as the ratio of producer price to export revenue (cedis per metric ton).
[3]Calculated using CPI, re-centered to correspond to crop years.
[4]Main crop plus mid-crop.

at the foreign exchange auctions, it is likely that a considerable share of imports, particularly consumer goods, were financed through the parallel market. For this reason the relative price of tradables and nontradables in the consumer price index basket of goods may be a more accurate measure of the real exchange rate than the REER—at least for consumer goods. With respect to exports, an important measure of production incentives, particularly for cocoa, is the ratio of producer to world prices and the ratio of export prices to domestic consumer prices; cocoa producer prices continued to be administered during the ERP. All these measures of the real exchange rate show a sharp increase in incentives for the domestic production of tradable goods during the first adjustment phase, which was largely sustained during the second phase of adjustment (Charts 3-9 and 3-10).[27]

Imports and exports responded quickly to the expenditure-switching policies (exchange rate, trade reform, and domestic price adjustments). Ghana succeeded in making gains in its share of export markets and in reducing the intensity of imports compared with past trends, the volume of imports nevertheless rose sharply, reflecting the strong recovery of output and the increased availability of financing. The impact of these policies also appears to have strengthened, on average, during the second phase of the ERP. In particular, the volume of merchandise ex-

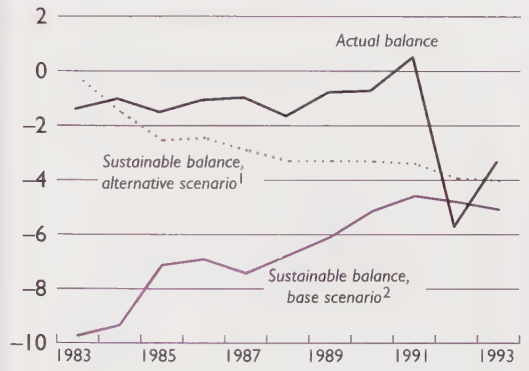
[27]Neither of these indicators of competitiveness focuses on developments in costs and therefore would not necessarily accurately reflect movements in profitability.

Chart 3-11. Ghana: Export and Import Volume Indices, 1981–93
(1985 = 100)



Source: World Economic Outlook database.

Chart 3-12. Ghana: Actual and Sustainable Fiscal Primary Balances, 1983–93
(In percent of GDP)



Sources: Ghanaian authorities; and IMF staff estimates.

[1]Primary balance needed to maintain the public debt-to-GDP ratio constant on the assumption of 5 percent inflation and no financial repression.

[2]Primary balance needed to maintain the public debt-to-GDP ratio constant on the assumption that inflation rates and the degree of financial repression are maintained at their actual levels.

ports increased substantially throughout 1983–93 (Chart 3-11).

Policy Credibility and Sustainability

One possible explanation for the sluggish response of private investment and saving to the ERP was that policies were initially perceived to be unsustainable or lacking in credibility. One clear signal of such a potential problem was the failure of inflation to fall below a level of about 30 percent for a sustained period.[28] This section considers two questions related to the credibility of financial policies. First, was the magnitude of the fiscal deficit reduction consistent with the objective of reducing inflation and a shift to positive real interest rates on public domestic debt? Second, why was inflation persistently high?

Private sector assessments of the *sustainability of fiscal policy* can have an important influence on the response of private investment and savings. An important aspect of this assessment is the effect of fiscal policy on the public debt burden. Chart 3-12 presents the results of some debt dynamics calculations for Ghana, based on the intertemporal budget constraint for the public sector. The actual primary fiscal balance at different stages of the adjustment process is compared with two notions of a "sustainable" balance: (1) the primary balance that would keep the public debt-to-GDP ratio constant at its current level, assuming that the current rate of inflation (and hence seigniorage) and the current interest rate on domestic debt (and hence the extent of financial repression) are maintained in the future (indicated as the base scenario); (2) the primary balance that would keep the public debt-to-GDP ratio constant at its current level in a context of low inflation and no financial repression (indicated as the alternative scenario).[29] This latter measure is a more comprehensive indicator of fiscal sustainability, since it pro-

[28]Bruno and Easterly (1994) found evidence, using a panel regression analysis (including Ghana), that inflation in the 40 percent a year range over a prolonged period has strong negative growth effects.

[29]Using the approach described in Anand and van Wijnbergen (1989), the budget constraint can be described as $b = (r-n)b+d-s$ where b represents the public sector debt-to-GDP ratio, d is the primary deficit as a share of GDP, s is seigniorage revenues (including the inflation tax) as a share of GDP, r represents the average real interest rate on debt, and n is the real GDP growth rate. Since the aim of the exercise is to assess whether fiscal policy was judged to be sustainable at the time, rather than with the benefit of hindsight, the debt calculations are based on a three-year moving average of actual interest rates and growth rates and assume, for the purpose of each year's estimate, that the real exchange rate is expected to be constant. The estimate of "low-inflation" seigniorage is derived from a quadratic function linking seigniorage to inflation that was estimated by Easterly and others (1993) on the basis of cross-country data and assumes an annual inflation rate of 5 percent.

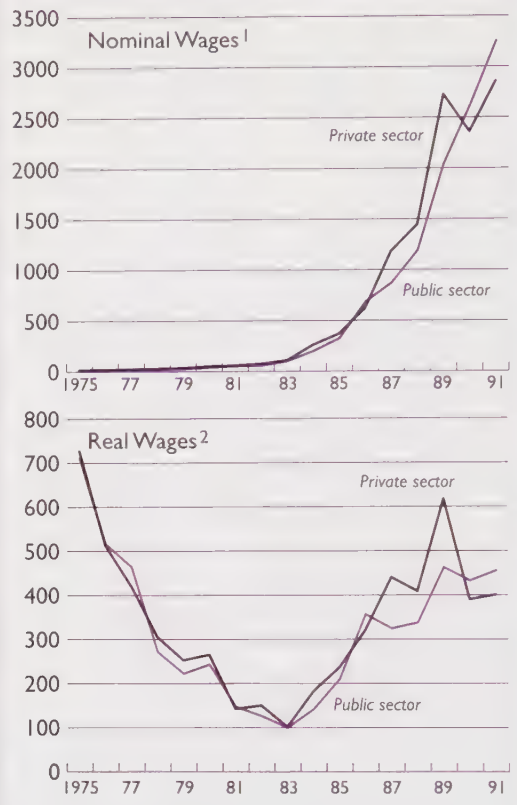
vides a measure of the deficit reduction that is needed to make fiscal policy consistent with other important goals of an adjustment strategy, namely low inflation and efficient financial intermediation. The convergence of the two measures of sustainability beginning in the late 1980s reflects the progress made in diminishing the degree of financial repression and in reducing inflation to some degree.

The results indicate that fiscal policy was on a sustainable path, in the sense defined above, between 1984 and 1991, even when it is assumed that the negative real yields on domestic debt and high levels of seigniorage revenue would not be available as sources of financing in the future.[30] During 1992–93, the expansionary stance of fiscal policy shifted the primary balance to an unsustainable position—in the sense that it implied continued increases in the debt-to-GDP ratio. As to the composition of the fiscal adjustment, increased outlays on health, education, and infrastructure rehabilitation were also positive aspects.

The fundamental factor underlying inflation inertia, after the initial sharp fall in inflation in 1984–85, was the absence of an effective nominal anchor.[31] Uncertainties about the appropriate equilibrium level of the exchange rate and the low level of reserves prevailed against the use of a nominal exchange rate anchor at the time the ERP was adopted. Moreover, credit and incomes policies, which had been expected to bring down inflation further, proved to be insufficient. In the event, monetary policy accommodated inflationary pressures, at times from cost-push factors, and may have contributed to keeping inflationary expectations high.

The limited effectiveness of incomes policies in reducing the cost-push factors on inflation is reflected in the substantial rise of nominal wages under the ERP. During 1983–88, significant increases in nominal wages were granted in the public sector in order to reverse the severe compression in real wage levels prior to the ERP and to improve the quality of the civil service. From the perspective of efficient public administration, this reversal was necessary, but, the large increases (on average 64 percent a year or 28 percent in real terms) put upward pressure on the price level directly through their impact on demand, and indirectly through their demonstration effect on private (formal) sector wages (Chart 3-13) and on inflationary expectations. In 1989–91, nominal wages in the public sector increased more closely in line with inflation, but in 1992 the civil service was granted a wage rise of 80 percent.

Chart 3-13. Ghana: Nominal and Real Wages, 1975–91



Sources: Ghanaian authorities; and IMF staff estimates.
[1]Index of average monthly earnings (1983 = 100).
[2]Index of average monthly earnings deflated by the CPI (1983 = 100).

The rapid growth of broad money, which was consistently higher than the rate of inflation by a large margin during 1983–89, was due primarily to the large expansion of credit to the public sector during 1983–86 and to the rapid increase in the net foreign assets of the banking system during 1987–88 (in part reflecting high levels of external concessional assistance, which was only partially sterilized).[32] During

[30]Another notion of sustainability would require also that the primary balance be consistent with maintaining the debt-to-GDP ratio constant in the event that no further concessional external financing was received. For example, if all external financing (including grants) was assumed to be on market terms, the additional interest payments in 1993 would have been equivalent to about 1½ percentage points of GDP.

[31]A more detailed discussion of the factors determining inflation is contained in Kapur and others (1991).

[32]The significant change in the macroeconomic regime during this period probably led to significant shifts in the demand for money. This complicates the task of clearly assessing the stance of monetary policy.

Table 3-5. Ghana: Balance of Payments, 1983–91

	1983	1984	1985	1986	1987	1988	1989	1990	1991
					(In millions of U.S. dollars)				
Exports, f.o.b.	439.1	566.7	632.3	749.4	824.0	881.0	808.3	896.6	998.0
Imports, f.o.b.	499.7	616.0	671.3	733.5	933.8	990.9	1,006.0	1,905.0	1,318.7
Trade balance	–60.6	–49.3	–39.0	15.9	–109.8	–110.0	–197.7	–308.4	–320.7
Services (net)	–186.0	–229.2	–254.4	–290.9	–315.9	–326.8	–318.8	–325.5	–352.5
Private unrequited transfers (net)	16.6	73.5	31.9	72.1	201.6	172.4	202.1	201.9	219.5
Official unrequited transfers (net)	72.4	129.7	104.6	118.2	122.2	174.9	219.4	213.8	202.4
Current account balance	–157.6	–75.3	–156.9	–84.7	–101.9	–89.5	–95.0	–218.2	–251.3
Capital account	102.0	93.3	62.4	20.0	255.0	217.8	222.4	284.3	391.5
Official capital (net)	27.7	186.7	32.1	123.1	217.9	187.2	192.0	290.4	356.6
Private capital (net)	13.4	–8.7	5.8	7.0	1.7	4.0	11.7	52.8	19.1
Short-term capital	60.9	–84.7	24.5	–110.1	35.4	26.6	18.7	–59.2	15.8
Errors and omissions	–187.4	19.2	–21.0	7.9	–14.6	–3.8	—	52.0	31.0
Overall balance	–243.0	37.2	–115.5	–56.7	138.5	124.6	127.4	117.8	171.2
Financing	243.0	–37.2	115.5	56.8	–137.9	–126.2	–127.4	–117.8	–171.2
Change in net foreign assets	241.9	–26.9	107.7	66.2	–131.4	–124.8	–142.2	–86.4	–147.5
IMF transactions (net)	258.7	213.7	122.0	16.1	–25.2	–45.5	4.4	–47.7	82.2
Change in arrears (reduction –)	–33.7	–207.8	–56.7	–3.7	–71.6	–34.8	–47.7	–17.3	—
Other reserves (increase –)	16.9	–32.8	42.4	53.7	–34.6	–44.5	–98.9	–38.7	–229.7
Bilateral payments agreements	1.1	–10.3	7.8	–9.4	–6.5	–1.4	14.8	–14.1	–23.7
					(In percent of GDP)				
Memorandum items:									
Current account deficit (–)									
Including official transfers	–0.8	–1.0	–2.5	–1.5	–2.1	–1.7	–1.8	–3.5	–3.6
Excluding official transfers	–1.1	–2.7	–4.1	–3.5	–4.6	–5.1	–6.0	–6.9	–6.5

Sources: Data provided by the Ghanaian authorities; and IMF staff estimates.

1989–91, broad money growth declined, as the Government made net repayments to the banking system. Monetary control started to become more effective in the post-ERP period following the introduction of open market operations at market-determined yields. However, in 1992–93, the large increase in the fiscal deficit fueled a resurgence in monetary expansion.

External Financing

Ghana's substantial and sustained reform effort attracted significant inflows of capital, including large amounts of concessional assistance, and the path of output and investment during the ERP was not unduly constrained by an inadequate level of external financing. During the first phase of adjustment (1983–86), net external financing flows (net capital inflows plus official transfers) provided scope for strong growth in import volumes—averaging 13.5 percent a year—which reversed the import starvation that occurred in 1982–83.[33] At the same time, sizable repayments of arrears were made and relations with creditors were normalized. In the second adjustment phase (1987–91) net external financing increased sharply, more than doubling from US$176 million a year during 1983–86 to US$472 million in 1987–91; for the most part this reflected a rise in net official inflows, especially transfers (Table 3-5). In the face of a large and persistent decline in the terms of trade, these inflows allowed Ghana to avoid a sharp contraction in domestic absorption, which could have dampened the recovery in output and investment. However, the significant increase in external inflows, which was larger than

[33]During the course of the ERP, net private transfers also grew strongly. During 1983–86, earlier small outflows were reversed (average annual inward transfers amounted to US$31 million) and by 1987–91 annual average inflows of US$200 million (equivalent to about 3.5 percent of GDP) were recorded.

expected, also complicated efforts to restrict the growth of broad money (Younger (1992)).

Throughout the adjustment period, Ghana avoided recourse to multilateral debt relief, which enabled it to enjoy access to new credits, many on concessional terms. As a result, the external debt-to-GDP ratio rose rapidly from 9 percent in the preadjustment period to 77 percent in 1993, although liquidity and solvency indicators of external debt sustainability indicate that the debt burden has been manageable. The debt-service ratio declined rapidly during the second phase of adjustment, falling from about 63 percent in 1987–88 to 29 percent in 1992–94, while the net present value of debt relative to exports at the end of 1993 was 225 percent, which may be regarded as a sustainable level.

Structural Impediments to Investment and Output Growth

Structural policies can influence growth by improving efficiency and resource allocation and by expanding the capital stock, including human resources. Ghana's policies to decontrol prices and liberalize the exchange and trade regimes early in the ERP led to significant efficiency gains and a dramatic improvement in growth rates as compared with the pre-ERP period. However, the implementation of other supporting structural policies lagged with the result that resources were hindered from moving to and within the tradable goods sector. Reform policies for the financial, parastatal, and agricultural sectors were implemented at only a gradual pace, while a concerted effort to strengthen directly the role of the private sector, through such policies as privatization, revisions to the regulatory framework for investment, and tax reforms, was initiated only toward the end of the ERP.

Private Sector Development

While prices were deregulated and economic activity was generally exposed to market forces during the ERP period, the public sector retained a dominant role in the allocation of resources—directly through government spending and indirectly through public enterprise activities. Moreover, the complex legal and regulatory framework took several years to dismantle. Only in 1991 did the Government create an advisory group to identify constraints on the private sector and pave the way to revisions in the regulatory framework. A fully liberalized investment code was not introduced until 1994, when a range of issues relating to business licensing, foreign ownership, technology transfer, and tax incentives was finally addressed. Despite these improvements, property rights in Ghana, particularly relating to landownership, are still governed by arcane regulations. Private investment initiative was also dampened during the ERP by heavy corporate taxation. Meaningful tax reforms were only introduced in 1991 (see below).

During the ERP the private sector also faced barriers to entry in major sectors of the economy where parastatal monopolies operated, most notably in cocoa marketing, banking and insurance, and the utilities, including energy and telecommunications. Privatization in these sectors was slow, and foreign direct investment in Ghana remained limited. This was in part due to cumbersome procedures that faced investors; those were not streamlined until 1994 when revisions to the investment code allowed foreign participation in the Ghana stock exchange. Since then there has been a marked increase in foreign direct investment, particularly in the mining sector.

A clear lesson from the experience of high-performance economies is that a strong response by the private sector (both foreign and domestic) was built on a business-friendly environment (World Bank (1993)). By contrast the private sector in Ghana received mixed signals during the ERP as liberalization policies were not fully complemented by an institutional framework conducive to promoting free competition. Thus the current strategy of the Government is to implement structural reforms aimed at sending an unequivocal signal about the central role of the private sector in the economy.

Financial Intermediation

In the period immediately before the ERP, public confidence in the banking system was badly shaken by decisions taken in 1979 and 1982 to confiscate private deposits as part of currency conversion exercises. As a result, banks found it increasingly difficult to mobilize deposits. Confidence in the banking system was only gradually restored and currency-to-deposit ratios remained high for most of the ERP period. The financial system was highly repressed by interest rate controls, credit rationing, and quasi-fiscal lending by the Central Bank in the form of support to the commercial banks.[34] Although real interest rates rose substantially, they continued to be negative, and thus financial intermediation through the banking system improved only gradually. Small scale enterprises continued to seek much of their financing outside the banking system in informal markets. Moreover, the weak financial state of the parastatal sector resulted in an accumulation of nonperforming assets in the banking system.

[34]During the ERP, on average almost 40 percent of credit was absorbed by the parastatal sector (including the Cocoa Board).

Table 3-6. Ghana: Selected Monetary and Financial Indicators, 1983–94
(In percent; end-period data)

	1983	1986	1989	1991	1992	1993	1994
Annual percentage changes in:							
Reserve money	43.3	58.9	23.3	—	89.2	4.9	73.8
Broad money (M2)	37.0	53.7	26.9	19.9	52.9	27.4	46.0
Monetary ratios:							
Broad money (M2)/GDP	11.9	16.9	16.9	13.2	17.3	16.8	18.7
Financial savings/GDP[1]	5.2	6.3	10.3	9.4	11.3	11.1	11.5
Currency outside banks/M2	47.3	36.1	34.5	26.5	35.3	33.5	38.1
Currency/total deposits	89.6	56.6	52.7	36.0	54.6	51.0	62.0
Velocity (GDP/End-period M2)	8.8	5.9	5.9	7.6	5.8	6.0	5.4
Interest rates:							
Discount rate on 91-day treasury bills	...	...	20.0	20.0	25.4	32.0	29.5
Bank of Ghana's rediscount rate	...	...	26.0	20.0	30.0	35.0	33.0
Ghana Stock Exchange:							
Value of shares offered							
(In billions of cedis)	—	—	—	4.2	3.4	4.2	73.9
(In percent of GDP)	—	—	—	0.2	0.1	0.1	1.4

Sources: Data provided by the Ghanaian authorities; and IMF staff estimates.
[1]Includes savings and time deposits.

Interest rates were progressively decontrolled between 1988–91, and the Government took over a large part of the nonperforming portfolios of commercial banks in 1990. However, to help improve profitability, the banks increased their spreads, which already reflected the oligopolistic nature of the financial system.[35] Stringent prudential regulations put in place under the financial reforms have also made banks cautious with regard to their lending attitude despite their excess reserves at the Central Bank. Credit controls were only removed in 1991; during most of the ERP period the available credit was not efficiently allocated.

Although some financial deepening occurred in Ghana, financial markets were still relatively underdeveloped during the ERP.[36] Even in the post-ERP period, financial intermediation still generated little medium-term or development financing for start-up capital. Small-scale businesses, particularly in farming communities, faced high interest rates in informal credit markets, reflecting the lack of depth in rural finance institutions. A stock exchange was started in 1990, but by 1994 shares of only 17 companies were traded.

Ghana's experience was similar to that of other ESAF countries in that fundamental reforms to address distressed financial institutions could not be introduced early in the adjustment period because the financial system itself was dominated by the public sector, and because the reforms could not precede parastatal sector reforms. The financial restructuring of distressed banks late in the ERP was made possible after hard budget constraints were imposed on the public sector. To complete the reform process, Ghana has recently embarked on a strategy to increase the competitiveness of the banking system through privatization of the major publicly owned banks as part of a more comprehensive privatization strategy.

Public Sector Management

Quality of Fiscal Adjustment

Improved fiscal discipline was critical for successful stabilization policies during the ERP. However, the "quality" of fiscal adjustment cannot be easily measured as changes in taxes, expenditures, and the regulatory framework are transmitted through a variety of channels. Progress was made in rationalizing the tax system, improving tax administration, and broadening the tax base. Other policies such as the price and exchange system liberalization also contributed to increasing the share in total revenue of consumption-based taxes (Table 3-4). Expenditure

[35]The banking system was, and remains, dominated by three large banks and nine smaller banks.

[36]The ratio of broad money to GDP improved from 11.3 percent in 1983 to 13.5 percent in 1991 and reached 18.7 percent by 1994 (Table 3-6). This is still lower than in other comparator countries.

priorities were redirected toward basic education, social services, and infrastructure, while subsidies to the parastatal sector were eliminated.

With regard to tax policy, heavy reliance on income-based taxes continued until the late 1980s. Only since 1988 has visible progress been made toward shedding distortionary taxation and broadening the tax base. Since then, the share of direct taxation in total tax revenue has been reduced sharply mainly owing to a reduced share of corporate income taxes. This change, in part, resulted from an introduction of an investment code in 1985, which lowered tax rates (from 55 to 45 percent) and offered provisions for accelerated depreciation, as well as import duty exemptions. However, its effectiveness was limited by the complex provisions on incentives and because of wide differentials in tax rates across sectors. Furthermore, capital gains taxes and withholding taxes on dividends remained high until 1991. Only then were these taxes reduced, with corporate tax rates further lowered to 35 percent for most sectors. Corporate tax rates were thus unified with the top marginal rate on personal income taxes that were also reduced in 1991.[37] During most of the ERP, the system of direct taxes was not actively supportive of private sector investment. An earlier introduction of meaningful tax reforms would have been more conducive to a better private sector investment response (see above).

Furthermore, higher producer prices for cocoa would have likely brought about a much stronger response in cocoa exports if it had been possible to lower cocoa taxation earlier in the ERP (see above). However, the need for a reliable source of revenue precluded such action. During the ERP the tax base expanded, reflecting higher reliance on indirect taxes from import duties, sales taxes, and excises on petroleum products.[38] Accordingly, the reduced dependence on cocoa taxes (as their share dropped from 29 percent of total revenue in 1983 to 10 percent by 1991) created scope for reducing cocoa taxation in the post-adjustment period.

Capital expenditure rose from negligible levels in 1983 to an average of over 5 percent of GDP during the second phase of the ERP. Over half of these capital expenditures were funded directly through donor project aid. Many of these expenditures were dedicated to the rehabilitation of infrastructure. The composition of current expenditure put priority on health and education, which rose from 25 percent in 1983 to 34 percent of expenditures in 1991, while reducing transfers and subsidies. Although there is no direct evidence about the effectiveness of these expenditures, long-run growth studies and Ghana's relatively poor initial endowment of human capital (at least in terms of primary school enrollment rates) suggest that expenditures during the ERP were likely to have been growth enhancing.

In the post-ERP period, however, the structure of the budget expenditures was adversely affected by a rise in wage-related expenditures and an increase in domestic interest payments.[39] For Ghana to be able to afford maintaining or increasing the level of social expenditures over the next few years, the wage bill will need to be contained and a stringent public expenditure management policy implemented to enhance efficiency in resource allocation.

Public Enterprise Reform and Privatization

Ghana's strategy in the pre-ERP period was to rely heavily on state-owned enterprises (SOEs) as a vehicle for economic development.[40] During the first phase of the ERP, little effort was made to reduce the size of the SOE sector. Instead, Ghana's reform strategy aimed to expose SOEs to competitive market forces as a means of stimulating their management to seek ways to improve their financial position through cost-cutting measures. Access to budget subsidies was discouraged, and controls on input and output prices were removed. However, most SOEs remained financially weak and overstaffed, and inefficiencies in their operations in key sectors constituted a drain on the budget and a drag on the economy.

In the second phase of the ERP, the Government's strategy for parastatal sector reform became more active. The State Enterprise Commission (SEC) was created in 1987 to manage a group of 20–24 core or priority enterprises, which would remain in state ownership, while 32 SOEs were targeted for divestment and the status of the remainder was made subject to a review. By the end of the ERP the financial positions of the core enterprises had improved as a result of performance contracts monitored by the SEC, under which SOEs faced borrowing limits, and none of them was receiving direct government transfers. Sixty-three minor SOEs were either sold or liquidated, and a similar number were identified for divestment (Table 3-7). Nonetheless, slow progress in parastatal reforms and privatization policy during the ERP was a critical factor holding back private and foreign investment. A decade after the inception of the ERP, major sectors in Ghana's economy were

[37]The investment code was further simplified in 1994 when tax rates were further reduced, differentials across sectors narrowed, while taxes on capital gains and withholding taxes were sharply cut, and new capital allowance provisions were enacted.

[38]Increases in petroleum taxes from 1990 onwards added a cost-push element to the consumer price index.

[39]The increase in domestic debt in 1992–93 was mostly due to large issues of Bank of Ghana bills needed to mop up the excess liquidity injected during that period.

[40]The number of SOEs created was in excess of 330 by 1983.

Table 3-7. Ghana: Public Enterprises and Divestment, 1987–91

Item	1987	1988	1989	1990	1991
Estimated number of public firms	329	329	314	291	266
Targeted for divestment[1]	...	32	45	39	42
Actual divestment	...	...	15	23	25
Cumulative divestment	...	...	...	38	63
Liquidated	...	...	15	24	26
Sold	...	...	...	14	37

Sources: State Enterprise Commission (1992); and World Bank data.
[1]Indicates sales, liquidation, and management contracts.

still dominated by SOEs, including cocoa, transport, telecommunications, the utilities, education, and services sectors. The SOE sector was still a major employer, but contributed little in terms of corporate income taxes.

Ghana's experience with parastatal sector reforms during the ERP shows that success in implementing hard budget constraints on the SOEs without privatization may not be sufficient, because enterprises tend to undermine financial discipline by using a variety of channels that are usually less transparent, such as making excessive severance awards. Performance contracts have had some success in eliminating enterprise operating losses, but some enterprises still remained uncommitted to long-term profit maximizing behavior, as they devoted few resources to capital replenishment. Such contracts are only second best when compared with privatization.

The Government therefore started to strengthen its stance on privatization after 1992. A milestone decision was taken when the Government divested its shares in seven of the most profitable enterprises through flotations on the Ghana Stock Exchange in 1993–94, and sold half of its shares in the Ashanti Goldfields.[41] The divestiture list has been expanded to over 100 enterprises, including the major publicly owned banks, and steps are under way to fully deregulate the cocoa and petroleum trading sectors. Accelerating the divestiture program is currently the centerpiece in the Government's structural reforms.

Agricultural Sector Policies

In the pre-ERP period, Ghana favored industry and taxed agriculture heavily, and by the early 1980s, the level of cocoa production had slumped to less than one third its level in 1965. This was clearly a major impediment to growth. Several studies of that period have shown that, in comparison with other developing countries, Ghana's sectoral tax/incentive regime was characterized by an "extreme" level of bias in favor of sectors other than agriculture during 1958–76.[42] Agricultural pricing policies led to huge income transfers out of agriculture, in favor of government (net revenues), urban consumers (lower food prices), and industry (cheap raw materials and other inputs). The effects of this intervention were considerable.[43] Schiff and Valdes (1995) provided clear evidence that the level of taxation on agriculture was inversely related to agricultural and total economic growth; and that higher producer prices were also associated with increased investment and a reduction in labor outmigration.

The ERP introduced several agricultural reforms to correct these distortions. In the first phase (1983–86), exchange rate adjustments and government-administered increases in the producer price of cocoa were undertaken to improve profitability and reduce implicit taxation. The second phase (1987–91) was more structural in focus where, in addition to increases in producer prices, attempts were made to restructure the Cocoa Board's crop marketing and financial operations and to increase public investment in the sector.

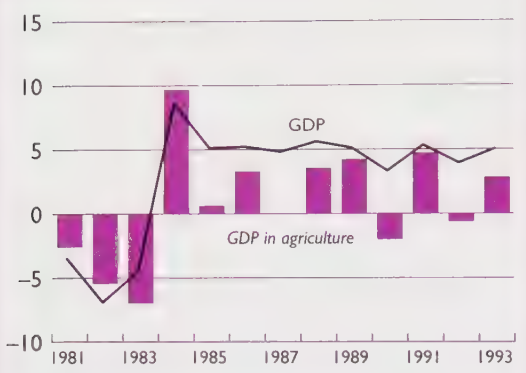
Ghana's agricultural performance during the ERP and the post-ERP period was less than satisfactory (Chart 3-14). In the 1980s, agricultural output grew at an average rate of 2.7 percent—considerably less than the developing country average of 3.9 percent (World Bank (1993)). This disappointing record represented a drag on overall economic growth. In addition, stagna-

[41]The total capitalization of the Ghana Stock Exchange jumped from 1.4 percent of GDP in 1992 to 5.7 percent of GDP in 1994.

[42]Stryker (1991), and Schiff and Valdes (1995).

[43]Based on cross-country comparisons, it was estimated that for that period if agricultural GDP in Ghana had a value of 100 under total price intervention, then it would have reached 240 in the absence of such interventions (Schiff and Valdes (1995)).

Chart 3-14. Ghana: Performance of Agriculture Relative to GDP, 1981–93
(Growth rates in percent)



Sources: Ghanaian authorities; and IMF staff estimates.

tion in agriculture may have dampened overall economic growth through the multiplier effect on dependent sectors, notably marketing, transport, and agro-industry.

Strong evidence has been compiled that indicates that Ghanaian farmers are responsive to changes in price incentives;[44] indeed, during the ERP period cocoa production rebounded sharply as producer prices were increased (Chart 3-10). However, there is also evidence that farm incomes did not keep up with inflation during the ERP period, in part reflecting the decline in world cocoa prices, and consequently there was a significant deterioration in the agricultural terms of trade (Sarris and Shams, 1991). This unfavorable price environment is likely to have limited the supply response of the agricultural sector during the ERP period.[45]

In addition, agricultural activity appears to have been constrained by extremely high transactions costs in the form of institutional and infrastructural weaknesses. Limited storage facilities, transportation and infrastructural bottlenecks, such as poor feeder roads, and lack of access to wider markets raised marketing costs, deterred new investments, and dampened output response. The persistence of high transaction costs also explains the low propensity among traditional Ghanaian farmers to make new investments and the unwillingness of subsistence farmers to enter the market economy.[46]

The key shortcoming of Ghana's agricultural reform strategy has been that where the Government could and should have played a more active role, as in upgrading the infrastructure of rural and urban markets and providing agricultural extension services and support to farmers, it did not, and where it should have relinquished its role, as in marketing, distribution, and the state enterprise sector in general, it did not move fast enough. These shortcomings undermined the impact of the other key aspect of agricultural reform: price reform.[47]

Lessons from the experience of high-growth Asian countries indicate that the initial impetus to growth came from agriculture. Substantial increases in value added in primary agriculture and agro-based industry generated the necessary export surpluses that were then used to finance the shift to manufacturing and manufactured exports (World Bank (1994)). During the ERP, Ghana was unable to achieve a similar agriculture-led growth path. To alleviate the impediments to its agricultural growth, Ghana's current strategy centers on moving aggressively toward the full deregulation of the cocoa sector and on adopting structural reforms aimed at removing the infrastructural bottlenecks, improving rural credit availability, and eliminating distortive taxation of agriculture.[48]

Exchange and Trade Reforms

A key element of the ERP was the reform of the exchange and trade system, where controls were widespread and distortions large. Before 1983, the trade and exchange system suffered from foreign ex-

[44]Price elasticities of supply were found to be high for cocoa, cereals, and other crops. See Leechor (1994) and World Bank (1993b).

[45]By one estimate, had real farm prices been 30 percent higher between 1980 and 1990, agricultural output would have grown faster, by 1.5 percent to 2 percent a year (World Bank (1993b)).

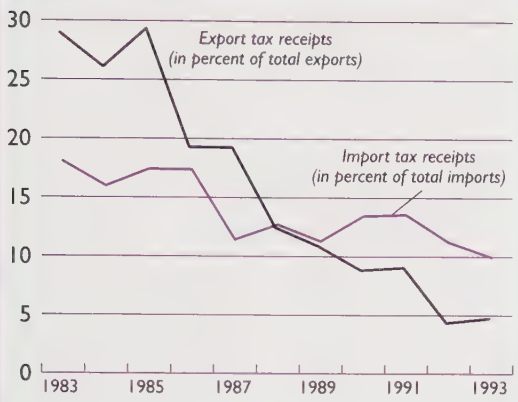
[46]The World Bank (1993b) noted that it was not clear to what extent the lack of rural finance may have been an impediment to investment and growth—even if credit were available, few farmers would have entered the credit system.

[47]See Leechor (1994). Lessons from the experience of other countries confirm that producers are unlikely to respond strongly to a price increase given by marketing boards, when faced with inadequate infrastructure to efficiently market and transport inputs and outputs, or with insufficient financial resources (Schiff and Valdes (1995)).

[48]It was only recently (1992–93) that some concrete steps were undertaken to introduce a significant private sector presence in agricultural activity: processing and storage capacity and input supply were privatized, and marketing of cotton, palm oil, coffee, and peanuts liberalized. Private companies have also been granted the right to purchase cocoa in competition with the Cocoa Board and are currently purchasing 25 percent of the crop.

[49]The bulk of exports went through state-owned monopolies: cocoa beans and products, coffee, and palm kernels could only be exported through the Cocoa Board; timber and related products through the Timber Marketing Board; and diamonds through the Diamond Marketing Corporation. These accounted for 69 percent of exports in 1982. For a detailed analysis of the effects of exchange and trade distortions, see Leith (1974).

Chart 3-15. Ghana: Trade Taxation, 1983–93



Sources: Ghanaian authorities; and IMF staff estimates.

change controls, restrictive export regulations,[49] a pervasive system of quantitative restrictions on imports,[50] and high trade taxes.[51] Exchange controls contributed to the overvaluation of the cedi, foreign exchange shortages, high effective levels of protection, and a strong anti-export bias. According to Agarwala's aggregate index of distortions, Ghana ranked as the country with the most distorted and inefficient price system among developing countries in 1983.[52]

In many respects, exchange and trade reform under the ERP followed many of the lessons on "best practices" that have emerged from the experience of developing countries. An important feature of the reforms was that substantial measures were introduced up front in a coordinated manner: a significant reduction in the level and dispersion of average tariff rates and the elimination of quantitative restrictions were accompanied by a major correction in the exchange rate. At the same time, controls on most domestic prices were abolished and the remaining administered prices were managed flexibly, ensuring that domestic prices reflected movements in world prices of traded goods. Moreover, reform was sustained, with considerable further action in subsequent years.

In 1983, the existing tariff system was replaced by a predominantly uniform tariff structure, with a duty rate of 30 percent. Although the uniform tariff rate was subsequently replaced by a more discriminatory four-tiered cascading structure in 1986, rates in each tier were steadily lowered over the course of the ERP period.[53] Overall, a significant reduction in average effective export and import tax rates was achieved (Chart 3-15). Also, in 1985, virtually all quantitative restrictions on imports were eliminated. After the initial large devaluations of the cedi, the focus on exchange reform shifted in 1986 to moving to a flexible market-determined exchange rate regime, leading to a unification of the foreign exchange market by 1990.[54]

The large-scale reduction of distortions in the trade and exchange system clearly improved the efficiency of resource allocation and thus had a positive impact on long-term growth in Ghana. Econometric estimates of private investment behavior and empirical studies of the long-term determinants of growth suggest that the elimination of the parallel market exchange rate premium had strong positive effects on investment and output growth. Also, trade reform contributed to a substantial increase in the openness of the Ghanaian economy: the share of exports of goods and services in GDP grew from less than 2 percent in 1982 to about 17 percent by 1987; for imports, the share rose from 2 percent to 19 percent.[55] However, the private sector in Ghana might have been more successful in taking advantage of liberalization if other supporting structural reforms—particularly in the public enterprise sector—had kept pace. Also, some industries that were previously protected found it difficult to adjust costs quickly and compete with imports.[56]

[50]An Interministerial Committee allocated all foreign exchange for imports through the import licensing scheme.

[51]The tariff system consisted of three ad valorem rates, with rates in the range of 25–30 percent applicable to most non-oil imports. However, effective tax rates were much higher for a wide range of imports: a special tax of 10 percent applied to imports financed outside the foreign exchange allocation system and additional domestic excise taxes and specific import duties applied to certain imported goods and services (e.g., alcohol, consumer durables, and plane tickets). On the export side, duties and levies ranging from 5 percent to 100 percent were applied to timber, gold, and net cocoa proceeds.

[52]See Agarwala (1983). The index is an unweighted average of scores assigned to measures of distortions including the effective rate of protection of manufactures, nominal protection coefficients for various agricultural commodities, movements in the real effective exchange rate, and the ratio of manufacturing real wage growth per capita income growth, adjusted for the terms of trade.

[53]In some respects, the change in the tariff structure in 1986 was a reversal of an earlier reform, and thus did not follow "best practices."

[54]See Kapur and others (1991) for a detailed description of the reforms.

[55]The steepness of the rise is strongly exaggerated by the elimination of the large initial overvaluation in the official exchange rate over this period.

[56]These include textiles and garments, leather products, and processed foods and beverages.

Labor Market Policies

Ghana has a segmented labor market. Agriculture, which employs some 60 percent of the labor force, accounts for the bulk of the informal sector, and in this sector wages are largely market determined.[57] Most of the rigidity in wages and employment practices lies within the formal sector, where the public sector still accounts for over two thirds of employment. Labor unions have a powerful presence in the formal and the public sectors.

The Government has been the largest employer in the formal sector, and wage and employment practices in the public sector have had a significant impact on the overall functioning of the formal labor market. During the ERP period, compensation levels in the public sector rose sharply in real terms, although, at least for the civil service, this represented a decompression from very low real wage levels (Chart 3-13). The levels of pay and employment in the state enterprises were not governed by profit-maximizing considerations and wage increases typically exceeded productivity growth, although these costs were passed on to the consumer as many of the enterprises were monopolies (Commander and Estrada (1992)). Moreover, collective bargaining agreements in the state enterprise sector generally yielded more generous provisions for retirement, redundancy, and other nonwage benefits than in the private sector (Davis (1991)). In many cases, SOEs agreed to large severance awards, which were well in excess of their abilities to fund. To a large extent, high levels of labor compensation and restrictive labor practices were the result of pressure from labor unions, and this led to wage awards in the private sector leapfrogging with those in the public sector. These factors restricted labor mobility, and limited the extent to which employment levels and wages could adjust to reflect changing market conditions. The competitiveness and profitability of private sector activity tended to suffer as a result of the cost-push impact of generous pay awards in the public sector. This became particularly more pronounced in the post-ERP period following an 80 percent wage award in the run-up to multiparty elections in 1992.

During the first phase of the ERP, government wage policy was motivated by the need to reverse the real decline of wages in the pre-ERP period, and large nominal wage increases were awarded to the civil service. However, in the second phase, significant efforts were made to restructure the size of the civil service. Efforts were made to link wage increases to productivity and allow differentials to widen across grade levels and occupations. There was some progress, albeit slow, but the restructuring process was interrupted in 1992 by the large wage increase. Also, although retrenchment from the core civil service was about 15 percent (or 45,000), yet on a net basis overall reduction in government employment was negligible because employment in the subvented agencies, particularly in the education services, increased over the ERP period.

Repeated attempts during the ERP were made to reduce the size of employment in the SOE sector but with limited success in most cases. This mainly reflected institutional rigidities involving the legal framework for retrenchment, industrial relations, and arbitration on severance awards (Davis (1991)). For example, in order to cut employment in the Cocoa Board—the largest single employer outside the Government—a special Reorganization and Indemnity Law had to be passed in 1985. Subsequently, the Cocoa Board was able to reduce its labor force by about 40 percent during the ERP. Overall, by the end of the ERP, employment in SOEs was estimated to have been reduced by 15 percent.[58]

The most visible impediments to the divestiture of SOEs on terms favorable to their successful restructuring under private sector ownership were (1) large, underfunded liabilities for the retirement benefits of continuing workers that in many cases exceeded the net worth of the enterprise; and (2) provisions in collective bargaining agreements for pay, allowances, and benefits that exceeded the financial ability of the enterprise to meet.[59]

The Government has recently initiated legislation to resolve the rigidities in industrial relations as a first step in creating a credible incomes policy consistent with enhancing competitiveness, employment, and growth. In the meantime, the current civil service reform program aims at achieving tangible efficiency gains by restructuring the core civil service and the subvented agencies with the aim of contracting out those services that can best be performed by the private sector.

Social Policies and Poverty Alleviation

During the ERP period Ghana made sizable gains in reducing poverty.[60] Between 1988 and 1992, there was a reduction in the incidence of poverty from 37 percent of population to 32 percent. The re-

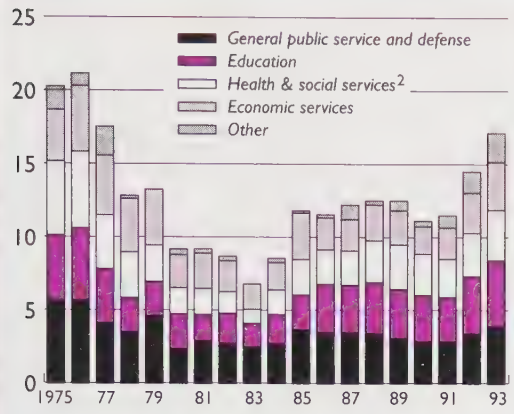
[57]Information on the labor market and employment in Ghana is very limited and the database is weak.

[58]It is estimated that in 1991 the size of the civil service (including subvented agencies) was around 300,000 and employment at nonfinancial SOEs was about 244,000, of which the Cocoa Board employed 42,000.

[59]A notable exception has been the Cocoa Board, which was able to reduce its staff by a further 30,000 in 1993–94, with more retrenchments planned. However, retrenchment costs were borne by the government budget.

[60]World Bank (1995).

Chart 3-16. Ghana: Functional Composition of Central Government Expenditures, 1975–93[1]
(In percent of GDP)



Sources: Ghanaian authorities; and IMF staff estimates.
[1]Excludes capital expenditure financed through external project grants and loans. For fiscal year ending June 30 through 1982; ending December 31, thereafter. Also excludes interest payments.
[2]Includes spending on housing and other community amenities.

duction was most pronounced in rural areas, where the concentration of poverty is highest. Poverty incidence there declined from 42 percent of population to 34 percent. Therefore, a major achievement of the ERP was that growth in income and expenditures was relatively broad based, and did not come at the expense of a deterioration in income distribution.[61]

Apart from growth and improvement in income distribution, another factor that contributed to poverty alleviation in Ghana was the persistent effort by the Government throughout the adjustment period to sustain public expenditures for education and health (Chart 3-16). There was an expansion in social expenditures as a share of GDP, and human capital indicators have improved markedly as a result. Primary and secondary school enrollment rose, infant mortality rates declined, malnutrition among children was cut in half, and average life expectancy increased over the ERP period (Table 3-8). With donor assistance, Ghana implemented for a limited time a program of investment in social services directly targeted to vulnerable groups.[62]

Although Ghana is currently above the sub-Saharan average in some of the key social indicators, it still lags behind the group of low-income countries, particularly in primary school enrollment rates. Ghana also lags behind in primary education when compared with the fast-growing Asian economies in their early stages of rapid growth. Ghana's current literacy level is 60 percent, while most of the Asian economies had already achieved near universal literacy prior to accelerated growth.

World Bank studies indicate that at current rates of growth, the average poor in Ghana will need 15 years to get out of poverty; more critically, the absolute poor would require 30–40 years to cross the "poverty line." To achieve a permanent increase in standards of living, Ghana's economy will therefore have to accelerate growth beyond 5 percent.

To pursue a strategy aimed at accelerated growth, Ghana placed emphasis on policies targeted at human resource development and poverty reduction.[63] The strategy emphasized that to be able to implement effective human resource development programs, budgetary resources would have to be spent efficiently and judiciously in the health and education sectors, while expenditures on unproductive outlays would need to be pruned. Furthermore, as discussed earlier, policies aimed at accelerating growth in agriculture would probably have the most direct impact on poverty reduction as rural incomes improve.

Conclusions

Ghana achieved a significant measure of success in overcoming deep-seated macroeconomic and structural imbalances during the period of adjustment, 1983–91. Ghana's economy responded well to adjustment policies, and was therefore able to achieve a strong and uninterrupted recovery in output. However, the recovery in the rates of private investment and saving was uneven. These rates remain at relatively low levels in comparison with high-growth economies. Thus Ghana's potential for reaching an accelerated growth path was constrained by the limitations of the private sector response.

The swift and strong recovery in output illustrates how the mix of financial policies was supportive of growth. Fiscal and monetary policies did not

[61]Despite the slow growth in agricultural output, household income surveys indicate that rural poverty improved because a modest increase in real income from food and export crops was supplemented by nonfarm incomes of household members engaged in informal sector activities such as trading.

[62]Program of action to mitigate the social costs of adjustment (PAMSCAD). In the post-ERP period this program was replaced by a more decentralized system where decisions on expenditure management were delegated to the district level to allow for better targeting of beneficiaries.

[63]See Government of Ghana (1993).

Table 3-8. Ghana: Selected Social Indicators, 1970–92

Human Capital Indicators	Latest Year 1970–75	Latest Year 1980–85	Latest Estimate 1990–92	Last Year Sub-Saharan Africa	Last Year Low-income countries
Health					
Infant mortality (Per thousand live births)	107	98	81	99	73
Under-5 mortality (Per thousand live births)	...	...	129	169	108
Life expectancy (Years)	50	52	56	52	62
Immunization (Percent of age group)	...	...	39	54	73
Education (Percent of age group)					
Net primary enrollment ratios	71	76	77	66	103
Female	62	66	69	62	96
Net secondary enrollment ratios	37	40	38	18	41
Female	28	31	29	14	35
Pupil-teacher ratio: primary	30	23	29	39	37
Literacy (Percent of population age 15+)	30	53	60	49	61

Poverty Indicators	Share of Population 1987–88	Share of Population 1991–92	Incidence of Poverty1 1987–88	Incidence of Poverty1 1991–92	Depth of Poverty2 1987–88	Depth of Poverty2 1991–92	Contribution to National Poverty 1987–88	Contribution to National Poverty 1991–92
				(In percent)				
Poverty profile by area								
Urban	34.2	33.2	27.4	26.5	8.1	6.8	25.3	27.9
Accra	8.3	8.2	8.5	23.0	1.7	5.6	1.9	6.0
Other urban	25.9	25.0	33.4	27.7	10.1	7.1	23.4	22.0
Rural	65.8	66.8	41.9	33.9	13.8	8.7	74.7	71.9
National	100.0	100.0	36.9	31.5	11.9	8.1	100.0	100.0
Poverty profile by rural economic group								
Farm household[3]	74.9	67.3	42.8	36.3	14.0	9.7	76.5	72.0
Cocoa farmers[4]	2.3	11.8	42.7	32.0	14.0	8.6	2.3	11.1
Non-cocoa farmers	72.6	55.5	42.8	37.2	14.0	9.8	74.2	60.9
Non-farm household	25.1	32.8	39.8	29.1	13.3	7.1	23.5	28.0

Sources: Ghana Living Standards Surveys; and World Bank (1995).

[1]Based on the Ghana Living Standard Surveys (conducted in 1987/88, 1988/89, and 1991/92), the "poverty line" is defined at ¢128,404 (or US$294) in constant 1992 prices, representing average annual expenditure per person that is two thirds of the mean per capita income of households surveyed. The average poor in percent of population are those with income just below that income level.

[2]The absolute poor in percent of population are those that earn significantly less than the income level defined by the "poverty line"—i.e., those earning at most half of the mean average household income (World Bank, 1995).

[3]Farm households are defined as those households where more than 50 percent of total income was derived from farming activities.

[4]Cocoa farm households are defined as those where more than 50 percent of crop revenue was derived from cocoa.

squeeze demand which, together with strong expenditure-switching policies, were successful in providing the stimulus needed to support a strong recovery in output growth, without a pause, as well as successful external adjustment. The high level of slack and distortions in the economy at the outset of the ERP provided the scope for a sharp rise in output during the initial adjustment phase, following the implementation of stabilization policies and early liberalization of prices and reform of the exchange and trade system. However, the improvement in growth was sustained beyond the early years of the ERP, notwithstanding a marked deterioration in the terms of trade during the second phase of adjustment. In this context, the mix of policies owed much to the renewed inflows of concessional external financing. Restoration of fiscal discipline throughout the ERP played a central role in stabilization of the economy and helped in the recovery of government saving and investment.

The experience of Ghana illustrates the importance of overcoming the private sector's perceptions of uncertainty and macroeconomic instability, particularly in the form of relatively high and volatile inflation, in order to elicit a strong response of investment and saving. To some extent, time was re-

quired to establish a sound track record in order to dispel the lingering effects of past mismanagement. However, a more decisive reduction of inflation to much lower levels could have restored private sector confidence sooner. This would have required firmer monetary policies at an earlier stage. However, monetary control was to some extent impeded by structural factors such as the relatively large credit demand by the public sector, the limited range of financial instruments, and the considerable uncertainty about the underlying behavior of money demand aggregates during the economy's transition from severe financial repression.

Major structural reforms were only introduced late in the ERP period. Thus, the private sector received mixed signals, as the price and exchange and trade liberalization policies were implemented while the public sector continued to play a dominant role in major segments of the economy. Within the financial sector, the combination of high inflation, continued, albeit milder, financial repression, and weaknesses in the banking system discouraged saving and financial intermediation. An earlier start to financial sector reforms would have made the task of monetary management easier. Furthermore, an earlier return to positive real interest levels would have encouraged more efficient financial deepening and possibly a higher rate of savings. Parastatal sector reforms emphasized measures to instill an element of financial discipline and to control losses but did not go far enough with regard to privatization. Earlier privatization efforts could have created a more competitive environment with a greater opportunity for private sector involvement in economic activity. Indeed, concerted efforts aimed directly at strengthening the role of the private sector, such as reforms to the regulatory framework for investment and tax reforms, were initiated only toward the end of the adjustment period. Such reforms could also have been started earlier.

Ghana's agriculture, which was severely distorted in the pre-ERP period, proved to be responsive to higher producer prices. However, Ghana's experience illustrates that price reforms alone were not enough, as agriculture, which is still the mainstay of the economy, grew only modestly. Earlier deregulation of cocoa marketing and rechanneling the public resources to the more efficient provision of support services could have unlocked the potential for agriculture to be a growth center, as was the case in high-performing economies.

During the adjustment period Ghana's economic growth was accompanied by a measurable reduction in poverty levels. A steady improvement in the provision of essential social services was associated with that outcome. Nonetheless, literacy and primary education levels are still below par when compared with those in high-performing economies prior to their accelerated growth. To achieve the sustained and accelerated long-term growth required to alleviate poverty, Ghana would need to maintain a stable macroeconomic environment conducive to private sector growth, and to make efficient investments to upgrade its infrastructure and human capital.

IV Senegal, 1978–93

Amor Tahari, Jules de Vrijer, and Manal Fouad

Since the early 1980s, Senegal has carried out a series of adjustment programs, which have been supported by stand-by arrangements, as well as by arrangements under the structural adjustment facility (SAF) and the enhanced structural adjustment facility (ESAF).[1] These programs have also been supported by the World Bank with various structural and sectoral adjustment loans, and by other multilateral and bilateral creditors. While the policies pursued under these programs have contributed to a reduction in macroeconomic imbalances, economic growth has remained erratic and subdued, and savings and investment ratios have been relatively low (Chart 4-1). After a short-lived export boom in the mid-1970s, during which real GDP rose by 5 percent a year, economic growth averaged only some 2 percent a year over the period 1978–93 and did not keep up with the 2.8 percent population growth; the investment-to-GDP ratio was only 13 percent of GDP; and gross domestic savings did not exceed 5 percent of GDP on average (Table 4-1 and 4-2). This study covers the period up to 1993, prior to the January 1994 devaluation of the CFA franc.

This paper examines the factors that may have accounted for Senegal's growth, savings, and investment performance, focusing in particular on the response to adjustment policies during the period 1985-91. It begins with an overview of the long-term economic performance in Senegal and then describes the initial conditions that led to an economic crisis in the late 1970s and early 1980s and discusses the main obstacles to higher sustained growth. It briefly examines the adjustment strategy implemented since the mid-1980s and focuses on the impact of macroeconomic and structural policies on growth, savings, and investment, as well as on the role of exogenous shocks.[2] The final section draws some conclusions from the analysis.

While Senegal has a comprehensive macroeconomic database, it suffers from a number of deficiencies, including the lack of a reliable database on sectoral developments and factors of production. Therefore, meaningful quantitative relationships between growth, investment, savings, and their determinants are difficult to establish. Given these limitations, the analysis presented here is largely qualitative and relies on existing work on the determinants of growth, investment, and savings in developing countries, as well as on previous Fund staff reports and various World Bank documents.

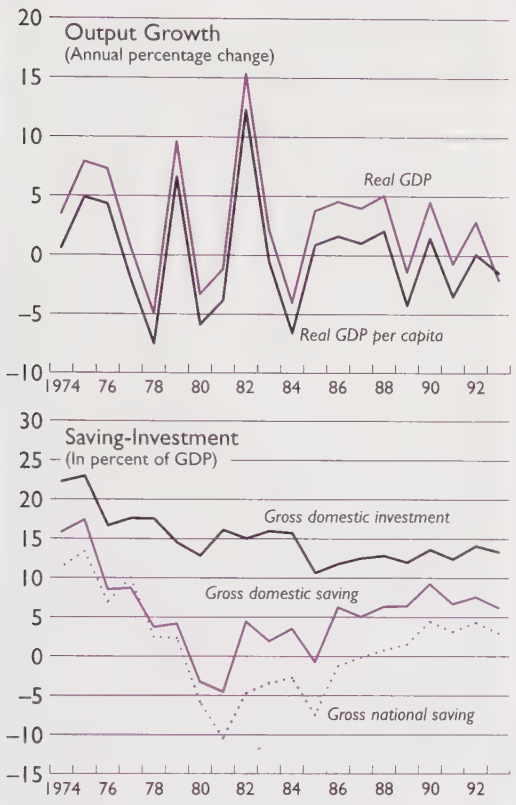
Long-Term Economic Performance

Senegal is a Sahelian country with a poor resource base, a high population growth rate, and a low per capita income (estimated at US$478 in 1994). The primary sector in the economy, which contributed about 21 percent to real GDP in the early 1990s, is the source of employment for the bulk of the population. About half of its value added originates in agriculture, but its contribution to growth has depended heavily on weather conditions, and has therefore been erratic (Table 4-3). The two main cash crops, groundnuts and cotton, are important but volatile foreign exchange earners. Since the mid-1980s, the fishing sector has emerged as Senegal's principal export activity. The secondary sector, which accounted for close to 19 percent of GDP in the early 1990s, encompasses a variety of economic activities, but still depends to a large extent on agro-industries. The growth of this sector averaged over 3 percent a year in the past decade, but in recent years it has suffered from the declining competitiveness of the economy. The tertiary sector, which has grown the most steadily over the years and is the largest contributor to GDP (60 percent of GDP), is mainly concentrated

[1]The first stand-by arrangement for Senegal was approved on March 30, 1979.

[2]Recent theoretical and empirical studies of economic growth, based on endogenous growth models, have attempted to explain growth by linking it to initial economic conditions and policies that affect physical and human capital accumulation and factor productivity growth. Exogenous factors, such as weather conditions and changes in the terms of trade, also play a key role. For a survey of the literature, see Hadjimichael and others (1995). See also Barro (1989), Fisher (1993), Kormendi and Meguire (1985), and Mankiw and others (1992).

Chart 4-1. Senegal: Output Growth and Saving-Investment, 1974–93



Sources: Data provided by the Senegalese authorities; and IMF staff estimates.

in trade, transportation, and tourism. Senegal's imports are dominated by petroleum products and foodstuffs.

Senegal gained its independence in 1960 and had a relatively well-developed physical and social infrastructure and a well-established civil administration. Although the nongovernment (private and public enterprises) sector dominates the economy, the government has always played an extensive role, participating directly in many economic activities and regulating private sector activity. From 1960 until about 1974, strong inward-looking policies were favored and the economy grew at a low rate compared with neighboring countries. The growth performance since 1974 can be divided into four periods. The first period (1974–77) saw a short-lived export boom during which the economy grew at an average annual rate of close to 5 percent, essentially as a result of favorable weather conditions and improved export prices for groundnuts and phosphates. Gross domestic investment was high, representing about 20 percent of nominal GDP. A large share of this was financed by domestic savings, averaging close to 13 percent of GDP a year. However, during this period, expansionary fiscal and monetary policies were pursued, contributing to double digit inflation (Charts 4-2, 4-3). Domestic consumption increased by almost 10 percentage points of GDP to 92 percent by 1977, with a corresponding decline in the savings ratio.

During the second period (1978–84), the Senegalese economy met with serious economic difficulties resulting from successive droughts, a deterioration of the terms of trade, and inappropriate financial and structural policies. The average annual real rate of growth dropped steeply to 2 percent, and the investment-to-GDP ratio fell by over 4 percentage points to around 15 percent. The macroeconomic situation continued to deteriorate, and the fiscal and external current account deficits widened by close to 4 and 9 percentage points of GDP, respectively, over their average levels in the preceding period.[3] Gross domestic savings fell sharply to less than 2 percent of GDP, with government saving virtually disappearing, and the resource gap widened by almost 7 percentage points of GDP over the period.

In an effort to tackle these difficulties and reverse the unfavorable trends, the Government adopted in the first half of the 1980s a number of adjustment programs that have been supported by use of Fund and World Bank resources, as well as by other external assistance. Initially, the results achieved were unsatisfactory, not only because of the adverse impact of the droughts but also owing to weaknesses in policy implementation. The authorities' program that was supported by an extended arrangement in August 1980 went off track soon after its inception and was subsequently replaced by annual programs. Similarly, the program supported by a structural adjustment loan and credit from the World Bank, which was approved in December 1980, was only partly implemented; the second tranche of the loan was canceled in June 1983. Under the Fund-supported program for 1981/82, a significant adjustment was made; but the improvement proved only temporary, and the situation deteriorated again in the following year. Only since mid-1983 has steady progress been made toward economic and financial adjustment, as the overall fiscal deficit was reduced and structural reforms were initiated. However, by the mid-1980s economic growth remained slow, owing largely to the adverse impact of recurrent

[3]Until 1991/92, the fiscal year ended on June 30. Starting in 1993, the fiscal year shifted to calendar year basis. In this study, fiscal data is presented on a calendar year basis.

Table 4-1. Senegal: Summary of Key Economic Indicators, 1974–93

	1974–93	1974–77	1978–84	1985–88	1989–93
		(Average annual percentage change)			
Real GDP growth	2.7	4.9	2.0	4.3	0.6
Inflation (CPI)	7.0	15.2	9.8	3.3	–0.4
Broad money	10.5	26.4	12.2	4.0	0.5
Terms of trade	–0.1	–0.6	0.6	2.7	–3.0
Real effective exchange rate	0.2	4.8	–1.4	2.0	–2.6
		(In percent of GDP, unless otherwise indicated)			
Gross domestic investment	14.9	19.8	15.3	11.8	12.9
Government	5.0	5.6	5.7	4.0	4.4
Nongovernment[1]	9.9	14.2	9.6	7.8	8.5
Gross domestic savings	5.7	12.6	1.4	4.2	7.2
Government	1.7	2.4	0.2	2.7	2.6
Nongovernment	3.9	10.2	1.2	1.5	4.6
Savings-investment	–9.2	–7.2	–13.9	–7.6	–5.8
Government	–3.3	–3.2	–5.5	–1.3	–1.8
Nongovernment	–6.0	–4.0	–8.4	–6.3	–4.0
Gross national savings	1.4	10.4	–3.2	–2.0	3.4
Current account balance (excluding official transfers)	–13.5	–9.3	–18.5	–13.8	–9.6
Budget deficit (excluding grants)	–4.2	–2.7	–6.3	–3.3	–3.2
External debt[2]	51.9	17.8	56.9	71.8	56.4
Debt-service ratio[3]	16.4[4]	6.2[5]	14.0	22.6	18.7

Sources: Data provided by the Senegalese authorities; and IMF staff estimates.

[1]Including public enterprises and stock-building.

[2]Public and publicly guaranteed debt, including Fund credit and Central Bank liabilities.

[3]In percent of exports of goods, services, and private transfers; after debt rescheduling and debt cancellation.

[4]1976–93.

[5]1976–77.

droughts and continuing structural problems in several sectors.

The third period (1985–88) was characterized by strengthened adjustment efforts, formulated and adopted within a medium-term framework, which involved bold measures to stabilize and liberalize the economy.[4] Combined with favorable weather conditions and an improvement in the terms of trade, these actions resulted in a noticeable recovery, with real GDP growing at an annual average rate of over 4 percent. Financial imbalances were reduced as well, as the fiscal deficit (excluding grants) was cut to 3.3 percent of GDP by 1988; and the external current account deficit (excluding official transfers) narrowed to less than 14 percent of GDP. Monetary expansion decelerated to 4 percent a year on average, and annual inflation was brought down to little over 3 percent from about 10 percent in the previous period. However, the ratio of gross domestic investment to GDP continued to decline and averaged less than 12 percent. Domestic savings increased on average by 3 percentage points of GDP, thanks mainly to the improvement in the fiscal position, but at 4 percent of GDP, they remained very low.

During the fourth period (1989–93), the economy again experienced erratic growth, averaging less than 1 percent a year, as the economy suffered from unfavorable weather conditions, adverse terms of trade shocks, and a continuous loss of external competitiveness. Furthermore, adjustment efforts weakened and Senegal's economic and financial position deteriorated. The budget and external current account deficits widened again, and the implementation of key structural reforms stalled. Despite the adoption in mid-1993 of a package of internal adjustment measures, Senegal's competitiveness and growth prospects remained very weak.

During 1981–93 Senegal's average real growth rate was somewhat higher than that achieved in sub-Saharan Africa, or in the CFA franc zone (Table 4-4). This growth rate, however, remained low com-

[4]In 1986, Senegal adopted its first SAF-supported program, which was followed by several SAF and ESAF arrangements.

Table 4-2. Senegal: Key Economic Indicators, 1978–93

	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993 Est.
								(Annual percentage change)								
Real GDP growth	–4.9	9.6	–3.3	–1.2	15.3	2.2	–4.0	3.8	4.6	4.0	5.1	–1.4	4.5	–0.7	2.8	–2.1
Inflation (CPI)	3.4	9.7	8.7	5.9	17.4	11.6	11.8	13.0	6.2	–4.1	–1.8	0.4	0.3	–1.8	–0.1	–0.6
Broad money	21.3	1.4	10.4	21.9	20.9	4.1	5.2	4.5	11.2	–0.2	0.5	10.3	–4.8	5.8	3.6	–12.6
Terms of trade	7.7	–8.0	–7.6	5.2	–4.4	1.0	10.5	19.3	0.3	–2.4	–6.5	–1.1	–4.5	–9.1	2.8	–2.8
Real effective exchange rate	–2.8	1.0	–2.9	–10.4	2.7	0.3	2.1	8.2	9.5	–4.4	–5.3	–4.2	0.4	–6.5	–1.0	–2.4
								(In percent of GDP, unless otherwise indicated)								
Gross domestic investment	17.4	14.4	12.7	16.0	14.9	15.9	15.6	10.5	11.7	12.4	12.7	11.8	13.5	12.3	14.0	13.2
Government	8.2	9.1	5.6	4.4	4.0	4.2	4.3	3.9	4.0	4.1	3.9	4.2	4.1	4.6	5.1	4.1
Nongovernment[1]	9.3	5.3	7.2	11.6	10.9	11.6	11.3	6.6	7.7	8.3	8.8	7.6	9.4	7.7	8.8	9.1
Gross domestic savings	3.7	4.2	–3.2	–4.5	4.4	1.9	3.5	–0.7	6.3	5.1	6.4	6.4	8.7	6.7	7.6	6.2
Government	2.9	2.4	–1.8	–3.3	–1.5	0.3	2.3	2.4	2.7	3.3	2.5	1.2	2.9	4.2	3.0	1.8
Nongovernment	0.8	1.8	–1.4	–1.2	5.9	1.6	1.2	–3.1	3.6	1.8	3.9	5.2	6.3	2.5	4.6	4.4
Saving-investment	–13.7	–10.2	–16.0	–20.5	–10.5	–13.9	–12.1	–11.2	–5.4	–7.3	–6.4	–5.4	–4.9	–5.6	–6.4	–7.0
Government	–5.2	–6.7	–7.4	–7.7	–5.5	–3.9	–2.0	–1.6	–1.3	–0.8	–1.5	–3.1	–1.2	–0.4	–2.1	–2.3
Nongovernment	–8.4	–3.5	–8.5	–12.8	–5.0	–10.0	–10.1	–9.7	–4.1	–6.5	–4.9	–2.4	–3.7	–5.1	–4.3	–4.7
Gross national savings	2.5	2.3	–5.8	–10.4	–4.7	–3.4	–2.7	–7.4	–1.2	–0.1	0.8	1.2	5.1	3.2	4.4	3.0
Current account balance (excluding official transfers)	–15.0	–12.0	–18.5	–26.4	–19.6	–19.3	–18.3	–18.0	–12.9	–12.5	–11.9	–10.6	–8.3	–9.1	–9.6	–10.2
Budget deficit (excluding grants)	–1.1	–3.2	–9.2	–10.3	–7.8	–7.1	–5.2	–4.2	–3.2	–2.6	–3.2	–4.2	–2.0	–1.8	–3.8	–4.0
External debt[2]	25.0	35.0	41.2	58.0	69.4	83.6	86.1	77.9	69.5	67.8	72.1	57.7	52.2	53.5	56.0	62.5
Debt-service ratio[3]	14.5	17.4	19.5	15.1	8.6	9.4	13.8	18.0	22.0	24.4	25.9	20.8	16.8	16.9	19.6	19.9

Sources: Data provided by the Senegalese authorities; and IMF staff estimates.

[1]Including public enterprises and stock-building.

[2]Public and publicly guaranteed debt, including Fund credit and Central Bank liabilities.

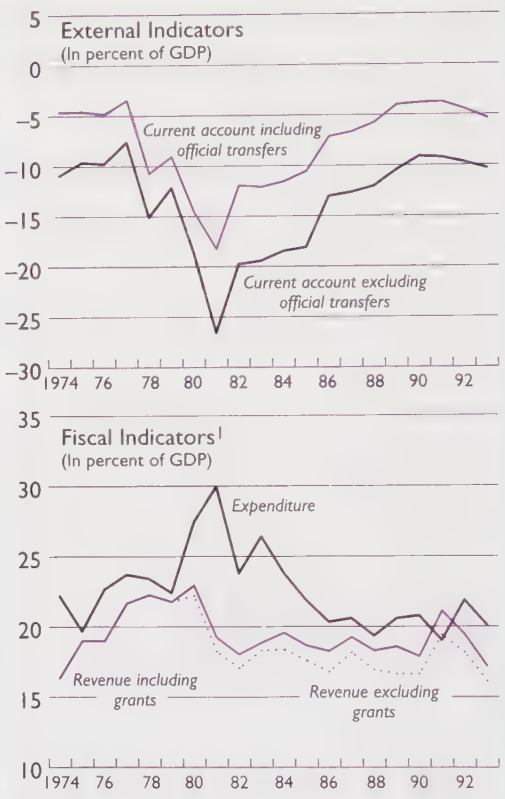
[3]In percent of exports of goods, services, and private transfers; after debt rescheduling and debt cancellation.

Table 4-3. Senegal: Summary of Real GDP Growth by Sector, 1978–93
(Average annual percentage change)

	1978–84	1985–88	1989–93
Primary sector	–0.6	7.6	–1.6
Agriculture	0.7	10.8	–4.1
Livestock	2.7	5.8	3.1
Fishing	0.7	3.6	0.1
Forestry	0.2	–0.5	–2.0
Secondary sector	3.1	5.7	0.9
Mining	0.9	11.4	–8.2
Industry	3.1	6.0	0.3
Oil milling	33.4	18.8	–5.2
Energy	6.2	1.3	4.5
Construction and public works	4.8	4.7	3.6
Tertiary sector	3.3	2.9	1.4
Transportation	6.8	3.8	1.2
Commerce	–0.5	4.0	1.0
Public administration	4.1	2.5	1.8
Other services	–0.7	1.7	1.9
GDP	2.0	4.3	0.6

Sources: Data provided by the Senegalese authorities; and IMF staff estimates.

Chart 4-2. Senegal: External and Fiscal Indicators, 1974–93



Sources: Data provided by the Senegalese authorities; and IMF staff estimates.
[1]Calendar years.

pared with the overall performance of developing countries as a group. Moreover, both domestic savings, averaging less than 5 percent of GDP during these years, as well as the investment-to-GDP ratio of some 13 percent, were significantly lower than the averages for sub-Saharan Africa, and much below the levels attained by the group of developing countries as a whole. According to World Bank estimates, for sub-Saharan Africa a fixed investment ratio of 13 percent is needed to prevent the capital stock from declining; thus, Senegal's capital stock would appear to have increased very little, if at all, during the last 15 years.[5]

Initial Conditions and Obstacles to Growth, 1978–84

Senegal faced a serious economic crisis in the late 1970s and early 1980s. The problems were attributable in part to exogenous factors, particularly recurring droughts and deteriorating terms of trade. But they were also due in large measure to inadequate macroeconomic policies, as well as inappropriate production, trade, and pricing policies.

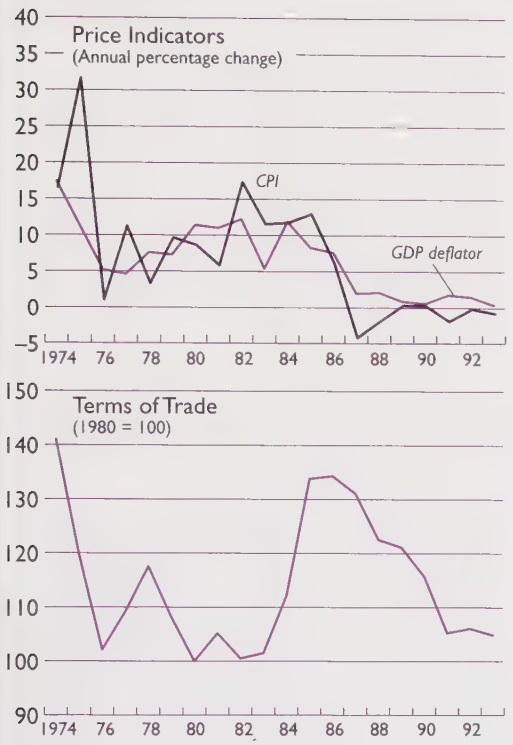
[5]World Bank (1993c).

Initial Macroeconomic Conditions

After several years of increasing difficulties, in the late 1970s and early 1980s Senegal's overall economic and financial situation deteriorated markedly, with per capita real GDP declining by close to 1 percent a year, domestic financial imbalances assuming serious proportions, and the external payments position coming under severe pressure.

In the six-year period 1978–83, the Government pursued expansionary financial policies that boosted consumption rather than productive investment, while placing increasing pressure on available resources. Domestic demand invariably exceeded supply, resulting in large resource gaps, which averaged 14 percent of GDP annually. Whereas gross domestic savings were negligible and at times negative, gross investment declined to some 15 percent of

Chart 4-3. Senegal: Price Indicators and Terms of Trade, 1974–93



Sources: Data provided by the Senegalese authorities; and IMF staff estimates.

GDP. Moreover, the quality of investment suffered because of the relatively low rate of return of projects, resulting from inadequate project evaluation, poor management, and a lack of maintenance of the existing stock of assets. The decline in the level of investment and its general inefficiency contributed to the weak growth performance.

The widening fiscal imbalances during the period were traceable to a failure to contain current government expenditure at a time when revenue performance was irregular, owing largely to the weakening of tax collection and the impact of falling per capita income. To finance the high levels of domestic demand, the authorities relied heavily on external borrowing. As a result, the debt-service burden increased substantially, and the Government had to seek a number of debt reschedulings. As external and domestic financing covered only part of the deficit, the remainder was financed in several years by the accumulation of domestic and external payments arrears, which in turn adversely affected private sector activity.

Structural Obstacles to Growth

In addition to the deteriorating macroeconomic situation, growth was adversely affected by the generally inappropriate production, trade, and pricing policies pursued in the 1970s. These policies led to an overextension of the public sector, the emergence of economic rents, and a weakening of incentives in agriculture and other key sectors of the economy.[6]

The parapublic sector, consisting of wholly or majority government-owned enterprises, was large and inefficient. Public enterprises were engaged in a wide range of activities. In the early 1980s, this sector registered substantial deficits because of undercapitalization, managerial problems, and inappropriate investment, recruitment, and pricing policies. Public enterprises received direct and indirect subsidies, which aggravated the fiscal imbalances. They also absorbed a large part of bank credit to the economy, thereby crowding out the private sector.

The labor market in Senegal was heavily regulated and operated in a way that discouraged the hiring of new job seekers or temporary workers. The Department of Labor controlled hiring and layoff practices, and the labor code guaranteed lifetime employment to almost all workers in the formal sector. Layoffs entailed complicated and lengthy administrative procedures. The Government set the minimum wage (SMIG) and civil service salaries, with wages in the rest of the economy determined by contracts or through collective bargaining. However, in practice wage rates in the public sector, which remained high, served as a guide for wage setting in the private sector. With the rigidity of the labor market and relatively high wages, production costs rose, productivity decreased, and employment creation was sluggish. A study estimated that total factor productivity in the industrial sector declined by 5–7 percent a year during 1980–85.[7]

During that period, Senegal operated an extensive and complex system of price controls. The Government fixed the administered producer prices for a number of agricultural products, as well as the retail prices of essential consumer goods and services. Two other systems of price control were also used: a category of goods was subject to a "strict certification" procedure whereby the price could rise by up to 8 percent a year if a justification was provided to the Ministry of Commerce; and a second category of goods was subject to a procedure whereby prices

[6]See World Bank (1993c and 1993d).
[7]World Bank (1993d).

Table 4-4. Senegal: Comparative Economic Indicators, 1981–93

	Real GDP Growth	Gross Domestic Investment	Gross Domestic Savings
	(Average annual percentage change)	*(In percent of GDP)*	
Developing countries[1]	3.9	23.6	23.4
Sub-Saharan Africa	2.1	18.6	14.8
CFA countries	2.0	18.8	10.5
Senegal	2.5	13.4	4.5

Source: IMF staff estimates.
[1]1981–92.

could be raised by up to 8 percent a year by simple notification. The prices of the remaining goods either were subject to regulation of profit margins or were market determined. In addition, for certain basic goods, a system of price equalization (péréquation) operated between regions. This extensive and cumbersome system of price controls resulted in further distortions and was a major impediment to private sector initiative.

The financial sector also faced serious difficulties in the early 1980s. By 1983, most banks experienced important liquidity problems owing to the accumulation of government payments arrears as well as a growing amount of nonperforming loans. Lending practices generally failed to assess risks adequately, legal mechanisms to enforce loan recovery were weak, and financial institutions were compelled to continue making loans to loss-making and inefficiently managed public enterprises. Crop credits were a particularly important source of financial distress. Given their assumed short-term nature, crop credits were not subject to ceilings but, in the event, tended to be nonperforming. The dissolution of ONCAD (the marketing agency for groundnuts) in 1982 resulted in major balance sheet problems for the banks that had to refinance it. The weak supervision of the banking system also contributed to the financial crisis.

Together, these factors contributed to the failure of the Senegalese economy to sustain growth. At the same time, investment declined, its quality suffered, the rate of savings was low and at times negative, and the domestic and external financial imbalances mounted. As the situation continued to deteriorate, by mid-1983 the Senegalese authorities decided to launch a serious adjustment effort and adopted a series of programs supported by the Fund, the World Bank, and other donors.

Growth, Savings, and Investment, 1985–93

Adjustment Strategy and Outcome

The adjustment strategy followed from the mid-1980s has aimed at alleviating the obstacles to sustained economic growth and achieving domestic and external financial viability. The strategy comprised three major elements: (1) a reduction of the fiscal deficit in order to raise domestic savings and restrain demand; (2) a tight monetary policy, through credit restraint and maintenance of interest rates close to or above levels in France; and (3) structural policies aimed at liberalizing prices, trade, and domestic markets, reforming the public enterprise sector, and reducing production costs. In view of the fixed parity of the CFA franc vis-à-vis the French franc, structural reforms were particularly important in the adjustment strategy as a means of improving efficiency and external competitiveness given the fall in the equilibrium exchange rate caused by terms of trade movements.

During 1985–93, the Government made efforts to liberalize the economy, reduce distortions in agricultural and industrial production, reform the public enterprise sector, and strengthen public investment programing. The authorities also reduced the overall fiscal deficit, ensured credit restraint, and put in place a more prudent external debt management.

Senegal's growth performance during 1985–93 was associated with very low rates of growth of import and export volumes (Table 4-5, Chart 4-4). In 1989–93, the external current account deficit (before grants) was halved, to 9.6 percent of GDP on average, as compared to the level in 1978–84. This improvement was based almost entirely on a reduction in the trade deficit, reflecting a modest rise in export volume and a stagnant import volume.

Table 4-5. Senegal: External Adjustment and Growth, 1974–93

	1974–77	1978–84	1985–88	1989–93
		(In percent of GDP)		
Trade balance	–8.1	–13.4	–7.2	–5.6
Merchandise exports	29.2	21.4	16.4	14.7
Merchandise imports	37.3	34.8	23.6	20.3
Interest payments	1.0	2.7	3.7	2.8
Current account (excluding official transfers)	–9.3	–18.5	–13.8	–9.6
		(Average annual percentage change)		
Export volume	17.2	0.9	–2.8	3.6
Import volume	1.7	0.3	–0.7	0.5
Terms of trade	–0.6	0.6	2.7	–3.0

Sources: Data provided by the Senegalese authorities; and IMF staff estimates.

In terms of savings-investment balances, the external adjustment achieved during 1985–93 was for the most part a result of an improvement of some 6 percentage points of GDP in the savings performance of both the government and nongovernment sectors. Nonetheless, despite the recovery in 1985–93, the rate of saving by the nongovernment sector was still only half that achieved in the first half of the 1970s. As noted above, the share of fixed investment to GDP changed only modestly during 1985–93:[8] the share of government investment fell on average by 1 percent of GDP between 1978–84 and 1989–93, while that of the nongovernment sector showed little improvement over past levels. The government sector accounted for almost half of the narrowing of the saving-investment balance between 1978–84 and 1989–93.

Overall, therefore, the impact of the stabilization efforts and structural reforms was mixed, as they met with more success in restoring financial stability than in increasing investment, savings, and economic growth. An attempt is made below to shed more light on how different factors may have contributed to this outcome.

Exogenous Shocks

Senegal's relatively undiversified production and export base, and its dependence on imports of energy, make the economy particularly vulnerable to terms of trade shocks and adverse weather conditions. These shocks can have an important impact on developments in output, saving, and investment. In an undiversified economy, such as that of Senegal, one would expect a positive output response to a favorable terms of trade shock that was considered permanent. A favorable (adverse) terms of trade shock would also be expected to lead to an increase (decline) in savings because of consumption smoothing, depending on how temporary the shock was perceived to be and the extent of liquidity constraints. The response of investment to a terms of trade shock is in principle ambiguous and will vary across different sectors.

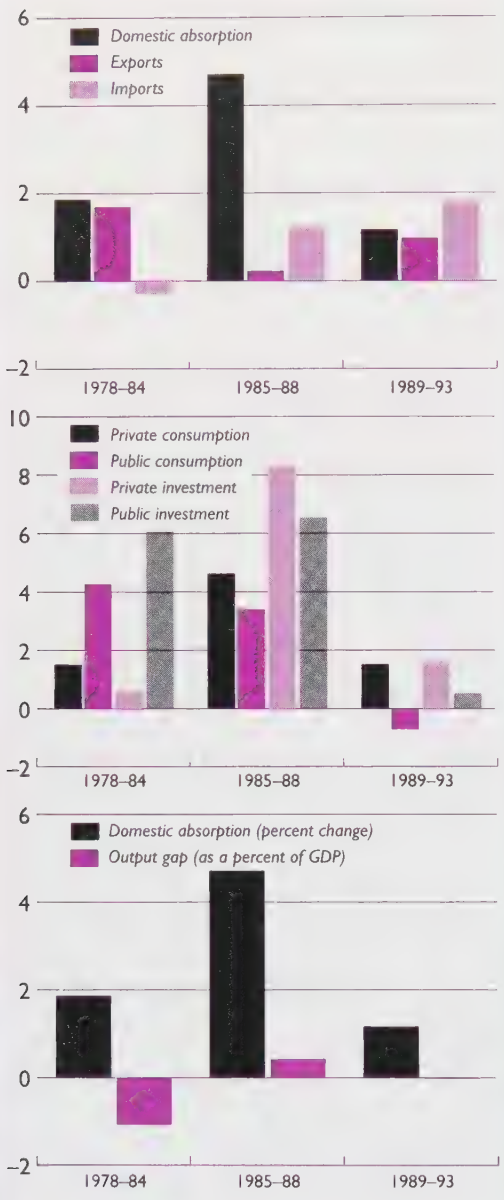
During the period under review, Senegal experienced a succession of sizable terms of trade and weather-related shocks.[9] The strong external adjustment and growth performance during the immediate post-crisis period (1985–88) benefited from a positive terms of trade shock, on average equivalent to 1 percent of GDP a year.[10] The deterioration in the growth rate during 1989–93 was associated with a negative terms of trade shock. Senegal also suffered a succession of droughts, which had an important impact on economic activity. One simple proxy for this type of supply shock is given by the deviations from trend in output of the agricultural sector, expressed in percent of total GDP; this measure, how-

[8]Developments in the share of fixed investment in GDP measured at constant and current prices diverge during the period under review. The investment rate shows, on average, a small but steady increase of 1 percentage point of GDP between 1978–84 and 1989–93, when measured at constant prices. By contrast, the investment rate, measured at current prices declined, on average, between 1978–84 and 1985–88, before recovering in 1989–93.

[9]Bad weather was experienced in 1978, 1980, 1981, 1984, 1991, and 1992.

[10]The shock is calculated as the change in the U.S. dollar export price index multiplied by the export volume, less the change in the U.S. dollar import price index multiplied by the import volume.

Chart 4-4. Senegal: Growth of Expenditures and Output, 1978–93
(Percentage changes at constant prices, unless otherwise indicated)



Sources: Data provided by the Senegalese authorities; and IMF staff estimates.

Table 4-6. Senegal: Estimates of Output Gap, 1978–93
(In percent of trend GDP)

	Total Output Gap	Agricultural Supply Shock	Remaining Output Gap
1978	–4.1	–4.0	–0.1
1979	2.5	3.3	–0.8
1980	–3.5	–1.6	–1.9
1981	–7.1	–2.7	–4.4
1982	4.2	1.8	2.4
1983	3.6	2.6	1.0
1984	–3.2	–2.7	–0.5
1985	–2.2	–1.6	–0.6
1986	–0.4	0.5	–0.9
1987	0.9	0.3	0.6
1988	3.4	2.0	1.4
1989	–0.4	–1.0	0.6
1990	1.8	1.1	0.7
1991	0.3	—	0.3
1992	1.1	0.1	1.0
1993	–2.9	–1.2	–1.7
Average			
1978–84	–1.1	–0.5	–0.6
1985–88	0.4	0.3	0.1
1989–93	—	–0.2	0.2

Source: IMF staff estimates.

ever, excludes sizable secondary effects on output in the agro-processing industry and therefore likely underestimates the contribution of droughts to the level of economic activity. As shown by the positive agricultural supply shock in Table 4-6, this measure suggests that better weather conditions were indeed a factor underlying the stronger growth performance during 1985–88, compared with other periods.

It bears noting that the first phase of adjustment coincided with more favorable exogenous shocks than occurred both in the preceding crisis period (1978–84) and the second subperiod of adjustment (1989–93). These favorable shocks contributed to the stronger growth performance and recovery in savings recorded in 1985–88.

Macroeconomic Policies

A stable macroeconomic environment with little uncertainty and high government credibility will tend to promote private investment and induce an efficient allocation of resources. Macroeconomic stability is typically defined as an environment with a low and predictable rate of inflation, a low and sustainable budget deficit, and an appropriate level of the exchange rate. Other factors, such as high external debt-servicing burden, may have a negative impact on future growth because they would crowd out public investment and weaken private sector confidence.

Output Gap

An important and frequently raised question is whether stabilization policies exert a substantial contractionary influence on aggregate demand and thereby delay a recovery in output and investment. An answer to this question requires, as a first step, calculating a measure of the gap between actual and potential or trend output. However, for an economy such as Senegal's, one cannot attribute deviations in output from a measure of trend output solely or even primarily to fluctuations in demand; as indicated above, supply shocks frequently have also had a sizable impact on output developments. Lacking a structural model of the Senegalese economy that could disentangle demand and supply effects, the approach taken here is to compare a conventional measure of the output gap—the deviation between actual and trend GDP—with a proxy for supply shocks as measured by deviations between actual and trend output in the agricultural sector.[11] The difference between these two measures is an indicator, albeit imperfect, of the policy-induced component of the output gap.

The evidence from Table 4-6 suggests that during the adjustment period the output gap was small, and that after account is taken of supply shocks in the agricultural sector, the remaining component of the gap was even smaller. This assessment should be interpreted with great caution in view of the considerable difficulties involved in measuring the output gap in an economy where growth rates of output are very volatile, which in turn may have been disruptive to longer term growth performance.

Fiscal Policy

Because Senegal is a member of a currency union, the main instrument of independent macroeconomic policy is fiscal policy. The fiscal deficit (on a commitment basis, and excluding grants) was reduced from an annual average of over 6 percent of GDP during 1978–84 to 3.3 percent in 1985–88 and to 3.2 percent per year during 1989–93. The average primary balance (excluding grants) shifted from a deficit of close to 4 percent to a balanced position in 1985–88; some backsliding occurred after 1991 leading to the reappearance of a small primary deficit of less than 1 percent of GDP on average in 1989–93 (Table 4-7, Chart 4-2). The fiscal adjustment was achieved mainly through expenditure-cutting measures. Although some increases in revenue were achieved through an improvement in tax and customs duty collections, a widening of the tax base, and a reduction in exemptions, the ratio of total government revenue to GDP declined from its 1978–84 level by about 3 percentage points, to less than 18 percent. The various tax reforms failed to generate substantial additional receipts for several reasons. The tax base continued to be narrow because of the pervasiveness of exemptions, and taxes were relatively inelastic. The tax system relied heavily on revenues of a cyclical nature, such as the taxation of oil products and import duties. Customs and tax administrations were weak and fiscal fraud persisted. Finally, the growing informal sector was not captured in the tax net. At the same time, high tariffs raised production costs and added to the loss of competitiveness of the economy. Furthermore, the various exemptions may have indirectly promoted capital-intensive technologies, while Senegal needed more labor-intensive projects, and most likely have contributed to inefficiencies.

On the expenditure side, total spending was cut by over 6 percentage points of GDP between 1978–84 and 1989–93. The reduction in total spending reflected mostly a cut in the outlays on materials, supply and maintenance, as well as subsidies and transfers, which were cut by about 3.5 percent of GDP. The wage bill was also brought down by almost 2 percent of GDP over the same period, but its share in total current spending, which amounted to almost half, remained high. The decrease in spending on maintenance contributed to a deterioration of the existing infrastructure, which in turn was detrimental to growth and investment. Spending on education and health services as a percent of GDP (less than 5 percent in 1991) was also hard hit, with unfavorable implications on human resource development. While total outlays declined as a percentage of GDP, capital spending remained around 4 percent of GDP, but the domestic counterpart funds were affected by the budget constraint, contributing to delays in project implementation.

Since mid-1987, a system of three-year rolling investment programs has been in place, in consultation with the World Bank, designed to provide an adequate environment for sustained long-term growth. The programs also aimed at improving the public investment planning system by reforming the process of project evaluation, selection, implementation, and monitoring. Priority has been given to projects with high rates of return, the rehabilitation

[11]Trend GDP is calculated by applying a univariate Hodrick-Prescott filter to actual GDP for 1970–93. The filter calculates trend GDP by minimizing the variation of actual GDP around the trend, subject to a (specified) constraint on the variations of the growth rate of the trend. Agricultural production in Senegal exhibits a relatively flat trend, and therefore the mean volume of output for 1977–93 is used instead of a trend. Supply shocks in the agricultural sector also generate second-round contractionary impulses through their impact on agroprocessing industries. Because these are not captured by output deviations in the agricultural sector, this measure will understate the impact of supply shocks.

Table 4-7. Senegal: Fiscal Adjustment, 1974–93
(In percent of GDP)

	1974–77	1978–84	1985–88	1989–93
Revenue	20.7	20.6	17.8	17.8
Expenditure[1]	23.4	26.9	21.1	20.7
Current[1]	19.0	22.8	18.3	17.1
Noninterest	18.3	20.4	15.0	14.7
Interest	0.7	2.4	3.3	2.4
Capital	4.4	4.1	2.8	3.8
Fiscal balance				
Excluding grants	–2.7	–6.3	–3.3	–3.2
Including grants	–2.7	–5.5	–1.9	–1.5
Primary balance				
Excluding grants	–2.0	–3.9	—	–0.8
Including grants	–2.0	–3.1	1.4	0.9
Fiscal impulse[2]	0.3	0.2	–0.6	—
Memorandum item:				
Change in arrears (minus = reduction)	0.1	–0.2	–0.8	1.2

Sources: Data provided by the Senegalese authorities; and IMF staff estimates.

[1]Includes net operations of the Treasury's special and correspondent accounts.

[2]Calculated as in Heller and others (1986). The measure of potential output is the same as that used in the main text (Table 4-6).

and maintenance of existing infrastructure and the improvement in the screening of social infrastructure projects. In addition, the investment budget has been incorporated into the Government's overall budget, allowing for better control of resources.

In order to examine the impact of fiscal policy on aggregate demand, some partial evidence is provided by calculating a fiscal impulse measure.[12] The calculations suggest that the fiscal impulse was on average contractionary during the first phase of adjustment (1985–88)—the period in which the output gap was slightly positive. During 1989–93, when output growth weakened, the fiscal impulse was neutral. Overall, this evidence suggests that fiscal policy was moderately countercyclical, did not unduly dampen output growth, and is therefore unlikely to have been a major cause of the slow recovery in nongovernment investment.

Moreover, government financing needs do not appear to have been a source of direct crowding out in financial markets during the adjustment period, at least not until there was backtracking in fiscal adjustment during 1992–93. The share of nongovernment savings absorbed by the Government's domestic financing requirement (including the accumulation or repayment of arrears) fell sharply after the mid-1980s. This primarily reflected a decline in recourse to bank financing, although the share of the government sector in total outstanding domestic bank credit did not begin to fall from its end-1984 level until the late 1980s. The net accumulation of domestic arrears, a particularly disruptive form of financing, was reversed during 1985–88 when net repayments were made. However, during 1989–93 strains on the fiscal position led to renewed domestic and external arrears accumulation, even as net repayments were being made to the domestic banking system.

Furthermore, there are two indicators that the sustainability of Senegal's fiscal position improved between the mid-1980s and the early 1990s. First, the primary balance (including grants) turned from a deficit equivalent to 3.5 percent of GDP in the early 1980s to a surplus of just over 1 percent of GDP in

[12]The measure is similar to that for industrial countries in the World Economic Outlook exercise; see Heller and others (1986) for a description of the methodology. The measure of potential output is identical to that used in estimating the output gap. For an economy such as Senegal's, the fiscal impulse measure must be interpreted cautiously, since "cyclical" influences on revenues and expenditure are likely to differ from those in industrial countries. In fact, revenue developments are likely to strongly reflect supply-side developments stemming from droughts and terms of trade shocks. The fiscal impulse measure will therefore reflect, among other things, the extent to which supply-induced revenue windfalls (shortfalls) are sterilized (accommodated) or spent (offset).

Table 4-8. Senegal: Monetary and Credit Conditions, 1974–93

	1974–77	1978–84	1985–88	1989–93
	(Annual averages; in percent)			
Nominal deposit rate	5.9	6.7	6.0	7.3
Nominal lending rate	11.4	14.0	13.8	16.2
Interest rate spread	5.5	7.3	7.8	8.9
Real deposit rate[1]	–3.2	–2.6	1.0	6.2
Real lending rate[1]	1.9	4.1	8.4	15.0
	(Annual average percentage change)			
Broad money	26.4	12.2	4.0	0.5
Domestic credit	25.7	17.9	4.4	–3.6
Of which:				
Nongovernment sector[2]	(23.6)	(15.8)	(5.0)	(1.5)
Real credit to the nongovernment sector[1]	12.6	5.7	0.1	0.4
Memorandum items:				
Adjusted credit to nongovernment sector[3]				
Nominal	28.3[4]	18.8	1.2	0.7
Real[1]	19.9[4]	8.5	–3.6	–0.3
Real credit to the private sector[1,5]	...	5.8	0.6	2.7

Sources: Data provided by the Senegalese authorities; and IMF staff estimates.

[1]Deflated by the annual rate of change of the GDP deflator.

[2]Includes public enterprises.

[3]Excludes crop financing and debts of ONCAD, frozen in 1980 and subsequently assumed by the Government.

[4]1975–77.

[5]Based on data from the Centrale des Risques, which does not necessarily correspond with monetary survey data.

the early 1990s. Second, the ratio of external debt to GDP fell after the mid-1980s, partly as the result of debt forgiveness, which, together with an increasing share of external debt contracted on concessional terms, reduced the debt-service burden.

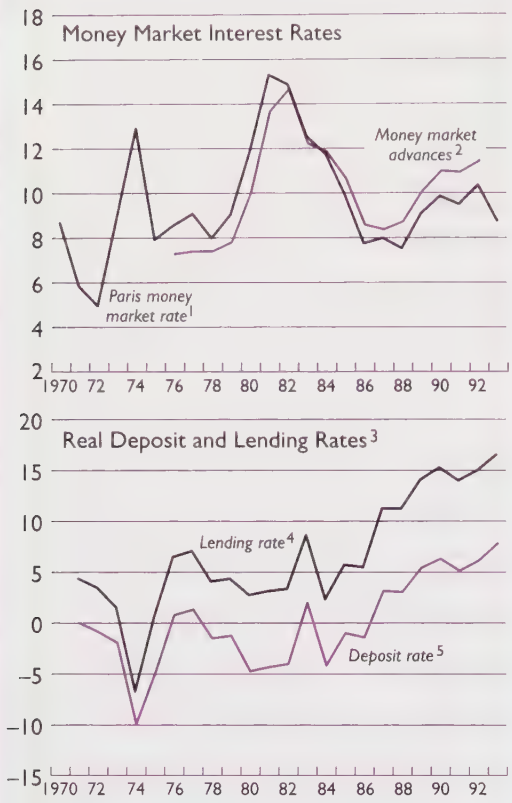
Monetary and Credit Policies

Within the institutional framework of the CFA franc zone there is only limited room for an independent monetary policy in Senegal and other West African Economic and Monetary Union (WAEMU) countries, and therefore little scope for inflation and interest rates to be substantially different from those in France for any length of time (once allowance is made for country risk factors). As a result, credit policy is primarily assigned to maintaining an appropriate level of foreign reserves. In addition, there is a statutory ceiling on government borrowing equivalent to 20 percent of recorded revenues in the previous year; when this ceiling becomes a binding constraint, fiscal policy becomes delinked from credit and monetary policy.

Beginning in the 1980s, real interest rates increased considerably and credit policy was substantially tightened (Table 4-8, Chart 4-5); broad money growth decelerated in line with lower inflation and weakening economic growth. The restrictive stance of credit policy severely constrained the expansion of domestic credit to the nongovernment sector; in real terms the rate of credit expansion since the mid-1980s has been close to zero on average. At the same time, the Government's net recourse to bank financing was diminishing and after 1986 gave way to net repayments. Accordingly, any crowding out of the nongovernment sector from the domestic credit market has been declining since the mid-1980s.

Domestic interest rates moved in line with rates in France, and by the late 1980s deposit and lending rates had become high in real terms, with real lending rates rising above 10 percent. This large increase in real interest rates is likely to have dampened investment and contributed to the recovery in nongovernment savings. Although there is admittedly little scope for an independent monetary policy in Senegal, real interest rates may have remained too high during the

Chart 4-5. Senegal: Interest Rate Developments, 1970–93
(Annual averages; in percent)



Source: International Financial Statistics database.
[1]Monthly average rates for day-to-day loans against private bills.
[2]Until October 14, 1993, rates for overnight advances; thereafter weekly auction advances.
[3]Adjusted on the basis of the GDP deflator.
[4]Average lending rate charge.
[5]Rate offered by banks on time deposits for under six months.

adjustment period. A comparison of domestic interest rates with those in France suggests that risk and liquidity premia increased in the late 1980s and early 1990s. The persistent high level of domestic interest rates thus may be explained to some extent by domestic factors. In spite of the high interest rate and tight credit policy, the contribution of Senegal to the net foreign assets position of the Central Bank of West African States (BCEAO) deteriorated. Moreover, the deterioration of economic performance and fiscal position in Senegal in the early 1990s affected the credibility of the adjustment strategy, resulting in expectations of a devaluation of the CFA franc and large capital outflows; efforts to stem these outflows contributed to upward pressure on domestic interest rates.

External Competitiveness

It is difficult to make a precise assessment of competitiveness in Senegal because of the paucity of comprehensive data; in particular conventional measures of the real effective exchange rate (REER) tend to be flawed.[13] Nonetheless, a number of indicators point to the fact that, after some improvement in the first half of the 1980s, the competitiveness of the Senegalese economy deteriorated sharply during the period 1985–93, and therefore could not stimulate exports and growth.

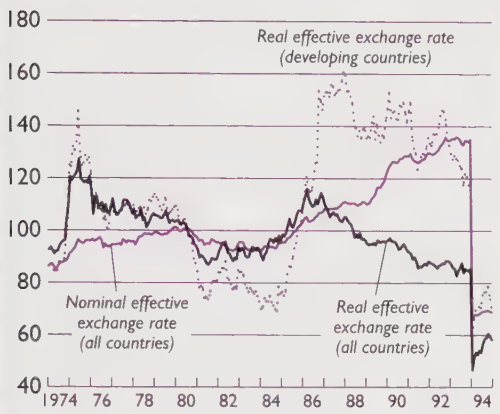
First, Senegal's trade-weighted nominal effective exchange rate (NEER), which had remained virtually stable between 1980 and 1985, appreciated by 47 percent during 1986–93 (Chart 4-6). Over these years, the appreciation of the CFA franc was 58 percent vis-à-vis the U.S. dollar and even sharper vis-à-vis developing countries in the trade-weighted basket for Senegal. As Senegal's domestic inflation, measured by the CPI index, was much lower than that of its trading partners, the overall REER declined by 13 percent during 1986–93, but it still rose by 37 percent vis-à-vis developing countries in the basket. Moreover, the evolution of the relative consumer price differential did not reflect changes in relative wage or domestic cost indices. If the average wage index for civil servants is used as a proxy for domestic costs in Senegal, instead of the CPI index, Senegal's exchange rate shows an appreciation of some 10 percent in real effective terms during 1986–93.

Second, wage levels in Senegal have been high in that period compared with other developing countries. It is estimated that in the second half of the 1980s, the average civil servant salary in Senegal was about two thirds higher than that in Malaysia, Morocco, or Tunisia, while studies of labor costs in manufacturing show that average labor costs in Senegal were also 60–70 percent higher than those in the above three countries and even higher than such costs in other neighboring countries.

Third, in view of the high level of production costs, the industrial sector had been granted until 1990 a 25 percent export subsidy on domestic value added. This subsidy was suspended for budgetary reasons. Foreign exchange earnings from fishing,

[13]The Information Notice System CPI-based REER index for Senegal is calculated with reference to bilateral trading partners and does not take into account other countries competing in Senegal's export markets. Also, the CPI index for Senegal is outdated; its weights are based on a 1960–61 household survey, and its coverage is limited to Dakar. Moreover, the CPI index has not reflected movements in domestic wage costs.

Chart 4-6. Senegal: Nominal and Real Effective Exchange Rates, 1974–94
(Period average, 1980 = 100)



Source: IMF Information Notice System.

which accounts for the largest share of Senegal's commodity exports, as well as from tourism, slowed down from the late 1980s. The groundnut sector, the second-largest source of export receipts, generated persistent losses partly as a result of declining export prices. Moreover, with high unit labor costs, and a substantially overvalued CFA franc, Senegal relied heavily on high customs duties and domestic tax rates, resulting in distortions and fiscal fraud.

Finally, Senegal's competitiveness was also affected by the protracted decline in its terms of trade, amounting to 22 percent over the period 1985–93. Although it is difficult to assess the equilibrium level of the real exchange rate, a decline in the terms of trade of this magnitude clearly would imply, ceteris paribus, a need for a reduction in the actual level of the REER.

Senegal's weak and deteriorating competitive position undoubtedly contributed to the poor performance of exports and dampened investment and growth during the 1980s and early 1990s. While the appreciation of the nominal effective exchange rate and the protracted decline in the terms of trade have been important causes of Senegal's lack of competitiveness, it is also clear that structural policies made little or no progress in improving efficiency and lowering domestic production costs—this issue is considered below.

External Financing

Under a fixed exchange rate, reliance must be placed in the short run on domestic demand restraint to effect external adjustment until improvements in competitiveness are achieved through cost reduction and structural reforms that yield efficiency gains. In these circumstances, a lack of external financing, which might otherwise ease the burden of demand restraint, could delay a recovery in investment and output. An assessment of the adequacy of external financing is a complex task. The available partial evidence does not, however, suggest that inadequate financing was a major obstacle to a recovery in output and investment.

In the first instance, as discussed earlier, there is no strong evidence of large output gaps in Senegal during 1985–93. Nonetheless, it is also true that import volumes were relatively stagnant after 1983. However, lack of reliable data on the composition of imports (in real terms) makes it difficult to ascertain whether a compression of production inputs and capital goods occurred. It is not clear, moreover, that a higher level of external financing would have encouraged a higher rate of sustainable growth rather than fueling an increase in consumer goods imports. Indeed, the World Bank (1993c and 1993d) has leaned toward this latter assessment for two reasons, pointing out, first, that in the absence of major structural reforms and sustained improvements in competitiveness, the output response to higher external financing would have likely been small. Second, the bulk of foreign financing was channeled through the budget and tended to support higher public consumption, particularly the wage bill, and thus reduced the incentive to implement hard reforms.

Structural Policies

During 1985–93, Senegal initiated and made progress in the implementation of a number of structural reforms to overcome the structural obstacles to growth that were prevailing in the economy. The main goals of the authorities have been to (1) enhance supply conditions by improving efficiency and resource allocation (through the elimination of price distortions resulting from price controls, subsidies, distortive taxes, and domestic and external trade regulations and restrictions); (2) increase private sector participation in economic activities by providing it with an appropriate incentive framework and removing impediments to private investment; and (3) reduce the size and improve the efficiency of the public sector's involvement in the economy. Have the structural reforms been successful in achieving these goals?

Agricultural Policy

A new agricultural policy was launched in 1984, aiming at the expansion and diversification of domestic production in order to reduce food imports, especially of rice, and to stimulate exports. Accordingly, production and marketing incentives were to be improved; government interventions, subsidies, and price controls reduced; the land tenure system was to be reformed; and the extension of services and the agricultural credit system strengthened. Progress was made toward meeting these goals, but by the end of the adjustment period under review, there remained a number of important impediments to growth in the sector.

As noted in a World Bank study (1993d), the agricultural reforms met with mixed success. While much of domestic trade was liberalized, prices of many commodities were decontrolled, and import subsidies eliminated, import controls on rice and sugar remained major issues, and producer prices for the principal cash crops—groundnuts and cotton—did not reflect world market prices. With the continued loss of competitiveness, the export-oriented activities registered mounting losses in the early 1990s. Moreover, the goal of food self-sufficiency became increasingly elusive and costly to pursue, as domestic food crops lost competitiveness vis-à-vis imports because of the increasingly overvalued currency. Thus, overall, even though a number of the initial objectives in the sector were achieved, the conditions for sustained and diversified growth were not all satisfied, and agricultural development remained constrained by a lack of competitiveness, unfavorable terms of trade, as well as the remaining controls on production, marketing, and processing of agricultural products.

Industrial Policy

Senegal launched in 1986 a series of reforms under the New Industrial Policy aimed at improving the competitiveness of Senegalese firms, promoting investment and exports, and reducing government intervention and the budgetary cost of administering industrial incentives.[14] The strategy consisted of two sets of complementary measures (1) to improve competitiveness by liberalizing the economy through the reduction and harmonization of customs tariffs, the removal of quantitative restrictions, and the opening up of domestic trade, and (2) to facilitate a supply response and investment opportunities through the restructuring of public enterprises and the improvement of the economic and regulatory environment, primarily by reducing the cost of key inputs, including labor. The implementation of these measures took place essentially between 1986 and 1988. Trade liberalization proceeded mostly on schedule, but reforms aimed at reducing the costs of production and improving the incentive environment have proceeded at a much slower pace and therefore appear to have had only a marginal impact on the performance of the sector. A World Bank study (1993c) concluded that although decontrol of domestic prices and easing of import regulations have improved domestic competition, accompanying measures aimed at improving incentives and the environment for firms were only partially implemented. Moreover, labor costs remained relatively high and little progress was made in dismantling domestic monopolies created under "special agreements" with a number of enterprises. As a result of these constraints, the development of the sector was hindered, private investment remained low, and little foreign investment occurred.

Labor Market

Labor market rigidities were a major impediment to new investment and the creation of employment. Improving the functioning of the labor market was therefore a key element of adjustment in Senegal, and labor reform was launched in 1986. The labor office was abolished in 1987, hiring practices were liberalized, and the constraints on the use of temporary labor relaxed. However, critical clauses of the labor code were not modified, because of strong opposition by the labor unions and fear of social unrest on the eve of the 1988 general election. In 1990, a tripartite committee composed of the Government, employers' associations, and labor unions was formed to examine existing labor legislation and industrial regulations. A revised labor code was drawn up in 1991, but it was not passed by the National Assembly. However, public sector labor rules were changed by abolishing automatic recruitment from training schools, downsizing the civil service through a voluntary departure program, and freezing the SMIG. In all, although reform of the labor market was identified as a major element of adjustment in Senegal, the partial approach to labor market reforms led to incomplete results. However, the decision to consult with the social partners has enhanced public awareness of the need for reforms, and contributed, albeit after a long delay, to the recent (1994) revision of the labor code.

Pricing Policies

The price controls that prevailed in the 1970s and most of the 1980s had introduced distortions throughout the economy, imposing substantial costs

[14]See World Bank (1993c and 1993d).

on consumers in the form of higher prices, and for many important industrial inputs, raising production costs through prices set substantially above world market levels. The agriculture sector in particular had been constrained by price controls, as almost all crops were subject to fixed producer prices. However, by 1988 most major domestic prices had been liberalized. Subsidies to the agricultural sector were virtually eliminated, producer prices for food crops were slightly raised, and those for cash crops were reduced. The prices of all but 24 consumer goods had been decontrolled in 1987 and 1988, and the office in charge of price controls was abolished in 1990. For manufactured goods, prices were decontrolled in conjunction with the elimination of quantitative restrictions on imports. In addition, a price information system was set up for local cereals. These efforts had the effect of improving resource allocation in the economy as prices increasingly became linked to market conditions in Senegal, and, for tradable goods, to world market prices. Moreover, the liberalization of most product markets provided an incentive to private sector activity in key areas of the economy.

Nonetheless, by the early 1990s, the prices of essential consumer items (rice, sugar, and flour) as well as producer prices of important crops (groundnuts, cotton, and rice) remained regulated. In the energy sector, the Government instituted a simpler and more transparent pricing and taxation system for petroleum products in 1991, and for the first time since 1986 energy prices were reduced by up to 25 percent. However, the distribution of petroleum products and retail prices had not yet been liberalized, and energy costs remained relatively high.

Public Enterprise Reform

An important structural issue concerned the downsizing of the public enterprise sector, the reduction in the scope of government participation, and the strengthening of the sector's financial situation. In 1986, there were 61 public enterprises and 25 noncommercial administrative entities in Senegal. Public enterprises had a virtual monopoly in water and power supply; dominated the mining, transport, and communications sectors; and played a lesser role in commerce, tourism, and manufacturing. The World Bank estimated that public enterprises accounted for 29 percent of total investment in the economy, 17 percent of employment, but only 7 percent of GDP. Moreover, the performance of the sector was generally poor and placed a heavy and growing burden on the budget. During the first half of the 1980s, the financial performance of the public enterprise sector was weak, with losses estimated at some CFAF 20 billion in 1985. This weak financial performance was largely the result of undercapitalization, organizational and managerial shortcomings, ill-designed investment programs, inappropriate recruitment and wage policies, as well as rigidity in the regulatory environment. Moreover, excessive administrative controls limited management flexibility in operating the public enterprises.

Although the Government's sectoral approach to parapublic sector reform dates back to the late 1970s, very little tangible progress was accomplished until the second half of the 1980s. In view of the seriousness of the problems facing the sector, in July 1985 the Government adopted, with the assistance of the World Bank, a comprehensive reform program for the parapublic sector, the Nouvelle politique envers le secteur parapublic (NPSPP), as part of the Government's overall economic and financial adjustment effort. The main objectives of the NPSPP were the withdrawal of the state from nonessential enterprises and the rehabilitation of the public enterprises that were to remain under government control. These aims were to be achieved by restructuring the sector through merger, privatization and liquidation, performance contracts, better pricing policies, simplified control mechanisms, and better internal management. By the late 1980s, although the information base on the sector had improved, auditing and management consulting capacity had been strengthened, and the regulatory framework had been relaxed, only gradual progress had been made in the implementation of the other aspects of the reform, particularly in the privatization or liquidation of enterprises.

A more comprehensive reform program of the public enterprise sector was initiated with the World Bank in 1989, and significant progress has been made in its implementation since then. This program aimed at reducing the scope of government participation and strengthening the financial position of public enterprises. This was to be achieved through a three-pronged approach: first, the rehabilitation of enterprises that were to remain in the public domain; second, the privatization or liquidation of 40 enterprises targeted under the SAL IV; and third, a modification of the financial relations between the Government and the public enterprises. This last aspect involved the settlement, in accordance with a timetable established with the World Bank, of the stock of public sector cross-payments arrears, the reduction in the Government's direct and indirect subsidies to public enterprises, and the ending of guarantees and subsidies on foreign borrowing by these enterprises.

With regard to the divestiture program of the 40 targeted enterprises, by end-September 1992, 19 were privatized and 20 liquidated. Only the privatization of one enterprise (the groundnut marketing

company—SONACOS) has not been implemented. An additional 8 enterprises, which had not been included in the original list, were also privatized. The rehabilitation of public enterprises remaining in the public domain was undertaken through performance contracts and other less formal financial restructuring arrangements; all together, 15 performance contracts and financial restructuring programs were concluded between public enterprises and the Government. Another important aspect of the reform was the need to ease the financial burden of the sector on the budget. In this area, total direct subsidies were reduced by about a third. The Government has also worked out a settlement plan for all cross debts.

The reforms contributed to an improvement in the financial situation and management of key public enterprises. The performance contracts signed between the enterprises and the Government were also useful in clarifying responsibilities between the Government and these entities. The reforms allowed for greater managerial autonomy and more freedom to adjust tariff rates, contributing to better financial and economic performance. Nonetheless, in spite of the progress made, by 1993 the public enterprise sector still posed a burden on the economy and discouraged private sector investment in key economic activities.

Financial Sector Reform

In the mid-1980s, the banking sector in Senegal was in a serious crisis, amplified by sizable and growing nonperforming loans and severe liquidity problems, which seriously hampered financial intermediation and the conduct of monetary policy and posed fiscal problems. As discussed earlier, the causes of these difficulties were to be found in the inadequate assessment of lending risks, weak legal mechanisms for loan recovery, the continued financing of loss-making public enterprises, and poor management. To solve the crisis, the Government and the BCEAO—with help from, among others, the World Bank, and the Fund—embarked in 1988 on a comprehensive reform program. This program encompassed a wide range of measures, such as the restructuring and rehabilitation of the banking system, the reduction of the Government's share in the equity of individual banks to a maximum of 25 percent, the consolidation/refinancing and recovery of nonperforming loans, and the reinforcement of banking supervision. The reform effort met with a large measure of success. The number of financial institutions was reduced from 16 to 8 between end-1988 and end-1991. A loan recovery institution was created, which took over the nonperforming assets and corresponding liabilities of all liquidated banks. Although the financial sector was significantly strengthened during the late 1980s, there was still a need for improving the judicial framework for loan recovery, as well as for enhancing the use of indirect instruments of monetary policy, which were introduced in late 1993 by the BCEAO.[15] In this context, flexible and market-determined interest rates were essential to promote savings and ensure better use of resources.

Tariff and Trade Policy Reforms

Before 1986, Senegal's trade regime was characterized by high import tariff rates and numerous nontariff barriers, as well as trade and tax advantages granted to selected domestic enterprises through a system of special agreements (conventions spéciales). Initially, this relatively restrictive trade system was intended to support the development of domestic production and the growth of domestic firms. Accordingly, from the mid-1980s onward, trade policy in Senegal was increasingly used as a tool to correct for the overvalued exchange rate and the declining competitiveness of the economy. In 1987, a system of export subsidies was introduced to promote exports, in particular of high value-added products. However, the system was suspended in 1990 because of insufficient fiscal resources to pay for the subsidies.

Nontariff restrictions took the form of monopoly import rights granted through special agreements and a system of prior authorizations for the import or export of numerous products. The prior authorizations covered a range of products, including key inputs such as packing materials, which, in the case of imports, reduced the local supply of these items. The restrictive trade regime was supplemented by a com-

[15]Monetary policy in the WAEMU has been conducted on the basis of an annual monetary program geared toward protecting the foreign reserves of the BCEAO. The conduct of monetary policy in the Union underwent significant reforms over the period 1989–93. Prior to the initiation of these reforms, the BCEAO relied largely on quantitative credit ceilings; limits on central bank financing; a discount rate; an interbank money market to maximize the retention of funds within the Union and the effective use of the liquid assets of the commercial banks; and a minimum liquidity ratio and two solvency ratios. The principal objective of the reform of monetary policy instruments in October 1993 is to foster a more efficient and flexible monetary policy by gradually replacing administrative controls over money and credit with more indirect and market-oriented instruments, including the liberalization of banking conditions; a major reform of money market operations; the establishment of minimum reserve requirements; the promotion of an active regional interbank market; and the strengthening of prudential regulations.

[16]Products subject to price controls were sugar, rice, cotton, groundnuts, vegetable oil, tomatoes, tomato paste, wheat flour, wheat bread, pharmaceutical drugs, health care services, imported milk, imported instant coffee, soap, bottled gas, charcoal, soft drinks, cement, reinforced steel bars, petroleum products, urban transport, and water, electricity, and telephone utilities.

plex system of domestic price controls. Despite the reduction during the late 1980s in the number of commodities subject to price controls to 24 from about 200,[16] the remaining price controls encompassed most essential consumer goods and services, and together covered about 40 percent of the basket composing the consumer price index. For 18 of these commodities, protection to the selected suppliers was provided through prior authorizations for imports.

The reforms undertaken between 1986 and 1988 in the context of the New Industrial Policy involved the rationalization of the tariff structure, the reduction of the tariff rates, the removal of most quantitative restrictions, and curtailment of the use of reference prices. Some of these measures, however, were reversed in the late 1980s, when tariff rates were raised again. By 1993, the average effective rate of protection remained high with tariff rates on consumer goods set at 75 percent and 45 percent for goods produced locally and other goods, respectively. Overall, although the reforms carried out led to a significant opening up of the Senegalese economy, further trade liberalization was still needed to foster growth and exports.

Assessment

Assessing the structural policies pursued under the SAF/ESAF-programs during 1985–91 leads to a somewhat mixed picture. The implementation record was broadly satisfactory, notwithstanding the fact that several key measures were taken late in the program period. In particular, there were delays in the reform of the groundnut sector, the ratification of the new labor code, and the improvement of the management and monitoring of the public investment programs. On the other hand, although the direct effects of structural policies on competitiveness are hard to measure, the results in terms of the sought-for increase in investment and export growth were disappointing. By 1993, there were still important structural rigidities prevailing in the economy, relating mainly to the market structure and existence of monopolies for companies that benefit from conventions spéciales. Private sector companies had monopolies on sugar, cement, and petroleum importing and refining, while state enterprises retained a monopoly on, among other things, rice imports, groundnuts and groundnut oil sector, and port administration. Price controls still were in effect for 24 products and the privatization program was not completed. Finally, the regulatory and legal environment still needed to be reformed to provide a better climate for private sector activity and incentives for higher investment and exports.

Conclusions

Under the adjustment programs adopted during 1983–91, Senegal succeeded in reducing macroeconomic imbalances and inflation significantly and made progress in implementing structural reforms. Nevertheless, growth remained subdued and uneven, private investment failed to increase, and an adequate level of domestic savings was not mobilized. Structural rigidities persisted and the competitiveness of the economy steadily eroded. The country was not able to achieve the diversification that would insulate the economy from adverse terms of trade and other shocks. Even though the Senegalese economy achieved a good record of growth and stabilization when strong adjustment efforts were undertaken during 1985–88, by 1993 the financial situation had deteriorated once again and there was a reversal of some of the earlier gains. These mixed results, combined with Senegal's inability to sustain reform and consolidate the gains of adjustment, would point to the following conclusions and lessons:

- Reducing domestic and external imbalances is necessary but not sufficient to achieve high sustainable growth. After taking into account the effects of exogenous factors, it does not appear that macroeconomic stabilization policies substantially delayed a recovery in investment and output. However, to achieve adequate levels of private investment, macroeconomic stability has to be supplemented with a high degree of private sector confidence in the economy, and an adequate regulatory and legal framework, including labor market regulations.
- Internal adjustment alone was not sufficient to achieve high sustainable growth, and the competitiveness issue should have been addressed at the outset of the adjustment process, through the timely and forceful implementation of structural reforms aimed at reducing domestic costs and improving efficiency.
- More comprehensive and upfront structural reforms conducive to an enabling environment for private sector development and export promotion would have been more successful. Key distortions and rigidities should have been addressed earlier in the adjustment process.
- Interruptions in reforms can easily erode the gains achieved during the adjustment process and adversely affect the credibility of the reforms undertaken and thus lead to adjustment fatigue.
- Achievement of high and sustained real economic growth as well as increases in investment and savings continued to elude Senegal, pointing to the urgent need for a more comprehensive and strengthened adjustment strategy. There-

fore, in early 1994, Senegal decided to adopt a new adjustment strategy that encompassed a 50 percent devaluation of the CFA franc, in concert with the other members of the CFA franc zone. The devaluation on January 12, 1994, accompanied by adequate macroeconomic and structural policies, could lead to high and sustained real growth in the economy, provided that the shortcomings of past adjustment efforts are effectively tackled. The results so far are encouraging.

V Uganda, 1987–94

Robert Sharer and Calvin McDonald

This case study presents a long-term perspective on investment and output performance in Uganda. Against the background of long-term trends in saving, investment, and output, it describes the initial conditions that led to the adoption of adjustment policies. The macroeconomic policy mix, together with important structural policies, is analyzed and the outcomes are assessed for the period 1987–95, during which Uganda pursued an ongoing adjustment program supported by successive arrangements with the Fund under the structural adjustment facility (SAF) and the enhanced structural adjustment facility (ESAF).

Since the end of the civil war in 1986, Uganda has made significant and impressive progress in improving its growth performance under the Government's Economic Recovery Program (ERP). This progress has been achieved in the context of a conducive political environment, and through the pursuit of sustained macroeconomic stability and important structural reforms.[1] Despite the successes achieved so far and the relatively high levels of growth, averaging 6.4 percent a year during 1987–95, still higher levels of growth may be required in order to meet the needs of Ugandans through increased employment generation, poverty reduction, and adequate provision of social services. For higher growth, Uganda needs to raise both its domestic saving and its investment efforts, combined with ongoing structural reform programs. The study addresses Uganda's growth potential and aims to draw out policy implications for faster growth by analyzing the obstacles to more rapid capital accumulation, as well as the response to structural adjustment.

A brief description follows of Uganda's long-term growth record and highlights trends in output, savings and investment. Then the conditions that led to the need for adjustment policies, the macroeconomic policy mix, and key outcomes are presented. The paper next focuses on the impact of fiscal, monetary, and debt policies on growth. Finally, it considers structural policies and presents concluding remarks.

A study of this nature is naturally constrained by a number of factors. First, the analysis is largely qualitative and tentative, given inadequate data. The data constraints for Uganda are extreme, especially for the 1970s as a result of the civil unrest. Consequently, important quantitative relationships between investment, saving, and their determinants are difficult to establish. Second, this task is made more difficult because of the prolonged periods of extreme political and social instability that have characterized Uganda's recent history, all of which have influenced investment and saving responses to economic stimuli. Third, although it is apparent that structural reforms are important to investment and saving behavior, it is difficult to quantify the magnitude of their importance.

Growth Record and Cross-Country Comparisons

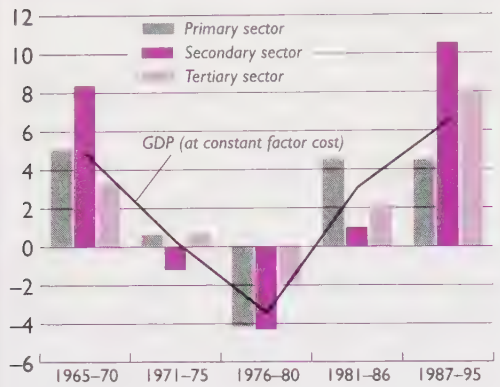
During the period 1965 through 1995, Uganda experienced annual average rates of real GDP growth of 2.8 percent.[2] The path of growth, however, varied markedly over the period under consideration, reflecting the military, political, economic, and social events that characterized the country in the past 30 years.

Following independence, Uganda initially experienced a period of considerable economic progress, which was sharply halted in the 1970s when a military regime assumed power under General Idi Amin and the country moved away from the outward-oriented policies pursued in earlier years. There was a relatively brief attempt to stabilize and revitalize the economy during the regime of Milton Obote in the early 1980s, with financial support from the Fund, the World Bank, and debt rescheduling from Paris Club creditors. This attempt was halted by the eruption of a civil war in the early 1980s, which led to the collapse of the economic stabilization efforts. The ensuing pe-

[1] A more detailed account of the adjustment efforts during 1987–94 is provided in Sharer, De Zoysa, and McDonald (1995).

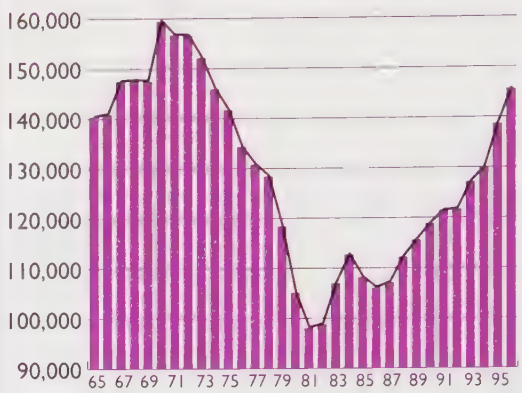
[2] All data provided in the text, charts, and tables refer to fiscal years (July–June).

Chart 5-1. Uganda: Real GDP and Growth, 1965–95
(In percent)



Sources: Data provided by the Ugandan authorities; and IMF staff estimates.

Chart 5-2. Uganda: Real Per Capita GDP, 1965–96[1]
(In Uganda shillings)



Sources: Data provided by the Ugandan authorities; and IMF staff estimates.
[1]Fiscal years up to 1995/96.

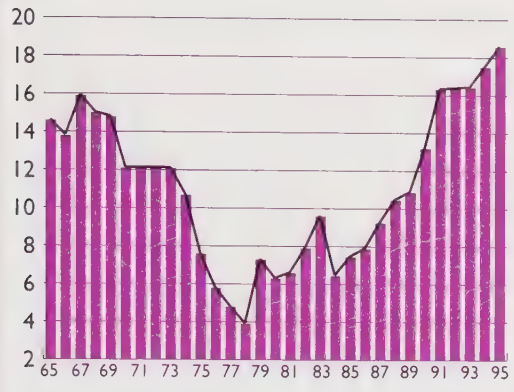
riod was one of economic devastation until the National Resistance Movement (NRM) Government came to power in early 1986. In 1987/88, the NRM launched a comprehensive ERP with the support of the IMF, the World Bank, and bilateral donors.

Uganda's long-term performance over the last three decades can be usefully divided into five main periods. During 1965–70, before the military and social crisis that enveloped the country in later years, Uganda experienced average annual economic growth of 4.8 percent, with an average real per capita GDP increase of 2.5 percent (Charts 5-1, 5-2). Ratios of gross domestic investment and gross domestic savings to GDP averaged 14.4 percent and 16.0 percent a year, respectively (Charts 5-3, 5-4). For most of this period, the country's external accounts were in balance as well. The period 1971–75 showed the beginning of economic stagnation following the coming to power of the Amin regime. Local industries were granted significant protection, and the size and involvement of the public sector in economic activity expanded considerably. Efficiency and financial discipline suffered, and substantial damage was done to the competitiveness of the economy, particularly to the export sector. Real economic growth decreased sharply and averaged 0.2 percent a year, and gross domestic investment and gross domestic savings to GDP declined to an average of 10.9 percent and 11.1 percent a year, respectively. The period 1976–80 was a phase of continuous contraction in economic activity, and by 1980 Uganda had become dependent on one crop (coffee) for 98 percent of its exports, and, largely because of the sharp decline in incentives on account of the overvalued exchange rate, the volume of coffee exports was barely half the volume it had been in the early 1970s. The volume of other traditional exports—particularly cotton, tea, and tobacco—became negligible, and copper exports ceased. Over these years, economic activity collapsed and, in real terms, GDP declined by an average of 3.5 percent a year. Savings and investments declined to averages below 6 percent of GDP, and real per capita GDP declined by an average of almost 6 percent annually.

During 1981–86, real economic growth recorded an annual average growth rate of 3.0 percent, but although domestic investment picked up, savings continued to decline. The cumulative effects of distortionary policies had reduced market transactions and led to more subsistence activities. The share of agriculture in GDP exceeded 56 percent (Charts 5-5), with nonmonetary GDP representing 36 percent of total GDP and nontraded agriculture representing 55 percent of total agricultural production.

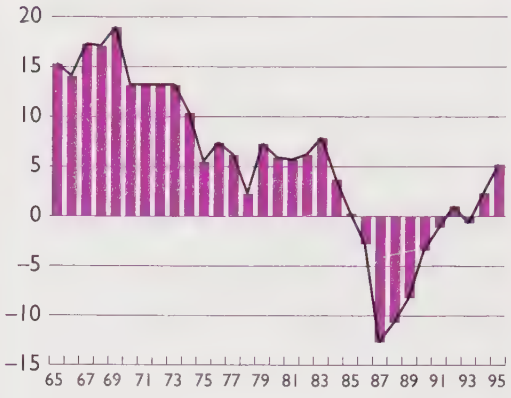
The period 1987–95 has been one of sustained adjustment, characterized by renewed economic growth and major progress in structural adjustment. Substantial structural reforms have taken place in the economy in price liberalization, exchange and payments liberalization, public enterprise reform, financial sector reform, civil service reform, and army demobilization. The recovery over this period has been

Chart 5-3. Uganda: Gross Domestic Investment, 1965–95
(In percent of GDP at current factor cost)



Sources: Data provided by the Ugandan authorities; and IMF staff estimates.

Chart 5-4. Uganda: Gross Domestic Saving, 1965–95
(In percent of GDP at current factor cost)



Sources: Data provided by the Ugandan authorities; and IMF staff estimates.

marked by an annual average real economic growth of 6.4 percent, an increased contribution of industry and services to output performance and higher monetization levels in the economy. The ratio of gross domestic investment to GDP also increased markedly, to an average of 14.3 percent, the highest level since the mid-1960s. The high levels of consumption, on the other hand, resulted in a decline in the ratio of gross domestic savings to GDP, averaging –3.2 percent a year. In 1994, the gross domestic savings-to-GDP ratio registered a positive 2.4 percent as a result of an improved trade balance and a shift to positive real interest rates on financial savings instruments brought about by the combination of interest rate liberalization and declining inflation.

Between 1987 and 1995, the gross national savings-to-GDP ratio improved dramatically (Chart 5-6). This mostly reflected higher private and official transfers brought on by a greater level of confidence inspired by political stability, and economic liberalization, particularly in exchange and payments where the exchange market was unified, restrictions were eliminated, and the trade system was made freer.

Attempts at comparing Uganda's growth performance to sub-Saharan African (SSA) countries are severely constrained by data inadequacy and must be restricted to basic economic indicators. For the period 1976–94, Uganda's average real GDP growth of 2.4 percent was in line with the SSA average (Chart 5-7), but the ratios of gross domestic investment and gross domestic savings to GDP—9.9 percent and 0.8 percent of GDP, respectively—were far below the SSA averages of 18.2 percent and 11.6 percent a year. By contrast, for 1987–95, the period of the adjustment efforts, Uganda's real GDP growth averaged 6.4 percent compared with the SSA average of 1.6 percent. The gross domestic investment-to-GDP ratio improved substantially (13.8 percent), thus reducing the gap with the average of SSA countries (17.9 percent), but the gross domestic savings-to-GDP ratio averaged –4.2 percent, well below the SSA average of 11.0 percent a year.

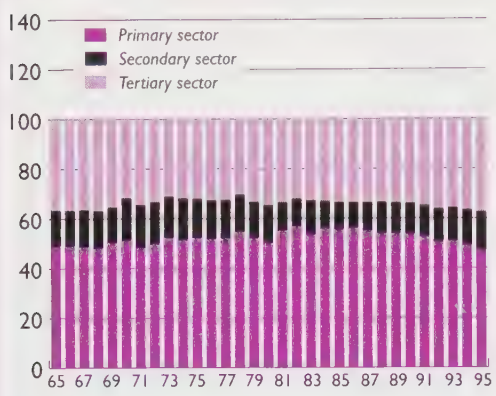
A number of cross-country comparisons have been undertaken to investigate the factors influencing long-term economic growth.[3] These comparisons focus on so-called endogenous growth models where the assumption is that "knowledge" and factor accumulation interact in such a way as to produce nondecreasing returns to scale. One critical implication is that economic conditions and policies can influence the accumulation of factors and their productivity.

[3]The simplest of these model specifications generally have the form:

$$Y_i = \alpha + \beta(INV_i) + \tau(PRIM_{it}) + \delta(SEC_{it}) + \zeta(POPG_i) + \Theta(GAP_{it}) + \epsilon_i$$

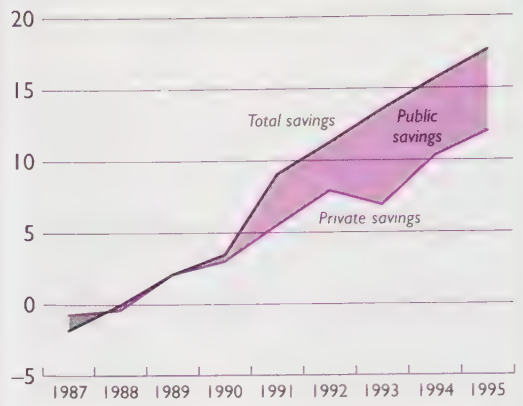
where Y is the average annual growth rate of real per capita GDP, INV is the average ratio of investments to GDP, $PRIM$ and SEC are the primary and secondary school enrollment rates at some specified time period t (proxies for human capital). $POPG$ is the average annual growth rate of population, and GAP is the ratio of country i's per capita GDP at some specified time period t to that of the United States.

Chart 5-5. Uganda: Real GDP By Sectors, 1965–95
(In percent)



Sources: Data provided by the Ugandan authorities; and IMF staff estimates.

Chart 5-6. Uganda: Gross National Saving, 1987–95
(In percent of GDP at current factor cost)



Sources: Data provided by the Ugandan authorities; and IMF staff estimates.

In most specifications, the accumulation of physical capital—measured by the investment-to-GDP ratio—and investments in human capital are significant. Notwithstanding the data problems and other shortcomings of such cross-country empirical analyses, the estimated models predict that, given Uganda's initial human capital in the mid-1960s, its accumulation of stock of physical capital, and its population growth rate, per capita GDP growth over the last 30 years should have been higher. This finding suggests that other factors, including policy-induced distortions, as well as the long periods of civil unrest have been impediments to long-run growth in Uganda and, possibly, the higher rates of capital accumulation. The impact of macroeconomic variables such as inflation, budget deficits, exchange rate premiums, and worsening terms of trade on growth are a major focus of this paper. Other variables, such as the degree of monetization, trade regimes with relatively few distortions, and government savings, are also considered as critical for capital accumulation and the growth in factor productivity.

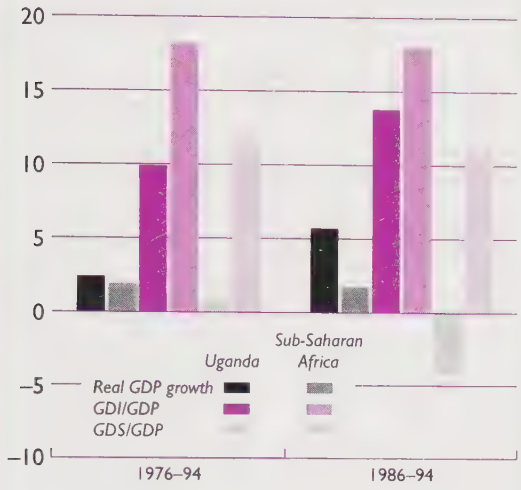
Initial Conditions

This section considers the political instability, macroeconomic imbalances, and the consequences of policies pursued in the 1970s as creating the initial conditions leading to the need for the adoption of stabilization policies in the 1980s. The analysis includes an estimate of the deviation of output from Uganda's underlying growth potential, and the impact of export growth and consumption on aggregate demand. The association between the output gap and investment behavior is also examined. The impact of stabilization policies is then summarized. First, the early adjustment attempts in the 1980s are briefly reviewed and then the more sustained efforts during 1987–95 are considered.

Output Deviations

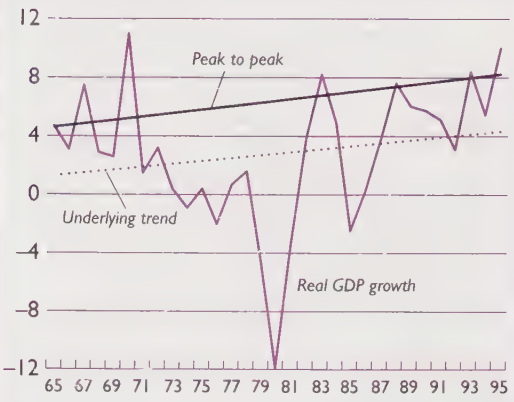
During the 1970s, the Ugandan economy was stagnating or contracting. Real GDP growth averaged 0.2 percent for 1971–75 and –3.5 percent for 1976–80. Fitting a simple time trend of actual output growth rates for 1965–95 suggests that growth deviations during the 1970s from trend averaged about –2.4 percent a year (Chart 5-8). Relating actual output growth to the underlying trend in Uganda, however, is subject to serious qualifications. Such an approximation does not fully capture the output potential of the economy, since economic performance in the 1970s was affected by major disruptions that, it could be argued, caused a significant pause in economic activity. Alternatively, one can consider Uganda's output potential in terms of a peak-to-peak trend (simple time trend of GDP growth peaks) over the period and measure actual output growth deviations in relation to this trend. In

Chart 5-7. Uganda: Sub-Saharan Africa Comparison, 1976–94
(In percent)



Sources: Data provided by the Ugandan authorities; and IMF staff estimates.
Note: GDI = Gross domestic investment, GDS = Gross domestic savings.

Chart 5-8. Uganda: Real GDP Growth and Trends, 1965–95
(In percent)



Sources: Data provided by the Ugandan authorities; and IMF staff estimates.

this regard, the average deviation in growth from peak-to-peak trend was –5.9 percent a year.

The poor performance during this decade reflected in large part the severe disruptions to the economy, including the expulsion of members of the Asian community who dominated the industrial and commercial sectors. The result was an acute shortage of technical and managerial expertise and a marked neglect of the productive sectors. This situation was later aggravated by the disruption and general uncertainties that surrounded the liberation war and the fall of the Amin regime in the late 1970s.

In addition to these instabilities, macroeconomic policies were generally inappropriate. During 1970–77, budgetary deficits averaged 33 percent of total expenditures with bank borrowing covering an average of 60 percent of the deficit. This fueled domestic credit expansion of 28 percent a year, and average broad money growth of 23 percent. Combined with the declines in output and an overvalued exchange rate, these policies led to an average annual inflation of 30 percent. The situation worsened considerably in the late 1970s, with the inflation rate rising to an average of over 70 percent between 1978–80 on account of an even more rapid growth in money supply and expansionary fiscal policies.

External Shocks

Although a significant part of the macroeconomic imbalances can be explained by war-related disruptions and expansionary monetary and fiscal policies, Uganda also experienced severe movements in the terms of trade in the mid- to late 1970s. Following a 27 percent deterioration in the terms of trade in 1975 associated with higher import prices and a decline in coffee prices, the terms of trade regained the 1974 level in 1976, and improved by 79 percent in 1977. By 1978, however, the terms of trade deteriorated to the 1976 level, and this worsening trend continued to the end of the decade. The mounting cumulative balance of payments deficit were thus a result of the increasingly unfavorable external environment, as well as the maintenance of an overvalued exchange rate, the lack of flexibility in adjusting administered prices, and the expansionary fiscal and monetary policies. Toward the end of the decade, the deficits were increasingly financed by the accumulation of external arrears.

The macroeconomic imbalances created by government policies reflected, in part, an inappropriate response to the adverse movements in the terms of trade as well as a futile attempt to maintain consumption levels in the face of declining resource availability. The extent and the persistence of the decline in real exports throughout the 1970s warranted an adjustment in fiscal policies to reflect the substantial fall in national incomes. Additionally, the

Table 5-1. Uganda: Selected Economic and Financial Indicators, 1980/81–1985/86

	1980/81	1981/82	1982/83	1983/84	1984/85	1985/86
			(Annual percentage change)			
Real GDP	–3.4	3.9	8.2	4.9	–2.4	0.3
Inflation	81.2	106.2	26.7	29.0	100.0	129.0
Broad money	56.8	63.8	47.0	61.0	139.0	148.0
			(In percent of GDP)			
Budget deficit[1]	–4.3	–3.2	–4.0	–2.6	–5.2	–4.5
Current account[2]	–1.6	–2.2	–2.3	0.1	–0.9	1.1
Gross reserves[3]	3.0	1.3	0.4	3.1	1.9	2.0

Source: Data provided by the Ugandan authorities.
[1]On a commitment basis, including foreign grants.
[2]Includes grants.
[3]In months of imports of goods and nonfactor services.

dependence of the economy on coffee exports made a powerful case for reforms in trade and payments and domestic pricing policies in order to encourage diversification of the economy. Instead, the response of government policy was to have a negative impact on investment and saving behavior in the economy. Although in nominal terms, aggregate demand rose nearly fourfold between 1974 and 1978, real aggregate demand fell by about 11 percent compared with the average for 1970–73. In 1978, for example, the real value of exports of goods and nonfactor services was only 40 percent of the level in 1970. On the other hand, consumption as a proportion of total domestic demand increased from an average of 88 percent in 1970–73 to over 95 percent by the late 1970s. Most of this increase was due to expansions in government consumption expenditures. Thus, the overall domestic saving ratio declined significantly.

Output Gap and Investment

Between 1970 and 1980, the output gap (measured as actual growth deviations from underlying trend) changed from 9 percent above trend to almost 15 percent below trend. Over this same period, investment as a ratio of GDP declined from 12.1 percent to 6.3 percent. Because of the difficulty of obtaining data on capacity utilization, it is not possible to explain the extent to which the variability in investment can be attributed to spare productive capacity. Also, for this period, separate data on private and public investments are not available. Nevertheless, it seems clear that the deficiency in real aggregate demand contributed to the fall in the investment ratio, as did the decline in the real value of exports.

The output gap was also clearly influenced by the Government's public investment programs. The difficulties in implementing public investment projects and their relation to terms of trade movements can be demonstrated by considering allocations to the Government's development budget in the second half of the 1970s. After a moderate nominal growth rate of 10 percent during 1975/76–1976/77, development expenditures rose sharply, by almost 70 percent, in 1977/78. This reflected significantly higher revenues from coffee exports accruing from the temporary but significant improvement in the terms of trade in 1977. However, the declining terms of trade, the return of foreign exchange shortages, and the increasing diversion of funds to military activity slowed project implementation considerably. Consequently, development expenditures fell sharply in 1978/79.

The attempt to stabilize and revitalize the Ugandan economy in the early 1980s met with limited short-lived success (Table 5-1). It included the introduction of a more flexible exchange rate policy, decontrol of many prices, and regular review of producer prices. There was a recovery in the growth of real GDP, which averaged about 6 percent a year during 1982–84, but this was not sustained, mainly because of the uncertainty of the political climate caused by the eruption of the civil war in the early 1980s. Gross domestic investment rebounded from its all-time low of 3.9 percent of GDP in 1978 to 9.6 percent of GDP by 1983, but by the end of 1983/84, political instability and the intensification of the civil war led to the collapse of economic stabilization efforts.

Table 5-2. Uganda: Selected Economic and Financial Indicators, 1986/87–1994/95

	1986/87	1987/88	1988/89	1989/90	1990/91	1991/92	1992/93	1993/94	1994/95
					(Annual percentage change)				
Real GDP	3.8	7.6	6.0	5.7	5.1	3.1	8.4	5.5	10.0
Inflation	237.0	199.1	76.8	26.9	32.0	63.0	–0.6	16.1	3.4
Broad money	95.0	202.9	122.4	56.0	46.8	53.4	42.0	33.3	25.3
					(In percent of GDP)				
Budget deficit[1]	–4.2	–4.1	–3.5	–4.7	–3.7	–7.8	–3.4	–4.1	–2.6
Current account[2]	–1.0	–9.6	–9.8	–10.5	–6.1	–4.9	–3.7	–1.6	–0.8
Gross reserves[3]	0.8	0.7	0.8	0.5	0.9	1.5	1.9	2.9	3.6

Source: Data provided by the Ugandan authorities.
[1]On a commitment basis, including foreign grants.
[2]Includes grants.
[3]In months of imports of goods and nonfactor services.

Adjustment Policy Mix

The starting point for adjustment in the mid-1980s was characterized by an environment that was unfavorable, both internally and externally. Internally, the civil war devastated transportation, power, and water facilities. Manufacturing plants had either closed or were operating at very low rates of capacity utilization, and much of the formerly productive agricultural sector had reverted to producing for subsistence consumption. The financial sector suffered severe repression, as interest rates were negative in real terms, reflecting inflation rates (on an annual basis) that approached 240 percent by June 1987. Externally, a fixed nominal exchange rate had further eroded Uganda's competitiveness, leading to a considerable spread between the rates in the official and parallel markets, an acute shortage of foreign exchange, and increasing payments arrears. These developments were made worse by a further steep deterioration in the terms of trade associated with the collapse of the International Coffee Agreement.

The objectives of the adjustment efforts during this period were varied, including the principal task of stabilization and structural reforms. Improving the use of market signals to determine prices, interest rates, and the exchange rate was an important strategic objective. This was seen as critical in providing an environment for enhanced investment and growth. Specifically, the broad policy objectives were (1) the need to stabilize the economy, in part through the restoration of fiscal and monetary discipline, notwithstanding demands for considerable outlays to restore and rehabilitate the devastated infrastructure; (2) the liberalization of consumer and producer prices, with the objective of realigning prices in favor of export-oriented production and import substitution; (3) the progressive movement toward a realistic, market-determined exchange rate within a system free of exchange restrictions; (4) the strengthening of the balance of payments and the normalization of relations with creditors; (5) the removal of trade restrictions; (6) the privatization and rationalization of state enterprises; (7) the downsizing of the civil service and the army; and (8) the liberalization of interest rates within a restructured and more efficient financial system capable of mobilizing savings and increasing investments, with the aim of raising the rate of economic growth.

From the outset, the Government viewed the pursuit of strong macroeconomic policies and structural measures as essential to the attainment of its recovery program. This commitment provided a basis for a coherent set of policy actions and a determination to implement policies consistently. Policy implementation was, however, affected by a marked deterioration in world coffee prices. Although there were slippages in the fiscal area as well as in some important structural reforms in the initial years, consistent application of stabilization policies characterized by a decidedly strong anti-inflation bias met with success in later years. Although difficult to quantify, the credibility of government consistency cannot be overstressed. Additionally, the contribution of the sequencing and pace of the reforms to business confidence is likely to have been significant. These issues are discussed in more detail below.

The outcome is that Uganda achieved stabilization with strong economic growth (Tables 5-2, 5–3).

Table 5-3. Uganda: Annual Growth Rates of Sectoral GDP at Constant 1991 Prices, 1986/87–1994/95
(In percent)

	1986/87	1987/88	1988/89	1989/90	1990/91	1991/92	1992/93	1993/94	1994/95
Agriculture	2.0	5.5	6.2	5.2	2.8	–1.0	9.3	1.6	6.0
Cash crops	–1.0	0.4	5.8	8.4	3.8	7.3	0.3	7.6	10.8
Food crops	2.6	5.9	6.9	5.3	2.0	–3.2	12.3	0.9	7.7
Livestock	0.3	6.0	5.6	3.7	3.9	2.2	3.7	3.3	–2.9
Forestry and fishing	3.0	5.0	2.3	5.0	7.0	4.1	4.7	–0.3	6.8
Industry	14.0	19.2	4.2	5.9	8.2	8.5	8.3	13.4	16.6
Mining & quarrying	–9.7	–11.5	4.4	73.7	106.1	10.4	10.6	3.7	–0.3
Manufacturing	2.4	17.1	9.2	6.5	7.3	15.7	7.0	15.2	17.7
Coffee, cotton, sugar	4.3	–0.2	29.3	–0.2	6.4	49.4	–11.8	23.8	19.3
Food products	12.3	39.1	5.4	–9.4	19.4	9.0	7.0	7.9	13.7
Miscellaneous	0.7	15.8	7.6	10.5	5.5	12.5	10.2	15.2	18.1
Public utilities	4.4	6.5	4.4	2.2	6.4	10.0	5.6	8.4	8.4
Construction	29.6	23.8	—	4.9	6.7	1.3	10.1	12.8	17.6
Services	3.8	10.8	6.9	6.6	7.6	6.4	7.1	10.5	19.6
Trade	2.6	12.0	7.2	6.2	7.0	6.2	5.9	8.1	21.6
Hotels and restaurants	10.8	12.7	9.5	12.3	14.5	14.2	15.0	21.4	21.5
Transport & communication	5.3	7.2	5.4	6.2	7.2	4.6	7.8	13.1	13.8
Road	3.9	7.5	6.7	6.4	6.6	5.0	7.7	8.1	8.7
Rail	7.1	–0.6	–1.8	10.1	20.6	–9.4	3.4	76.3	46.1
Air & support services	21.0	12.7	0.2	4.4	4.5	8.3	9.9	19.8	25.1
Communications	2.7	4.9	4.6	4.6	6.3	7.8	9.1	10.5	12.0
Community services	3.4	4.2	6.1	6.5	7.8	8.2	7.2	5.9	6.4
General government	2.8	3.0	3.9	2.7	7.6	11.0	5.9	4.3	6.8
Education	0.2	1.1	5.8	7.7	5.8	3.6	4.1	3.7	3.0
Health	3.6	3.4	3.9	3.4	3.4	7.9	5.2	4.0	4.9
Rents	4.2	5.5	6.9	7.4	7.5	7.6	7.3	6.2	6.0
Owner-occupied dwellings	2.7	2.7	2.9	2.9	2.9	2.9	3.7	3.2	3.1
Miscellaneous	6.5	7.4	8.4	9.0	12.8	11.7	12.3	9.7	10.0
GDP at factor cost	3.8	7.6	6.0	5.7	5.1	3.1	8.4	5.5	10.0

Source: Statistics Department, Ministry of Finance and Economic Planning, Uganda.

Over the nine-year stabilization period under review, growth averaged 6.4 percent a year, accompanied by rising investment-to-GDP and domestic saving-to-GDP ratios. Despite unfavorable terms of trade for most of the period, the external current account deficit (excluding grants) also declined markedly, from 16.9 percent of GDP in 1988/89 to 5.9 percent in 1994/95, while the exchange rate remained competitive, depreciating from U Sh 100 per U.S. dollar at end-1987 to U Sh 966 at end-June 1995. Although the real effective exchange rate (REER) appreciated somewhat during 1993/94, Uganda's external competitiveness is now substantially better than it was in 1987 (Chart 5-9). Successes were recorded in many structural areas, notably, marketing, the foreign exchange system, civil service reform, and army demobilization. Progress was also made in financial sector reforms, albeit with delays.

Fiscal, Monetary, and Debt Policies

Fiscal and Monetary Policies

For Uganda, fiscal performance during the years since 1987 has been important in determining the pace of reforms and the overall savings and investment levels. Not only has strong fiscal adjustment in the last three years affected public savings directly, but it can be argued that it has also had a positive effect on private savings, contrary to the usual Ricardian substitutability theory.[4] In 1991/92, the overall fiscal deficit (excluding grants) reached 15 percent of GDP (Table 5-4). Since that time the deficit has

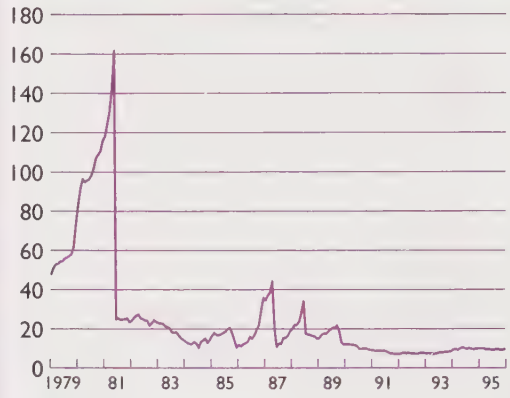
[4]See, for example, Asilis and Ghosh (1992) and Leiderman and Blejer (1988). It is argued in some studies that fiscal policies can shift an economy to a higher saving and growth path if individual saving behavior is dependent on aggregate savings.

been steadily reduced to 8 percent of GDP in 1994/95, reducing the Government's reliance on credit from the banking system and raising public sector savings. The improved fiscal performance—particularly in the last few years—has been a major factor in building confidence in the economy and achieving stabilization through lower inflation—both of which, it can be argued, have a positive effect on private saving behavior. This commitment by the Government to prudent fiscal policies could have the effect of reassuring private savers that the Government would supplement private saving rather than absorb it, thus increasing individuals' expectations of a higher return on saving because of lower inflationary expectations, and generally a more optimistic outlook concerning economic growth.

In assessing the stance of fiscal policy and its direct impact on investment and aggregate demand/output growth during the adjustment period, one has to consider the degree to which fiscal policies were contractionary or expansionary. In this regard, the adjustment policies faced the task of stabilizing the economy while at the same time preventing a too contractionary impulse from stifling investment and growth. While the achievement of the broad objective of financial stabilization required the pursuit of a restrictive fiscal policy, the desirability of strengthened economic performance necessitated larger outlays on the restoration and the rehabilitation of devastated infrastructure. The authorities reconciled these objectives by focusing on tax reform to augment revenue and by raising donor disbursements. Revenue performance as a percentage of GDP has shown a sharply rising trend under the adjustment efforts in 1987, increasing from 4.9 percent of GDP in 1986/87 to 10.5 percent of GDP by 1994/95. Nevertheless, the ratio is still below that achieved two decades earlier (about 11 percent in 1974/75) and less than half of the average for SSA countries. Of significance is the strong rise in the grant element of budgetary financing, which grew from 0.5 percent of GDP to 5.2 percent of GDP during the same period. This enabled total expenditures to grow from 9.6 percent of GDP to 18.7 percent, having a stimulative effect on the economy.

Thus, although substantial progress has been made in reducing the fiscal deficit before grants since 1992, over the period 1987–95, the deficit worsened from 5 percent of GDP to 8 percent. The high level of foreign financing clearly enabled Uganda to sustain a sufficiently expansionary policy to maintain adequate aggregate demand even while reducing its reliance on the domestic banking system and facilitating the stabilization of the economy. Nevertheless, in recent years a number of aggressive measures have been taken to increase the revenue effort. These include enlarging the coverage of the income tax base, streamlining investment incentives, rationalizing import duties, and improving tax administration. Establishment of the Uganda Revenue Authority (URA) in 1992 was an important factor in the success of these efforts.

Chart 5-9. Uganda: Real Effective Exchange Rate, 1979–95
(1980 = 100)



Source: IMF Information Notice System.

The relatively high growth rates achieved in the Ugandan economy over the adjustment period were led by an increase in the rate of investment activity, which responded positively to the fiscal policies described above, as well as numerous structural, price, and exchange reforms. Although the investment-to-GDP ratio has increased substantially, this growth has slowed in recent years raising concerns about bottlenecks, implementation capacity, efficiency issues related to the pace of financial sector reforms, or the possibility that the stimuli provided by reconstruction activities have run their course. A further disaggregation of estimates on capital formation shows that whereas public fixed investment as a ratio of GDP almost tripled from 2.6 percent in 1986/87 to about 7 percent in 1994/95, the private fixed investment ratio increased less sharply, from 6.7 percent to 11.5 percent. Given the implementation capacity constraints on the public investment program in recent years, future increases in gross domestic investment will most likely have to come from the private sector, unless significant bottlenecks reducing the efficiency of public investment programs can be resolved.

Achieving a sustainable deficit is critical to facilitating enhanced growth prospects in Uganda. This is necessary to avoid reverting to destabilizing fiscal

Table 5-4. Uganda: Central Government Budget Operations, 1986/87–1994/95
(In percent of GDP at factor cost)

	1986/87	1987/88	1988/89	1989/90	1990/91	1991/92	1992/93	1993/94	1994/95
Recurrent revenue and grants	5.4	7.8	7.3	8.9	12.2	14.8	16.5	16.0	16.1
Recurrent revenue	4.9	6.1	5.6	7.3	8.0	7.2	7.8	9.0	10.5
Tax revenue	4.7	5.3	4.7	6.7	7.5	6.7	7.2	8.3	9.7
Nontax revenue	0.2	0.8	0.9	0.6	0.5	0.5	0.6	0.6	0.8
Grants	0.5	1.7	1.7	1.6	4.1	7.6	8.7	7.1	5.2
Expenditure and net lending[1]	9.6	11.9	10.7	13.6	15.8	22.6	19.9	20.1	18.7
Recurrent expenditure[2]	6.1	6.6	7.1	7.6	7.7	12.5	9.0	9.6	10.2
Development expenditure[3]	3.5	5.3	3.4	5.9	7.9	9.7	10.9	10.4	8.3
Overall deficit (commitment)									
Excluding grants	–4.6	–5.8	–5.1	–6.2	–7.8	–15.3	–12.1	–11.2	–7.8
Including grants	4.2	4.1	3.5	4.7	–3.7	–7.8	–3.4	–4.1	–2.6
Financing									
External (net)	1.0	2.3	2.3	7.1	3.8	5.5	5.6	6.0	4.6
Domestic (net)	2.2	2.1	1.6	–1.7	0.6	2.2	–0.7	–1.1	–1.8
Of which: banking system	(–2.6)	(2.1)	(1.4)	(–1.5)	(0.2)	(2.0)	(–0.5)	(–1.3)	(–2.0)
Memorandum items:									
Primary surplus/deficit[4]	–0.8	—	–0.8	0.4	1.5	1.8	0.8	0.9	1.5
Current budget balance[5]	–1.2	–0.6	–1.5	–0.3	0.4	–5.3	–1.2	–0.7	0.7

Source: Department of Statistics, Ministry of Finance and Economic Planning.
[1]For 1987/88–1990/91 on a commitment basis.
[2]For 1987/88–1990/91 all defense expenditures in the budget are included in current outlays.
[3]For 1987/88–1990/91 includes net lending.
[4]Recurrent revenue (excluding grants) less recurrent expenditure (excluding interest).
[5]Revenue less current expenditure.

policies while providing for rising real levels of outlays on key economic and social services. In this regard, improving further the revenue-to-GDP ratio and reducing the reliance of the budget on donor support are critical. Further rationalization of recurrent expenditures to increase investments in human capital—in particular, education and health—is needed, and though the impact may not be to immediately raise output levels, cross-country analyses have demonstrated that it is significant in the long term.

The reduced reliance of the fiscal position on credit from the banking system through increased donor disbursements and fiscal adjustment efforts has been critical in restraining monetary growth and achieving the Government's stabilization objectives. Growth in broad money in Uganda declined from a peak of over 200 percent in 1987/88 to 25 percent in 1994/95 (Table 5-5). Over this same period, inflation (as measured by the annual change in the consumer price index) declined from around 200 percent to 3 percent in 1994/95. The impacts of lower money growth and the consequent fall in inflation on the real sector have been several. First, lower inflation has had the effect of raising real interest rates, thus enhancing savings mobilization and increasing the efficiency of allocation of financial resources for investment purposes. Second, by reducing the share of credit to the Government in the supply of money, private sector demand for credit became more easily satisfied. Third, it could be argued that the fall in inflation in Uganda contributed to the increased share of monetary transactions in the economy, thus fostering an environment for investments in formal economic activity. Fourth, the lower inflation has most likely raised investor confidence in Uganda. Fifth, lower inflation has contributed to the maintenance of a competitive exchange rate and therefore enhanced export prospects.

Debt Policies

Uganda's adjustment efforts have relied to a great extent on disbursements by multilateral institutions. As a consequence, its external debt grew from US$1.3 billion in June 1987 to around US$3.4 billion at end-June 1995, but since the debt is highly concessional, the average interest rate and maturity improved substantially. Nevertheless, the debt-service ratio has been high over the adjustment period, reaching a peak of 128 percent in 1991/92

Table 5-5. Uganda: Selected Monetary and Financial Indicators, 1986/87–1994/95

	1986/87	1987/88	1988/89	1989/90	1990/91	1991/92	1992/93	1993/94	1994/95
	(Annual change as a percent of initial period broad money)								
Net domestic assets	340.6	204.1	232.0	129.6	114.7	157.1	16.7	–6.1	–3.4
Domestic credit	108.0	121.7	124.3	52.7	38.1	50.4	8.6	–2.7	–12.3
Claims on government, net	68.3	23.6	12.9	6.3	–1.2	32.0	–8.1	–17.4	–23.8
Claims on the private sector	38.8	98.1	111.4	46.4	39.3	18.3	16.7	14.7	11.4
	(In percent)								
Growth of broad money (M2)	95.6	208.4	122.4	56.0	46.8	53.4	42.0	33.3	25.3
91-day treasury bill rate[1] (annualized)	...	38.0	43.0	39.0	37.0	32.0	24.0	10.8	7.4
Monetization rates									
Monetary GDP/total GDP	64.2	65.4	65.7	66.3	69.3	70.9	70.3	73.2	75.9
M2/GDP	7.1	7.0	6.8	6.9	7.6	7.8	7.8	9.2	9.5

Source: Ugandan authorities.
[1]End of period.

(Table 5-6), before beginning a falling trend to 28 percent in 1994/95. While manageable, the high level of debt and debt service demonstrates the fragility of the economy and its reliance on the continued financial support of the international community. This high level of debt and debt service also demonstrates the need for continued high growth and substantial increases in export volumes and diversification of the country's exports. In this regard, Uganda needs to vigorously deepen its structural reforms and raise savings and investment levels. But how has this substantial debt burden affected Uganda's saving and investment behavior over the adjustment period?

A heavy debt burden can potentially impact negatively on saving and investment in a number of ways. First, public investments may be crowded out by resources used to service the public debt, and given the complementarity between public and private investments, the latter may be discouraged. Second, a high debt-service burden may be indicative of a debt overhang that could lead savers to transfer funds abroad instead of saving domestically because of the fear of future tax liabilities to service this debt. This would naturally raise the domestic cost of capital for investments. Third, a high debt burden could discourage foreign direct investment by raising the probability of the imposition of restrictions by the Government on external payment obligations—even for current payments such as investment income.

In Uganda, the heavy debt-service burden may have affected budgetary allocations for investment purposes, particularly in the early years of the adjustment period. However, this does not appear to have been substantial in view of the degree of donor support in the development budget. Thus, it is not obvious that rising debt service has limited public investment outlays, particularly given the implementation constraints of the public sector. Additionally, Uganda has received substantial debt relief in the form of debt reschedulings and write-offs, including being the first country to receive a stock of debt reduction by Paris Club creditors on Naples Terms in February 1995. This would serve to bolster investor confidence. In the absence of solid data, it is also difficult to gauge to what extent private domestic investments or foreign direct investments may have been affected by a debt overhang. The evidence, as demonstrated by rising private investments and unclassified foreign transfers in recent years, seems to suggest that achieving macroeconomic stability was more important in the decision-making process of investors. Additionally, savings behavior seems to have been affected more by the achievement of positive real interest rates and reforms to the financial system. This is not to say that one can continually discount the likely impact of a debt overhang on investor confidence. Whereas the achievement of macroeconomic stability may have been paramount in investors' minds in the early years of the adjustment period, the sustainability of debt servicing can become increasingly important for future investments in a post-reconstruction Uganda.

Structural and Pricing Policies

The path of output, saving, and investment in Uganda has been influenced by a number of struc-

Table 5-6. Uganda: Balance of Payments Summary, 1986/87–1994/95

	1986/87	1987/88	1988/89	1989/90	1990/91	1991/92	1992/93	1993/94	1994/95
					(In millions of U.S. dollars)				
Current account	–82	–201	–230	–278	–187	–132	–112	–59	–44
Trade balance	–111	–246	–281	–375	–370	–279	–373	–464	–504
Exports, f.o.b.	383	298	282	210	175	172	157	254	537
Of which: Coffee	(365)	(286)	(276)	(159)	(127)	(117)	(99)	(172)	(408)
Imports, c.i.f	–494	545	562	584	545	451	531	718	1,041
Nonfactor services	–64	–11	–128	–56	–102	–108	–87	–96	–191
Net interest	–47	–57	–67	–77	–58	–87	–49	–43	–33
Private transfers	100	120	114	78	81	136	129	312	445
Official transfers	40	92	131	153	262	206	269	250	264
Other	—	—	—	—	—	—	—	–18	–24
Capital account	21	128	133	233	86	10	103	165	171
Official (net)[1]	11	56	56	48	122	38	138	179	197
Disbursements	125	186	211	292	214	163	242	294	293
Amortization due[2]	...	...	...	77	–92	–125	–104	–115	–96
Private capital (net)[3]	10	72	77	185	–36	–28	–34	–14	–26
Overall balance	–61	–74	–96	–45	–101	–121	–8	106	127
Financing requirement	61	74	96	45	101	121	8	–106	–127
From monetary authorities	22	–13	18	22	35	–5	–32	–90	–150
Change in arrears (net)	39	47	18	–19	65	98	–330	–59	8
Exceptional financing	—	40	60	42	1	29	370	43	15
					(In percent; unless otherwise specified)				
Memorandum items:									
Foreign exchange reserves in months of imports of goods and nonfactor services	0.8	0.7	0.8	0.5	0.9	1.5	1.9	2.9	3.6
Current account/GDP	–1.0	–9.6	–9.8	–10.5	–6.1	–4.9	–3.7	–1.6	–0.8
Excluding official transfers	–1.5	–14.0	–16.9	–16.7	–14.5	–12.6	–12.7	–8.4	–5.9
Debt-service ratio before rescheduling (including IMF)	54.2	62.3	74.0	81.0	95.9	127.7	73.8	53.7	28.3
Debt/GDP	...	20.2	29.1	83.1	83.8	98.7	89.2	80.9	65.6

Sources: Data provided by the Ugandan authorities; and IMF staff estimates.

[1]For 1986/87 includes Kenya compensation and counterpart to IMF valuation adjustment.

[2]In 1994/95 includes prepayment of US$7.3 million in debt outstanding to the IBRD.

[3]Includes commercial banks, private direct investment, and errors and omissions.

tural distortions in the economy. Substantial progress has been made in correcting these distortions, but in some areas they still present obstacles to higher growth. In addition, at issue is whether reforms could have been more closely coordinated and sequenced to encourage a more timely response by investments, and possibly higher growth.

Agricultural Pricing and Marketing Policies

The return of new investments and growth in the agricultural sector in Uganda has been facilitated by the adoption of market-oriented policies, including the decontrol of food prices and trade. All farmgate agricultural prices in Uganda became market determined during the period of adjustment, although indicative prices continue to be announced for the traditional export crops, such as coffee and cotton, in order to strengthen the bargaining position of producers. The liberalization of agricultural commodity prices and the abolition of various marketing boards have had the effect of increasing revenues to farmers as well as lowering marketing costs, thus significantly raising the profitability of agricultural production and providing the incentives for new investments. Additionally, the positive impact of these policies on investment behavior by producers, processors, and exporters has been bolstered by the progressive liberalization of the exchange system and the abolition of the surrender requirement on export proceeds from traditional crops. However, increased investments and further growth in the food crop subsector are constrained by its reliance on the domestic market. Demand is likely to rise only in re-

lation to population growth rates and, to a lesser extent, increases in income, given the relative inelasticity of food crop demand to changes in income. Higher investment levels and growth rates in food crop production will have to focus on the diversification of export markets and the development of agro-industries.

Traditional agricultural exports have been a key determinant of Uganda's growth performance. Export growth has not only been significant in the generation of incomes and demand for domestic output but has also eased foreign exchange constraints, making possible higher import levels, which support economic growth. Until recently, declining export prices were a major factor affecting the production levels of the main export, coffee. Coffee exports in 1994/95 totaled about 2.7 million (60 kg) bags, considerably below the peak of 3.5 million bags achieved in 1972/73. The recovery in volume, albeit slow, has been helped by a new system for pricing and taxing coffee adopted in 1991, which allows the producer price, as well as processor and exporter margins, to be determined by market forces. In 1992, in response to the very low levels of world prices, the tax on coffee exports was abolished, and the Government removed the Coffee Marketing Board's monopoly on buying and marketing. The Board was subsequently converted into a commercial operation in competition with private exporters.

Other traditional exports, such as cotton and tea, remain critical to Uganda's growth potential. In 1970, Uganda exported 78,000 tons of cotton and earned approximately US$49 million. By 1988, output had fallen to 2,100 tons, with earnings of US$3 million. Over the past several years, all of the ginneries—which are owned by cooperatives—have become heavily indebted and incapable of operating profitably. The greatly improved overall incentive framework and the liberalized environment, together with steps taken by the Government, have improved the outlook for new investments in the industry. The Lint Marketing Board's monopoly on the export of lint has been removed, and a Cotton Development Statute was enacted in 1994, which abolished the union monopoly over cotton exports, eliminated licensing and other regulatory barriers, and established the Cotton Development Organization to regulate cottonseed production. The cotton industry is far from a recovery, but the decline was arrested during the adjustment period, and production volumes picked up to about 4,000 tons in 1993/94, although there were subsequent declines in 1994/95. With respect to tea, output fell from about 15,000 tons in 1970 to about 2,000 tons in 1987. Reforms in the industry, although limited, have included a shift in policy to allow firms to export directly, and privatization efforts. The result has been a significant recovery in output, to 12,000 tons in 1994/95.

Trade and Foreign Exchange Policies

One of Uganda's more important and successful external sector reform measures during 1987–95 was the move to a flexible foreign exchange system. This was supported by a continuous effort to liberalize the trade system. The result was the realistic pricing of foreign exchange, which not only gave powerful investment incentives to exporters, but also encouraged the inflow of private capital, which increasingly has become important in financing the balance of payments. Between 1986/87 and 1994/95, private transfers averaged about 6 percent of GDP. The result was the easing of the foreign exchange shortage that had disrupted productive activity in the past. The increased inflow of private transfers has also been significant in raising overall national savings, thus providing a further boost to the economy's growth potential.

Following an initial 77 percent devaluation in 1987, the Uganda shilling was adjusted periodically through 1989. In 1990, foreign exchange bureaus were licensed, and the spread between the rates in the parallel and official markets narrowed significantly. Finally, the exchange system was unified in November 1993, with the introduction of an interbank system and the abolition of the auction for donor import support funds. The move toward a liberalized trade regime was also fairly rapid, beginning with the open general licensing scheme (OGL) in 1987/88, which focused on allocating donor balance of payments assistance for the importation of raw materials for specified firms. The list of firms and industries was subsequently expanded periodically through 1990. By 1993, this scheme had been phased out, as the payments and foreign exchange system was liberalized and a broadly based import scheme was implemented with a short negative list.

While it is difficult to establish a definitive and quantitative link between investment and growth and reforms in the external sector, Uganda may have benefited from these reforms through the increase in resource accumulation—in particular, foreign exchange. Subjecting the economy to increased external competition may also have had a positive impact on productivity growth and efficiency in the use of resources. Moreover, reforms in trade and foreign exchange policies proved particularly complementary to several of the other key structural reforms. The result was that the efficiency of macroeconomic policies was improved, the supply response of the economy was enhanced, and a clear signal was sent to potential investors that the risks of policy reversals were low.

Public Sector Adjustment

Public sector structural adjustment in Uganda has many facets. Chief among these are the privatization of public enterprises and the improvement of their efficiency, followed by reform and downsizing of the civil service, and demobilization of significant numbers of soldiers. These reforms can have a significant impact on public sector saving rates through reduced expenditures and potentially can have an influence on long-run growth by allowing for a reorientation of expenditure toward the accumulation of human capital through increased allocations for education and social services. Privatization also allows for an improvement in the efficiency of enterprises that previously relied on direct or indirect subsidies from the budget.

Privatization of public enterprises began slowly in the first year after the enactment of the Public Enterprises Reform and Divestiture (PERD) program in 1993, with only two enterprises sold and nine liquidated. The slow implementation of these reforms may have restrained the investment and output response of the economy during the adjustment period, but with the current accelerated efforts in this area, the economy is likely to see significantly higher investment levels in several large enterprises in the coming years. In the second half of 1994, for example, progress in this area accelerated, and eight enterprises were privatized.

Key issues in reforming the civil service have been the rationalization and downsizing of the service, the reform and decentralization of government functions, and the introduction of improved personnel management systems. Since 1992, the Government has been implementing reforms in these areas, with the civil service being downsized from 320,000 positions in 1990 to about 150,000 at end-December 1994. Substantial progress has also been made in simplifying the salary structure by the abolition of a wide range of nonmonetary allowances and their consolidation into a basic salary. The challenges for decentralization are significant, however, since local administrative capacity is either low or nonexistent in key areas. In the area of military demobilization, approximately 38,000 soldiers have been discharged since 1992, reducing the size of the army by over 40 percent from the previous high of around 90,000.

Interest Rate and Financial Reforms

Several issues need to be addressed in assessing the possible role of financial sector performance in enhancing or retarding growth and investment in Uganda. First is the issue of financial repression. The key point here is the extent to which controls on interest rates or directed credit allocation may have distorted the financial sector. As far as the latter is concerned, there is evidence that the allocation of credit to some firms and sectors by political dictate during earlier years—particularly in the 1970s—may have contributed to the current high levels of nonperforming loans in the banking sector. Most of these extensions of credit were made without due regard to creditworthiness and profitability of projects.

Until 1992, the level and structure of interest rates were administered by the Bank of Uganda (BOU), which, in consultation with the Ministry of Finance and Economic Planning, made periodic adjustments. The resulting interest rate policy, combined with a persistently high inflation, led to highly negative real interest rates throughout most of the 1980s, which inhibited savings. The liberalization of interest rates generally resulted in the achievement of positive real rates. Some rates, however, continued to be formally linked to the annualized discount on treasury bills. These included maximum lending rates for term loans, development loans, and agricultural loans. In June 1994, this formal link to a reference rate was abolished, and all interest rates are now freely market determined. The repression of interest rates, however, is only one aspect of the problem. A second issue is the spread between deposit and lending rates, which measures financial intermediation costs. Deposit rates have fallen in response to lower inflation and, most recently, to lower yields on treasury bills, but there has been a general stickiness in lending rates. The result is that the spread has widened, from around 9 percentage points in 1991 (between savings and commercial lending rates) to around 12 percentage points at end-June 1995. The large spread is principally accounted for by the profitability problems associated with the large stock of nonperforming assets in the banking system and by the general inefficiency of the banks.

The problems of profitability of the banking system, liquidity management, and capital adequacy have all made it difficult for the financial system to mobilize savings effectively and channel these resources into profitable investments during the adjustment period. The current high real lending interest rates may be constraining investments and can potentially be damaging to further growth in the economy. In this regard, the acceleration of the financial sector reforms is crucial. These reforms include the restructuring and eventual privatization of the Uganda Commercial Bank (UCB) and the reform of several weak banks to achieve stated prudential objectives related to capital and profitability.

Another important issue is the depth of the financial sector. This can be measured by the ratio of the stock of monetary aggregates to GDP. Financial depth can be important, as one would expect a high degree of monetization to be correlated with eco-

nomic growth by providing greater opportunities for saving and thus investment. In Uganda, the ratio of broad money (M2) to GDP grew from around 7 percent in 1987/88 to around 10 percent in 1994/95. This should be compared with that of Kenya, where the ratio is about 40 percent, or Tanzania, with a ratio of about 30 percent. Although GDP growth may have been facilitated by increasing monetization, this remains a clear obstacle to higher growth.

Reform Sequencing

With any adjustment, the need for appropriate sequencing of reforms in the presence of adjustment costs and political and administrative constraints is unavoidable. Related to the issue of sequencing is the speed of the adjustment. It is difficult to establish principles on the proper sequencing of reforms, and only judgments can be made as to the appropriateness of Uganda's reform agenda. In assessing this issue, the primary concern is the likely impact on the efficiency of investment and the contribution to growth.

It is generally accepted that stabilization should come first. From the start, this was a primary concern in Uganda's adjustment efforts and was critical in establishing credibility and in reducing the distortionary effect that high and variable inflation has on potential investors. To enhance credibility, the simultaneous initiation of structural reforms in pricing and marketing was also critical. Given Uganda's reliance on the export of cash crops, such as coffee, the early attempts to correct the overvaluation of the currency and the reform of the trade regime were also well timed, although delays in this area could have led to some distortionary effects in the allocation of resources away from export crops.

The proper sequencing of the privatization of enterprises should depend on the efficiency gains expected in the short and medium term and the likelihood that a more competitive environment is created. Additionally, early privatization efforts can enhance credibility and improve the Government's fiscal balance. For Uganda, the slow start of the privatization program may have retarded investment growth and the efficiency of resource allocation. In such key sectors as banking, the delay in completing the restructuring of the UCB and in effecting its privatization may be contributing to the overall weakness of the sector and the difficulty in achieving efficient financial intermediation.

The speed and efficiency of financial sector reforms in Uganda have been constrained by the general weakness of banks and the need to develop an infrastructure that could accommodate market-based indirect monetary instruments. One consequence, as mentioned above, is the continued wide spread in interest rates. This implies that the liberalization of interest rates may have occurred too early, or alternatively, that more effort should have been placed on improving the profitability of problem banks earlier in the adjustment program, as well as on developing the necessary institutions and instruments to influence monetary variables.

Concluding Remarks

Uganda has made impressive strides toward achieving a high and sustained growth in economic activity. This progress has been made possible by the successful implementation of stabilization policies during 1987–95 and by important structural reforms. The evidence from the study of Uganda's long-term economic performance confirms what is true of other countries, that is, although economic growth is determined by factors such as the accumulation of physical and human capital, these variables can be significantly affected by policy variables. In general, the sequencing and pace of Uganda's reforms have been appropriate and have elicited the expected responses from investment and saving. Starting from a low base, these variables nevertheless remain inadequate when compared with those of other countries and with Uganda's potential as demonstrated by past performance.

In addition to mobilizing the resources through higher savings to increase the accumulation of physical capital, Uganda needs to invest more in human capital, which has been shown to be a major influence on economic performance over long periods of time. The consolidation of the fiscal position along a sustainable path is required to allow a greater share of resources in such areas as education and health services to build the human capital of the country. Investment in human capital, together with the growth in physical capital, has the potential to also enhance the technological capability of the country to absorb imported technologies, thus leading to greater dynamism in the growth process.

In the medium term, Uganda's growth process can be further enhanced through the encouragement of foreign direct investment. This should be given a boost immediately through the various privatization efforts currently under way. However, there is a real potential for sustained inflows of direct investment as a result of the success of the stabilization efforts, the achievement of political stability, the ongoing investments in infrastructure, the liberalized exchange and payments system, and the current reforms being undertaken in the tax and incentive environment.

To achieve a sufficiently higher growth rate and be able to reduce poverty, Uganda needs to accelerate certain structural reforms, primarily in the banking and financial areas. The current weak state of the

banking system is preventing the achievement of financial depth and is contributing to distortions in the allocation of resources because of the stickiness of real lending interest rates and the large spread between lending and saving rates. In addition, the economy still remains substantially unmonetized and largely cash based. The achievement of financial depth requires that this situation be improved, including the development of rural finance and the operation of an efficient commercial banking system geared toward mobilization and efficient allocation of financial resources.

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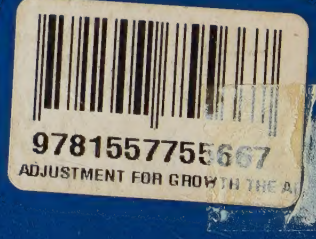
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