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16

**Macroeconomic Reform and
Employment: An Investment-Led
Strategy of Structural Adjustment
in Sub-Saharan Africa**

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Preface

The present paper has been prepared within the framework of the UNDP financed programme “Jobs for Africa”. This programme, which has been launched by the ILO, represents a contribution to the United Nations System-Wide Special Initiative on Africa as well as to the follow-up to the Social Summit. The objective of “Jobs for Africa” is to identify a set of mutually enforcing policies for job creation and poverty reduction. This will be done through: (a) developing a conceptual framework for comprehensive and sectoral policies on employment creation for poverty reduction; (b) identifying policy tools and operational systems to implement employment creation for poverty reduction; and (c) designing a comprehensive regional programme to support country level employment promotion programmes. The programme is to be implemented in two phases.

This paper is concerned with macroeconomic policies intended to stabilize the economies of sub-Saharan Africa and bring about profound structural change. Existing structural adjustment programmes are discussed in terms of their impact on per capita income, employment and earnings from work, the rate of growth of output, exports and the degree of integration into the world economy, and the rate of accumulation of capital. As regards the objectives of stabilization policies, a distinction is made between (i) policies intended to prevent rapid inflation and stabilize the general level of prices, (ii) policies intended to stabilize a small number of strategic or key prices such as the real exchange rate and the real borrowing rate of interest and (iii) efforts to stabilize the policy regime and create a favourable investment climate. Emphasis is placed on the last two objectives.

Three distinct paths or strategies of structural adjustment are identified. The first, called structural adjustment through reallocation, constitutes the theoretical foundation of most existing structural adjustment programmes and is the basis of most external advice. The actual economies in sub-Saharan Africa, however, have tended to follow the second path, structural adjustment through contraction. This path is associated with severe hardship. The third path, called structural adjustment through investment, is argued to be superior to the other two.

An investment-led strategy of adjustment requires an appropriate structure of incentives that encompasses not only a set of relative prices that reflects social costs and benefits, but also neglected features of sub-Saharan Africa such as lack of access to resources, barriers which exclude people from some markets, discrimination in the labour market and the effect on incentives of widespread missing markets. The primary concern should be the effect of the structure of incentives on the efficiency of investment allocation.

The important issue of how best to finance an investment-led strategy is discussed next. Priority should be given to domestic resource mobilization rather than large inflows of foreign capital either in the form of private direct investment or as overseas aid. Hence private domestic savings are of great importance. It is argued that they depend on the structure of incentives and, above all, on the existence of profitable investment opportunities. Investment opportunities can be exploited not only by saving in the conventional sense but also through the direct application of labour. This implies that some investment can be “financed” not by consuming less (saving more) but by working longer. This shifts the discussion from savings in a narrow sense to the broader question of domestic resource mobilization.

The state has an important role to play in creating the enabling environment for such a strategy. It is argued that public investment in infrastructure and certain forms of human capital is complementary to private sector investment. That is, public investment can raise the profitability of private investment and stimulate private savings and domestic resource mobilization more generally. Further, it is argued that considerable scope exists for improving the allocation of state-financed human capital formation, notably expenditures on education and health. This would help to raise the efficiency of investment. Next, it is argued that government financed investment in physical capital could be made much more labour intensive,

thereby increasing employment, saving on foreign exchange and raising the overall rate of return. Finally, some scepticism is expressed about excessive expectations of privatizing state owned enterprises in Sub-Saharan Africa. Instead emphasis is placed on the “commercialization” of state enterprises, reforming their objectives and management structure and increasing their profitability, thereby generating funds that can be used to finance investment activities not only in the state enterprises themselves but also in labour intensive infrastructure and in human capital.

It is hoped that the present paper will provide a contribution to the debate on the prospects for Africa in the coming century.

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Macroeconomic Reform and Employment: An Investment-Led Strategy of Structural Adjustment in Sub-Saharan Africa¹

There are 50 countries in sub-Saharan Africa.² These countries, containing over 600 million people, are among the poorest in the world. Indeed the World Bank classifies 74 per cent of the countries of sub-Saharan Africa as “low-income economies” and the United Nations Development Programme classifies 79 per cent as being “low human development” countries. In most cases low income and low human development coincide, but in Angola, Cameroon and Senegal medium incomes are nonetheless associated with low human development whereas in Zimbabwe and Congo medium human development has been achieved despite their low incomes. (See Table 1.)

The conclusion is inescapable: the great majority of countries in sub-Saharan Africa are poor regardless of the standard of evaluation used. In fact only eight countries are classified as having achieved a “medium” level of development by both UNDP and the World Bank. Three of these (Cape Verde, Seychelles and Swaziland) have less than one million people and four (Mauritius, Gabon, Botswana and Namibia) have less than two million. Only South Africa (40.5 million) has a large population and because of the legacy of apartheid, there is great inequality and poverty.

At least in a qualitative sense one can be certain that the level of development in sub-Saharan Africa is low. It is more difficult to be certain about trends in production and incomes. In Table 2 we present estimates of the rates of growth of gross domestic product (GDP), population and GDP per capita for the period 1980-1994. Let us consider these three macroeconomic phenomena in order.

In the case of 17 out of the 50 countries there is no estimate of the rate of growth of GDP for the period that interests us. That leaves us with 33 countries. In many, perhaps most, of these countries the estimates of domestic production are not terribly reliable, in part because much production is for subsistence consumption and does not pass through a market and in part because market prices often are highly distorted. Thus quantitative estimates must be treated with caution. The simple average³ rate of growth of GDP for the 33 countries for which data are available was about 2.3 per cent a year during the 14 year period 1980-1994. This is low compared to most other developing regions of the world. Moreover the 2.3 per cent average rate of growth for our 33 countries may overstate the average for sub-Saharan Africa as a whole. The reason for this is that there was serious political violence in several of the countries for which data are lacking -- Eritrea, Ethiopia, Liberia, Somalia, Sudan, Angola -- and it is likely that civil war and ethnic conflict in those countries reduced the rate of growth below the average in the rest of sub-Saharan Africa. Thus our estimated growth rate of 2.3 per cent a year should be regarded as an upper limit.

There was considerable variation in growth performance among the 33 countries for which we have data. A few grew quite rapidly and two countries, both small, enjoyed outstanding performances, namely, Mauritius (6.2 per cent a year) and Botswana (8.6 per cent a year). At the other extreme, four countries experienced a negative rate of growth of production and two of these, Niger and Rwanda, suffered a precipitous decline in output of -0.9 and -2.9 per cent a year, respectively.

Turning to estimates of demographic expansion, it will be seen in Table 2 that in the case of 15 countries there is no estimate of the rate of growth of the population. Even in the remaining 35 countries demographic data should be interpreted with caution. Censuses often are infrequent and somewhat unreliable. Inter-census estimates are even less reliable. In many countries accurate estimates of the size of the population and its rate of growth are unavailable. Keeping this warning in mind, the average rate of growth of the population in the 35 countries of sub-Saharan Africa for which we have some information was 2.8 per cent a year between 1980 and 1994.

Table 1: Classification of Countries in sub-Saharan Africa

Country	Low-income (World Bank)	Low Human Development (UNDP)
Angola		x
Benin	x	x
Botswana		
Burkina Faso	x	x
Burundi	x	x
Cameroon		x
Cape Verde		
Central African Republic	x	x
Chad	x	x
Comoros	x	x
Congo	x	
Côte d'Ivoire	x	x
Djibouti	x	x
Equatorial Guinea	x	x
Eritrea	x	n.a.
Ethiopia	x	x
Gabon		
Gambia	x	x
Ghana	x	x
Guinea	x	x
Guinea-Bissau	x	x
Kenya	x	x
Lesotho	x	x
Liberia	x	x
Madagascar	x	x
Malawi	x	x
Mali	x	x
Mauritania	x	x
Mauritius		
Mayotte		n.a
Mozambique	x	x
Namibia		
Niger	x	x
Nigeria	x	x
Reunion		n.a.
Rwanda	x	x
São Tomé and Príncipe	x	x
Senegal		x
Seychelles		
Sierra Leone	x	x
Somalia	x	x
South Africa		
Sudan	x	x
Swaziland		
Tanzania	x	x
Togo	x	x
Uganda	x	x
Zaire	x	x

This is very rapid demographic growth compared to the growth rates in the rest of the developing world. In only three countries -- Guinea-Bissau, Mauritius and Mozambique -- was the rate of growth of the population less than two per cent a year and in 15 it was three per cent a year or more. Birth rates and population growth rates have however begun to fall in sub-Saharan Africa and with sensible economic policies which focus on improving the health, education and income earning opportunities open to women, these rates should fall further.

The combination of a slow rate of growth of output and a rapid rate of growth of the population has produced a negative rate of growth of GDP per head. During the period 1980-1994 the simple average rate of growth of output per head in sub-Saharan Africa was -0.4 per cent a year. This average is based on information from 33 countries; in 17 countries no information is available. Of the 33 countries, 11 had positive growth rates, two had a zero growth rate and 20 experienced a negative growth of per capita output. Once again, the average rate of -0.4 per cent probably understates the rate of decline in sub-Saharan Africa as a whole since many of the countries where data are absent probably performed even worse than average because of civil conflicts of various sorts.⁴ Our estimate should therefore be regarded as a minimum: the true average rate of decline probably was faster than our estimate suggests.

Assuming that the average country in sub-Saharan Africa experienced a fall in output per head of about 0.4 per cent a year for 14 years, this implies that per capita output fell about five or six per cent during the period. Average incomes fell even more sharply than output because in the majority of countries, as we shall see below, there was a significant deterioration in the external terms of trade. Given that average incomes already were very low at the beginning of the period, the incidence and depth of poverty must have increased quite considerably. Insofar as the decline in average incomes was accompanied by increased inequality in the distribution of income, as fragmentary evidence suggests in some countries,⁵ the rise in poverty must have been exacerbated.

The World Bank reports that 47 per cent of the total population of sub-Saharan Africa were poor in 1985⁶ and the International Fund for Agricultural Development reports that 60 per cent of the rural population of sub-Saharan Africa were poor in 1988.⁷ The economic situation has continued to deteriorate since these estimates were made and it is therefore highly likely that poverty is even greater today.

Macroeconomic performance in sub-Saharan Africa since 1980 thus has been remarkably bad. The rate of growth has been slow, output per head has declined, average incomes have fallen, inequality probably has increased and the proportion of the population living in poverty has risen. The outcome has not been uniformly bad, some countries have performed better than others and in a few countries performance has been good, but seen as a whole, the economies of sub-Saharan Africa compare unfavourably with the rest of the world, with the possible exception since 1989 of the economies of the former Soviet Union.

Those concerned about the acute and increasing hardship in Africa, particularly external advisors and international financial agencies, have recommended policies of "stabilization" and "structural adjustment".⁸ The meaning of these phrases is not unambiguous and it is useful to examine them with some care. This we do in the next two sections.

Stabilization

The purpose of stabilization policies is to restore macroeconomic balance. In the African context severe imbalances are reflected in high and possibly accelerating rates of inflation, a large and possibly increasing balance of payments deficit and perhaps, too, in a large public sector deficit, including deficits of public sector enterprises. The general policy recommendation in such a situation is to reduce the level of aggregate demand so that it corresponds more closely to the economy's production potential and to lower inflationary expectations by establishing the "credibility" of strong anti-inflation measures by the government.

Table 2: Growth Rates in Sub-Saharan Africa: 1980 to 1994 (per cent per annum)

Country	GDP	Population	GDP per capita
Angola	n.a.	n.a.	n.a.
Benin	3.0	3.0	0.0
Botswana	8.6	3.4	5.2
Burkina Faso	3.4	2.7	0.7
Burundi	2.7	2.9	-0.2
Cameroon	0.2	2.9	-2.7
Cape Verde	n.a.	n.a.	n.a.
Central Africa Republic	1.2	2.4	-1.2
Chad	4.9	2.4	2.5
Comoros	n.a.	n.a.	n.a.
Congo	2.5	3.1	-0.6
Côte d'Ivoire	-0.1	3.7	-3.8
Djibouti	n.a.	n.a.	n.a.
Equatorial Guinea	n.a.	n.a.	n.a.
Eritrea	n.a.	n.a.	n.a.
Ethiopia	n.a.	2.7	n.a.
Gabon	-0.3	3.4	-3.7
Gambia	2.8	3.7	-0.9
Ghana	3.4	3.2	0.2
Guinea	n.a.	2.6	n.a.
Guinea-Bissau	4.2	1.9	2.3
Kenya	3.2	3.2	0.0
Lesotho	4.8	2.7	2.1
Liberia	n.a.	n.a.	n.a.
Madagascar	0.7	2.9	-2.2
Malawi	1.7	3.2	-1.5
Mali	2.1	2.6	-0.5
Mauritania	2.3	2.6	-0.3
Mauritius	6.2	1.0	5.2
Mayotte	n.a.	n.a.	n.a.
Mozambique	2.0	1.8	0.2
Namibia	2.0	2.7	-0.7
Niger	-0.9	3.3	-4.2
Nigeria	1.8	3.0	-1.2
Reunion	n.a.	n.a.	n.a.
Rwanda	-2.9	2.9	0.0
São Tomé and Príncipe	n.a.	n.a.	n.a.
Senegal	2.3	2.8	-0.5
Seychelles	n.a.	n.a.	n.a.
Sierra Leone	0.8	2.2	-1.4
Somalia	n.a.	n.a.	n.a.
South Africa	0.9	2.3	-1.4
Sudan	n.a.	n.a.	n.a.
Swaziland	n.a.	n.a.	n.a.
Tanzania	3.6	3.1	0.5
Togo	0.3	3.1	-2.8
Uganda	3.8	2.6	1.8
Zaire	n.a.	n.a.	n.a.
Zambia	0.5	3.4	-2.9
Zimbabwe	2.8	3.1	-0.3

Source: Calculated from data in World Bank, World Development Report 1996, New York: Oxford University Press, 1996

Specific policies recommended usually include a reduction in the supply of money and an increase in nominal interest rates; a reduction in government expenditure and, less frequently, an increase in tax revenues; privatization of state owned enterprises or, again less frequently, reform of state enterprises to reduce losses or increase profits; and unification of exchange rates and devaluation of the currency. The primary purpose of the policies is to stabilize the price level and, secondarily, to restore balance to the external trading account and to the public sector's income and expenditure accounts. In fact, most countries in sub-Saharan Africa (35 according to the latest count) have introduced stabilization and structural adjustment programmes and it is now possible in general terms to evaluate the outcomes.

Before doing so, however, it is necessary to be specific about the standard of evaluation. High rates of inflation undoubtedly are harmful to an economy. First, they lead to inefficiencies in the allocation of resources and consequently to a lower level of output and income than would otherwise be possible. Second, high rates of inflation also make it more difficult to make long term investment decisions and this leads to a lower rate of capital formation and to a pattern of investment biased in favour of projects with a quick pay-off. The result is a lower rate of growth of output, incomes and employment. Third, rapid inflation usually is accompanied by large and arbitrary changes in the distribution of income and this damages economic incentives and leads to a widespread sense of injustice.

It does not follow from this, however, that "stabilization" should be taken literally, i.e., that the objective of policy should be to stabilize the price level and achieve a zero rate of inflation. Such an objective, if attained, probably would increase inefficiency and reduce the rate of growth. The reason for this is that a well functioning price system depends for its success on the flexibility of relative prices and relative prices are likely to be more flexible if the rate of inflation is positive but moderate.

An illustration may clarify the point. If the demand for bicycles diminishes while that for radios increases, the price of bicycles should fall and the price of radios should rise, i.e., relative prices should move against bicycles. Similarly, if the demand for carpenters declines while the demand for electricians increases, relative wages should shift against carpenters. The problem is that many prices (e.g. in the manufacturing sector) and many wages (notably in the urban formal sector) are "sticky" downwards; a nominal cut in some prices and wages is difficult to achieve. Yet if the aggregate level of prices is stable, i.e., there is zero inflation, a change in relative prices implies that for every price rise there must be a compensating price fall elsewhere. Sticky prices and wages may make this impossible unless stabilization measures are pushed to such an extreme that the level of effective aggregate demand falls below the potential level of production of the economy.

Rather than allow that to happen, it would be better to tolerate mild inflation so that relative prices can adjust with some prices rising faster than others but without the necessity of some prices falling absolutely while others rise. Exactly how much inflation should be tolerated on grounds of economic efficiency and growth is impossible to say, but the answer presumably depends on the degree of downward stickiness of prices and on the extent of relative price adjustments that are necessary. That is, the more sticky are prices and the greater the required changes in relative prices, the higher the rate of inflation that should be tolerated. Given the highly "distorted" structures of prices in many sub-Saharan countries, an upper limit of the rate of inflation of 20 per cent a year might be a reasonable objective of a "stabilization" programme.

This would allow the government some margin to run a modest fiscal deficit. This margin of flexibility should be used to finance public investment, not to cover the deficits of state enterprises or to finance current operating expenditure. Higher public investment, as emphasized below, should raise incomes and accelerate growth directly and, in addition, stimulate investment and growth in the private sector. Government borrowing, in moderation and if used for the right purposes, thus could play a constructive role.

Table 3 contains data on the rate of inflation (as measured by the GDP deflator) in the 33 countries

of sub-Saharan Africa for which information is available. The data cover three periods, namely, the decade of the 1980s, the first four years of the 1990s and the entire period 1980-1994. One possible test of the success of stabilization efforts would be whether the rate of inflation has diminished over time, regardless of the initial or terminal rate of inflation. That is, non-accelerating inflation might well be an objective of macroeconomic policy.

Unfortunately, sub-Saharan Africa has not done particularly well by this test. The rate of inflation actually accelerated between the first and second periods in 18 of the 33 countries. In the remaining 15 countries the rate of inflation did indeed diminish. In most of the countries where inflation accelerated, there is little cause for concern because even after the acceleration the rate of inflation was well below our cut-off point of 20 per cent a year. In only three countries (Malawi, Nigeria and Zimbabwe) did the acceleration in inflation move the country from below the threshold level to above it, and in only one country (Mozambique) was inflation initially above the threshold level and then accelerated further. Thus one can safely say that, in general, accelerating inflation is not a major problem in Africa, at least in those countries where data are available.

A second test of the success of stabilization efforts would be whether the rate of inflation during the second period (the 1990s) is below the threshold level of 20 per cent a year. The results of this test are quite encouraging: 23 out of the 33 countries for which data are available are below the threshold and only ten are above it. Half of the ten countries above the threshold (Ghana, Malawi, Tanzania, Uganda and Zimbabwe) have rates of inflation below 30 per cent a year and hence the extent of price instability may not be alarming; the remaining five countries however (Guinea-Bissau, Mozambique, Nigeria, Sierra Leone and Zambia) clearly do have serious inflationary problems and require further stabilization efforts in order to improve their macroeconomic performance.

So far we have used the word "stabilization" to refer to changes in the general level of prices, i.e., to the rate of inflation. We have argued that "stabilization" ought to imply a rate of inflation no higher than 20 per cent per annum and have used this standard to evaluate performance in Africa. There is however a second sense in which the word "stabilization" could be used, namely, stability of certain strategic or key prices. The word is seldom used in this second sense, but a case can be made that stability in this second sense is even more important than stability in the first sense of moderate inflation.

Two obvious candidates for strategic prices that ought to be kept stable are the real rate of interest and the real exchange rate. Let us consider each in turn.

The real rate of interest is the nominal (or market) rate of interest adjusted for expected or anticipated inflation. Since anticipated inflation is hard to measure, in practice the real rate of interest usually is calculated as the nominal rate of interest minus the current rate of inflation. Thus if the nominal rate of interest is eight per cent a year and the rate of inflation is ten per cent, the real rate of interest is a negative two per cent. In most discussions of macroeconomic policy emphasis is placed on the role of interest rates (that is, the deposit rate of interest) in providing an incentive to save (particularly through formal sector financial institutions) and in reducing aggregate consumption demand (and hence contributing to price stabilization). Negative or low but positive real deposit rates of interest are criticized for discouraging savings. Given the low (and even negative⁹) savings rates in many sub-Saharan countries, this criticism is not without merit. The problem with this argument however is that most of the empirical evidence suggests that savings are not very sensitive to changes in interest rates.

More significant in our view is the effect of interest rates on the efficiency of investment. That is, the strategic price is the real lending rate of interest. If the rate of interest charged by banks to their customers is negative in real terms, the risk to the borrower disappears and the demand for credit will greatly exceed the available funds. Price (i.e., interest rates) will play no role in allocating credit and the banks will have to rely on credit rationing devices to distribute funds among enthusiastic would-be borrowers. The temptation for

Table 3: Indicators of Stabilization

Country	GDP Deflator (av. annual percentage rate of growth)			Nominal Lending Rate of Banks, 1994
	1980-90	1990-94	1980-94	(% per annum)
Angola	n.a.	n.a.	n.a.	n.a.
Benin	1.6	7.9	3.8	16.8
Botswana	13.1	8.4	11.7	13.9
Burkina Faso	3.1	4.0	3.4	16.8
Burundi	4.4	7.1	5.2	n.a.
Cameroon	5.7	2.7	4.8	17.5
Cape Verde	n.a.	n.a.	n.a.	n.a.
Central Africa Republic	5.6	6.2	5.8	17.5
Chad	1.1	6.6	2.7	17.5
Chad	n.a.	n.a.	n.a.	n.a.
Comoros	0.3	2.1	0.8	17.5
Congo	3.1	6.8	4.2	16.8
Côte d'Ivoire	n.a.	n.a.	n.a.	n.a.
Djibouti	n.a.	n.a.	n.a.	n.a.
Equatorial Guinea	n.a.	n.a.	n.a.	n.a.
Eritrea	n.a.	n.a.	n.a.	14.3
Ethiopia	1.9	10.5	4.4	17.5
Gabon	8.7	5.6	14.9	25.0
Gambia	42.4	20.7	36.1	n.a.
Ghana	n.a.	11.7	n.a.	22.0
Guinea	56.1	53.4	55.3	36.3
Guinea-Bissau	9.0	17.7	11.5	n.a.
Kenya	13.6	11.9	13.1	14.3
Lesotho	n.a.	n.a.	n.a.	n.a.
Liberia	17.1	16.8	17.0	n.a.
Madagascar	14.6	22.8	17.0	31.0
Malawi	5.6	8.0	6.3	16.8
Mali	8.6	7.6	8.3	10.0
Mauritania	8.7	7.2	8.3	18.9
Mauritius	n.a.	n.a.	n.a.	n.a.
Mayotte	38.4	49.3	41.6	n.a.
Mozambique	13.6	9.5	12.4	17.1
Namibia	2.9	4.7	3.4	16.8
Niger	16.6	37.4	22.6	20.5
Nigeria	n.a.	n.a.	n.a.	n.a.
Reunion	3.3	9.7	5.2	15.0
Rwanda	n.a.	na.	n.a.	n.a.
São Tomé and Príncipe	6.4	7.1	6.6	16.8
Senegal	n.a.	n.a.	n.a.	n.a.
Seychelles	56.0	55.9	56.0	27.3
Sierra Leone	n.a.	n.a.	n.a.	n.a.
Somalia	14.8	11.9	14.0	15.6
South Africa	n.a.	n.a.	n.a.	n.a.
Sudan	n.a.	n.a.	n.a.	n.a.
Swaziland	35.7	20.4	31.3	39.0
Tanzania	4.7	5.7	5.0	17.5
Togo	125.6	28.8	97.5	n.a.
Uganda	n.a.	n.a.	n.a.	n.a.
Zaire	42.4	124.2	66.1	113.3
Zambia	11.5	27.0	16.0	34.9
Zimbabwe				

Source: Calculated from data in World Bank, *World Development Report 1996*, New York: Oxford University Press, 1996, Tables 2 and 11.

bankers to lend to their friends or to those with political influence or to engage in corrupt practices will be very great. Since the banks will not run a risk of default on their loans, bankers will have no incentive to select the best projects (those with the highest rates of return) and to weed out the worst projects (those with a high likelihood of failure). The result is that the composition of investment will be adversely affected and the return on investment will be reduced. This, in turn, will lower the average rate of growth.

It is thus important that the real lending rate of interest should be positive, moderately high and stable. While it is true that gross domestic investment in sub-Saharan Africa has been lower than in other developing regions, and in addition the rate of investment has fallen substantially (from 23 per cent of GDP in 1980 to 17 per cent in 1994), the most serious problem is the low return on investment as reflected in the large number of “white elephants”, economically non-viable projects and a poor project mix.

The real lending rate of interest influences not only what projects will be undertaken but also the degree of labour intensity of production. A low real rate of interest introduces a bias against the employment of labour, a factor in relative abundance in Africa, and instead creates incentives for producers to adopt relatively capital intensive methods of production. Given that the great majority of countries in sub-Saharan Africa obtain their capital goods from abroad, low real rates of interest in effect represent a subsidy by Africa to employment in the capital goods industries of the rest of the world. This is hardly a desirable macroeconomic policy.

As a rough rule of thumb, a sensible policy in sub-Saharan Africa might be a real lending rate of interest of a minimum of 10 per cent per annum. This would not reduce demand for investment below the available funding but it would increase the incentive to allocate funds for investment more efficiently. How well have our countries done according to this test? In the last column of Table 3 there is information on the nominal lending rate of banks in 1994. This nominal rate of interest can be compared with the actual rate of inflation in 1990-94 as reported in the second column of the Table. This comparison will give us a crude approximation to the real lending rate of interest and is the best that can be done in the absence of detailed country studies.

A comparison of nominal lending rates with the actual rate of inflation is possible in 28 countries. In 24 of the 28 countries the real rate of interest is positive; only in Guinea-Bissau, Nigeria, Sierra Leone and Zambia is it negative. This is encouraging. On the other hand, in only 12 countries is the real rate of interest at least 10 per cent a year. In other words, 16 out of 28 countries fail to pass the test. This implies that throughout much of sub-Saharan Africa “stabilization” is being hampered by less than optimal interest rate policies.

A second strategic price that ought to be kept stable is the real rate of exchange. The real rate of exchange is the nominal rate of exchange adjusted for rates of inflation in the domestic economy and in the country’s trading partners. In effect the nominal exchange rate is adjusted to take into account the difference between the domestic and foreign rates of inflation. A stable real exchange rate means that the structure of incentives as regards importing and exporting is held constant.

Once a unified “equilibrium” exchange rate is established which brings the balance of payments deficit to a level which can be sustained by long term inflows of foreign capital, both public and private, the rate of exchange should be stabilized, i.e., the real rate of exchange should remain roughly constant until fundamental economic conditions change. This is especially important in small countries where dependence on foreign trade is high. Unfortunately, there is no evidence on the evolution over time in the real exchange rate in the sub-Saharan countries, but as we shall see below, the behaviour of exports suggests that real exchange rates in many countries have been allowed to appreciate, to the detriment of the countries’ balance of payments position.¹⁰

The argument in favour of stabilizing strategic prices such as the real rate of exchange and the real borrowing rate of interest can be extended to the policy regime as a whole. Investment is inherently a risky

undertaking: it requires a commitment of funds “today” in the expectation of rewards “tomorrow”, sometimes in a rather distant tomorrow. If risks are high and uncertainty is great, the volume of investment will diminish and the time horizon of investors will shrink: investors will be unwilling to commit large sums of money over long periods of time. Volatile government policies -- and arbitrary changes in policies -- increase risk and harm investment whereas stable policies and a “credible” policy regime, by reducing uncertainty, create a more favourable economic environment and can help to stimulate private investment and growth.

Structural Adjustment

Structural adjustment policies have three major purposes. First, they are designed to effect a substantial change in the composition of output, primarily through a radical alteration in the structure of relative prices. The intention is to reform the market mechanism so that prices reflect marginal costs and benefits, in the expectation that this in turn would induce a change in the pattern of production in favour of products in which the country has or can rapidly acquire a comparative advantage. An improvement in the internal terms of trade of the rural sector, for example, would be expected to reverse the decline in per capita agricultural production. Second, structural adjustment is intended to integrate the countries of sub-Saharan Africa more closely into the global economy. Exports were expected to grow rapidly and to increase their share of GDP. Foreign trade was expected to become a leading sector, reversing the import substituting industrialization strategy adopted in the early post-independence period. Third, structural adjustment is intended to raise the rate of investment and improve the allocation of investment thereby increasing the rate of growth of output, incomes and employment. Poverty would decline as average incomes rose. The ultimate consequence of the economic reforms thus would be a fundamental restructuring of the economy and a marked improvement in its performance.

We shall analyse below each of the three components of structural adjustment policies in sub-Saharan Africa. Before doing so, however, it is important to distinguish between those outcomes which are the result of exogenous “shocks” and those which can be attributed to the policy reforms and the way they were introduced. Many analysts have argued that the distressing macroeconomic performance in Africa is due in large part to external shocks, notably a dramatic deterioration in the external trading environment. The decline in the terms of trade often is singled out as a major contributing factor.

In the second column of Table 4 data are presented on the change in the external terms of trade for 33 countries between 1985 and 1994. In two cases (Burkina Faso and Senegal) there was no change in the terms of trade; in eight cases the terms of trade improved, usually only moderately but in Botswana and Mauritius dramatically. In the remaining 23 countries the terms of trade declined, often very sharply indeed, as in Burundi, Uganda, Nigeria, Rwanda and Gabon. Clearly there was an external trade shock in many countries and the shock was serious. Inspection of the data in Table 4 shows however that there is no close association between the change in the terms of trade and the rate of growth either of exports or of investment.

In Cameroon, for example, the terms of trade declined 30.1 per cent but the value of exports nonetheless increased 6.3 per cent a year during the period 1980-1994. In Niger the terms of trade improved by 11 per cent but the rate of growth of exports was negative, namely, -5.2 per cent a year. Turning to investment, in Malawi the terms of trade deteriorated by 12.1 per cent but investment grew by 7.0 per cent a year. In South Africa, in contrast, the terms of trade improved fractionally (by 0.9 per cent) but investment declined by 2.7 per cent a year.

A second exogenous shock frequently emphasized is internal, namely, the widespread ethnic conflict and civil discord in sub-Saharan Africa. The direction of causality almost always is said to run from ethnic conflict to economic disruption. The conflict and violence in countries such as Angola, Mozambique, Ethiopia, Somalia, the Sudan, Liberia and Rwanda undoubtedly did severely damage the economy (or large parts of it) contributing mightily to the economic crisis in those countries. But the relationship between ethnic conflict and economic performance is more subtle than this implies: it can be argued that the

economic crises in sub-Saharan Africa increased the likelihood of domestic conflicts and, once started, increased the intensity of conflict. According to this view, ethnic conflict is at least in part endogenous

During the 1960s, in the immediate post-independence era, growth in sub-Saharan Africa was encouraging, human development indicators improved substantially, incomes and general well being increased and poverty began to decline. The import substituting industrialization strategy that was adopted, however, soon reached its limits, particularly in the smaller countries, and in the 1970s per capita incomes stagnated and began to decline. By the 1980s, as we have seen, most of sub-Saharan Africa found itself in the midst of a severe economic crisis. Per capita output declined steadily, average incomes sometimes fell sharply, foreign indebtedness rose precipitously, food production per head declined and hunger became chronic. In some countries (Ethiopia, Somalia, southern Sudan and the Sahelian countries) famines occurred. Competition for food, jobs (particularly in the formal sector), income earning opportunities in general and productive resources intensified. Livestock operators, for example, attempting to preserve traditional grazing and water rights, often found themselves in conflict with peasant farmers attempting to expand the cultivated area into lands previously regarded as marginal.

The intensification of competition over livelihoods, resources and opportunities in not a few instances resulted in social conflicts of a bewildering variety: between Asian traders and indigenous peoples; between one “tribe” and another; between groups from different regions, or of different religious orientations; between pastoralists and farmers; between people of different “race”, and so on. Military dictatorship, civil war, banditry, ethnic confrontation and even genocide and ethnic cleansing became a commonplace. Economic failure often had horrible political consequences. Restructuring became essential.

There are however three very distinct ways of bringing about structural adjustment -- of radically changing the composition of output -- and these three ways or paths have markedly different consequences for the people concerned. The first path is the one that is usually implicit in conventional policy advice given to sub-Saharan African countries. It is assumed that changes in the composition of output occur as a result of a reallocation of the existing stocks of productive assets. That is, physical, human and natural capital can be reassigned and combined in different proportions to produce a new mix of products from the set of feasible alternatives. Movement occurs along a given “production possibilities frontier” in response to changes in relative product prices. This movement is assumed to be frictionless and rapid and consequently full utilization of resources is ensured and structural adjustment is achieved without significant lags.¹

This story is not implausible. Assume, for instance, that the price of millet falls relative to the price of maize. Farmers are likely to reallocate their land, labour power and mechanical equipment from the production of millet to that of maize. The output of millet will decline and the output of maize will increase and, moreover, this change in the cropping pattern will occur quickly (namely, within one crop season) and without a decline in the degree of utilization of land, physical capital or labour. A change in relative crop prices is sufficient in this case to bring about a change in the composition of output.

Consider another example: a fall in the price of cocoa relative to alternative crops. In this case there may be no supply response, i.e., a fall in cocoa production and a corresponding rise in the output of alternative crops. That is, there may be no reallocation of resources, no structural adjustment. The reason for this is that once the heavy investment in cocoa trees has occurred, the marginal cost of harvesting the output may be very low and hence even if prices fall sharply it may pay the farmer to maintain production. The failure to respond to the price disincentive may persist indefinitely, or until it is necessary to replace the old cocoa trees by replanting young ones.

1 A more detailed description of the three adjustment paths can be found in the Annex of this paper.

Table 4: Indicators of Restructuring in Sub-Saharan Africa

Country	Growth of Exports 1980-1994 (% per annum)	Change in the Terms of Trade, 1985- 1994 (%)	Growth of investment 1980-1994 (% per annum)
Angola	n.a.	n.a.	-0.9
Benin	-1.0	-0.9	n.a.
Botswana	n.a.	+56.7	1.7
Burkina Faso	-1.1	0.0	2.0
Burundi	2.5	-60.9	n.a.
Cameroon	6.3	-30.1	-3.7
Cape Verde	n.a.	n.a.	n.a.
Central Africa Republic	-1.4	-16.5	0.9
Chad	0.9	+4.0	12.6
Comoros	n.a.	n.a.	n.a.
Congo	5.1	-38.0	-10.4
Côte d'Ivoire	-1.1	-25.7	-7.3
Djibouti	n.a.	n.a.	n.a.
Equatorial Guinea	n.a.	n.a.	n.a.
Eritrea	n.a.	n.a.	n.a.
Ethiopia	n.a.	-37.8	n.a.
Gabon	3.3	-41.6	-4.1
Gambia	-1.2	-19.0	1.4
Ghana	4.0	-31.2	2.1
Guinea	n.a.	-24.2	n.a.
Guinea-Bissau	-2.9	+1.1	4.3
Kenya	3.2	-35.5	-0.1
Lesotho	6.0	n.a.	7.9
Liberia	n.a.	n.a.	n.a.
Madagascar	-0.1	-33.9	1.3
Malawi	1.9	-12.1	7.0
Mali	4.6	+3.0	5.3
Mauritania	1.3	-3.6	-2.0
Mauritius	8.7	+57.1	10.0
Mayotte	n.a.	n.a.	n.a.
Mozambique	-1.5	+9.7	0.7
Namibia	1.9	n.a.	7.6
Niger	-5.2	+11.0	-6.2
Nigeria	0.3	-48.5	-9.1
Reunion	n.a.	n.a.	n.a.
Rwanda	3.5	-44.9	-0.9
São Tomé and Príncipe	n.a.	n.a.	n.a.
Senegal	2.4	0.0	2.5
Seychelles	n.a.	n.a.	n.a.
Sierra Leone	-3.8	-18.3	-2.5
Somalia	n.a.	n.a.	n.a.
South Africa	2.0	+0.9	-2.7
Sudan	n.a.	n.a.	n.a.
Swaziland	n.a.	n.a.	n.a.
Tanzania	n.a.	-34.1	n.a.
Togo	-3.5	-35.3	-8.5
Uganda	3.2	-61.1	7.4
Zaire	n.a.	n.a.	n.a.
Zambia	1.6	-4.5	-6.8
Zimbabwe	5.1	-16.0	1.0

Source: Calculated from data in World Bank, *World Development Report 1996*, New York: Oxford

University Press, 1996, Tables 3 and 11.

Consider, finally, the opposite case of a rise in the price of a tree crop (say, coffee) relative to the price of an annual crop (say, beans). It is not possible merely to reallocate the land and labour used to grow beans in order to increase coffee production. Considerable investment is needed: the farmer must purchase and plant coffee saplings and then wait several years for the trees to mature to a fruit bearing age. This investment will not occur unless (a) the farmer expects the relatively favourable price of coffee to be semi-permanent and (b) the farmer is able to finance the investment, including the consumption needs of himself and his family while waiting for the coffee trees to yield their first harvest. That is, structural adjustment in this case is heavily dependent upon the rate of investment.

We have deliberately selected examples from agriculture to illustrate the first path of structural adjustment -- namely, adjustment through reallocation -- because conditions in agriculture more closely approximate the assumptions that lie behind the conventional view. Even so, it is evident that once specific capital is introduced, as was the case with cocoa and coffee trees, the conventional story becomes much more complicated.

Let us turn now to the second path of structural adjustment. This is the path that comes closest to describing the path actually followed in much of sub-Saharan Africa and this path can be called structural adjustment through contraction. Imagine that structural adjustment is interpreted to mean a shift in the composition of output away from manufactured goods and in favour of minerals (petroleum, natural gas, copper, diamonds, platinum, gold, etc.). How might this shift occur within a context of decreased aggregate demand and price stabilization and of a radical change in relative prices?

Clearly both the demand effects and the relative price effects would reduce the profitability of the manufacturing sector. Labour would be discharged, idle manufacturing capacity would increase, unwanted capital equipment would be released for use elsewhere or sold as scrap, output of manufactured goods would decline. So far so good: production in the low priority sector would contract and the resources used in that sector would in principle become available to facilitate the expansion of the minerals sector, the high priority sector. But could the resources formerly used in manufacturing profitably be re-absorbed in the minerals sector? There is reason for doubt, and the doubt centres on the specificity of much physical and human capital.

The physical capital used in a brewery, or a textile mill or a food processing plant cannot rapidly be converted for use down a mine shaft, to cut a seam of coal, to sift diamonds, to transport ores on a conveyor belt or to separate the economically valuable minerals from the surrounding rock. Each economic activity requires specific types of capital equipment, specific tools, even sometimes specific buildings and this physical capital cannot readily be reallocated for other purposes.

The same is true of much human capital. Indeed the existence of firm-specific human capital is one reason why industrial enterprises often pay their experienced and skilled employees more than a "market clearing" wage. It is worthwhile for firms to pay a premium in order to retain their human capital. The worker on an electronics assembly line (who could well be female) cannot be transformed into an underground miner (where physical strength is important). The worker in a furniture factory does not possess the skills needed on an oil rig. The worker in a pharmaceutical company, the salesperson in a kitchen utensils factory, or the quality control inspector in a meat processing plant can only with difficulty be absorbed in a totally different occupation. Resources, in other words, cannot normally be reallocated quickly and without friction. Expansion of newly profitable activities (minerals in our example) usually requires investment both in plant and equipment (physical capital) and in the education and training of the labour force (human capital). Moreover, the greater the desired transformation of the economy, the more essential it is to achieve a high rate of investment in physical and human capital.

Structural adjustment can still occur, but it occurs through contraction of unprofitable activities

combined with stagnation of output in the profitable activities. That is, the level of production of both manufactured goods and minerals is much lower. Structural adjustment is purchased at the price of economic contraction, high unemployment and massive poverty. This essentially is what has happened in large parts of sub-Saharan Africa.

The response of well meaning advisors and aid donors has been to advocate the construction of a “safety net” to alleviate the worst forms of hardship. This advocacy however is based on a misconception about the nature of the problem. A safety net would be appropriate if the increased unemployment and poverty were temporary and constituted a small deviation from the path of structural adjustment through resource. In fact however sub-Saharan Africa is on a quite different path -- a path of structural adjustment through contraction -- and the human distress associated with this path is neither of short duration nor small in magnitude. The resources required to construct an effective safety net would consequently be enormous and such an undertaking is not feasible given the sharp decline in available resources. What is needed is not so much a safety net as policies that put the economy on a different path of adjustment.

Here, too, well meaning advisors and aid donors have an inkling of what is required, namely, a sharp acceleration in the rate of growth of investment. There has been a proliferation of so-called structural adjustment loans and, indeed, the amount of foreign aid received in sub-Saharan Africa, when expressed as a proportion of GDP, is relatively high in many countries.¹¹ The problem is that foreign capital inflows have not been used to increase the level of investment but instead they have been used to finance current public and private expenditure. This reflects not the foolishness of donors but inappropriate government policies during the transition.

This brings us to the third path of structural adjustment -- namely, adjustment through investment. The path to structural adjustment occurs without any reallocation of pre-existing resources and without any decline in the level of output in the manufacturing sector. Structural adjustment along this path is part of a growth strategy, a strategy designed to increase investment in physical, human and natural capital and to channel that investment into economic activities which have become highly profitable as a result of changes in the structure of incentives.

The third path -- structural adjustment through investment -- does not result in a rise in unemployment, a fall in average real incomes or an increase in poverty. On the contrary, the rate of growth of GDP accelerates and average incomes rise rapidly. Moreover, as the experiences of China and Viet Nam illustrate during their transition from central planning to a more market oriented economic system, an investment dominated path of structural adjustment is compatible with a simultaneous expansion of all sectors of the economy, but of course expansion at different rates. Far too much attention has been devoted to adjustment through reallocation in sub-Saharan Africa; much more attention should in future be devoted to adjustment through investment.

Structural adjustment in the external sector

As mentioned earlier, one of the objectives of structural adjustment policies in Africa is to improve performance in the foreign trade sector and in particular to increase the rate of growth of exports. In the first column of Table 4 we report figures for the rate of growth of the value of exports for the 31 countries for which data are available. The simple average rate of growth of exports (G_x) for these 31 countries during the period 1980-1994 was 1.5 per cent a year. There was of course considerable variation around this average, but taken at face value the rate of growth does appear to be remarkably slow.

A clearer understanding of the significance of the export growth figures can be obtained by comparing them with other relevant parameters. This is done in Table 5. We ask in the first row of the Table whether the rate of growth of export earnings was negative ($G_x < 0$). The answer is that in 11 countries the value of exports declined absolutely. These 11 countries in 1994 had less foreign exchange

from exporting to finance the imports needed for development than they did 14 years earlier. These unfortunate countries included Côte d'Ivoire, Burkina Faso and Niger, among others. In the other 20 countries the rate of growth was at least positive. Nevertheless, the evidence suggests that about a third of the countries of sub-Saharan Africa face a potentially crippling foreign exchange constraint on development.

Table 5: Export Performance in 31 Countries of Sub-Saharan Africa, 1980-1994
(number of countries)

	Yes	No	Total
Gx < 0			
Gx # Gpop	11	20	31
Gx # Ggdp	22	9	31
	18	13	31

In the second row of Table 5 we ask whether the rate of growth of exports was slower than the rate of growth of the population (Gpop). In 22 countries -- more than two-thirds of the total -- the answer was yes. That is, the per capita availability of foreign exchange earned from exporting was less in 1994 than in 1980 in a large majority of sub-Saharan African countries. The people of Africa have become less integrated into the world economy and instead have become more dependent (in the absence of foreign aid) on domestic production to satisfy their needs for capital, intermediate and consumption goods.¹² In only nine countries did export earnings per head of the population increase.

Finally, in the third row we consider whether exports grew more slowly than GDP (Ggdp). If structural adjustment in the foreign trade sector is to be a success, one would expect the ratio of exports to GDP to rise. Alas, in 18 countries it fell. At least in these countries, it is perhaps unlikely that exports could be the engine of growth, as some advocates of structural adjustment have hoped. Given the small size of most of the countries in the region, it is unrealistic to imagine that national self-sufficiency is consistent with high levels of development. The trend in the 18 countries where exports have grown less rapidly than total output is therefore cause for concern. On the other hand, there are 13 countries in sub-Saharan Africa where exports have grown more rapidly than GDP. While it would be premature to herald this as evidence of export-led growth, relative growth rates in some of these countries at least are moving in the right direction.

Investment: The Neglected Path to Adjustment

This brings us closer to the heart of the matter, the urgent need to increase investment and improve its allocation among sectors and projects. This should be the primary task of macroeconomic policy in sub-Saharan Africa. Indeed, unless this can be achieved, structural adjustment will fail. The task is formidable.

The third column of Table 4 contains data on the annual rate of growth of investment in 31 countries during the period 1980-1994. The simple average for these 31 countries is a miserable 0.3 per cent a year. Even this low figure probably overstates the true rate of growth of investment in sub-Saharan Africa as a whole since many of the countries for which data are lacking have been wracked by civil wars and have suffered considerable destruction of and damage to the stock of physical capital.

As usual in so large and diverse a group of countries, there are several which have performed much better than average and several which are much worse than average. Uganda, Namibia and Lesotho have experienced rates of growth of investment in excess of 7.0 per cent a year; in Mauritius investment has grown 10 per cent a year and in Chad it has increased 12.6 per cent a year. If these rates can be sustained in the decades ahead, these five countries have a good chance of achieving structural adjustment through investment. At the other extreme are five countries -- Zambia, Côte d'Ivoire, Togo, Nigeria and Congo --

where investment has declined between 6.8 and 10.4 per cent a year. These are classic cases of structural adjustment through contraction.

In Table 6 we ask and answer questions about investment performance similar to the questions posed about export performance in Table 5. In the first row of Table 6 we ask whether the rate of growth of investment (G_i) was negative. The answer, surprisingly, is that in 14 out of the 31 countries for which we have data the rate of growth was indeed negative. That is, in those countries the stock of physical capital assets was smaller in 1994 than it was in 1980. There was an absolute decline in the value of such things as the number of dwellings and commercial buildings, the stock of machinery and transport equipment, the quality and length of the road and railroad networks, the size of inventories, and so on. The productive potential of the economy, in other words, was slowly shrinking. In the other 17 countries, fortunately, the stock of capital assets was increasing, even if the rate of growth in most cases was rather low.

Table 6: Investment Performance in 31 Countries of Sub-Saharan Africa, 1980-1994 (number of countries)

	Yes	No	Total
$G_i < 0$	14	17	31
$G_i \# G_{pop}$	22	9	31
$G_i \# G_{gdp}$	20	11	31

In the second row of Table 6 we ask whether investment was growing less rapidly than the population (G_{pop}). In more than two-thirds of the cases (22 countries) the per capita rate of growth of investment was negative. In the remaining nine countries it was positive. The implication is that the amount of physical capital per person was declining in most of sub-Saharan Africa. Assuming that in the long run average incomes are closely correlated with the amount of capital available per person, the data suggest that even the currently low levels of income in sub-Saharan Africa are not sustainable unless trends in population growth and investment are reversed.

Finally, in the third row of the Table we address an issue that is central to structural adjustment through investment. Is the rate of growth of investment less rapid than the rate of growth of GDP (G_{gdp})? In 20 out of 31 countries it turns out that investment is growing less rapidly than total output, implying that the investment ratio is declining in about two-thirds of the countries of sub-Saharan Africa. In 11 countries the investment ratio is rising.

A falling investment ratio wouldn't matter if the ratio were high at the beginning of the period of structural adjustment and per capita incomes were growing rapidly. But in most of sub-Saharan Africa the investment ratio is low and per capita incomes are falling. In these circumstances it is essential to increase the rate of growth of investment and raise the proportion of output that is devoted to capital formation. Only thus can employment be generated and the long slide in living standards be halted and reversed.

Labour and Adjustment Through Contraction

The three paths to structural adjustment obviously have very different implications for employment and the remuneration of labour. The path followed in most of sub-Saharan Africa, unlike the other two possible paths, is highly disadvantageous. Those who were working in 1980 suffered the consequences of a decline in output per head; those who entered the work force between 1980 and 1994 found it more difficult than their predecessors to obtain full time employment and, when employed, they found that on average they were less well rewarded for their efforts than the previous generation.

The labour force in sub-Saharan Africa is growing exceptionally fast. Indeed only in the Middle East and North Africa is the labour force increasing more rapidly. Between 1980 and 1994 the simple average annual rate of growth of the labour force in 35 countries of sub-Saharan Africa for which we have data was 2.7 per cent. The lowest rate of growth was in Guinea-Bissau and Mozambique (1.6 per cent a year) and the

Table 7: The Labour Force

Country	Growth of the Labour Force, 1980-1994 (% per annum)	Percentage of the Labour Force in Agriculture, 1990
Angola	n.a.	n.a.
Benin	2.6	64
Botswana	3.3	46
Burkina Faso	2.0	92
Burundi	2.8	92
Cameroon	2.6	70
Cape Verde	n.a.	31
Central Africa Republic	1.8	80
Chad	2.1	83
Comoros	n.a.	77
Congo	2.8	49
Côte d'Ivoire	3.0	60
Djibouti	n.a.	n.a.
Equatorial Guinea	n.a.	77
Eritrea	n.a.	n.a.
Ethiopia	2.6	86
Gabon	2.4	52
Gambia	3.4	82
Ghana	3.1	59
Guinea	2.3	87
Guinea-Bissau	1.6	85
Kenya	3.6	80
Lesotho	2.6	40
Liberia	n.a.	72
Madagascar	3.0	78
Malawi	3.5	87
Mali	2.7	86
Mauritania	2.2	55
Mauritius	2.1	17
Mayotte	n.a.	n.a.
Mozambique	1.6	83
Namibia	2.4	49
Niger	3.0	90
Nigeria	2.6	43
Reunion	n.a.	n.a.
Rwanda	3.1	92
São Tomé and Príncipe	n.a.	n.a.
Senegal	2.5	77
Seychelles	n.a.	n.a.
Sierra Leone	1.9	67
Somalia	n.a.	75
South Africa	2.6	14
Sudan	n.a.	69
Swaziland	n.a.	39
Tanzania	3.2	84
Togo	2.7	66
Uganda	2.9	85
Zaire	n.a.	68
Zambia	3.4	75
Zimbabwe	3.3	68

Sources: World Bank, *World Development Report 1996*, New York: Oxford University Press, 1996 and UNDP, *Human Development Report 1996*, New York: Oxford University Press, 1996.

highest was in Kenya (3.6 per cent). (See Table 7.) In 12 countries the work force increased 3.0 per cent a year or more.

Rapid growth in the numbers of those seeking employment combined with slow growth of investment has resulted in a fall in the capital-labour ratio in most countries. This has undermined the ability of the economy to sustain production at previously attained levels. As can be seen in Table 8, the capital-labour ratio was constant in one country and rose in eight; in the other 22 countries for which we have data, it fell. That is, in two-thirds of the countries of sub-Saharan Africa the amount of capital available to equip each member of the labour force actually declined over a 14 year period.

This negative trend in capital-labour ratios is reflected in trends in the productivity of labour and hence in the income received by working people. If the labour force rises more rapidly than output, the average productivity of labour will fall and, in fact, this is what occurred in much of sub-Saharan Africa. In 12 of the 33 countries for which we have data, the average productivity of labour increased, but in the remaining 21 countries it fell. This downward trend in productivity, extending over 14 years in 21 countries, means that it was impossible to maintain the real incomes of workers and, primarily because of this, poverty increased.

**Table 8: Changes in the Capital-Labour Ratio and the Productivity of Labour, 1980-1994
(number of countries)**

	Rising	Constant	Falling	Total
Capital-labour ratio	8	1	22	33
Productivity of labour	12	0	21	33

Structural adjustment through contraction, in other words, resulted in a contraction of employment opportunities and real incomes. This contraction of the labour market took various forms which differed in urban and rural areas. In the urban areas the formal sector declined absolutely in terms of output and employment.¹³ This is especially true of public sector activities. Those who remained in formal sector employment usually experienced a fall in real wages,¹⁴ demonstrating that wage rates may be sticky but that they are not rigidly fixed.¹⁵

Some of those who lost formal sector jobs became openly unemployed and some of the new entrants into the labour market who were unable to obtain formal sector jobs continued to search and meanwhile joined the ranks of the openly unemployed. Rates of open unemployment however have not risen dramatically in sub-Saharan Africa. Instead there has been a large increase in part-time employment and a rapid “informalization” of the urban economy in response to the contraction of formal sector activities. Indeed the “informalization” of the economy is the most notable, or at least the most visible, consequence of the prolonged economic crisis. Finally, unable to find productive employment, some workers became discouraged and withdrew from the labour force; they simply dropped out.

The implication is that although there is not a lot of idle labour in Africa’s cities, there is an enormous amount of slack in the labour market. That is, there is a great deal of labour that potentially could be employed in more productive activities, including of course investment activities. We shall argue below that this potential should be exploited by organizing investment projects in the public sector.

Although the rate of urbanization in Africa is the most rapid in the world, the proportion of the labour force engaged in agriculture also is the highest in the world. The second column of Table 7 contains information for 43 countries. On average, 68 per cent of the labour force in these countries obtains a livelihood from agriculture. The range is very wide. At the top end of the distribution, three countries (Burkina Faso, Burundi and Rwanda) employ 92 per cent of the labour force in agriculture whereas at the

lower end of the distribution only 14 per cent of the working population is engaged in agriculture in South Africa. In 34 out of the 43 countries however more than 50 per cent of the labour force is in the agricultural sector. The economies of sub-Saharan Africa, in other words, still are predominantly rural.

Worsening labour market conditions in the rural areas were in large part a manifestation of a fall in labour productivity in agriculture -- and of a decline in food output per capita. Small farmers, tenants and wage workers experienced a fall in real incomes because of a fall in output per worker per year. Structural adjustment policies, contrary to the expectations of many, seem to have been associated with a decline in the rate of growth of agricultural output. In the decade of the 1980s, agriculture in sub-Saharan Africa grew 1.8 per cent a year on average, but in the period 1990-1994 the rate of growth declined by more than half, to 0.7 per cent a year.

Structural adjustment brought about a change in relative prices which favoured agriculture (as opposed to manufacturing) and, within agriculture, export crops (as opposed to food crops). Careful studies of Sierra Leone, Tanzania and Zambia however indicate that the change in relative prices was not sufficient to induce (i) an acceleration of agricultural output as a whole, or (ii) a switch from food production to export crops or (iii) a reverse flow of labour from urban to rural areas.¹⁶ The failure of changes in relative prices to reallocate resources in the predicated direction could of course be attributed to the presence of long lags in the system, but a more natural interpretation of the evidence, consistent with the view presented above, would be that reallocation of resources is extremely difficult in the absence of high rates of investment.¹⁷ Getting prices right is not enough.

The Structure of Incentives

Structural adjustment through reallocation places primary emphasis on improving the structure of incentives by reforming and liberalizing prices. Specific policies advocated include the removal of price controls and government subsidies, removal of quotas and other non-tariff barriers to international trade combined with a reduction of tariffs to a uniform modest level, and unification and liberalization of the foreign exchange rate. The broad purpose is to eliminate "distortions" so that prices accurately reflect social costs and benefits. We have no quarrel with this broad objective, but we would make three qualifications.

First, if one supports a programme of structural adjustment through investment, then the most important aspect of the structure of incentives is its effect on the efficiency of investment. The challenge of economic reform is to produce a set of price signals that channel new investments into the socially most profitable sectors and projects. Had the allocation of investment in sub-Saharan Africa been better, the rates of growth of output and incomes would have been much higher, even if the level of investment had remained relatively low. The primary objective of a new structure of incentives should be to correct this glaring deficiency.

Second, it would be a serious mistake to equate price liberalization with *laissez faire*. Prices convey information. When markets work well they convey accurate information about social costs and social benefits, but markets often do not work well -- they convey misleading information -- and when this occurs there is a possible argument for government intervention. For example, strong cases can be made to tax the consumption of tobacco products (to protect public health), or to tax the consumption of alcoholic beverages (to prevent injury or death to others in automobile accidents) or to tax the use of hydrocarbon fuels (to reduce damage to the environment). These are examples of negative "externalities" which result in market failure.

Most important from our perspective are market failures that lead to a severe misallocation of investment. Consider education. It is widely recognized that expenditure on education is a form of investment in human capital that confers substantial benefits both on the person being educated and on society at large. That is, there are large positive "externalities" associated with education which are not

taken into account by a free market. Hence there is a good reason, on grounds of efficiency in investment allocation, for governments to subsidize the cost of education. The same is true of some types of vocational training. Governments which reduce expenditure on primary and secondary education, either on grounds that they are reducing subsidies and thereby improving the structure of incentives or on grounds that they are reducing the fiscal deficit and thereby promoting stabilization, are implicitly turning their backs on structural adjustment through investment and following a path of structural adjustment through contraction.¹⁸

A similar argument can be made for government expenditure on public health and nutrition programmes. The benefits of measures to prevent the spread of communicable diseases (cholera, yellow fever, typhoid), malaria and, above all, AIDS are reaped by the community as a whole and not just by the individual receiving treatment. There is thus a case for collective provision of disease prevention and eradication services; if left to the market these services will be underprovided. More generally, well nourished children and a healthy working population will absorb knowledge more quickly and be more innovative and productive. This will raise the average productivity of labour and benefit directly the workers concerned and indirectly their dependents, co-workers and fellow citizens.

Thus public subsidy of certain types of expenditure on education, training, nutrition and health should be seen as improving the allocation of investment. These are investments in human capital with potentially high rates of return. The experience of East Asia demonstrates that this form of market intervention contributes to faster, more sustainable and equitable growth. The same almost certainly would be true in sub-Saharan Africa. Where there are major market failures (as in education and health) selective government intervention can improve the structure of incentives.

The third qualification to more conventional ways of thinking about incentives is to note that there is much more to the structure of incentives than relative prices.¹⁹ The price structure is only a part, albeit an important part, of the structure of incentives. Equally important are barriers which exclude people from participating in some markets, as happens with licensing regulations which restrict a number of informal sector activities in many cities in sub-Saharan Africa; or features of an economy which restrict the ease of access of some people to markets, such as the restricted access of small farmers and small businesspeople to formal sector credit markets; or overt discrimination, which reduces occupational mobility and income-enhancing opportunities of some people because of their gender, ethnic or other characteristics. There are also many cases of missing markets in sub-Saharan Africa, where economic activity occurs without market mediation and consequently the output that is produced is not explicitly valued. Important examples include food produced for household consumption, in urban as well as rural areas, by unpaid female labour and, more generally, labour performed by female labour within a household economy in a wide range of activities that include food preparation, child raising, assistance to the elderly and provision of medical services.²⁰

The structure of incentives includes all activities, whether mediated by the market or not, and in the case of market-mediated activities, it includes discrimination, barriers to entry, market access and, of course, relative prices. The essential point, however, is that even if one is a believer in structural adjustment through reallocation, and hence focuses on changing incentives, "getting prices right" will not suffice. Particularly in sub-Saharan Africa the phenomenon of missing markets is widespread. Unpaid women producing unpriced goods and services account for a high proportion of productive labour. The price system -- the structure of incentives narrowly defined -- often is biased against the crops grown by women (and other goods and services they produce) as well as against innovations which reduce the time and effort spent by women in crop cultivation (and other activities), since the labour of women is not valued by the market. It is hardly surprising that an incentive system, broadly defined, that is strongly biased against half the population has produced such unsatisfactory outcomes.

Consistent with our theme of giving high priority to a better allocation of investment, there are two areas where substantial improvements are possible.²¹ First, public sector investment often is poorly allocated. It is excessively capital intensive and hence creates less employment than it could; there is

enormous scope for labour intensive public investment programmes, as we shall see below. In addition, public investment is excessively concentrated in the capital and hence rural-urban and regional inequalities are accentuated. Further, public investment often is directed to projects that have low rates of return and hence produces less income than it should. Fresh thinking is needed on the role of the state in domestic resource mobilization and the financing of investment, on project selection and evaluation, and on the objectives and management of state enterprises. The “commercialization” of state owned enterprises may be more important than the “privatization” of state enterprises.

Second, private sector investment also is poorly allocated in sub-Saharan Africa. The reason for this is the underdevelopment of capital markets and the concentration of the banking system. The problem is partly a matter of inappropriate pricing, namely, low real borrowing rates of interest, as discussed above. In addition there is a problem about the sectoral allocation of credit. Most people in Africa do not in fact have access to formal sector credit at any price and large sectors of the economy are starved of finance. Small and medium sized urban businesses have much difficulty obtaining credit; agriculture and livestock are under-supplied, apart from large plantations and ranches, and small farmers obtain virtually no credit from banks. Fishermen and rural artisans cannot obtain loans from commercial banks; the informal sector as a whole has little access to credit; new enterprises in any sector are rarely able to obtain start-up capital. The great majority of people in Africa either are self-financed or use the informal credit market supplied by traders, money lenders, friends and relatives. Most formal sector credit, in effect, is reserved for large, well established urban enterprises. The consequence of this massive defect in the structure of incentives is that many highly profitable private sector enterprises fail to get established and many small but established enterprises are unable to grow rapidly for lack of credit.

The pace and efficacy of structural adjustment would be much increased by improvements in the functioning of capital markets in Africa -- by institutional innovation, by improved regulation of the banking sector, by supporting credit programmes targeted at specific groups such as women, informal sector entrepreneurs and small farmers and by increasing the supply of “venture capital”. The emphasis should be on encouraging new private sector enterprises to emerge (particularly those which are small in scale and labour intensive) and on enabling small private sector enterprises to expand, innovate and penetrate new markets, including of course export markets. Changing the structure of incentives, in other words, is about accelerating growth by creating new productive assets; a more efficient allocation of the existing stock of resources, while not unimportant, is of secondary significance.

Investment and the Role of the State

The obvious question to ask of an investment-led strategy of structural adjustment in sub-Saharan Africa is how an acceleration of investment can be financed. There are three possible sources we shall examine: (a) foreign financing, (b) private sector saving and investment and (c) the public sector. Let us consider each of these in turn.

It is always tempting to look abroad for a solution to financial problems. In the case of sub-Saharan Africa, however, it is unlikely that a solution will be found there. Foreign direct investment in the region is negligible and is likely to remain so. A few countries with rich mineral deposits to exploit may be able to attract private foreign capital and South Africa’s relatively large urban market may attract some foreign investors, but most countries with small markets, falling incomes and poorly educated workers will be avoided by foreign capital. The evidence from China and the market economies of East and Southeast Asia is that foreign capital flows to a country in large volume only after the country has succeeded in attaining rapid rates of growth. That is, inflows of private foreign capital are a consequence of successful development, not a cause of it.

There is of course foreign aid, but total aid allocations have been falling rapidly and it is perhaps improbable that the trend will be reversed in the near future. In principle Africa’s share of a declining total could increase, so that aid inflows actually rose or at least remained constant, but it would seem unwise to

plan on this when designing a strategy for structural adjustment. If foreign aid is available, and it is thought to be useful,²² it would be a welcome addition to domestic resources, but when it comes to financing national development, governments in sub-Saharan Africa should make conservative assumptions and choose self-reliance.

Foreign debt is a major problem in many countries of the region. In sub-Saharan Africa as a whole total external indebtedness increased by 153 per cent between 1980 and 1994 and external debt as a percentage of GNP rose during the same period from 30.6 to 78.7 per cent. Debt servicing in some countries (Côte d'Ivoire, Congo, Burundi, Uganda, Kenya) absorbs well over 30 per cent of export earnings and a combination of debt forgiveness, a moratorium on repayment and unilateral default could release large sums of foreign exchange to help finance an investment-led structural adjustment programme.²³ Countries contemplating unilateral action, however, should consider carefully the possible consequences, namely, termination of aid programmes and a reduction in the already meagre inflows of private foreign capital.

Despite the low and even negative savings rates that characterize sub-Saharan Africa, the private domestic sector could under the right conditions finance a much higher level of investment. A change in the structure of incentives along the lines suggested, including greatly widening access of potential investors to formal sector credit institutions, could increase the incentive to save and improve the allocation of savings. Because some saving by a would-be borrower almost always is required before obtaining a loan, widening access to lending institutions should increase the number of savers and the rate of savings.

It is customary to think of the savings decision as being separate from the investment decision. The two are guided by different incentives and are brought into balance by price adjustments in financial markets and variations in the level of national income. This is only a partial view of the savings process however. In many sectors of a sub-Saharan economy the amount saved by an enterprise, household or individual depends upon the specific investment opportunities open to that enterprise or household. If those engaged in a small family owned and family operated firm, for example, see a promising opportunity for expansion, they may seize the opportunity by reinvesting some of the firm's profits rather than using them to increase current consumption. That is, it is the presence of a profit opportunity that determines simultaneously the amount of investment and saving that occurs. The saving and investment decisions merge into one. People restrict their consumption not in order to "save" but in order to finance a desired investment. In such a situation, the role of government policy should not be to try to induce people to consume less (save more) but rather to create a development environment in which there are large numbers of profitable investment opportunities.

This way of examining the problem of how to finance investment in sub-Saharan Africa can be extended further. In many instances investment requires little more than the direct application of labour: digging an irrigation or drainage ditch; planting a tea garden, coffee bushes or fruit trees; clearing, levelling or terracing a field; constructing a wall, animal shelter or home out of earth bricks. Whether a household will expend labour on such tasks depends on whether it is worthwhile or profitable. If there is plenty of slack in the labour market, e.g. in the form of seasonal rural unemployment, potentially profitable investments can be "financed" not by consuming less (i.e. saving) but by working longer. That is, surplus labour at the level of the household can be used to finance household level investment projects. The problem is not how to save more but how to create investment opportunities. If there is an abundance of investment opportunities, the savings problems will take care of itself.

The issue then is not savings in a narrow sense but domestic resource mobilization. This way of posing the problem sheds new light on the question of the right balance between public and private sector investment. Governments which have attempted to follow a path of structural adjustment through reallocation have regarded public sector investment, and indeed public spending in general, as competitive with private sector investment. Public spending is said to "crowd out" private investment. This view, however, urgently needs to be reassessed.

In the conditions which prevail in sub-Saharan Africa, many types of public expenditure are likely to be complementary to private sector investment.²⁴ This is likely to be true of public investment in rural and urban infrastructure (transport, power, water and sewerage facilities) and of public expenditure on several kinds of human capital investment (primary and secondary education, certain types of vocational training, basic health and nutrition, applied agricultural research). Expenditure in these areas can increase investment opportunities in the private sector and raise, not lower, private sector “savings”. That is, public investment can increase the profitability of private investment and this, in turn, will increase private savings and domestic resource mobilization more generally.

The state thus has a leading role to play. This presupposes of course that there is a functioning state that is able to evaluate policies, choose from among them and implement programmes that bear some resemblance to what was planned. Where the state has disintegrated (Liberia, Somalia) or is in rapid decay (Zaire, Sudan), development is impossible and the first order of business must be to reconstruct the state (as is happening in Uganda and Mozambique). Any strategy of adjustment, i.e., any set of policies deliberately selected to achieve a specified objective, even *laissez faire*, requires a functioning state. The alternative is anarchy, not the spontaneous order of well functioning markets.

A strategy of structural adjustment through investment implies that the composition of government expenditure, at all levels, should be shifted as far as possible in the direction of investment in human, physical and natural capital. There has been much debate about whether the state in sub-Saharan Africa is “too large” and should be reduced in size. A more fruitful debate would be over the role of the state, directly and indirectly, in promoting a rapid rate of growth of investment and ensuring an efficient allocation of investment funds. It is not sufficient that government spending be heavily biased toward capital formation, it is equally important that within each spending category, funds be allocated to achieve the highest possible rate of return.

Let us consider spending on human capital as an example. It is well established that investing in education yields a high return, often comparable to or higher than the returns from investing in physical capital. Within education, the rate of return is highest on expenditures on primary education, followed by secondary education. The returns on university and other forms of tertiary education tend to be lower than the returns on primary and secondary education. Yet when one examines the composition of public expenditure on education, it often turns out to be the case that funds are allocated in inverse proportion to the rate of return: university education receives the largest amount of funds, followed by secondary and then primary education. It follows from this that if budgetary priorities were reversed, some of the funds now allocated to universities being transferred to primary education, the rate of return on investment in education as a whole would rise and the overall efficiency of investment would increase. Similarly, if governments are forced to cut spending on education, e.g. because of the need to stabilize the economy, the damage minimizing strategy would be to cut university budgets first and leave spending on primary and secondary education intact.

The same arguments apply to public spending on health. Investing in the health of the people can be an excellent use of a country’s resources, but not all forms of health expenditure are equally profitable. Some types of medical treatment are costly and produce modest results whereas other types are inexpensive and produce large benefits. Particularly in sub-Saharan Africa where resources are very scarce, it is important to allocate government expenditure on health services so as to maximize the returns. In general this implies favouring preventive health programmes, primary health care centres, mother and child nutrition programmes and pre- and post-natal maternity services and family planning programmes. In practice, however, government health expenditure pyramids often are inverted: most of the funds are allocated to the less beneficial activities while those with high returns are starved of resources. Large urban hospitals in particular absorb a disproportionate amount of the budget, to the neglect of primary health centres in the rural areas and preventive programmes in general. The overall impact of investments in health could be increased substantially if funds were better allocated.

Consider next government financed investment in physical capital. There is an enormous need in sub-Saharan Africa for investment in infrastructure, in both rural and urban areas. Much public investment at present, however, uses relatively capital intensive methods of production (which require imported equipment), relies on large, well established contractors (and thus excludes small and medium sized African owned businesses) and even uses imported construction materials (which denies investment opportunities to local suppliers). The result is that public investment is costly and the returns are rather low. Numerous opportunities are overlooked to generate a large amount of employment for low skilled labour at very low wages, to encourage the emergence and growth of small local contractors by providing a bit of training and credit, and to foster a large, rapidly expanding local construction materials industry.

The state can play a leading role in mobilizing domestic resources for investment. The key is the organization of labour intensive public investment projects. Such projects can generate a lot of employment both during the construction phase and in maintenance activities. They can help to economize on the use of foreign exchange by reducing the demand for imported capital equipment and construction materials and hence they can help to ease the severe balance of payments constraint on development. And, if procurement and bid tendering policies are revised, that can encourage saving and investment in the private sector, directly in the construction and building materials industries and indirectly in industries which support construction activities (e.g. transport) and supply wage goods to construction workers (clothing, footwear, processed food, etc.).

Moreover, labour intensive public investment in infrastructure can be used to improve the distribution of income by choosing projects whose benefits accrue more than proportionately to the poor. Examples include the provision of water, drainage and sewerage facilities in the poorest neighbourhoods of large cities, construction of schools, health clinics and civic buildings in small towns and the rural areas, and giving priority to investment in farm-to-market roads and rural electrification rather than to major highways and to providing more power stations in the large cities. The combination of high labour intensity of construction and selection of investment projects to benefit the poor can do much to reduce poverty and inequality in sub-Saharan Africa.

Where it is practicable to do so, user fees and charges should be levied to enable the state to recover its costs of investment and maintenance. When given the choice between services plus modest user fees, on the one hand, and no services and no charges, on the other, the evidence suggests that the poor are willing to pay fees for services that genuinely improve their lives. Thus a large public investment programme in sub-Saharan Africa could be inexpensive (insofar as it concentrates on mobilizing abundant low skilled labour and pays a low wage) and it could also be partly self-financing (by imposing user fees to recover costs).

Finally, let us consider the role that could be played by state owned enterprises in financing structural adjustment through investment. In many parts of sub-Saharan Africa the formal sector consists largely of the public administration and public sector enterprises. Private formal sector activity in comparison is very small. State enterprises however typically operate at a loss, in part because they are seen as providing an essential service (e.g. telephone services), in part because they are used to increase distributive equity (e.g. subsidized public transport) and in part because the revenues of state enterprises have been diverted from their proper purposes. Whatever the causes may be, the deficits of state enterprises have contributed to the economic crisis in Africa and have propelled the economy along a path of structural adjustment through contraction.

The deficits of state enterprises are a form of negative savings. They constitute a drain on the resources available for productive investment and for this reason the state enterprises as presently organized are a major obstacle to structural adjustment through investment. This obstacle must be removed.

There are two ways to do this. First, the state can dispose of the state enterprises through gift or sale. This is known as “privatization” and is widely recommended. There are however several difficulties

with this approach. If after transfer to the private sector the ex-state enterprises continue to operate at a loss, there will be demands for state subsidies and various forms of protection to cover the losses. Negative savings will persist and the drain on the economy will continue; the change in the form of ownership will make no difference to the macroeconomic performance of the economy. Moreover, if the transfer of ownership occurs through gift or through sale at less than full market value, some individuals, namely, the new owners of the enterprise, will become enriched at the expense of the general public. This almost certainly will result in a more unequal distribution of income and wealth. Furthermore, if the state uses the receipts from the sale of state enterprises to reduce its current operating deficit rather than to reinvest in other more productive activities, the rate of investment in the economy actually could fall. Capital assets, in effect, would be transformed into current consumption.

These undesirable consequences of privatization can be avoided if (a) state enterprises are sold at their full market value, (b) the sales proceeds are used by the government to finance other kinds of investment and (c) the newly privatized companies are allowed to go bankrupt if they are unable to operate at a profit. These are stringent conditions for the success of a privatization programme and few if any countries in sub-Saharan Africa have met them. None the less, countries continue to be advised to adopt privatization programmes, on the grounds that this sends an attractive “signal” to domestic and foreign investors that the economic climate has improved. A better signal than inefficient privatization, however, would be evidence of a reformed policy regime and abundant investment opportunities.

The alternative to privatization is the “commercialization” of state enterprises. Rather than sell loss making enterprises, or give them away, this approach concentrates on reforming the state enterprises: separating the firms from ministerial control so that they become independent entities, transforming the managers of state enterprises from civil servants to commercially minded businessmen, or if necessary replacing them; introducing profit making as the principal objective of the firms; subjecting them to greater competition by eliminating barriers to entry; and if all else fails, allowing them to become bankrupt.

The assumption of course is that reform is possible, that commercialization of the state enterprises would produce high returns for the government in the form of a steady flow of profits which could be used to finance investment in the state enterprises themselves, in labour intensive infrastructure and in human capital. If this happened, the state enterprises, far from being an obstacle to structural adjustment, would become a major source of finance for development. If, however, state enterprises turn out to be incorrigible -- a herd of white elephants causing havoc, trampling crops and threatening life and limb -- then indeed privatization might be the better solution. In extreme instances some state enterprises might not be viable under a sensible structure of incentives. That is, neither commercialization nor privatization would result in a profitable outcome. In such instances the only alternative is to sell the firm for its scrap value. But it is premature to come to such pessimistic conclusions.

The optimistic view is that public investment can be the leading sector in structural adjustment in sub-Saharan Africa and, because of complementarities with the private sector, can stimulate a rise in aggregate saving and investment and in the overall rate of growth. This approach presupposes reform of the state enterprises which transforms them into a source of profit, the organization of a large labour intensive investment programme in physical infrastructure and an inversion of the expenditure pyramid for education and health in order to increase the returns on investment in human capital. This three-pronged initiative should be feasible in the conditions that beset sub-Saharan Africa and, if successfully implemented, could transform for the better the lives of millions of desperately poor people.

Three paths for structural adjustment

There are three very distinct ways of bringing about structural adjustment -- of radically changing the composition of output -- and these three ways or paths have markedly different consequences for the people concerned. The first path is the one that is usually implicit in conventional policy advice given to sub-Saharan African countries. It is assumed that changes in the composition of output occur as a result of a reallocation of the existing stocks of productive assets. That is, physical, human and natural capital can be reassigned and combined in different proportions to produce a new mix of products from the set of feasible alternatives. Movement occurs along a given "production possibilities frontier" in response to changes in relative product prices. This movement is assumed to be frictionless and rapid and consequently full utilization of resources is ensured and structural adjustment is achieved without significant lags.

This first path is illustrated in Figure 1 as a movement from point A to point B. The initial composition of output at A reflects a development strategy which gives priority to manufacturing and promotes growth along an expansion path represented by the ray OA. Structural adjustment entails a new development strategy -- one that gives higher priority, say, to the minerals sector -- and an attempt to move along a different expansion path represented by the ray OD. This expansion path is intersected by a segment of the production possibilities frontier at B and the purpose of the economic reforms is to effect a shift from A to B by reallocating existing resources.

This story is not implausible. Assume, for instance, that the price of millet falls relative to the price of maize. Farmers are likely to reallocate their land, labour power and mechanical equipment from the production of millet to that of maize. The output of millet will decline and the output of maize will increase and, moreover, this change in the cropping pattern will occur quickly (namely, within one crop season) and without a decline in the degree of utilization of land, physical capital or labour. A change in relative crop prices is sufficient in this case to bring about a change in the composition of output.

Consider another example: a fall in the price of cocoa relative to alternative crops. In this case there may be no supply response, i.e., a fall in cocoa production and a corresponding rise in the output of alternative crops. That is, there may be no reallocation of resources, no structural adjustment. The reason for this is that once the heavy investment in cocoa trees has occurred, the marginal cost of harvesting the output may be very low and hence even if prices fall sharply it may pay the farmer to maintain production. The failure to respond to the price disincentive may persist indefinitely, or until it is necessary to replace the old cocoa trees by replanting young ones.

Consider, finally, the opposite case of a rise in the price of a tree crop (say, coffee) relative to the price of an annual crop (say, beans). It is not possible merely to reallocate the land and labour used to grow beans in order to increase coffee production. Considerable investment is needed: the farmer must purchase and plant coffee saplings and then wait several years for the trees to mature to a fruit bearing age. This investment will not occur unless (a) the farmer expects the relatively favourable price of coffee to be semi-permanent and (b) the farmer is able to finance the investment, including the consumption needs of himself and his family while waiting for the coffee trees to yield their first harvest. That is, structural adjustment in this case is heavily dependent upon the rate of investment.

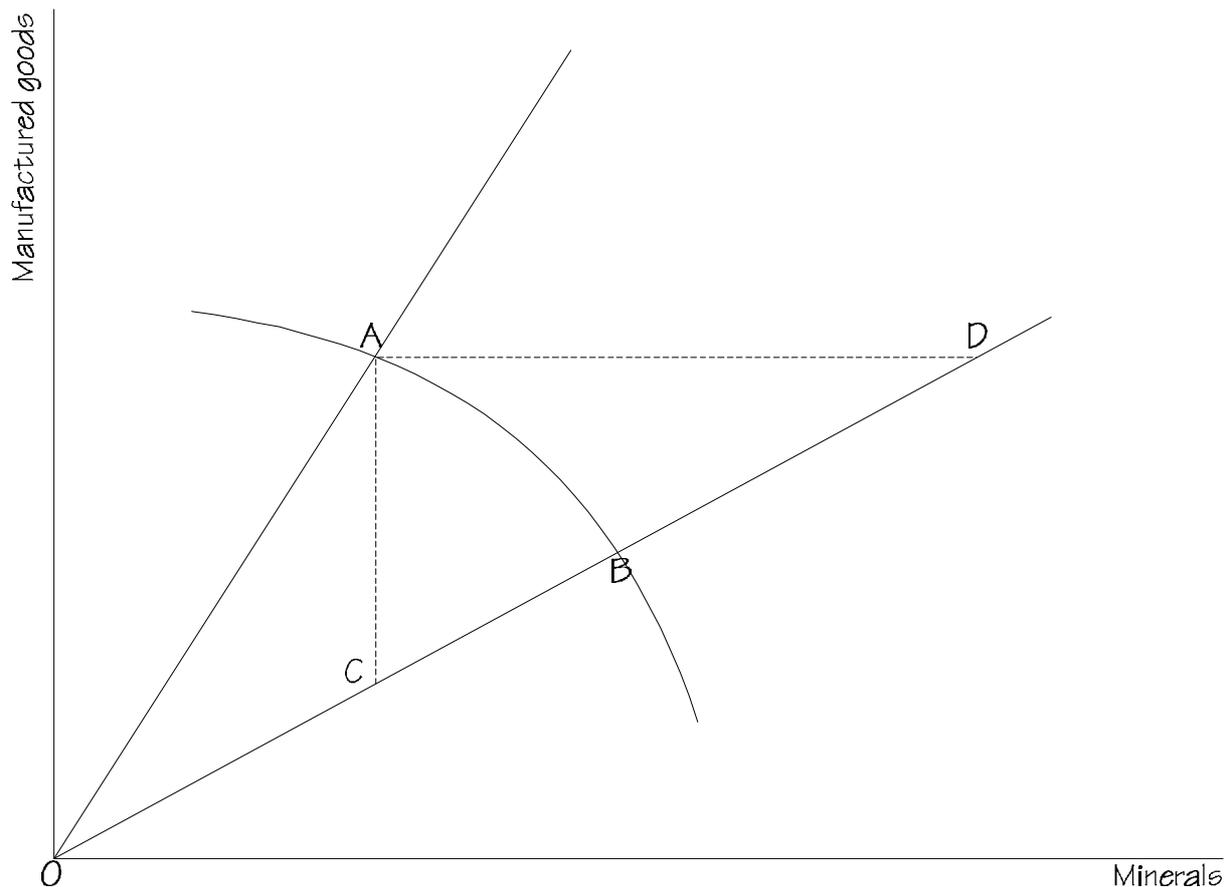


Figure 1: Alternative Paths of Structural Adjustment

We have deliberately selected examples from agriculture to illustrate the first path of structural adjustment -- namely, adjustment through reallocation -- because conditions in agriculture more closely approximate the assumptions that lie behind the conventional view. Even so, it is evident that once specific capital is introduced, as was the case with cocoa and coffee trees, the conventional story becomes much more complicated.

Let us turn now to the second path of structural adjustment. This is the path that comes closest to describing the path actually followed in much of sub-Saharan Africa and this path can be called structural adjustment through contraction. Imagine, as in Figure 1, that structural adjustment is interpreted to mean a shift in the composition of output away from manufactured goods and in favour of minerals (petroleum, natural gas, copper, diamonds, platinum, gold, etc.). How might this shift occur within a context of decreased aggregate demand and price stabilization and of a radical change in relative prices?

Clearly both the demand effects and the relative price effects would reduce the profitability of the manufacturing sector. Labour would be discharged, idle manufacturing capacity would increase, unwanted capital equipment would be released for use elsewhere or sold as scrap, output of manufactured goods would decline. So far so good: production in the low priority sector would contract and the resources used in that sector would in principle become available to facilitate the expansion of the minerals sector, the high priority sector. But could the resources formerly used in manufacturing profitably be re-absorbed in the minerals sector? There is reason for doubt, and the doubt centres on the specificity of much physical and human capital.

The physical capital used in a brewery, or a textile mill or a food processing plant cannot rapidly be converted for use down a mine shaft, to cut a seam of coal, to sift diamonds, to transport ores on a conveyor belt or to separate the economically valuable minerals from the surrounding rock. Each economic

activity requires specific types of capital equipment, specific tools, even sometimes specific buildings and this physical capital cannot readily be reallocated for other purposes.

The same is true of much human capital. Indeed the existence of firm-specific human capital is one reason why industrial enterprises often pay their experienced and skilled employees more than a “market clearing” wage. It is worthwhile for firms to pay a premium in order to retain their human capital. The worker on an electronics assembly line (who could well be female) cannot be transformed into an underground miner (where physical strength is important). The worker in a furniture factory does not possess the skills needed on an oil rig. The worker in a pharmaceutical company, the salesperson in a kitchen utensils factory, or the quality control inspector in a meat processing plant can only with difficulty be absorbed in a totally different occupation. Resources, in other words, cannot normally be reallocated quickly and without friction. Expansion of newly profitable activities (minerals in our example) usually requires investment both in plant and equipment (physical capital) and in the education and training of the labour force (human capital). Moreover, the greater the desired transformation of the economy, the more essential it is to achieve a high rate of investment in physical and human capital.

Structural adjustment can still occur, but it occurs through contraction of unprofitable activities combined with stagnation of output in the profitable activities. This is depicted in Figure 1 as a movement from A to C. Note that C is on the same expansion path as B (namely, the ray OD) and hence the proportion of manufactured goods and minerals is the same as at point B, but the level of production of both manufactured goods and minerals is much lower. Structural adjustment is purchased at the price of economic contraction, high unemployment and massive poverty. This essentially is what has happened in large parts of sub-Saharan Africa.

The response of well meaning advisors and aid donors has been to advocate the construction of a “safety net” to alleviate the worst forms of hardship. This advocacy however is based on a misconception about the nature of the problem. A safety net would be appropriate if the increased unemployment and poverty were temporary and constituted a small deviation from the path of structural adjustment through resource allocation, i.e., a movement from A to B. In fact however sub-Saharan Africa is on a quite different path -- a path of structural adjustment through contraction -- and the human distress associated with this path is neither of short duration nor small in magnitude. The resources required to construct an effective safety net would consequently be enormous and such an undertaking is not feasible given the sharp decline in available resources. What is needed is not so much a safety net as policies that put the economy on a different path of adjustment.

Here, too, well meaning advisors and aid donors have an inkling of what is required, namely, a sharp acceleration in the rate of growth of investment. There has been a proliferation of so-called structural adjustment loans and, indeed, the amount of foreign aid received in sub-Saharan Africa, when expressed as a proportion of GDP, is relatively high in many countries.²⁵ The problem is that foreign capital inflows have not been used to increase the level of investment but instead they have been used to finance current public and private expenditure. This reflects not the foolishness of donors but inappropriate government policies during the transition.

This brings us to the third path of structural adjustment -- namely, adjustment through investment. In Figure 1 this is illustrated by the movement from A to D. Point D is on the ray OD and hence the expansion path and the composition of output are the same as at points B and C. The difference is that the movement to D, i.e., the path to structural adjustment, occurs without any reallocation of pre-existing resources and without any decline in the level of output in the manufacturing sector. Structural adjustment along this path is part of a growth strategy, a strategy designed to increase investment in physical, human and natural capital and to channel that investment into economic activities which have become highly profitable as a result of changes in the structure of incentives.

The third path -- structural adjustment through investment -- does not result in a rise in

unemployment, a fall in average real incomes or an increase in poverty. On the contrary, the rate of growth of GDP accelerates and average incomes rise rapidly. Moreover, as the experiences of China and Viet Nam illustrate during their transition from central planning to a more market oriented economic system, an investment dominated path of structural adjustment is compatible with a simultaneous expansion of all sectors of the economy, but of course expansion at different rates. In terms of our diagram, this implies a movement in a north-easterly direction from A rather than the movement due east from A to D. Far too much attention has been devoted to adjustment through reallocation in sub-Saharan Africa; much more attention should in future be devoted to adjustment through investment.

Notes

1. I am grateful to Samir Radwan, Rolph van der Hoeven, Frank Lisk, Steven Miller and Roberto Zachmann for stimulating discussions which influenced my views. Neither they nor the International Labour Office are responsible for any of the opinions expressed in this essay.
2. In the World Bank, World Development Report 1996 (New York: Oxford University Press, 1996) fifty countries are listed. The UNDP, Human Development Report 1996 (New York: Oxford University Press, 1996) contains 44 countries on its list. The six countries in the World Bank's list but not on the UNDP's list are Djibouti, Eritrea, Mayotte, Reunion, Somalia and Sudan. This study will use the World Bank's list.
3. We have used a simple average rather than an average weighted by size of population because we want to give each country's development experience equal weight in assessing macroeconomic performance. Thus our growth rates do not measure the performance of sub-Saharan Africa seen as a whole but the average performance of the countries that comprise sub-Saharan Africa.
4. The World Bank, op.cit., reports that GNP per capita in sub-Saharan Africa declined 1.2 per cent a year during the period 1985-94. This is a weighted average for the region.
5. For example, the share in total income of the lowest 20 per cent of households is reported in early sample surveys to have fallen in Côte d'Ivoire (from 1970-75 to 1986), Kenya (from 1969-71 to 1976), the Sudan (from 1964 to 1967-68) and in Zambia (from 1959-61 to 1976). See Idriss Jazairy, Mohiuddin Alamgir and Theresa Panuccio, The State of World Rural Poverty, published for the International Fund for Agricultural Development by New York University Press, 1992, Table 5, pp. 402-3. A World Bank study also suggests that in the 1980s inequality increased in Côte d'Ivoire, Ethiopia, Ghana, Nigeria and Tanzania. (Lionel Demery, Binayak Sen and Tara Vishwanath, "Poverty, Inequality and Growth", Washington D.C.; World Bank, ESP Discussion Paper Series 70, June 1995. Also see Lionel Demery and Lyn Squire, "Macroeconomic Adjustment and Poverty in Africa: an Emerging Picture", World Bank Research Observer, vol. 11, No. 1, February 1996.)
6. World Bank, World Development Report 1990, New York: Oxford University Press, 1990, Table 2.1, p. 29.
7. Idriss Jazairy, Mohiuddin Alamgir and Theresa Panuccio, op.cit., Table 2, p. 387.
8. The World Bank has published three major studies of sub-Saharan Africa in each of which analysis is followed by policy prescription. See World Bank, Toward Sustained Development in Sub-Saharan Africa: A Joint Program of Action, Washington, D.C., 1984; World Bank, Sub-Saharan Africa: From Crisis to Sustainable Growth, Washington, D.C., 1989; and World Bank, A Continent in Transition: Sub-Saharan Africa in the Mid-1990s, Washington, D.C., 1995. Also see World Bank, Adjustment in Africa: Reforms, Results and the Road Ahead, New York: Oxford University Press, 1994 for the Bank's assessment of policy reforms in 29 countries. The World Bank tends to blame uneven implementation of reforms for the failure of structural adjustment rather than the choice of the reform strategy itself. In Ishrat Husain, Why Do Some Economies Adjust More Successfully Than Others? Lessons From Seven African Countries, World Bank: Washington, D.C., Policy Research Working Paper 1364, October 1994, uneven implementation

is attributed to lack of “domestic ownership” and “capacity”. The policies themselves, in other words, are assumed to be correct. World Bank and IMF policies however have been severely criticized by the Economic Commission for Africa. See ECA, African Alternative Framework to Structural Adjustment Programmes for Socio-Economic Recovery and Transformation (AAFSAP), E/ECA/CM.15/6/Rev 3, Addis Ababa, 1989 and Adebayo Adedeji, Structural Adjustment for Socio-economic Recovery and Transformation: The African Alternative, Addis Ababa: United Nations Economic Commission for Africa, 1990.

9. In 1994 gross domestic savings were negative in Rwanda, Burundi, Malawi, Chad and Lesotho.
10. There is evidence that many countries in sub-Saharan Africa did adjust the real exchange rate to cushion the impact of the decline in the external terms of trade on domestic economic activity. (See Michael Hadjimichael, Dhaneshwar Ghura, Martin Mückeisen, Roger Nord and E. Murat Uçer, Sub-Saharan Africa: Growth, Savings and Investment, 1986-93, Washington, D.C.: International Monetary Fund, January 1995). The question remains however whether nominal exchange rates were fully adjusted to compensate for inflation.
11. In 1993, official development assistance (ODA) was 10.5 per cent of GNP in sub-Saharan Africa. This was much higher than the proportion in all other developing regions apart from East Asia (excluding China), where it was 19.5 per cent. The average for all developing countries was 1.4 per cent. (UNDP, Human Development Report 1996, New York: Oxford University Press, 1996, Table 47, p. 212).
12. See Paul Collier, “The Marginalization of Africa”, International Labour Review, vol. 134, No. 4-5. 1995 for an attempt to explain the de-linking of Africa from the world economy.
13. For example, formal sector wage employment as a percentage of the total labour force declined in Kenya from 18 per cent in 1988 to 16.9 per cent in 1994; in Uganda from 17.2 per cent in 1991 to 12.7 per cent in 1995; in Zambia from 29.4 per cent in 1980 to 18.2 per cent in 1994; and in Zimbabwe from 34.1 per cent in 1980 to 25.3 per cent in 1995. (Rolph van der Hoeven, “Labour Markets and Structural Adjustment”, paper presented at a seminar on Policies for Economic Growth and Development in Southern Africa, Harare, Zimbabwe, 1-3 April 1996, Table 12. Also see Willem van der Geest and Ganeshan Wignaraja, Adjustment, Employment and Labour Market Institutions in Sub-Saharan Africa in the 1990s: A Survey, Geneva: International Labour Office, Employment Papers 10, 1996.)
14. For example, real earnings in manufacturing in Kenya declined 30.5 per cent from 1987 to 1992 and in Zambia the decline was 23.6 per cent from 1987 to 1991. (Rolph van der Hoeven, ibid., Table 15.)
15. Vali Jamal and John Weeks, Africa Misunderstood or Whatever Happened to the Rural-Urban Gap?, Geneva: International Labour Office, 1988.
16. Vali Jamal, ed., Structural Adjustment and Rural Labour Markets in Africa, London: Macmillan, 1995.

17. In the case of internationally mobile resources, however, reallocation certainly is possible. There was a large exodus of human capital from Africa in the form of the emigration to Europe and North America of high skilled, professional, managerial and technical labour. There was also considerable capital flight. Both these scarce resources could in principle be repatriated under favourable conditions, such as those associated with an investment-led strategy of structural adjustment.
18. The implication of this argument is that in a context of economic decline and a fall in total government expenditure, public expenditure on human capital formation should be protected and hence the proportion of government expenditure devoted to education (and health) actually should rise.
19. See Keith Griffin and Terry McKinley, Implementing a Human Development Strategy, London: Macmillan, 1994, Ch. 2.
20. Ingrid Palmer has argued persuasively that the reduction in state provided health services that has accompanied structural adjustment has increased disproportionately the burden on women since it is they who must now provide substitutes for the lost services. (Ingrid Palmer, "Public Finance from a Gender Perspective", World Development, Vol. 23, No. 11, November 1995.)
21. See the essay on "Domestic Policies in Developing Countries and their Effects on Employment, Income Inequality and Poverty" in Keith Griffin, Studies in Globalization and Economic Transitions, London: Macmillan, 1996.
22. Large inflows of foreign aid can lean in an anti-development direction by (i) reducing real rates of interest, (ii) putting upward pressure on the exchange rate, (iii) increasing consumption at the expense of savings and (iv) distorting the composition of investment. (See the essay on "Foreign Aid After the Cold War" in Keith Griffin, ibid.)
23. Rolph van der Hoeven recommends "a moratorium on African debt for the next 10 years ..." (Rolph van der Hoeven, "External Dependence, Structural Adjustment and Development Aid in Sub-Saharan Africa", in Karel Jansen and Rob Vos, eds., External Finance and Adjustment, Failure and Success in the Developing World, London: Macmillan, forthcoming 1996.)
24. For evidence in support of the "crowding in" hypothesis see Lance Taylor, Varieties of Stabilization Experience, Oxford: Clarendon Press, 1988; Lance Taylor, ed., The Rocky Road to Reform, Cambridge: MIT Press, 1993; Helen Shapiro and Lance Taylor, "The State and Industrial Strategy", World Development, Vol. 18, 1990; and implicitly, World Bank, World Development Report 1994, New York: Oxford University Press, 1994.
25. In 1993, official development assistance (ODA) was 10.5 per cent of GNP in sub-Saharan Africa. This was much higher than the proportion in all other developing regions apart from East Asia (excluding China), where it was 19.5 per cent. The average for all developing countries was 1.4 per cent. (UNDP, Human Development Report 1996, New York: Oxford University Press, 1996, Table 47, p. 212).