

Macroeconomic Policies For Poverty Reduction: The Case Of Sudan



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Published for the
United Nations
Development
Programme
In Sudan

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ABBREVIATIONS AND ACRONYMS

ABS	-	Agricultural Bank of Sudan
BOS	-	Bank of Sudan
BOSS	-	Bank of Southern Sudan
CMC	-	Central Bank Musharaka Certificate
CNP	-	Comprehensive National Plan
CPI	-	Consumer Price Index
ESP	-	Economic Salvation Programmes
EU	-	European Union
FAO	-	Food and Agriculture Organization
FDI	-	Foreign Direct Investment
FRC	-	Federal Rule Chamber
GDP	-	Gross Domestic Product
GMC	-	Government Musharaka Certificates
GNI	-	Gross National Income
GOS	-	Government of Sudan
HDI	-	Human Development Indicator
HDR	-	Human Development Report
HIES	-	Household Income and Expenditures Survey
HIPC	-	Heavily Indebted Poor Countries
HPI	-	Human Poverty Indicator
IFS	-	International Financial Statistics
ILO	-	International Labour Organization
ILR	-	Internal liquidity Ratio
IMF	-	International Monetary Fund
I-PRSP	-	Interim Poverty Reduction Strategy Paper
LDCs	-	Least Developed Countries
MDGs	-	Millennium Development Goals
MENA	-	Middle East and North Africa
MICS	-	Multiple Indicators Cluster Survey
MLFS	-	Migration and Labour Force Surveys
MOF	-	Ministry of Finance
MOI	-	Ministry of Interior
NCS	-	National Comprehensive Strategy
NESP	-	National Economic Salvation Programme
NHDR	-	National Human Development Report
ODA	-	Official Development Assistance
OMO	-	Open Market Operations
PRSP	-	Poverty Reduction Strategy Paper
SAP	-	Structural Adjustment Programme
SMEs	-	Small and Medium Enterprises
SPLM/A	-	Sudan People's Liberation Movement/Army
SRR	-	Statutory Reserve Ratio
ToT	-	Terms of Trade
UNDP	-	United Nations Development Program

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ACKNOWLEDGMENTS

The core team of this report was comprised of Gouda Abdel-Khalek (Professor of Economics at Cairo University), who was the Team Leader and Principal Author of this study, Khalid Abu-Ismael (UNDP Regional Adviser on Macroeconomics and Poverty, Sub-Regional Resource Facility for Arab States) and Terry Mckinley, (Former) UNDP (HQ) Senior Macroeconomics Policy Adviser.

From the UNDP Sudan Country Office, all discussions held with the Sudanese Government and other stakeholders, in the process of formulating this report, were led by Dr. Heba El-Kholy, (Former) Country Director and Mohammad Pournik, Senior Economist at UNDP CO. The core team also benefited greatly from the discussions held with Omer Egemi, Team Leader, Environment and Natural Resources and support of Abdul Hameed Elias, Project Manager (PEPR) who contributed to the coordination of the study. In October 2006, under the leadership of Jerzy Skuratowicz, UNDP Country Director, UNDP Sudan commemorated the International Day for the Eradication of Poverty by inviting Sudanese policy makers, national experts, donors, UN country team and civil society to reflect on the report. A broad section of the development community and government officials took part in this dialogue, including HE Dr. Lual Deng the Minister of Finance and National Economy who affirmed the importance and relevance of the study to Sudan's current situation and future development planning process. Last, but by no means least, many thanks to Dirk Hansohm who commented on the final draft of the report and contributed to a note to the chapter on the challenges in post-conflict era.

The UNDP SURF-AS team comprised of Ghada Khoury (Researcher), Nora Khalaf (Office Manager), Sonya Knox and Rhonda Brown (Editors).

From the Government of the Sudan, the report was written under the general guidance of H.E Abda Elmahdi, Ex State Minister for Finance. Discussions were also held with Mr. Elfatih Ali Siddig, Former Head of the Poverty Reduction Unit at the Ministry of Finance, Mr. Hassan Gaffar, Head of the Poverty Unit, and Dr. Abdel-Lateef Egemi from the Ministry of Agriculture. Further discussions were held with Mr. Omer Abdel Salam, Head of Public Enterprises Unit.

Initial results from the study, and its methodology, were presented at several meetings and workshops, which were attended by Sudanese intellectuals, key line ministries officials and the donor community in Khartoum.

Finally, it is with great sadness that we report the loss of Prof. Fareed Attabani, member of the Advisory Group, who contributed significantly to all the discussions and meetings, held during the preparation of the study.

PREFACE

This report on “Macroeconomics Policies for Poverty Reduction in Sudan” is part of a global UNDP-supported project that started in 2001 and has grown to encompass policy-oriented research, advisory services and capacity development in 25 developing countries. Among the Arab States, UNDP has supported similar studies in Morocco, Yemen and Syria. This report has been prepared under the umbrella of the project: “Participatory Economic Policy Reform”. This project is seeking to improve the national capacity to plan and monitor a comprehensive approach to the reduction of human and income poverty, taking into account the Millennium Development Goals (MDGs). This study has been funded mainly from the World Bank “Post-conflict Fund”.

The general objective of the report is to come out with realistic policy options and alternatives that broaden the national dialogue on such choices. Specifically, this study is intended to assist the development of more pro-poor policies, in the post-peace era, by taking into consideration all policy trade offs and costing alternatives for reaching the MDGs. This would include critical assessment of the mixture of macro-economic policies adopted in order to explore opportunities for innovations that would be more supportive of pro-poor growth. The case study is therefore primarily policy-oriented. Its research is geared to that purpose.

Similar to other reports, this report adopts a general approach that focuses on fostering growth with equity. The report also gives high priority to reducing unemployment and underemployment, since cross country studies confirm that growth cannot be translated effectively into poverty reduction without creating broad-based employment.

The real challenge facing Sudan is to sustain growth and macroeconomic stability, while undertaking an ambitious development plan. Prerequisites include: a sound and modern financial system; an efficient federal system through more decentralization, coupled with adequate financial and technical resources and participatory mechanisms; and a just income and wealth distribution

Provided that the peace process is sustained, and the Official Development Assistance is substantially increased, the Government of Sudan should be able to mobilize additional domestic resources, and focus on a large public investment programme focusing on improving productive conditions in traditional farming and herding. Employment-intensive public works programmes to build badly needed rural economic and social infrastructure should become the centrepiece of a pro-poor rural development policy. Many of these public works should be focused on small-scale infrastructure, such as storage facilities and rural roads, which could directly and immediately benefit poor farmers and herders.

Moreover, General economic policies need to be reformulated in order to sustain more rapid economic growth, broader employment generation and deeper poverty reduction. Part of the

strategy involves more expansionary fiscal policies focused on mobilizing domestic and external resources for ambitious public investment programmes. Small-scale poverty-focused infrastructure projects, especially in rural areas, are part of this strategy; but so are large-scale infrastructure projects designed to connect the far-flung reaches of such a large country to a common transportation, power and communications network.

Resource Mobilization will remain critical to the success of this strategy. Domestic resources from increase in non-tax revenues, from oil production, can be harnessed for this purpose. But the very low level of taxes in Sudan also needs to be raised. In addition, external resources are absolutely crucial. This would necessitate the cancellation of Sudan's onerous external debt and a substantial increase in Official Development Assistance. All in all, the report's package of policy recommendations is designed to put Sudan on the path of sustainable growth, employment generation and poverty reduction.

CHAPTER ONE

Overview

1.1 Background

Sudan is a low-income country, with income per capita of less than US\$ 400. With its vast geographic area and varied natural resources, it holds great economic potential. So far, however, it has been a land of missed opportunity. It is also a land of great diversity: ethnically, geographically and ecologically, and it faces the challenge of utilizing/capitalizing on such diversity to achieve development and eradicate poverty.

Sudan is the largest country in Africa and the ninth largest in the world in terms of area (2.5 million square kilometres). It shares extensive borders with nine countries. Because of its vast area, the country embraces many climatic and ecological zones. Diversity is also reflected in its people; and as a result, the country is multi-cultural, multi-ethnic, multi-lingual and multi-religious. According to CBS/UNFPA estimate, the total population amounted to 32 million in 2001, the large majority of whom (about 70 per cent according to the 1993 census) live in rural areas. This might have changed due to substantial rural to urban migration in recent years, though it is unlikely that this would have significantly changed the overwhelming rural nature of the population. Given Sudan's size compared to its total population, the country is sparsely populated. Furthermore, the mostly arid climate and unpredictable weather conditions leave vast stretches of the country subjected to episodes of extreme drought and/or substantial flooding.

The low level of average per capita income masks wide regional disparities in economic and social development. Educational levels are low, health conditions are poor, and the burden of disease is heavy and widespread. Infrastructure (roads, river traffic, railways power, water, telecommunications, as well as irrigation facilities) is either non-existent or underdeveloped and inadequate. In this area as well, regional disparities are huge and the little that exists is run down due to prolonged neglect of necessary maintenance and upkeep. Large migrations of trained and skilled Sudanese to the oil-rich Gulf countries since the early 1970s contributed to the considerable deterioration in the quality and effectiveness of Sudan's institutional capabilities, which are necessary when dealing with these structural problems. These factors have been further aggravated by a difficult political situation following independence, all contributing to a vicious cycle of political conflict, civil disturbances and underdevelopment. (IPRSP Draft, Jan., 2004).

Since its independence in 1956, Sudan has undergone several phases/episodes with respect to socio-economic policies generally, and with respect to growth and poverty in particular. More recently, since 1992, the country implemented self-imposed economic policies, without agreements with the Bretton Woods institutions. Under such policies, growth performance appears to have improved. But there are also indications that the incidence of poverty has

increased. This seems to hold particularly for the agricultural sector – the leading sector of the Sudanese economy.

Sudan also belongs to the group of Heavily Indebted Poor Countries (HIPC). But it has yet to qualify for support and debt relief under the HIPC Initiative, which was launched by the IMF and the World Bank in 1996 to deal with the unsustainable external debt in the world's poorest and most heavily indebted countries.¹ With its Interim Poverty Reduction Strategy Paper (IPRSP) prepared in January 2004, it is hoped that the Sudan may soon qualify for relief under the Initiative to bring its massive external debt (currently more than 140 per cent of GDP) down to manageable and sustainable levels. But due to internal conflict and the large arrears to various creditors, Sudan was unable to establish a track record of policy performance. Consequently, it has not yet reached the decision point for HIPC Initiative.²

The data problem in Sudan is very acute. The latest population census dates back to 1993. The latest agricultural census was taken in 1983³, and the latest household budget survey was conducted in 1978. Consequently, this study had to be structured such as to avoid reliance on large survey and census database. Furthermore, because of the civil war, parts of the country in the south remain outside the control of the government. As a result, coverage of data and domain of stabilization and adjustment measures largely leave out the south. This sets clear limitations to our exercise, which should be always kept in mind. However, we strived to access some of the recent efforts involving fresh data gathering. Two such efforts are particularly significant. The first is the Comprehensive Industrial Survey, 2001, which was undertaken by the Federal Ministry of Industry and the Central Bureau of Statistics, with technical support from UNIDO and UNDP. The second is the attempt within the Ministry of Finance and National Economy (MoFNE) to generate data on revenue and expenditure at the state/local level in a number of states. Other data sources and material include the Bank of Sudan and its regular publications, the database at the Central Bureau of Statistics and the macro-economic time series data set available at the Macro-Economic Policies Directory in MoFNE (time series for macroeconomic variables starting in 1970).

It should be noted that interest in issues of poverty reduction precedes the more recent IPRSP effort. The National Comprehensive Strategy 1992-2002 (NCS) targeted getting 2 million Sudanese out of poverty through The Productive Families Project (Ibrahim et al., 2001). In this context, the Ministry of Social Planning was established, and was later transformed into the Ministry of Social Welfare and Development. The Sudanese government, with support from the World Bank, produced a draft Interim Poverty Reduction Strategy Paper (IPRSP) in January 2004. Other UN agencies such as FAO were also involved in this effort. But the macro framework underlying this exercise reflects a heavy emphasis on orthodox stabilization by advocating tight fiscal and monetary policies. For example, it envisages a fiscal stance to keep the budget deficit to 1.0 per cent of GDP and growth of money supply at 25 per cent per annum. This continues along the same line of macro policies adopted by the Government of

¹ The HIPC Initiative was enhanced in 1999 to provide faster, deeper and broader debt relief. See: *Heavily Indebted Poor Countries (HIPC) Initiative- Status of Implementation*, a report prepared jointly by the staff of the IMF and the World Bank, August 20, 2004.

² For more details, see <http://worldbank.org/hipc>.

³ According to officials in the Ministry of Animal Wealth and Fisheries, the latest census dates back to 1975/76 (Intervention by Hussein Mohamed Nour during Khartoum Workshop, February 2005).

Sudan through an IMF-monitored programme of economic reform, which appears to have increased poverty in the country. By contrast, our point of departure with respect to the macro framework will be quite different, stressing supply-side in addition to demand-side measures.

1.2 Major Issues

Our attention in the present exercise will focus on a number of specific issues. The most important ones are:

- (i) Agriculture is central to the issue of rural poverty in particular and poverty in general. Stressing agricultural and rural development helps to avert famines and food insecurity, boost non-oil exports and provide inputs to manufacturing, in addition to producing wage goods. The issue of efficient allocation of such inputs as credit, pesticides, fertilizers and energy is important, as the modern mechanized sector claims most of the resources while the traditional rain-fed sector lags behind. The World Bank *Sudan Country Economic Memorandum* (World Bank, 2003) notes that in spite of the fast growth of output in agriculture by some 20 per cent during the 1990s, there is evidence that poverty is on the rise, especially in the rain-fed sector. This highly conspicuous jobless growth calls for an explanation. Critical issues here include infrastructure and institutions (monopolies, credit, etc.).
- (ii) The federal/state fiscal nexus is also important. States are denied the authority to levy taxes, yet they are expected to provide for social services (education, health, etc.) out of meagre federal transfers through the State Support Fund (SSF). Although the level of public expenditure was cut drastically in an effort to reduce budget deficit and to stabilize the economy, the structure of public expenditure needs to be scrutinized to ensure effectiveness in combating poverty. Expanding the revenue base is also an important issue.
- (iii) Sudan partially introduced Islamic banking in 1984, and completely in 1992. It is one of the very few countries in the world where the financial system is based completely on Islamic principles. In this case, it poses the challenge of conducting monetary policy on the basis of interest-free instruments. An interesting question is how the cost of Islamic finance compares to the cost of finance according to the traditional banking practices. Another issue is whether banks were restructured in a way suitable for providing financial services according to Shari'a principles – an issue which is very relevant to poverty reduction.
- (iv) Oil is starting to be an important factor in the economic equation of Sudan. Oil revenue (on account of crude oil exports, net profits from local sales, income from Sudapet and bonuses) jumped from \$63.5 million in 1999 to a yearly average of about \$700 million during 2000-2002. It should increase more dramatically starting 2005, reflecting the increase in the government's actual share beyond the cost-recovery phase. Oil exports now are four times greater than non-oil exports, and government revenue from oil exceeds non-oil revenue. Attention needs to be given to macro management in the medium term to avoid currency appreciation and associated Dutch disease symptoms.
- (v) The prospects of an end to the civil war in Sudan, the longest internal conflict in Africa, present both opportunities and challenges. The mere end of this strife should enhance the fortunes of the Sudanese economy, which currently hangs in

the balance. On the other hand, the eruption and intensification of the conflict in Darfur recently has a clear and strong bearing on issues of growth, wealth sharing, income distribution and poverty. It further underscores the regional/geographical and ethnic dimension of poverty in the Sudan.

1.3 Main Questions

In the course of our exercise, we will attempt to answer the following questions, which underscore the critical issue of the role of the state in the context of a market economy.

- How do we reconcile the widespread impression that fast and steady growth in the traditional rain-fed agricultural sector since the early 1990s was apparently associated with increased poverty? One could think of several plausible hypotheses: non-competitive market structure; poor infrastructure; differential access to land, finance and other agricultural inputs. Did rural-urban migration and external migration contribute to this result? Did the internal terms of trade move against agriculture? What role did trade liberalization play in this process?
- Government support of the agricultural sector raises issues of efficiency and equity. What is the nature of reform in such critical areas as irrigation systems, land tenure, research and extension services, agricultural credit, infrastructure development and marketing facilities?⁴
- Has trade liberalization resulted in increasing poverty and inequality? Or did it lead to a reduction of poverty? Was the pace of Sudan's trade liberalization effort under stabilization and adjustment consistent with reform at the micro level? How did it interact with privatization? What would be the nature of a trade and industrial policy consistent with Sudan's pattern of comparative advantage and conducive to poverty reduction? How does trade and industrial policy, or lack thereof, relate to regional inequality in Sudan's case? What are the priority areas from a pro-poor perspective within the manufacturing sector?
- Is the economy of Sudan headed toward a Dutch disease? Is there any evidence of real appreciation of the Sudanese Dinar? Does the rising foreign-exchange contribution of oil pose a threat to macro management? What are its implications for poverty and inequality?
- With public expenditure slashed by 50 per cent relative to GDP during 1992-98, did that fiscal effort carry the threat of overkill? Is fiscal policy sustainable? What are the implications for poverty and inequality? Decentralization needs critical reconsideration: where to draw the line separating federal and state levels with respect

⁴ In this context, the World Bank suggests that "the government needs to consider making a clear policy decision at the earliest opportunity to withdraw completely from agricultural commodity markets and eliminate monopoly power vested in any of its agricultural marketing agencies. At the same time, the government could clearly state its commitment to delivering important public services to support rural producers because of the public goods benefits that such a strategy would bring." (World Bank, 2003, Vol. I, p. 99).

to revenue collection and expenditure allocations, such as to combat poverty and safeguard growth.

- Since fast economic growth appears to have been associated with rising inequality and poverty, how can this be explained in terms of pattern and sources of growth? Stabilization was costly in social terms, and privatization and liberalization have produced unutilized capacity side by side with a growing non-oil trade deficit. How does this relate to a pattern of income redistribution?
- What is the relation of unemployment, underemployment and poverty in the Sudanese context? How does the structure of the labour market impact poverty and inequality? Is there an instituted minimum wage? If so, how effective is it? An apparent reduction in real wages may actually have lowered productivity and effective demand and hence may prove contradictory in the medium term. How did unit labour cost in Sudan behave over the period of the stabilization and adjustment?
- What are the opportunities and challenges of the post-peace era in the Sudan? Among the issues to be considered are: benefits of national integration (the peace dividend); issues of resource redeployment and relocation of population; fiscal impact; and sectoral impact (agriculture, forestry, fisheries and oil).

1.4 Methodology

As the focus of this exercise is the macroeconomics of poverty reduction, emphasis will be placed on economic measures to be implemented to ensure that the poor benefit from stabilization, adjustment and growth. This involves examining two main aspects:

- (i) how to make macro policies in general, and stabilization and adjustment policies in particular, more pro-poor (the focus), and
- (ii) how to enhance the impact of these macro-level policies by augmenting the entitlements of the poor (the complementary theme).

The exercise will explore the major policy initiatives that could be undertaken to produce complementarities between growth and redistribution. This involves not only suggesting an inequality-reducing pattern of growth, but also recommending a growth-enhancing pattern of redistribution (McKinley, 2001).

There are six main entry points for the study, organized in two clusters:

1. The first cluster is macroeconomic policies: fiscal policy, monetary policy and exchange-rate policy.
2. The second cluster is the adjustment policies: financial liberalization, trade liberalization and privatization and deregulation.

Because of the paucity of data for Sudan as already noted above, no formal modelling is used. The analysis is conducted in a before-and-after fashion, using a basic analytical framework that seeks to:

- (a) identify the impact of the changes in macroeconomic and adjustment policies belonging to the two clusters on relevant conduit variables (effective demand, aggregate supply, general price level, factor prices, etc);
- (b) identify the impact of these conduit variables on the entitlements of the poor; and
- (c) Take account of feedbacks from changes in entitlements to the conduits.

Thus the synthesis report of the Sudan case study consists of the following sections: Economic and Social Trends; Public Finance: Revenue/Expenditure Nexus; Monetary Policy; Exchange Rate and Inflation; Financial Sector and Poverty Reduction; Agricultural Development and Rural Poverty; Trade, Industrial Policy (what role for poverty reduction; employment generation and poverty reduction); Opportunities and Challenges in the Post-Peace Era; and Policy Recommendations.

CHAPTER TWO

Economic and Social Trends

2.1 Economic Performance and Policy

Macroeconomic performance rarely follows a linear trend, invariably encompassing episodes of stability and instability. In many less developed countries (LDCs) like Sudan, it may be easy to announce such stability enhancing performance indicators as policy targets, but it is difficult to identify and implement the policy instruments relevant to achieve them. The standard aggregate demand management that emphasizes the control of monetary and fiscal excesses (to keep inflation low), and monitoring of the exchange rate (to prevent overvaluation) may not work in many LDCs, including Sudan. Those economies suffer rigidities (e.g. lack of supporting/complementary infrastructure, difficult access to credit, paucity of information, etc), as well as external shocks. Both may blunt supply response. In such a case, measures to improve market performance and competitiveness, and hence increase price elasticities, are essential to create the relevant environment for the success of standard macro management (Bird, 2002). Otherwise, adherence to the standard demand management policies required by the conventional structural adjustment package slows, rather than increases, the supply response in many LDCs.

The identification of the sources of the instability is important:

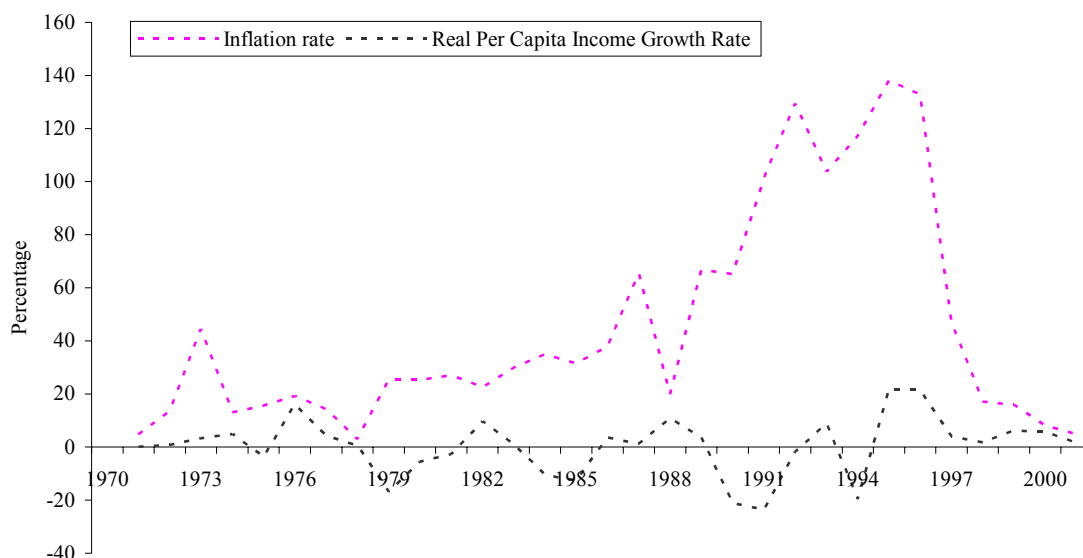
- If the sources of the shock that drove the economy out of equilibrium are exogenous (e.g. terms of trade shock, reverse capital flows, natural disaster, etc), demand management alone may not suffice to restore equilibrium. It must be combined with other supply-side measures to restore stability.
- If the sources are endogenous (e.g. excessive fiscal and monetary expansion which increases aggregate demand), then the standard demand management could be a powerful tool. The LDCs at times face both: external shocks and supply rigidities, as well as inappropriate domestic policies. Appropriate adjustment also depends on whether the shock is temporary or permanent. (Ames *et al.*, 2001).

With this in mind, we define a situation of macroeconomic instability in this report as either (a) an episode of negative real GDP or per capita real income growth over more than two consecutive years, or (b) an onset of inflation above 40 per cent per annum over more than two years, or both (Ferreira *et al.*, 2001).

Economic performance in Sudan has undergone several phases. We focus on the periods before and after 1992. The year 1992 represents a watershed, or turning point, from a policy point of view. The question to be addressed is: what is the nature of the macro performance during the various episodes and the policies associated with it in Sudan? In an attempt to answer this question, we examine various indicators of macroeconomic performance of the

Sudanese economy over the past three decades. Figure 2.1 shows the plot of the annual growth rate of real per capita income and the inflation rate (measured by changes in the CPI) over the review period 1970-2001 (see Suliman (2004)).

Figure 2.1: Real GDP Growth Rate and Inflation for Sudan, 1970-2001



Note: See Suliman (2004), Appendix 1, for the definition of variables.

By applying our definition of instability to the case of Sudan over the period 1970-2001, five sub-periods of macro performance can be discerned. Three were episodes of stability: 1970-78, 1982-89 and 1996-2001. They alternated with two sub-periods of instability: 1979-81 and 1990-95. These sub-periods differed in length, and witnessed various macroeconomic episodes and policy responses.

The estimated values for the means and coefficients of variations of the conventional macro indicators are used in gauging performance and policy stance in each sub-period. Table 2.1 highlights the major episodes during that period and the corresponding policy responses.

During the first sub-period (1970-78), real GDP grew by a 6.4 per cent average rate, with a coefficient of variation of 0.94. Although this sub-period witnessed the first oil price shock, macro stability was not affected because Sudan was able to attract a substantial inflow of capital from oil-rich Arab countries, promoting itself as a breadbasket for the whole region. This period also witnessed the signing of the Addis Ababa Peace Accord in 1972, ushering a respite from armed conflict, which lasted for a decade. It was an important political development that contributed to positive growth during this episode.

Similar to other LDCs, the 1970s and 1980s were periods of strong involvement of the state in all sectors of the Sudanese economy. The public expenditure share in GDP averaged 27.9 per cent, and the share of public development spending averaged 6.6 per cent recording the highest share over the whole review period. Although the fiscal deficit as a ratio to GDP was

relatively high (averaging 7.6 per cent), still it was within bounds as the growth of money supply and inflation averaged 23.6 per cent and 14.3 per cent, respectively.

It seems that much of the growth in money supply was matched by an increase in the demand for money (in the sense of increasing monetization of the economy), more than in fuelling inflation. Measured by the changes in CPI, inflation in Sudan was relatively higher compared to its main trading partners.

The reported period-averages were respectively 14.3 per cent and 9.24 per cent – implying that the CPI inflation in Sudan was driven mainly by domestic factors. The growing divergence between domestic and foreign inflation rates contributed to the declining trend of the real effective exchange rate over this sub-period (i.e., real appreciation of the Sudanese pound).

Real per capita investment grew on average by 6.5 per cent, and the rate of investment averaged 15.8 per cent of GDP. These favourable trends translated into real agricultural growth of 7.4 per cent over the period, but the industrial sector remained small and recorded 2.6 per cent average growth rate over the sub-period.

In early 1970s, the dominant macroeconomic policy and development strategy was outward orientation. The focus was on the expansion of cotton production and other main export crops, and on the promotion of private sector investment, in terms of enactment of investment promotion acts in 1972 and 1974. These two acts followed the roll-back of the nationalization programme of the military regime (of 1969) in the aftermath of the aborted *coup d'état* in 1971, which marked a turning point in the orientation of the regime from left to right. However, the populist policies of the regime were reflected in high growth of per capita consumption that averaged 8 per cent with a low coefficient of variation (Table 2.2). By the late 1970s, the failure of the breadbasket strategy, associated with the inflow of the capital from the Arab countries, coupled with the expansionary fiscal policy, started to unfold into the signs of instability in 1977 and 1978.

The upsurge of instability during 1979-81 was triggered by the macroeconomic shock, which originated from the balance of payments deficit and fiscal expansion. The nominal devaluation of the currency was the policy response intended to rectify the situation.

The change in the relative prices caused by the devaluation of the Sudanese Pound appears to have contributed to the decline in the real GDP growth. First, it increased the price of imports in the domestic economy, and the tolerated parallel market in foreign exchange put further pressure on imports price. Sudan's high dependence on imports to supply capital and intermediate inputs, as well as a wide range of consumer goods, means that import price significantly affects the domestic price formation. Furthermore, the compression of imports crippled supply response. The growth in real imports declined by about 11 percentage points and the rate of investment declined by about 3 percentage points, compared to the previous period average.

Second, the successive nominal devaluations of the currency caused the premium (defined as a ratio of free exchange rate to the official rate) to widen. The real effective exchange rate

depreciated by about 8 percentage points, compared to the previous period records, which contributed to the decline of imports more than to the growth of exports.

Other factors also contributed to the downturn; for example, the growing fiscal deficit over the sub-period appears to be financed by money creation to compensate for cuts in external credit after the mid-1970s. Because the increase in the demand for money was not enough to match the excessive growth of the money supply, inflation grew by double digits. The heavy toll of the combined effects of these factors occurred in the real sector of the economy. The agricultural growth declined by about 16 percentage points, contributing to the drop in the real GDP growth by about 12 percentage points, compared to the previous sub-period average.

Table 2.1: Major Economic Episodes and Policy Responses, 1970-2001

	1970-78	1979-81	1981/82-1988/89	1989/90-1994/95	1996-2001
Period average GDP real growth	6.4 (-0.94)	-5.5 (-1.93)	3.3 (-2.64)	-9.3 (1.58)	11.6 (.79)
Period average Inflation	14.3 (0.62)	27.0 (0.15)	39.5 (0.54)	118.7 (0.22)	35.8 (1.07)
Major Episodes	1. Oil price shock in 1973. 2. Inflow of capital from oil surplus Arab countries to finance the Breadbasket Plan. 3. Build-up of balance of payments imbalance.	1. Balance of payments deficit driven mainly by fiscal expansion. 2. Build-up of Inflationary pressure.	1. Continued balance of payments deficit driven mainly by the fiscal expansion, the adverse terms of trade shocks as well as by reversal of capital flow in payments of debts and interest. 2. Investment saving gap. 3. Outbreak of the civil war. 4. Inflation started to run loose in the economy	1. Deterioration of the balance of payments due to the continued capital outflow, loss of competitiveness and the meat export ban in 1992. 2. Triple digit inflation crossing the classical threshold of hyperinflation. 3. Huge investment saving gap.	1. Fiscal retrenchment. 2. Inflow of direct foreign investment in connection with the commercial exploitation of oil. 3. The commercial exploitation of oil.
Policy Response	1. Outward orientation in order to promote cotton production and to initiate the breadbasket strategy. 2. Adoption of the Structural Adjustment Programme (SAP) as from late 1978.	1. A series of nominal exchange rate devaluations under the SAP. 2. Expansion of money supply to finance the fiscal deficit. 3. Implementation of various administrative control policies.	1. Nominal devaluation of the exchange rate and partial shift of imports and to some extent export to the free market. 2. Foreign exchange and price controls.	1. Implementation of a home-grown vintage of the SAP. 2. Continued policy of controls despite the announced liberalization package in 1992	1. Serious commitment to the liberalization and privatization policy of 1992. 2. Price and quantitative decontrols. 3. Substantial progress in the peace talks.

Source: Suliman (2004), Table (1)

Against the background of instability that characterized 1979-81, the sub-period 1982-89 was dominated by policy reforms with the help of the IMF and the World Bank. In principle, these programmes emphasized outward orientation, nominal devaluation, aggregate demand retrenchment, trade and institutional reforms to create an incentive structure consistent with the reform strategy. However, actual policy operations during the sub-period emphasized the use of multiple exchange rate and controls, including import and price controls.

Performance improved somewhat over 1982-89. As shown in Table 2.1, real GDP growth turned into a positive average rate of 3.3 per cent. Much of this growth was driven by the growth of real sector of the economy – notably agriculture. Also real exports reverted to the previous negative growth trend, the real import growth declined by 6 percentage points compared with the previous period record. As a result, the current account showed improvement, albeit still in deficit. Despite the achieved improvements, the intensification of the controls and the successive devaluations of the currency created rigidities and distorted the incentive structure, which restricted the supply response.⁵

It may be argued that the cash-transactions nature of the Sudanese economy emphasized by some analysts (Kireyev, 2001), has its origin in this sub-period. The demand for cash intensified as a result of dealings in the parallel and black markets (including other legal or illegal informal activities that rapidly grew over the period). Since cash transactions make it easier to escape the notice of the tax collector, a stable and formal foreign exchange market becomes one of the prerequisites of fiscal balance.

Over this sub-period, the dismal real GDP growth and the large fiscal and balance-of-payments deficits were also accompanied by saving-investment gap (the respective growth of saving and investment were –1.56 per cent and 13 per cent over the period). It is maintained that the combined effects of these imbalances and structural rigidities accounted for the partial failure of the ‘version’ of demand management policies implemented from the late 1970s to the 1980s. It should be noted that these policy failures were not unique to Sudan; similar policy failures and macro crises were documented for the Sub-Saharan African countries (see e.g. Oyejide (1990); McKinley (2001); Cornia and Helleiner (1994); El Sayyid (2001); and Elbadawi 1992). The macro policy failures of the period were compounded by the outbreak of the civil war in 1983, ending the ten-year peace following the Addis Ababa Peace Accord.⁶

Faced with a deteriorating balance-of-payments due to loss in competitiveness, the reversal of capital flows in connection with debt-service payments and mounting inflation, the 1989 regime was forced to commit itself to the liberalization programme announced in 1992 as a

⁵ Restriction of imports, including dealing in foreign exchange and price controls, resulted in an entrenched rent-seeking black market and smuggling. It is known that depreciation of the free exchange rate in the black market made the official exchange rate overvalued, triggering an inflationary vicious circle. See for example Branson and de Macedo (1987). Over the period, the premium grew by 16.6 per cent. Hussein (1986) estimated that during that period, more than 80 per cent of imports were financed from the black market sources. The increasing diversion of imports towards the black market with a depreciated exchange rate over the period increased the cost of imports in the domestic economy, resulting in increased capacity under-utilization and decelerating growth.

⁶ The pressure of the situation not only resulted in an economic u-turn of sorts, but also induced massive political instability. For example, the sub-period witnessed succession of three governments (see Table 10.1 below).

part of its National Salvation Strategy (1992-2002). The main elements of this programme were: (a) decontrol and deregulation of imports, foreign exchange, and prices; (b) stabilization of the foreign exchange rate through managed floating; (c) fiscal retrenchment and strict budget cash control; (d) privatization of non-performing public enterprises; and (e) encouragement of saving through reform of the financial system.

But instead of improving, macroeconomic performance deteriorated over the sub-period 1990-1995. Real per capita consumption declined by about 11 percentage points.⁷ Inflation reached a record triple-digit rate during this sub-period (Table 2.1). In view of the nature of the various measures implemented during this sub-period, income distribution deteriorated. The combination of rising inequality and falling per capita consumption during this sub-period created fertile ground for breeding poverty.

Over the sub-period 1996-2001, the government further committed itself to the liberalization package of 1992. Coinciding with the substantial inflow of foreign direct investment (FDI) related to the commercial exploitation of oil,⁸ the policy stance contributed to enabling a macroeconomic environment. This was helped by the improvements in the terms of trade averaging about 17 per cent, and growth of real exports (including oil) by 13 per cent. Thus, during 1995-2001, money supply and credit to the public and private sectors grew by about half their rates of the previous sub-period; accordingly the inflation rate receded to a single digit towards the end of this sub-period (Table 2.1). The real GDP showed a strong response to these developments, growing by 11.6 per cent period average. Also the growth of the per capita consumption reverted to its earlier trend of the 1970s.

From a poverty-reduction perspective, it should be noted that the fiscal retrenchment was a remarkable feature of the macroeconomic recovery during 1995-2001. In particular, the growth of public spending as a ratio of GDP was almost half its rate in the previous period, yet the growth of revenue was dismal. This is partially explained by the tax rigidities mentioned earlier, wide-spread informal transactions, weak enforcement of tax law and poor tax administration, as well as trade liberalization measures (Chapters 2 and 6).

2.2. Structural Change

It should be reiterated here that GDP data for Sudan leaves much to be desired in terms of quality, coverage and consistency. Table 2.2 shows the contribution of main sectors to overall GDP and sectoral growth of output over the period 1978-2001. The first and third phases (i.e. 1978-91 and 1992-2001) describe the times before and after the 1992 liberalization. In between the latter period, we also looked at the average trends during 1992-98, to highlight the positive effects of the oil exports.

What we observe in Sudan is to some extent at odds with the experiences of structural change of other developing economies over the last three or four decades, in which the contribution

⁷ The estimated trend regression equation for the real per capita consumption over 1982-1994 showed negative growth of 5.8 per cent (with t-value equal -6.13 and R² equal 77, see Suliman (2004)).

⁸ The inflow of the DFI partially softened the negative effects of the American-led embargo on Sudan, as well as the effects of the self-imposed isolation in the early 1990s.

of the agricultural sector declined while that of the industry and services increased. Until the end of the 1980s, a similar tendency was observed in Sudan; but this trend was reversed from the early 1990s onwards.⁹

Table 2.2: Sectoral Contribution to GDP and Sectoral Growth Rates (1982 constant prices)

	Sectoral Share of GDP (%)			Sectoral Output Growth (%)		
	1978-91	1992-98	1992-01	1978-91	1992-98	1992-01
Agriculture	34.1	43.6	44.6	3.2	11.2	9.4
Industry	15.2	15.5	16.7	5.4	5.2	11.1
Manufacturing	8.0	8.3	9.7	5.5	4.3	13.5
Electricity & Water	1.8	2.1	2.0	5.6	5.0	4.8
Construction	5.3	5.2	5.0	2.6	5.5	4.8
Services	50.7	41.2	37.0	2.6	2.2	2.4
Overall GDP	100.0	100.0	100.0	2.8	5.9	6.2

Source: Dagdeviren and Mahran (2004), Table 6.3, based on CBS data.

Corresponding to this was a rise in the share of industry and services. The contribution of manufacturing to the overall GDP increased from 4.5 per cent in the 1960s to about 10 per cent in the 1970s. The strategy of industrialization in this period emphasized the agro-processing units that depended on the extraction of agricultural surplus. Although some progress had been made in the manufacturing sector in the 1970s, the overall long-term trends indicate stagnation in the share of the sector in total GDP in the 1980s and 1990s largely because of higher growth of agriculture. In short, while discrimination against agriculture led to stagnation and impoverishment in rural areas, not much progress was achieved in the manufacturing sector, despite its favourable treatment.

Over the longer period 1970-2001 as a whole, the average share of agriculture in the GDP was about 37 per cent. Thus, it seems that the long-term growth experience in Sudan has not been accompanied by any appreciable structural transformation.

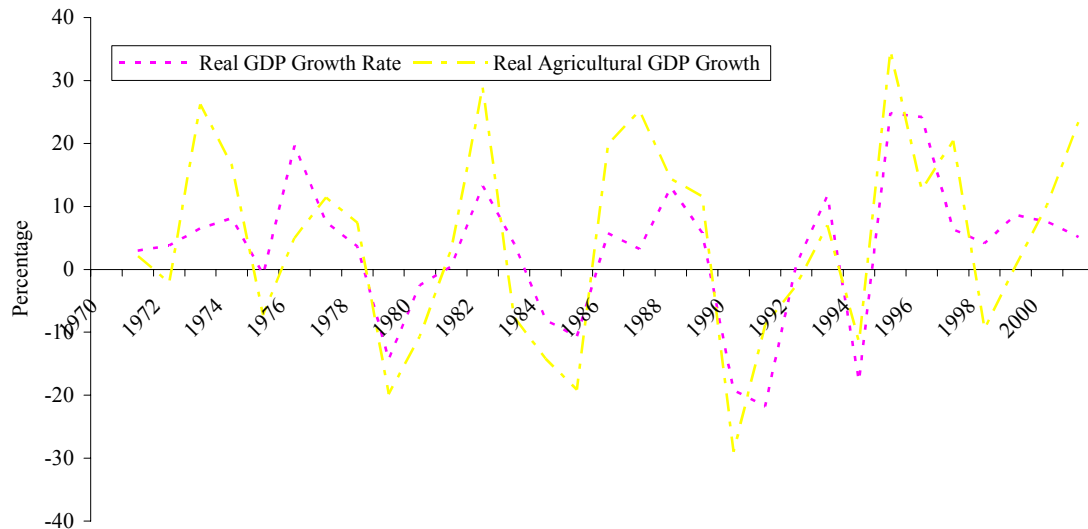
Agriculture appears to have a strong spill over effect on GDP, through the service and the manufacturing sectors. Figure 2.2 shows that change in GDP seem to be explained by fluctuations in agricultural production, which in turn are determined by weather.

Table 2.3 shows the development of sectoral shares for the main sectors of the Sudanese economy in constant (1981/82 prices) over the period 1981/82-2003. Throughout this long period, agriculture remained the leading sector despite losing part of its weight during the 1980s and early 1990s (Hassan and Khan (2004)). But it regained its share of about 38 per cent after the mid-1990s. In fact, except for 1988/89, agricultural GDP sustained an absolute decline

⁹ The share of agriculture declined from over 50 per cent in the 1960s to 28 per cent in 1990. As is often indicated, this was largely due to the bias of the import substitution policies against agriculture. As shown in Section 7 below, Sudan's agricultural crops have suffered a significant effective taxation, both explicit and implicit. The policy-induced adversities were particularly severe in the case of crops like cotton and groundnuts, whose exports were valued at the (lower) official exchange rate whereas imported inputs which producers of these crops used were often valued at the (higher) parallel rate, creating disincentives for producers.

throughout the decade 1981/82-1990/91.¹⁰ Several factors may explain this development: the resumption of military conflict in the South; policy bias against agriculture during this period as already noted, etc. But adverse weather conditions such as droughts and floods must have been the dominant factor behind the poor performance of agriculture (Mc Kinley (2004)).

Figure 2.2: Real GDP and Agricultural GDP Growth for Sudan Over 1970-2001



This poor performance of agriculture, and hence the rural sector during the 1980s, must have been a powerful force contributing to the spread of poverty in the Sudan. The rebound of the sector later may not be enough to rectify the situation. We propose this as a plausible explanation of the paradox referred to earlier: the apparently high incidence of poverty associated with the fast growth of the sector. But the poor performance of the agricultural sector did not fully impact on overall GDP performance during the 1980s – thanks to the massive inflows of aid and remittances of Sudanese nationals working abroad. Foreign aid inflows per capita reached an all-time high of US\$40 during 1985-89 (Ali & Elbadawi, 2002: Table 17). Moreover, Sudan was able to attract large inflows of Arab capital in the context of the “Bread Basket” strategy, which the country adopted after the mid-1970s.

In contrast to agriculture, the share of industry hovered around 15 per cent of GDP throughout 1981/82-1999. As shown in Dagdeviren and Mahran (2004), manufacturing maintained its share of 8-9 per cent throughout the period 1981/82-2003. This reveals a remarkable stickiness of the share of manufacturing in GDP over the entire period, reflecting the fairly modest diversification of the structure of production in the Sudan.

¹⁰ According to CBS data, agricultural GDP was Ls 2573.9 million in 1981/82, falling to a range of Ls 1963.6-2505.3 million throughout the 1980s (except 1988/89). It surpassed its 1981/82 level only in 1991/92, when it recorded Ls 2853.9 million.

Table 2.3: Development of Sectoral Shares for the Main Sectors of the Sudanese Economy in Constant (1981/82 prices), 1981/82-2003

Year	Agriculture	Industry	Services	Total
1981/82	38.7%	15.4%	46.0%	100.0%
1982/83	34.7%	17.1%	48.3%	100.0%
1983/84	34.1%	16.5%	49.4%	100.0%
1984/85	31.8%	17.6%	50.6%	100.0%
1985/86	34.9%	15.4%	49.7%	100.0%
1986/87	33.2%	15.7%	51.1%	100.0%
1987/88	30.1%	16.5%	53.5%	100.0%
1988/89	35.5%	14.4%	50.0%	100.0%
1989/90	29.8%	15.2%	55.1%	100.0%
1990/91	27.5%	16.8%	55.7%	100.0%
1991/92	32.4%	15.7%	51.9%	100.0%
1992/93	31.6%	16.2%	52.2%	100.0%
1993/94	29.8%	15.1%	55.0%	100.0%
1994/95	29.8%	15.1%	55.0%	100.0%
1996	38.5%	14.5%	47.0%	100.0%
1997	39.8%	14.1%	46.1%	100.0%
1998	39.4%	16.7%	43.9%	100.0%
1999	39.2%	14.7%	46.1%	100.0%
2000	36.9%	19.5%	43.7%	100.0%
2001	36.9%	20.1%	43.1%	100.0%
2002	37.0%	20.5%	42.4%	100.0%
2003	37.4%	20.8%	41.9%	100.0%

Source: Central Bureau of Statistics.

Only around the turn of the century do we observe a significant change in the structure of production in the Sudan associated with the recent discovery and production of oil.¹¹ The share of petroleum in GDP thus rose from nil prior to 1999 to 5.2 per cent and 7 per cent in 2000 and 2003 respectively. Table 2.4 gives more information on the increasing role of oil in the overall economic equation of Sudan. It is obvious that the advent of oil creates both opportunities and risks for Sudan.¹² But in terms of poverty reduction, if well managed, oil and its exportation promises significant potential. It remains to be seen if the new oil wealth will actually trickle down to the poor Sudanese. Be that as it may, the advent of oil presents Sudan with the opportunity of diversifying its economy away from the inherited agricultural base towards a modern structure that can better respond to economic and institutional incentives. To effect such a transformation requires a disciplined role for the state, including a planning role.

¹¹ Oil production initially started in August 1999 at a modest rate of 116,680 barrels per day. It quickly more than doubled to reach 250,000 barrels per day in 2001.

¹² In fact oil was one of the factors that contributed to prolonging the civil war in the South; it was one of the thorny issues of the peace talks between the GOS and the SPLA/SPLM, and figured very eminently in the Wealth Sharing Agreement signed by the two parties in January 2004.

Table 2.4: Some Indicators on the Importance of Oil in Sudan

	1999	2000	2001	2002	2003
Exports (fob.)	780.1	1806.7	1698.70	1949.11	2542.17
Oil Exports	275.9	1350.76	1376.66	1510.38	2047.70
Non-Oil Export	504.2	455.95	322.04	438.28	494.47
Oil/Total export (%)	35.4	74.8	81.0	71.5	80.6
Foreign Direct investment	370.80	382.21	574.00	713.18	1349.19
Oil Revenues/GDP (%)	0.6	4.6	4.4	5.4	9.5
Oil Revenues/Total Revenue (%)	7.6	43.2	40.4	44.8	56.9

Source: Bank of Sudan Annual Reports and IMF SMP 2000-2004.

The increasing importance of oil for Sudan may prove to be a double-edged sword. On the one hand, it contributes to improving the macroeconomic balances. Thus, according to the CEM, the federal budget was supplemented by revenue from oil amounting to US\$700 million in 2002 – mainly from the sale of petroleum products on the domestic market.

Exploration and development of oil (including the construction of the 1,610 km oil pipeline and oil refineries) has attracted a total of US\$1.3 billion in FDI during 1996-2000, which amounts to 10 per cent of GDP. (World Bank, 2003, Vol. I: 19). Furthermore, thanks to oil the foreign exchange situation of Sudan has improved considerably on account of oil-related foreign direct investment, oil export earnings and reduced import bill for crude and petroleum products. These are only the direct benefits; the main indirect benefit results from putting an end to energy bottlenecks and securing more stable energy supplies for industry, transportation and agriculture (Dagdeviren and Mahran (2004)).

Oil-related inflows of foreign currency have contributed to stabilize the exchange rate, and, in addition, the Bank of Sudan followed a proactive interventionist policy in the foreign exchange market to keep the exchange rate stable against the US dollar. As a result, the real exchange rate appreciated significantly while foreign reserves declined. Exports of oil have triggered large changes in Sudan's external position and relations. In less than two years, oil established itself as the dominant export item. Oil exports rose from zero in 1998 to US\$ 276 million in 1999, accounting for 35 per cent of total exports. In 2000 oil exports generated about US\$ 1.4 billion, accounting for 80 per cent of export proceeds. In turn, this doubled Sudan's export volume for 2000 as compared with 1999, and created gains in the terms of trade of 30 per cent in 1999 and 82 per cent in 2000. It is really remarkable to note that after more than 20 years of consecutive trade deficit, a surplus emerged in 2000 (Sobahi (2004)).¹³

But there is also a downside to the oil factor. Aside from increasingly subjecting Sudan to domestic as well as international pressures related to oil politics, oil revenue may pose serious challenges to the macro management of the Sudanese economy. Most important in this respect is the danger of Dutch disease plaguing the Sudanese economy. This critical issue will be discussed in detail in Hassan and Khan (2004).

Based on the traditional 3-tier sectoral classification (primary, secondary and tertiary), the main conclusions regarding the development of sectoral shares in GDP in Sudan may be

¹³ Most recent estimates for 2004 put oil revenue at US\$ 2.4 billion.

stated in comparison with Sub-Saharan Africa (Ndulu and O'Connel, 2000; Tahari *et al.*, 2004: Tables 4 and 5)

- (a) For Sudan, the share of the tertiary sector (which includes both public and private services) in GDP was the largest, followed by the primary sector. The share of the secondary sector in GDP was the lowest. This follows both the pattern seen in low-income countries and SSA countries.
- (b) For Sudan, the share of the tertiary (service) sector rose during the 1980s, but fell afterwards. The share of agriculture fell during the 1980s and rose afterwards, while the share of industry was broadly stable. This contrasts with SSA, where the share of the tertiary sector remained broadly stable while that of the primary sector steadily declined and that of the secondary sector rose.
- (c) The actual share of agriculture in GDP of the Sudan is noticeably higher than the predicted share on the basis of income and population. This illustrates the significant role which agriculture plays in overall economic activity in the Sudan. By contrast, the actual share of industry in the GDP of the Sudan is markedly lower than the norm based on income and population.

Thus, on the basis of these results it can be concluded that Sudan's growth experience over the relevant period shows that little or no development transformation has occurred in the economy. As suggested in Abdel Gadir (2004), this may be explained by several factors: lack of serious diversification plans; poor sequencing of investment projects; weak response of private sector; and political instability.¹⁴

2.3 The Sources of Economic Growth

According to the literature on growth accounting, the standard approach for discerning the different sources of growth is the aggregate production function. The most popular form is the Cobb-Douglas production function with disembodied technical progress. According to this approach, overall GDP growth may be the sum total of growth in the physical capital stock, growth in labour input, and a residual term representing the growth of total factor productivity. The analytics are quite simple and straightforward, expressed by the growth accounting equation:

$$G_y = \pi + \alpha G_k + (1-\alpha)G_l \dots\dots\dots(1)$$

¹⁴ Sudan changed political regimes over the period under consideration in a predictable fashion in a cycle of democratic-military regimes, with the democratic regimes being short-lived while military regimes had relatively long durations. This political cycle substantially affected the manner in which the economy was managed and undermined the capacity of government to think through long-term development in a systematic way. Significant in this respect are the uncritical borrowing of development thinking, and models, from neighbouring countries and the equally uncritical adoption of economic programmes prescribed by international donors.

where G_y = the growth rate of GDP,
 G_k = the growth rate of the capital stock,
 G_l = the growth rate of labour, and
 π = the rate of technical progress
 α = the share of capital in output; $0 < \alpha < 1$.

In empirical research, a value for α ranging between 0.3 and 0.4 is usually assumed to reflect stylized facts, and π is derived as the residual growth component (the grey matter, or the Solow factor):

$$\pi = G_y - [\alpha G_k + (1-\alpha)G_l] \dots\dots\dots(2)$$

This brief review of the methodology of growth accounting underscores the role which technical progress, as captured by the growth of total factor productivity (π), plays in the growth performance of a given country. The theoretical and empirical interest revolves around whether such growth performance is driven by factor accumulation (which in the long run has its own limits) or is driven by technical progress (which will sustain steady growth in the long run). Although equation (2) may look simple and straightforward, both its underlying assumptions and the data requirements of the Cobb-Douglas production function indicate its limitations – even detracting from its meaning. Extreme caution in using it to explain the sources of growth is required. In fact such results need to be taken with at least a grain of salt.¹⁵ Notwithstanding such limitations, the growth accounting methodology has gained increased popularity; the literature in this area is mushrooming.¹⁶

What is the record of growth accounting for the Sudan, and how does it fare with comparator cases, such as SSA countries? Table 2.5 below includes some interesting results for Sudan and SSA and Middle East countries. Such results should be cautiously interpreted – at least for the case of Sudan.

¹⁵ The concept of aggregate production function and the associated "category" of capital as a factor of production has been the subject of a heated debate (known as the Capital Controversy) between the Cambridge School and the Neoclassical School. The battle of the Two Cambridges raged for decades and produced voluminous literature. The possibility of re-switching techniques, argued forcefully by the Cambridge School and acquiesced by the neo-classical school, is sufficient to invalidate many of the assumptions of neoclassical economics in general and growth theory in particular. (for a lucid survey, see G. C. Harcourt, *Theory of Capital*, Cambridge University Press, 1972). The assumption of constant returns to scale is too strong; it implies that growth goes hand in hand with familiar economic ingredients (factors of production) – aside from shocks. Such is not simply the case in the context of a developing economy; shocks may significantly affect the growth of output regardless of factor inputs. Despite the apparent simplicity of this methodology, it is rather demanding in terms of data requirements, especially in the case of many developing economies. Time-series data on employment, capital stock and factor shares are either non-existent or severely unreliable. Using data borrowed from cross-country studies is not the real answer; data may still be wanting. As per equation (2) above, all such lacunas will distort the estimate of rate of TFP change – π . Furthermore, the value of factor shares may be quite sensitive to changes or shifts in policy regimes. For example, implementing stabilization and adjustment policies along neo-liberal (viz. Bretton Woods) lines may imply significant reduction in the share of labour in GDP. Thus, using the same value for α throughout a period witnessing drastic policy shifts may lead to inaccurate estimate of π . As a result the aggregate production function has negligible empirical content (Filipe and Fisher, 2003), and they are even dubbed "empty source" of growth (Rada and Taylor, 2004).

¹⁶ See for example, (Ali and Elbadawi (2003); Ali and Wani, (2004); Collins and Bosworth (1996); O'Connell and Ndulu (2000); Tahari *et al.* (2004)).

For sensible interpretation of these results, it is prudent to bear in mind two important considerations. The first is the tremendous volatility of GDP growth in the case of Sudan¹⁷, which largely reflects fluctuations in agricultural GDP, as demonstrated above. The second is that the empirical results are based on an assumed value for the share of labour equal to 0.65 (implying a value of 0.35 for α , the share of capital). In a situation such as that of Sudan, involving a policy-induced change in the functional distribution of income and hence in the share of labour in GDP (such as privatization, price liberalization, reducing subsidies, etc), the estimates of the contribution of production factors is bound to change; it becomes more or less endogenous. Given overall GDP growth, TFP will also change correspondingly¹⁸.

Table 2.5: Sources of Growth in Sudan and Comparators, 1960-2000 (per cent)

Period	GDP per Worker Growth Rate: G_y	Growth Rate of Capital Stock per Worker: G_k	Growth Rate of Human Capital per Worker: G_h	Contribution of Physical Capital: $0.35 G_k$	Contribution of Human Capital: $0.65 G_h$	Total Factor Productivity
1960-1964	-1.38	9.60	4.05	3.36	2.63	-7.37
1965-1969	-0.67	2.60	4.40	0.91	2.86	-4.44
1970-1974	-1.69	-0.05	6.00	-0.02	3.90	-5.57
1975-1979	4.48	4.63	6.55	1.62	4.26	-1.40
1980-1984	-0.51	1.28	3.29	0.45	2.14	-3.10
1985-1989	-0.45	2.45	4.12	0.86	2.68	-3.99
1990-1994	-0.54	-0.42	3.31	-0.15	2.15	-2.54
1995-1999	1.97	-0.46	2.09	-0.16	1.36	0.77
1960-1999	0.19	2.27	4.23	0.79	2.75	-3.35
SSA 1960-2000	0.6			0.5	0.3	-0.1
ME 1960-2000	2.1			1.1	0.4	0.5

Notes: SSA = Sub-Saharan African Countries; ME = Middle East Countries

Sources: For the Sudan, Abdel Gadir (2004), Table (8.13). For SSA and ME, Bosworth and Collins (2003), as reported in Tahari et al. (2004), Table 10.

With these critical observations on the traditional growth accounting methodology, we now take a look at the results in Table 2.5. The GDP per worker column in the above table reveals a pattern of alternating negative and positive growth sub-periods, with the negative growth periods being longer than the positive ones.

¹⁷ Suliman (2004) (Table 1.2) reports an average real GDP growth rate for the 1970-2001 around 3.0 per cent, with a 3.81 coefficient of variation. Ali and Elbadawi (2002: Table 5), studying the longer period 1960-1998, report a much lower growth rate and a much higher coefficient of variation. They report values of 0.29 and 19.96 for the average growth rate and coefficient of variation, respectively, for the whole period 1960-1998. Apparently there was an error, since the value for the coefficient of variation falls outside the range of individual values for the sub-periods.

¹⁸ To illustrate this important point, take the following example. Assume that $\alpha = 0.4$ initially. With growth rates of the capital stock and labour of 4.5 per cent and 2.5 per cent respectively, a GDP growth rate of 3.2 per cent implies zero TFP change. Now assume that the country implements neo-liberal policies involving raising α to 0.6. With the same growth rates of GDP, capital, and labour, TFP growth changes significantly from zero to -0.5. Obviously, this popular tool of neo-classical analysis is misleading for analyzing sources of growth in the context of stabilization and adjustment policies. This is an important manifestation of the Lucas critique (Lucas, 1976).

The overall average growth rate of labour productivity is positive, but very low at 0.19 per cent per annum. It can also be shown that the growth of labour productivity is also volatile. For the whole period the estimate of the coefficient of variation is 30.3. The capital per worker column shows relatively high rates of growth during the first two half decades, and also during the 1975-1989 period there was positive growth for capital per worker. For the 1990s, the growth rate of capital stock per worker was negative¹⁹. For the whole period, capital per worker increased by an annual rate of 2.27 per cent.

As for human capital per worker the table shows positive and high growth for all decades, averaging 4.23 per cent per annum (Abdel Gadir (2004)). This, however, may be difficult to reconcile with what is commonly known about the deterioration of human development in the Sudan during the 1980s and 1990s. (World Bank, 2003, Vol. I: ch. 7). The reason for this anomaly may be that Abdel Gadir (2004) used too high values for the growth rate of the human capital (h) which were borrowed from Barro and Lee (2000).²⁰

Be that as it may, perusal of the results in Table 2.5 leads to a number of observations:

- (a) Average growth in GDP per worker was negative (-0.11) during the sub-period 1960-1994, despite decent growth in factor inputs (2.42 per cent for capital stock per worker and 4.53 per cent for human capital per worker). As a result, TFP declined throughout this sub-period at a rate averaging 3.9 per cent per annum.
- (b) By contrast, the sub-period 1995-1999 witnessed real positive growth in GDP per worker and positive growth in TFP.
- (c) The growth story for the entire period 1960-1999 is one of modest GDP per capita growth and significant deterioration in TFP; the rates averaging 0.19 per cent and -3.35 per cent per annum, respectively.

According to this evidence, Sudan seems to have fared worse in comparison with SA countries where the same methodology was applied. As shown in Table 2.5, SSA countries recorded an average annual growth of per capita output per worker and TFP of 0.6 per cent and -0.1 per cent, respectively, for the entire period 1960-2000. In comparison with Middle Eastern countries, the performance of Sudan is much worse.

Generally speaking, causes of low or negative total factor productivity include such factors as falling capacity utilization, climate shocks, civil strife, fluctuations in aggregate demand, and the rate of unemployment and underemployment. Clearly, some of the above sources of low, or negative, total factor productivity are related to institutions. All such factors, strictly speaking, are supposed to reflect our ignorance as to the underlying factors that determine the long-run growth performance of various countries.

In Abdel Gadir (2004) the deterioration in TFP in Sudan over the period 1960-1994 is mainly attributed to political instability reflecting itself in regime change in a cyclical pattern (from democratic to military then democratic, etc.), and to institutional innovations. According to this interpretation, it would seem safe to conclude that the overall impact of various

¹⁹ This may be difficult to reconcile with the reported large capital inflows during this sub-period.

²⁰ According to Barro and Lee (2000, appendix table A2), estimates of average years of schooling per person 15-years and above were as follows: 0.41 for 1960; 0.50 for 1965; 0.62 for 1970; 0.83 for 1975; 1.14 for 1980; 1.34 for 1985; 1.64 for 1990; 1.93 for 1995; and 2.14 for 2000.

institutional innovations on technical change in the economy was negative for the period 1960-1994. TFP improvement during 1995-1999 may be explained by the inflow of foreign direct investment into the oil sector. This is suggested in Abdel Gadir (2004), citing to available evidence that indicates that oil-related foreign direct investment (FDI) flows were indeed substantial during the second half of the 1990s.²¹

Notwithstanding these explanations, they still leave a number of gaps in our understanding of the sources of growth and the behaviour of TFP in the Sudan. It may not be unreasonable to question the accuracy of some pieces of data on which the calculations in Table 2.5 were based, particularly with respect to α , $G_{K,t}$, and G_L . We have already referred to the implications of using the same value for α over entire periods which involve sudden and major shifts in policy regimes (so-called institutional innovations). As to the growth rate of human capital per worker (G_L) in the table, it seems highly exaggerated and inconsistent with observed developments in the Sudan during the period. One important development is the migration of Sudanese nationals to the Gulf oil-exporting countries.²² Migration to non-oil countries would naturally involve a higher proportion of qualified manpower. Therefore, it is reasonable to conclude that Sudan was subjected to significant brain drain after 1978. Another relevant factor is the significant drop in government expenditure on social services, which must have also impacted negatively on human capital.

According to the World Bank, the extent and quality of social services provided by the central government, particularly in the areas of health and education, has declined considerably over time due to budget cuts. In 1987, real per capita expenditure on health care by the central government was less than half of its level in 1975. In areas of social services critical to human development, this caused deterioration in public facilities, declining number of qualified staff, and lower-quality services. For more recent years, limited data from such sources as the Demographic and Health Survey, 1989/1990 (DHS), the Safe Motherhood Survey, 1999 (SMS), and the Multiple Indicators Cluster Survey, 2000 (MICS) indicate that the deterioration in Sudan's basic social services during the 1980s continued during the 1990s.

It seems that stabilizing the economy during the 1990s was largely achieved by cutting public expenditure – particularly public expenditure on such basic social services as health, education, and domestic water supplies and sanitation. This seriously undermined the development of human capital. (World Bank, 2003, Vol. I: 107).

Consequently, in view of brain drain through migration of Sudanese nationals and cuts in public expenditure on social services, it is difficult to accept the high growth rates of human capital per worker presented in Table 2.5; they grossly overestimate the extent of the

²¹ As noted in Abdel Gadir (2004), estimates of FDI flows differ between IMF sources (International Financial Statistics and Balance of Payments Yearbook) on the one hand and UNCTAD on the other (*World Investment Report*). According to IMF sources, FDI flows into Sudan were either zero or negligible for each year from 1960 to 1995. During the second half of the 1990s, FDI flows increased from about US\$70 million in 1996 (representing 0.92 per cent of GDP) to about US\$371 million in 1999 (representing about 2.26 per cent of GDP). These flows increased to US\$392 million in 2000 and to US\$574 million in 2001.

²² Migration of Sudanese nationals started in earnest in the second half of the 1970s. The numbers jumped from 132 thousand in 1978 to 250 thousand in 1984 – almost doubling in 6 years. According to some experts, 45 per cent of migrant workers to the Gulf oil-exporting countries were professionals, technicians, and skilled workers (Galal Eldin, 1987).

development of human capital in the Sudan – particularly during the 1980s and the 1990s. This implies that the true deterioration in TFP during 1980-1994 may not have been to the extent shown there.

For more understanding of the forces driving economic growth of the Sudan, we examine the development of GDP by type of expenditure over the period 1981/82-1999.²³

Table 2.6: Development of GDP by Type of Expenditure, 1981/82-1999

Year	Government Final Consumption Expenditure	Private Final Consumption Expenditure	Investment	Exports	Import	Total GDP
1981/82	10.78%	80.96%	22.82%	9.73%	24.28%	100%
1982/83	10.40%	88.79%	15.67%	10.43%	25.30%	100%
1983/84	12.66%	82.38%	12.81%	9.56%	17.42%	100%
1984/85	13.23%	89.79%	5.41%	6.54%	14.97%	100%
1985/86	11.78%	83.93%	9.28%	7.16%	12.15%	100%
1986/87	9.15%	80.35%	13.02%	6.16%	8.68%	100%
1987/88	9.88%	83.27%	8.03%	7.35%	8.53%	100%
1988/89	9.71%	78.32%	13.10%	7.26%	8.39%	100%
1989/90	14.03%	79.00%	7.22%	5.58%	5.83%	100%
1990/91	18.27%	73.46%	13.25%	4.20%	9.17%	100%
1991/92	14.81%	77.12%	14.36%	5.83%	12.12%	100%
1992/93	13.46%	74.52%	20.23%	5.20%	13.41%	100%
1993/94	17.52%	68.59%	19.86%	6.67%	12.64%	100%
1994/95	13.00%	70.00%	23.00%	5.00%	11.00%	100%
1996	23.74%	69.99%	10.22%	3.80%	7.74%	100%
1997	18.63%	73.35%	11.45%	4.11%	7.54%	100%
1998	14.21%	68.72%	22.01%	3.61%	8.56%	100%
1999	11.39%	78.22%	13.66%	4.42%	7.70%	100%

Source: CBS, unpublished data

CBS's unpublished data presented in Table 2.6 reveals some interesting trends.

- First, there is a clear trend decline in the ratio of private final consumption to GDP over the decade and half spanning the period from the early 1980s to the late 1990s. It fell from an average close to 87 per cent in 1981/82-1984/85 to about 71 per cent for the period 1996-1998. Despite a significant increase in 1999, it never regained its level during the early 19980s. Private final consumption did not keep pace with GDP growth over this long period. This pattern has clear implications for poverty; even with no increase in inequality, the incidence of poverty must have increased.

²³ Unfortunately, complete constant-price GDP data are not available before 1981/82 or after 1999. Our efforts to extend the period backward and forward by tapping data from CBS proved futile. The CEM has incomplete current-price data for 2000 and 2001. (World Bank, 2003, Vol. II, Table A3.5).

- Second, the behavior of government final consumption expenditure was almost opposite to that of private consumption; despite annual fluctuations, it showed a clear upward trend until 1996. From a poverty/social welfare perspective, the effect of this trend rise in the ratio government consumption depends on the pattern of government expenditure. As already noted, development expenditure and government expenditure on social services was reduced in relative terms (Babiker, Bell and Medani (2004); World Bank, 2003). In fact, the rise in government expenditure was mainly driven by military considerations reflecting the financial burden of the conflict in the South.
- Third, investment as a ratio of GDP tended to fluctuate rather strongly during this period. It may be that investment, rather than consumption, was changed such as to reflect changes in current income as shock absorber, rising during booms and falling during bust. Actually, such policy response may have contributed to magnifying shock-initiated fluctuations, making GDP even more volatile.

2.4 Poverty and Inequality

Detailed analysis of the relation between growth on the one hand and income poverty on the other is hampered in the case of Sudan by the great lacuna in reliable up-to-date and relevant data – particularly the household expenditure surveys. Related to this is the fact that there is no official poverty line for the Sudan (Ibrahim *et al.*, 2001: 28). In order to address the question of the relation between growth and poverty, data on the changes in poverty and inequality indicators over time are needed. Unfortunately, no such data is available for Sudan beyond 1992. We shall use this information in addition to other pieces of data derived from the Sudan draft NHDR 1998, *The Migration and Labour Force Surveys* (MLFS) 1990 and 1996 (by the Ministry of Manpower) and other sources. For the more recent period, we shall use some indicators of human poverty as proxies for income poverty.

Using the Foster-Greer-Thorbecke type of poverty measures, Ali (1994) derived estimates for poverty in Sudan at four time points of critical significance to major economic policy changes in Sudan over the period 1968-93. Notwithstanding data and methodological issues, this work provides the only available estimates of several poverty measures for Sudan over such a fairly long period. Table 2.7 reproduces some of his results.

A number of observations follow from this table²⁴:

- Measured by the head count index, poverty in Sudan showed an increasing trend at a varying rate of increase over 1978-93. For example, the head count index increased from 54.3 per cent to 77.8 per cent and 91.4 per cent in 1978, 1986 and 1993, respectively. Also,

²⁴ A word of caution is in order regarding poverty line-based measurements for Sudan. With a very weak information base, it will be difficult to make precise assessment of levels, not to mention differentials or trends, of poverty. Non-comparability of various data sources makes it rather difficult to establish poverty trends with a reasonable degree of confidence. But despite data problems, the consensus is that poverty is extensive, deep and severe. A composite index of socio-economic standard derived from the 1993 census questionnaire reveals that in the north of Sudan poverty (especially extreme poverty) is more prevalent in rural areas, and that 90 per cent of the rich are in urban areas (Ibrahim *et al.*, 2001: 29).

the number of poor households increased at the period end-points from 1.7 million to 2.7 and 3.4 million, respectively.

- The rate of spread of poverty started high in the rural areas, and over time it was overtaken by the rate of expansion of urban poverty. For example, over 1968-78 the rate of spread of urban poverty was 2.6 per cent, which increased to 12.6 per cent over 1978-86 before declining to 7.8 per cent over 1986-92. The corresponding rates for the spread of rural poverty were 0.23 per cent, 3.29 per cent and 1.6 per cent respectively.
- The urban areas were hit worst by both the spread and the incidence of poverty especially over 1986-92. This perhaps reflects the high weight of the poor who joined the urban areas as a result of the displacement by the civil war and other conditions of decline in the rural areas.²⁵
- Transcending the rural-urban divide, there are wide regional differences in income poverty (see *Ibrahim et al.*, 2002, pp. 30-32 for details).

Because of lack of data, the discussion of the change of income poverty in the Sudan is only possible up to 1993. Beyond that year, we use data on human poverty and human development: the Human Poverty Index (HPI) and the Human Development Index (HDI).²⁶ For these indicators data are available for Northern and Southern Sudan separately for 1993 and 2000. The results are shown in Table 2.8.

The data reveal a wide regional gap between the North and the South. For southern Sudan, the data also indicates some improvement both in human poverty and human development. The deprivation of survival index in the South fell from about 24 in 1993 to about 15 in 2000 – an improvement by more than one third. There was a reduction by 40 per cent in the deprivation in knowledge index.

The slightest improvement was the living standard dimension, as the low living standard index fell by just about 6 per cent between 1993 and 2000. As a result of these developments, the HPI for the South (with $\alpha = 3$) fell from about 47 in 1993, to about 40 in 2000. In Northern Sudan, on the other hand, the HPI (with $\alpha = 3$) fell more considerably, from about 41 in 1993 to about 25 in 2000. Most of the improvement was in connection with reduction in deprivation of knowledge component.

²⁵ This pattern is also consistent with observation made in the literature that, the rural sector is characterized by low income and low inequality, while the urban sector exhibits high income and high inequality at the initial stages of development.

²⁶ The HPI is the average of three indices: reflecting deprivation of survival, deprivation of knowledge, and low living standard.

Table 2.7: Poverty Trends in Sudan Over 1968-1993

Poverty Indicators	Poverty Trends (1968-78)			Poverty Trends (1978-86)			Poverty Trends (1986-93)		
	1968	1978	Annual per cent Change	1978	1986	Annual per cent Change	1986	1993	Annual per cent Change
Headcount (per cent)	62.68	64.17	0.23	64.17	83.12	3.29	83.12	93.16	1.6
Rural	15.90	20.51	2.58	20.51	52.86	12.56	52.86	84.43	6.9
Urban	51.59	54.26	0.50	54.26	77.8	4.61	77.8	91.41	2.2
Sudan									
Poverty Gap (per cent)	28.11	30.56	0.84	30.56	51.67	6.79	51.67	62.61	2.8
Rural	4.56	8.58	6.53	8.58	24.38	13.94	24.38	47.78	10.09
Urban	24.66	23.12	-0.64	23.12	45.43	8.81	45.43	59.35	3.89
Sudan									
No of Poor Households (000)	1181.0	1575.0	2.92	1575.0	2309.0	4.9	2309.0	2725.0	2.39
Rural	51.7	127.4	9.44	127.0	370.0	14.3	370.0	705.0	9.65
Urban	1305.8	1669.0	2.48	1669.0	2706.0	6.23	2706.0	3430.0	3.45
Sudan									
Mean Income of the Poor	75.0	104.0	18.43	104.0	2415.0	24.93	2415.0	85450.0	66.4
Rural	97.0	452.0	16.63	452.0	3440.0	28.88	3440.0	117200.0	65.5
Urban	71.0	446.0	20.17	446.0	2656.0	24.99	2656.0	90200.0	65.5
Sudan									
Poverty line (Ls)	136.0	777.0	19.04	777.0	6384.0	30.12	6384.0	270000.0	70.7
CPI (1987=100)	2.4	10.2	15.60	10.2	82.9	29.94	82.9	3691.9	72.0

Notes:

Estimates for 1968 and 1978 are based on Income and Expenditure Surveys for 1967/68 and 1978/80 by CBS.

Estimate for 1986 is based on the Migration and Labour Force Survey conducted by the Ministry of Labour in 1990 (relating to 1989).

Estimate for 1993 is based on Survey conducted by the Takaful Fund in February 1993.

Source: Ali (1994), Tables (4-9), (4-15), and (5-4).

Table 2.8: Human Poverty in Northern and Southern States, 1993- 2000

	Northern States		Southern States	
	1993 (T)	2000 (U)	1993 (U)	2000 (U)
Deprivation in Survival Index	17.30	11.73	23.73	14.91
Deprivation in Knowledge Index	47.55	17.73	45.39	27.01
Low Living Standard	46.21	33.91	58.89	55.52
Human poverty Index Pa (α = 3)	41.30	24.87	46.98	40.15

Notes: T = Total, U = Urban

Source: From HDI –HPI Excel file provided by UNDP CO, Khartoum.

The HDI for the South increased from 0.428 in 1993 to 0.584 in 2000. Most of the improvement was in the life expectancy index. For the North, the data indicate that the HDI rose from 0.492 in 1993 to 0.563 in 2000. The data also indicate the extent and development of regional inequality (between North and South) in Sudan (more on this later).

No less important than the development of poverty in Sudan over the period 1968-2000, is the development of various dimensions of inequality. We stress three such dimensions in Sudan's case: the inequality between income groups (vertical inequality), inequality between rural and urban sectors (horizontal inequality), and inequality between North and South (regional inequality) (see Ibrahim, *et al.*, 2001). The latter dimension was discussed above, using indicators of human poverty and human development. Now we deal with the first two dimensions. Consider the data in Table 2.9, which contains estimates from two independent studies of the Gini coefficient for selected years spanning the period from the late 1960s to the mid-1990s. These are the time points where relevant surveys were conducted.²⁷ Several conclusions may be reached based on the information in the table.

Table 2.9: Income Inequality in Sudan, 1968-1996

Area	Gini Coefficients			
	1967/68	1978/80	1990	1996
	0.34	0.51	0.69	0.65**
Rural	(0.38)	(0.48)	(0.66)*	
Urban	0.41	0.42	0.56	0.72
	(0.41)	(0.40)	(0.55)*	
Total	0.41	0.50	0.61	0.74
	(0.44)	(0.46)	(0.64)*	

Notes: Figures in parentheses are from Ali (1994). (*) means estimates for 1986. (**) means value in Ibrahim *et al.*, but most likely it is 0.75.

Source: Ibrahim, *et al.*, 2001, Table (1.5); Ali (1994), Tables (4-1), (4-5), (4-10), and (4-11).

First, it seems that generally speaking, inequality has been on the rise in the Sudan throughout the period. The overall value of the Gini coefficient increased steadily from 0.41 in 1967/68 to 0.74 in 1996. The increase appears to have accelerated in the 1990s; almost 40 per cent of the absolute increase in overall inequality took place between 1990 and 1996. Thus, over the 30-year period 1967-1996, income distribution in Sudan appears to have experienced a dramatic change; it shifted from moderately unequal to extremely unequal. It is remarkable that in the first six years of the 1990s, the ratio of the income share of the top 20 per cent to that of the boom 50 per cent has more than doubled. By all counts, this is an alarming development, pointing to a case of severe inequality.²⁸

²⁷ It is important to remember that the surveys of the 1970s are not exactly comparable with those of the 1990s; the former is an income and expenditure survey whereas the latter are migration and labour force surveys. There are issues related to differences of definition and coverage that have to be kept in mind in interpreting those numbers. For example due to the civil war, except perhaps for the 1978/80 survey, data relate only to the North and government-controlled areas in the South.

²⁸ It is reported in a recent study on poverty and employment in Sudan that during the 1970s, the income share accruing to the bottom 50 per cent of the population dropped from 21.9 per cent to 18.4 per cent, whereas the income share of the top 20 per cent increased from 48.1 per cent to 53.3 per cent. During the much shorter period of the 1990s (till 1996), the share of the poorest half of the population dropped from 14 per cent to 7 per cent, while the share of the richest fifth shot up from 65 per cent to 76 per cent. (Ibrahim *et al.*, 2001: 25-26).

Second, inequality in rural areas seems to have increased much faster (compared to urban areas) during the 1970s and 1980s, while inequality in urban areas seems to have increased much faster (compared to rural areas) during the 1990s.

2.5 The Growth-Poverty Nexus

It is clear from the discussion in sections 2.1 and 2.4 above that Sudan experienced disparate growth-poverty patterns of association over the period since the early 1970s:

- (i) Fast growth during the 1970s was associated with a slight increase in poverty.
- (ii) Negative growth over the period from the early 1980s to the mid-1990s was associated with a significant increase in poverty.
- (iii) Very fast growth during the 1990s appears to have been associated with a moderate increase in poverty. Thus it is curious to note that both negative growth and very fast growth were associated with increased poverty.

The interesting question from a policy standpoint is: why did growth of the Sudanese economy associate with increased poverty? We shall attempt to answer this question: was economic growth in Sudan, especially in the post-1992 period, pro-poor or pro-rich or neutral? But before doing that we first define the concept of pro-poor growth.

It may be said that growth is pro-poor “when it is labour-absorbing and accompanied by policies and programmes that mitigate inequalities and facilitate income and employment generation for the poor, particularly women and other traditionally excluded groups.”²⁹ As demonstrated in the World Bank *WDR 1990*, the pattern of growth for poverty matters. To ensure poverty reduction through growth, policies should be adopted to provide opportunities to the poor and enable them to participate in growth:

- (i) economy-wide and sectoral policies should encourage rural development and urban employment;
- (ii) specific measures are needed to increase the access of the poor to land, credit, public infrastructure and services;
- (iii) in resource-poor areas, poverty and environmental degradation are interrelated, which calls for public investment and government subsidies to meet basic needs, maintain or increase yields and preserve natural resources. (World Bank, 1990: ch. 4).

In light of the above, a pro-poor growth strategy may be characterized as one that combines the adoption of direct pro-poor policies with the removal of institutional and policy-induced biases against the poor (such as discrimination on the basis of gender, ethnicity and religion). Needless to say, removal of various anti-poor institutional barriers and policy-induced biases may actually enhance efficiency in addition to increasing equity. Also, implementation of

²⁹ ADB, *Fighting Poverty in Asia and the Pacific: The Poverty Reduction Strategy*. Manila: Asian Development Bank, 1999, quoted in Kakwani and Pernia, 2000:1. Pro-poor growth was also reflected in the notion of “broad-based growth” which underpinned the *World Development Report 1990; Poverty* (Oxford: Oxford University Press, 1990).

social policies focusing on education, health and other basic services will simultaneously promote equity and raise productivity and overall efficiency in the economy (Kakwani and Pernia, 2000).

There are three aspects of poverty-reduction strategy. First, poverty reduction results from the combination of strong economic growth and non-worsening distribution of income. Second, this raises the bi-directional relationship between economic growth and the distribution of productive endowments. Third, the role of redistribution- how much of each variety: possibly distorting redistribution of income and possibly growth-enhancing redistribution of assets.

It becomes essential for studying country experiences to determine the nature of the effect of growth on poverty in each particular case. To achieve this, we need to decompose the overall growth effect into its two components: the income effect (i.e., the effect of growth with inequality constant) and the equity effect (i.e., the effect of changes in inequality with mean income constant):

$$\eta = \eta_g + \eta_i \quad \dots\dots\dots (3)$$

where: η is the proportional change in total poverty associated with a positive growth of 1 per cent.

η_g is the proportional change in poverty associated with a positive growth of 1 per cent, provided income inequality does not change.

η_i is the effect on poverty of inequality, provided mean income does not change.

It is obvious that η_g is always negative, while η_i can be either positive or negative. From (3) it follows that if $\eta < 0$, growth is unequivocally pro-poor; and if $\eta > 0$, the change in income distribution associated with growth is pro-rich.

Kakwani and Pernia suggest as an index of pro-poor growth:

$$\phi = \eta / \eta_g \quad \dots\dots\dots (4)$$

$\phi > 1$ implies that $\eta_i < 0$, which means growth is strictly pro-poor.

$0 < \phi < 1$, means that poverty still declines with growth

$\phi < 0$, economic growth hurts the poor.

Unfortunately, requisite data for estimating ϕ are not available in the case of Sudan. However, in view the pattern of growth discussed in this report and the policies implemented particularly after 1992, we surmise that such growth was not pro-poor. The effect of inequality on poverty has significantly outweighed the benign effect of growth on poverty during the post-1992 period. Specifically, plausible causes may include: liberalization measures, the pattern of growth and asset ownership in agriculture, deterioration in real wages as a result of

hyper inflation, rising unemployment³⁰, in addition to government measures involving cuts in spending for such basic social services as health and education.

As concluded in Dagdeviren and Mahran (2004), the implications of liberalization policies for growth and income distribution are obvious. While wage and salary earners as well as producers have all suffered a fall in their real earnings, black-market traders and capitalists have gained. Although the high inflation rates have been detrimental to the whole economy, the adverse welfare effects were particularly harsh on the poor who constitute the majority of the population (Mahran, 1999). Economic reforms in general, and liberalization policies in particular, have taken place at a high social cost, manifesting not only in widespread poverty, but also in its depth and severity, particularly for low-income groups who have borne the brunt of these policies.

Particular attention should be given to labour migration during the 1970s and 1980s, internally and externally, driven by deterioration of agriculture, the war in the South and dramatic shifts in political regimes. For internal migration from rural to urban areas, the force of the push factor may have dominated, supplemented by migration from neighbouring countries;³¹ the urban population increased by about 6 per cent per annum compared to around 2 per cent for the rural population. Since the modern sector proved for various reasons unable to generate enough demand for labour to match the fast growth of labour supply, the informal sector seems to have acted as a *vent for surplus labour*. According to the MLFS 1996, about 1.6 million jobs were created in the informal sector during 1990-96, while the number of lost job opportunities in the modern sector (both private and public) exceeded 0.6 million during the same period (quoted in Ibrahim *et al.*, 2001:24).

Although the conflict in the South propelled much of the migration to urban centres, another factor was the slackening of demand for seasonal agricultural labour – even as early as the 1980s when short- and medium-staple cotton varieties replaced the more labour-intensive long-staple cotton. Another factor was drought in regions such as Kordufan and Darfur, which intensified rural-to-urban migration. In addition, the inflow of refugees from neighbouring countries contributed significantly to the urban influx.

As a result of these factors, Sudan experienced significant population and labour mobility in the last two decades. Thus, 13 per cent of the total population surveyed in the 1993 census had already changed residence since birth. Most of the internal migration from both rural areas and smaller urban localities was directed towards large urban centres, such as Khartoum. In 1993, Khartoum received about half of the internal migrants. Close to 38 per cent of total internal migrants moved from smaller urban centres to large cities. The migrants have tended to be better educated than average; in 1993, about 70 per cent of them were literate, almost one third were students. Half of the migrants became employees (Chapter 7).

³⁰ It is estimated that the unemployment rate has tripled between 1973 and 1996, rising from 5 per cent to 15 per cent. According to the results of the 1996 Migration and Labour Force Survey by the Ministry of Labour, the youth unemployment rate was 28.4 per cent – almost twice the national unemployment rate (Ibrahim *et al.*, 2001: 22).

³¹ It was estimated that at one time during the 1980s, about 3 million Sudanese were recorded as displaced, in addition to a million refugees from neighbouring SSA countries. (Ibrahim *et al.*, 2001: 24)

External migration factored significantly in the manpower equation of Sudan, where thousands of Sudanese have left the country in recent decades (see Galal El Din, 1987, for details on numbers and destination). They were predominantly men (about 85 per cent according to the 1996 MLFS). Sudanese emigrants have been even more educated than internal migrants. Of all emigrants, 86 per cent were literate in 1993 (Sudan draft NHDR 1998). Also 62 per cent of the migrants had a secondary school education or higher, while a quarter had university degrees. About a third worked abroad as senior officials, professionals or technicians while another quarter worked as skilled production workers.

Sudan's experience provides a striking example of brain drain through South-South migration. Despite the importance of foreign-currency receipts from remittances by Sudanese nationals working abroad (SNWA), emigration in Sudan's case has also led to the loss of a large number of skilled personnel. A proper cost-benefit analysis should take into account such a huge loss of the country's human capital. Against this loss of skilled labour was the compensation in terms of the remittances that Sudanese workers abroad have sent back to their families. An interesting point from a poverty-inequality reduction perspective is the redistributive effect of this two-way flow (loss of human capital in exchange for more foreign currency).

This redistributive effect is related to the disparate nature of the cost and the benefit: public cost of investment in human capital vs. private benefit of remittances. It has been argued that since investment in human capital is publicly funded, while returns to that investment through migration are privately appropriated, external labour migration may impact negatively on income equality (Abdel-Khalek, 1978). Sudan's case seems to support this argument. According to the results of the 1996 Migration and Labour Force Survey, 90 per cent of all remittances were sent back by emigrants with a secondary school education or higher. This suggests that remittances are likely to have had an inequalizing impact on the distribution of income within Sudan; remittances may have benefited higher-income households more.

In addition, low-income households are adversely affected by labour losses caused by emigration, (Chapter 7). According to the 1996 MLFS, agricultural households reported a clear labour shortage as a result of emigration of a household member and about 86 per cent of households identified this constraint as a problem that was attributable to emigration.

2.6 Social Indicators

The social indicators of Sudan place it behind its colleagues in the low-income and even the SSA group of countries. This should not be surprising, as in relative terms Sudan allocates to social spending on education and health barely 25 per cent of what other low-income countries, as well as SSA and MENA countries, generally spend.³²

³² Thus, according to the IMF data, in 1999 Sudan's spending on education amounted to 1 per cent of GDP, compared to 4.6 per cent for African countries, 4.8 per cent for MENA countries, and 4.6 per cent average for developing countries. Spending on health in Sudan amounted to 0.7 per cent of GDP compared to 2.3 per cent, 1.7 per cent, and 2.5 per cent for African countries, MENA countries, and average for developing countries, respectively (Bruxiova, *et al.*, 2003).

Available data on social indicators in Sudan reveal a clear centre-periphery divide. This pattern is at the same time multi-dimensional. It cuts across North-South, East-West; but in addition, there is the gender (female-male) and the sector (rural-urban) divides. More recent disaggregated figures from the Federal Ministry of Education for 2002/2003 reveal a big centre-periphery divide (see map of Sudan for reference). It shows that the average enrolment in primary education for Northern Sudan reached 75.2 per cent, but that enrolment in individual states ranged from a high of 97.6 per cent for the Northern State (95.5 per cent boys and 99.7 per cent girls) to a low of 49.3 per cent in Western Darfur (53.1 per cent boys and 45.2 per cent girls). Estimates for the South (based on government-controlled areas) range from Equatorial Region 25.0 per cent (27.4 per cent boys and 22.4 girls), Bahr El Ghazal Region 19.8 per cent (21.3 per cent boys and 18.2 per cent girls), and Upper Nile Region 17.2 per cent (19.7 per cent boys and 14.7 per cent girls).

While the government of Sudan has subscribed to and approved the Millennium Development Goals (MDGs) as a guide to social development in the country, progress in this respect has been slow. The reasons for this basically relate to the way economic stabilization was achieved in the latter half of the 1990s, particularly the severe retrenchment in expenditure on the social sectors. (Draft IPRSP2, Dec03/Jan04: p.27, and Babiker, Bell and Medani (2004) for more details).

Paucity of data on the health situation for the whole of the Sudan complicates the task of making comparisons with other low-income countries in general, and SSA countries in particular. The fact that most of the available information relates to Northern Sudan renders such comparisons of rather limited value (on this, see JAM, 2004: 3).

Based on the most recent available statistics (those produced by the Safe Motherhood Survey (SMS) in 1999 and the Multiple Indicators Cluster Survey (MICS) 2000), the IPRSP shows that the current situation falls significantly short of the MDG targets. Table 2.10 provides some details.

Lack of significant progress with respect to health is due to the extremely low level of public spending on health. Spending on health amounts to 0.7 per cent of GDP, which implies a per capita health spending of less than \$3 equivalent per month, as compared to the minimum required per capita per month of \$10 equivalent (IPRSP, 2004). This has led to poor coverage of the health system, with poor capacity for delivery at all levels in the health system, but particularly the deterioration of primary health centres in rural areas where shortages of drugs, doctors and nurses are chronic.

Table 2.10: Social Indicators and MDGs for Sudan

	Current Situation, SMS	MDG Target: 2015
Health Indicators		
Under 5 mortality rate	104	45
Urban	101	39
Rural	105	48
Infant Mortality	68	25
Urban	67	24
Rural	68	26
Maternal Mortality Ratio	509	134
Urban	496	n.a.
Rural	514	n.a.
Education Indicators		
Gross Enrolment Ratio in Primary Education- Total	59.8	100
Males	61.8	100
Females	57.7	100
Gross Enrolment Ratio in Primary Education- Urban	78.1	100
Males	78.9	100
Females	77.3	100
Gross Enrolment Ratio in Primary Education- Rural	49.7	100
Males	52.6	100
Females	46.8	100

Source: IPRSR/Draft, Dec03/Jan04.

As in health, progress in education has been held back by low levels of public spending, which averages no more than 1 per cent of GDP, which has in effect meant physical deterioration of educational facilities, and limited geographical spread – especially in a country like Sudan. This was aggravated by significant waves of brain drain to Gulf countries, as teacher salaries at home failed to keep pace with market conditions, thereby affecting the quality of teachers and ability of the system to retain qualified teachers. Teacher training also fell behind, resulting in deterioration in the quality of teachers. By some estimates, 50 per cent of primary school teachers are unqualified. Overcrowded classrooms and untrained teachers resulted in poor education (IPRSP, 2004).

CHAPTER THREE

Macroeconomic Management

The imperative of reforming macroeconomic management in Sudan dates back to the 1970s and 1980s, when the first wave of reforms was undertaken during 1978-1984. But it did not stress macroeconomic and price stabilization, and reforms were not fully implemented. A new wave of intensive reforms was initiated, culminating in the adjustment policies of the medium-term National Economic Salvation Programme (NESP) for 1990/91-1992/93, which was merged into the Comprehensive National Plan (CNP) of 1992-2002. To combat inflation, which escalated around the mid-1990s, and to deal with the deterioration in the balance of payments, macroeconomic and price stabilization became the focus of a strengthened reform effort during 1997-2001. It should be noted that although the reform measures were self-imposed (as the IMF has had no formal agreement with the Sudan since 1989), adjustment measures under the NESP are commonly believed to be more stringent than those that the IMF and the World Bank would have called for (Dagdeviren and Mahran (2004)).

The broad objective of NESP was the revitalization of the Sudanese economy through reallocation of resources with an emphasis on agriculture, encouragement of exports through scrapping of the export license system, liberalization of export prices, and the provision of export subsidies if needed. The centerpiece of the programme was encouragement of the private sector participation through the creation of a more conducive environment (by removing all administrative, economic, or legal impediments).

The government reform efforts emphasized four aspects in particular (World Bank, 2003, Vol I: 44):

- (a) restoring macroeconomic stability and combating runaway inflation through tough fiscal and monetary policies;
- (b) emphasizing market-oriented economic activity, liberalization, abolition of controls and deregulation;
- (c) limiting the role of the state through privatizing public-sector enterprises and extending the role of the private sector to all activities including health, education and utilities; and
- (d) Encouraging saving by reforming the banking sector and introducing new saving instruments.

The 1992 fiscal year witnessed the implementation of aggressive rapid structural adjustment policies (SAPs). In fact, that year marked the beginning of the most comprehensive liberalization programme ever in Sudan's case, with further liberalization continuing until the end of the decade.

In the fiscal policy area, this self-imposed reform aimed at reducing the government budget deficit through curbing government expenditure and increasing revenue through broadening of revenue sources, especially taxes. Reduction of government spending was mainly directed to curb spending on social services; especially health and education³³, water and other critically needed goods and services. This has clear implications for poverty; due to budget cuts, most of these basic services were provided by the private sector at levels of prices that most people could not afford. As argued in Babiker, Bell and Medani (2004), with no compensating increases in the level of wages and salaries, the fixed-salary people, middle class and small-scale producers and most of the peasant farmers in the rain-fed and livestock sectors, as well as a large number of unskilled and seasonal labourers, have become net losers and their incomes and consumption positions worsened³⁴, joining the masses of the poor (Babiker, Bell and Medani (2004)). Ultimately, such policies clearly reduce the entitlements of the poor rather significantly.

In the foreign-trade area, various measures were taken for export promotion and import liberalization (Dagdeviren and Mahran (2004)):

Export promotion

Export duties were reduced from 20 to 5 per cent.³⁵ In 1993, minimum prices were set for exports of sorghum, oilseeds, cake and meal, livestock, and camels, which were also exempted from export duties. Exporters of such products were free to use all extra receipts generated at higher prices without conditions. Seven councils for the promotion of exports (of sorghum, oilseeds, livestock, karkadeh, medical plants, fruits and vegetables, and manufactured and mining exports) were established. Their role has been to suggest export prices, organize the export process and monitor the quality of exports. Except for gum Arabic and cotton, export proceeds became fully retainable by the exporters, as opposed to 70 per cent before liberalisation. Export procedures were simplified, and a directed credit policy towards the export sector was started. The system of surrendering part of the export proceeds to the Bank of Sudan was abolished.

Import liberalization

New policies were put in place, which allowed the importation of all other commodities with the exception of alcohol, gambling instruments, weapons and ammunition. In order to meet the increasing need for imports of some strategic commodities such as petroleum products, commercial banks were directed by the Bank of Sudan to allocate 80 per cent subsequently reduced to 50 per cent of the free market foreign exchange resources to finance such imports. Import tariff bands were gradually reduced from 13 to only 8 and 5 in 1990, 1992 and 2003.

³³ According to the World Bank (2004, Table 2.14), public expenditure on health for 2001 averaged 59.2 per cent of total health expenditure for the world as a whole, and 41.3 per cent for SSA. For Sudan, public expenditure on health was a meagre 18.7 per cent. In 2001, health expenditure per capita for Sudan was \$14 compared to \$23 for low-income countries and \$29 for SSA countries.

³⁴ Although the pay structure was revised several times, and nominal wages and salaries were raised regularly, such increases were not enough to compensate for the rise in the cost of living due to inflation. As a result the real wage fell by 25 per cent during the 1990s (Ibrahim et al., 2001: 25)

³⁵ For cotton and gum Arabic, export duties were reduced from 75 to 10 per cent. Since 2000, only raw hide and skin exports are subject to a 15 per cent export-duty rate intended to discourage unprocessed exports of these products (Dagdeviren and Mahran (2004)).

The tariff range was considerably narrowed from 0-1000 per cent in 1990, down to 0-70 per cent in 1992 and further to 0-45 per cent in 2003. For the latter year, the average tariff rate was about 23 per cent (see Table 3.1 below).

Table 3.1: Import Tariffs, 1986-2003, (per cent)

1986 (17 Bands)	0; 5; 10; 15; 20; 30; 40; 50; 60; 70; 75; 80; 100; 125; 150; 175; 250;
1988 (15 Bands)	0; 3; 6; 9; 12; 18; 24; 36; 42; 51; 60; 90; 125; 200; 300
1990 (13 Bands)	0; 5; 10; 20; 30; 40; 60; 100; 125; 200; 600; 800; 1000
1992 (8 Bands)	0; 1; 5; 10; 20; 30; 50; 70
1994 (9 Bands)	0; 1; 5; 10; 20; 30; 50; 70; 250
2002 (4 Bands)	0; 10; 25; 45 - Overall average: 24.3 per cent
2003 (5 bands)	0 per cent (244 lines including heavy machineries, computers, rice, lentils, inputs for animal husbandry) 3 per cent (715 lines incl. seeds, fertilizers, chemicals, raw and other materials) 10 per cent (1422 lines incl. wheat, flour, medicines, tools and equipments) 25 per cent (326 lines, e.g. packaging materials and construction items) 45 per cent (1547 lines, including luxury products like passenger cars, household appliances, cement, sugar, tobacco, clothes and shoes) Overall average: 22.7per cent

Source: Dagdeviren and Mahran (2004), Table 6.2.

With regard to the foreign-exchange rate regime, the dual foreign-exchange system, which was established in 1988 (consisting of the official-market exchange rate and the commercial bank's free-market exchange rate), was eliminated in 1992, re-instituted in 1993 and finally abolished in 1994. The Commercial Banks' rate has been determined by the Union of Commercial Banks, with the Bank of Sudan (BoS) calculating its own rate on the basis of the rates announced by commercial banks. The new policies also allowed residents to open foreign-exchange accounts with banks.

In the area of monetary policy, emphasis was placed on three objectives – developing selected priority sectors; reducing the rate of inflation; and achieving an equitable distribution of income and wealth, both sectoral and regional (Sobahi (2004)). The BOS continued to adhere to selective credit policies aimed at dividing the economic sectors and activities into priority sectors, non-priority sectors, and sectors prohibited from getting any bank finance. The main priority sectors were agriculture and industry. The commercial banks were directed as early as 1990 to allocate not less than 50 per cent of the deposits they hold to be loaned out within the state of origin. At least between 85 and 90 per cent of total bank credit was to be allocated to the private sector.

The role of the private sector was also reconsidered through adoption and implementation of an aggressive privatization program intended to transfer resources from the domain of the public sector to that of the private sector (Dagdeviren and Mahran (2004)).

Thus, the SAPs attempted to liberalize the economy with more reliance on market forces for allocating resources and determining their relative costs and prices. The exchange rate of the Sudanese Pound against one US Dollar deteriorated substantially from LS100/US\$1 in 1992 to LS2610/US\$1 in 2003; a devaluation rate of 2510 per cent. Formal credit to agriculture, which was confined to the public specialized Agricultural Bank of Sudan, was charged to a "Consortium" of commercial banks. To achieve food security the government increased areas

allocated to wheat production at the expense of cotton, the main export, in all public schemes, (Hag Elamin, and el Mak, 1997).

The use of these policies coincided with the substantial inflow of foreign direct investment (FDI), associated with the commercial exploitation of oil.³⁶ The period 1995-2001 witnessed two other developments: the significant improvement in the terms of trade, which showed an average growth rate of about 17 per cent; and the growth of real exports (including oil) by about 13 percentage points, compared to its negative growth during 1990-94 (see Suliman (2004)).

Freeing prices from administrative controls and the use of market forces to reflect real factor costs resulted in enormous increases in prices of consumer goods and inputs that pushed up the cost to consumers and producers alike. With the failure to adopt some critically needed safety-net programmes to offset the negative and adverse effects of these SAPs, the poor and most vulnerable groups were the hardest hit and their economic and social situations further deteriorated.

The initial draft of the Sudan Interim Poverty Reduction Strategy Paper acknowledges that, "This stringent economic policy and the poor state of social service delivery contributed to increased poverty and human deprivation, *in spite of high economic growth* fuelled by the start up of oil production and continued favourable weather conditions over a number of years," (IPRSP, 2004, p. 7; emphasis added).

The main phases of macro-management are illustrated in Table 3.2.

³⁶ The inflow of the DFI partially ameliorated the negative effects of the American-led embargo on Sudan, as well as the effects of the self-imposed isolation in the early 1990s.

Table 3.2: Monetary Policy: Phases, Performance, and Main Targets, 1984-2004

Phase/episode	Monetary/credit Policy	Inflation	Exchange Rate
First Phase 1984-1989	Policy objectives similar to pre 1984. Policies and instruments are conventional. Directing banks credit to priority sectors, and banks were encouraged to extend credit to private customers using Islamic modes of finance.	The upswing in the rate of inflation which began in the late 1970s sustained its momentum, coupled with severe shortages in certain essential commodities.	The fixed exchange rate regime was subject to a series of devaluations since 1978; this episode continued through to 1997 reflecting three main causes: • Continuous deterioration of Sudan's foreign reserves. • Rising share of remittances from SNWA. • Drying up of foreign aid and loans.
Second Phase 1990-1996	Monetary policy aimed at : • Increasing bank credits to the private sector. • Reducing the rate of inflation. • Achieving an equitable distribution of income on sectoral and regional levels. • 85 –95 per cent of total commercial banks credit to be allocated to the private sector.	Inflation rose to unprecedented three-digit levels. This was mainly related to the financing of the civil war using internal sources.	Maintaining a regime of fixed exchange rate and a system of exchange controls. This was associated with a very sharp deterioration in the balance of payment.
Third Phase 1997-2002	Adoption of a strengthened macro policy programme: • To restore a stable macroeconomic management, emphasizing market oriented policies, deregulation, export controls, and prudential monetary stance by reforming the financial sector. • There seems to have occurred a clear "slippage" in controlling nominal money supply, and a falling trend of the rate of inflation. The BOS intervened indirectly through the use of Islamic modes of finance with CMCs, GMCs, and lately GICs as instruments.	The policy adopted to combat inflation was successful, whereby the rate of inflation fell to single digits from 133 per cent to 8.3 per cent.	This period witnessed a move toward a more flexible exchange rate system, starting with a series of devaluation in the context of the new liberal monetary-cum-credit policies adopted; culminated with the introduction of a managed-float exchange rate regime.
Fourth Phase 2002-2004	A switch to indirect monetary management and broad money targeting.		Adoption of a managed-float exchange rate regime.

Source: Sobahi (2004), pp. 7-8.

CHAPTER FOUR

Public Finance: Revenue/Expenditure Nexus

In 1992 Sudan adopted the federal system, thereby creating three main levels of governance: the federal government, the states, and local communities. Below the central government, the structure of the federal system in Sudan currently consists of 26 states (16 in the northern part and 10 in the south), and some 500 local communities, (World Bank, 2003: 63-64). The 1998 Constitution spells out the division of responsibilities among the three tiers of government.

- For the localities: preschool and primary education, supply and management of primary health care, and environmental sanitation (garbage collection and sewerage management).
- For the state governments: responsibilities include providing secondary education and purchase and distribution of school textbooks to all pupils; health care at hospitals and dental care units; construction, operation and maintenance of small water schemes; and agricultural development.
- For the federal government: in addition to traditional functions at the national level such as defence, foreign relations, monetary, fiscal and exchange rate policies, responsibilities include transport and communication, energy and mining; higher education, planning and education policy, monitoring education quality and providing transfers to the poorer states to finance schooling; education and posting of high-level of medical personnel; water policy and large-scale federally-owned irrigation projects.

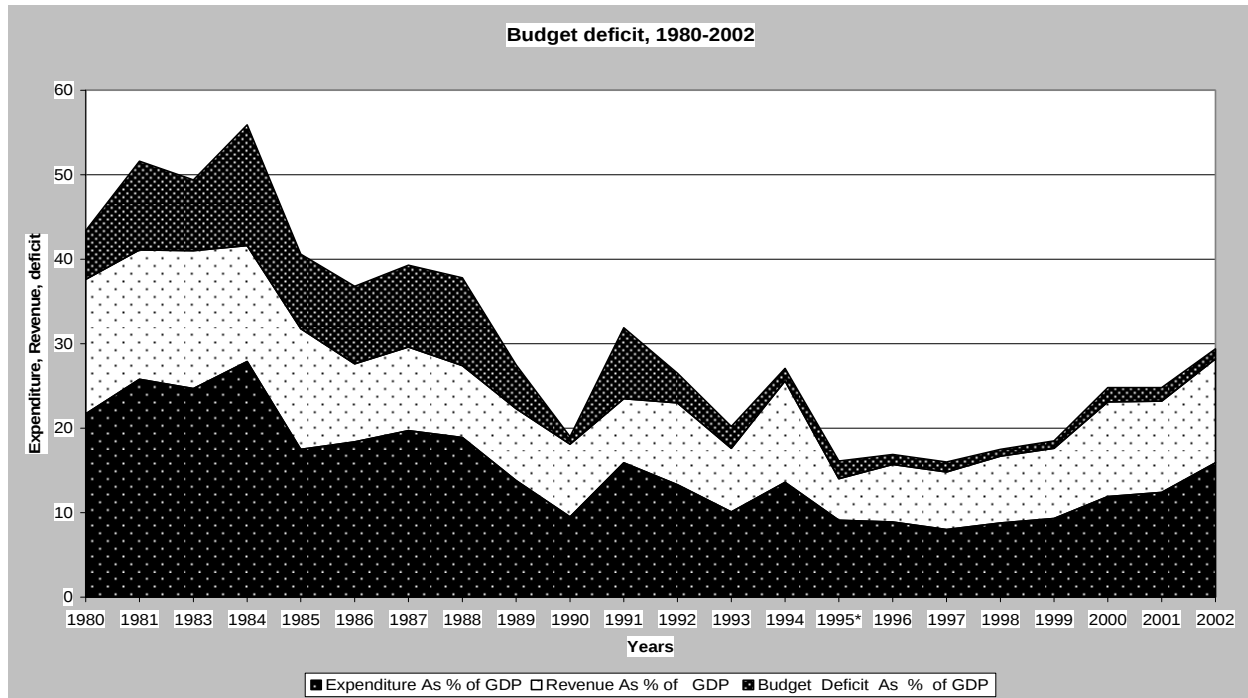
4.1 Federal Government Budget

As already mentioned, 1992 is a watershed, separating two policy regimes. To examine the nature of fiscal balance and the change in the fiscal-policy stance, we examine the development of the federal budget over the period 1980-2002, which straddles 1992. Figure 4.1 shows the development of total government revenue, total government expenditure and budget deficit as per cent of GDP over this period.

Within the overall guidance of the SAPs adopted and implemented in the 1990s, the 1992 fiscal year served as a base for the NCS [1992-2002]. Three-Year Economic Salvation Programmes (ESPs) were consecutively adopted during the NCS: The first ESP covered 1990/91-1992/93, the second spanned 1996-1998, and the third was implemented during 1999-2001. The NCS aimed initially at achieving a balanced budget but further making a surplus to finance productive projects and activities. As we see from Table 4.1 and Figure 4.1,

the budget deficit continued for the entire period of the NCS, although it was drastically cut from 8.4 per cent of GDP in 1991 to 3.6 per cent in 1992, and was actually below 2 per cent for most of the decade 1993-2002. The objective of turning the budget deficit into a surplus proved too difficult to be fully achieved.

Figure 4.1: Budget Deficit, 1980-2002



According to the data presented in Table 4.1 and illustrated in Figure 4.1, government revenue for the period 1980-1991 averaged 11.6 per cent of the GDP and dropped to 8.9 per cent of the GDP for the period 1992-2002.³⁷ Overall, government revenue amounted to an average of 10.2 per cent for the whole period 1980-2002. By contrast, government expenditure as a ratio to GDP scored an average of 19.4 per cent for the period 1980-1991 and dropped sharply to an average of 11 per cent of GDP during the period 1992-2002. Government expenditure was thus slashed by almost one half after 1992, thanks to the implementation of self-imposed SAPs. It is no exaggeration to say that the post 1992 fiscal stance involves very draconian measures.

³⁷ In the case of Sudan, there are several activities that are undertaken by government agencies, but related revenue/expenditure are technically off-budget. For illustration, we mention four examples. First, individual ministries often collect revenue for services that are not always completely reflected in official budget figures. Second, ministries often receive direct funding from international sources, which do not get reflected in official budget figures. Third, the Zakat Chamber collects and distributes funds according to the Islamic tradition of Zakat. Fourth, wages and salaries for the military are not recorded in the budget. To satisfy requirements of fiscal-discipline and transparency, it is imperative to put together a consolidated budget document for the central government that includes all revenue and expenditure for all governmental activities. All such off-budget items should at a minimum be reported on a regular basis to the Ministry of Finance and National Economy, so that they may be reflected in official budget numbers.

The fact that such a drastic cut in government expenditure was brought about mainly by reducing government spending on social sectors, as well as on new productive projects, is highly significant from a growth-poverty perspective. But at the same time, as a result of this retrenchment there was a significant reduction in the fiscal deficit, which has definitely contributed to bringing down the rate of inflation. *Ceteris paribus*, reduction in the rate of inflation is beneficial to the poor. This may have been the positive side of the fiscal-retrenchment coin. But at the same time, detailed examination of the changes in the composition of government revenue and expenditure over the period is necessary for ascertaining the true nature of the impact of this fiscal stance on the poor. For this purpose, we deal with the composition of government revenue and expenditure over the period 1980-2002 and the nature of the changes that took place around 1992.

Table 4.1: Federal Government Budget and Decomposed Revenue (% of GDP), 1980-2003

ITEM/ YEAR	Expenditure (% of GDP)	Revenue (% of GDP)	Budget Deficit (% of GDP)	Tax Revenue (% of GDP)	Non-tax Revenue (% of GDP)	Direct Tax (% of GDP)	Indirect Tax (% Of GDP)
1980	21.7	15.9	5.80	10.8	5.0	2.4	8.2
1981	25.8	15.3	10.5	11.5	3.7	2.2	9.4
1983	24.7	16.3	8.40	12.9	3.4	2.9	10.1
1984	27.9	13.7	14.3	11.8	2.1	2.6	9.2
1985	17.5	14.3	8.80	6.8	0.9	1.5	5.3
1986	18.4	9.2	9.20	5.6	2.4	1.5	4.1
1987	19.7	9.9	9.70	5.6	2.3	1.4	4.2
1988	18.9	8.5	10.4	6.2	1.3	1.5	5.5
1989	13.8	8.5	5.20	7.9	0.9	1.7	5.9
1990	9.5	8.6	0.90	5.5	3.6	1.3	3.7
1991	15.9	7.6	8.40	5.3	2.3	1.1	4.2
1992	13.3	9.7	3.60	6.0	2.5	2.3	3.9
1993	10.1	7.5	2.60	5.9	1.6	2.3	3.5
1994	13.6	12.0	1.60	8.8	3.2	3.5	5.2
1995	9.1	4.9	4.20	4.0	0.9	1.6	2.5
1996	8.9	6.8	2.10	5.9	1.7	2.3	3.5
1997	8.0	6.8	1.20	5.2	1.6	1.4	3.8
1998	8.8	7.9	0.90	5.8	2.2	1.6	4.3
1999	9.3	8.3	1.00	6.3	2.1	1.5	4.8
2000	11.9	11.2	0.70	5.4	5.8	1.3	4.1
2001	12.4	10.8	1.6	5.5	5.2	1.2	4.4
2002	15.9	12.3	3.6	5.6	6.7	1.1	4.5
1980- 1991	19.4	11.6	7.8	8.2			
1992-	11.1	8.9	2.1	5.8			
1980-	15.2	10.3	4.8				

Source: Babiker, Bell and Medani (2004).

Table 4.1 also includes information on tax and non-tax revenue, as well as direct and indirect taxes, as per cent ratios of GDP. It is remarkable to note that tax revenue proved inelastic with respect to economic growth in the Sudan; the ratio of tax revenue to GDP has been

consistently falling since the mid-1980s. For example, tax revenue as a ratio of GDP averaged 8.2 per cent during the sub- period 1980-1991 and dropped to 5.8 per cent average for the period 1992-2002. According to stylized facts, these ratios are much lower compared to those of the LDCs (18 per cent of GDP), not to speak of the industrialized countries' ratio of (38 per cent of GDP). It is important to mention that, until the advent of oil, taxes have continued to be the main sources of federal government revenue; with an average of 76%. On the other hand, the non-tax revenue as ratio of federal government revenue amounted to 21.5 per cent and 28 per cent for the periods 1981-1991 (before 1992) and 1992-2002 (after 1992) respectively. In fact, non-tax revenue became the dominant source of federal government revenue during 2000-2002. The advent of oil explains the rise in the share of non-tax revenue in total federal government revenue in the latter part of the post-1992 period.³⁸

Even if only looking at the modest example of the Sudanese case, the tax effort is considerably below potential; a sizable part of tax capacity in Sudan is being increasingly wasted.³⁹ There is an opportunity for a more pro-active role by having the government spend more in proportion to GDP, without fearing the prospects of rising and unsustainable fiscal deficit.

Babiker, Bell and Medani (2004) (Table 2.2) report another remarkable feature from a poverty-reduction standpoint over the period 1980-2002. Indirect taxes were a major source of generating tax revenue in the Sudan for the entire period 1980-2002. In relation to total government revenue, indirect taxes remained the dominant source until the advent of oil in 2000. For example, the share of indirect taxes in total government revenue reached on average 58% and 41.5% for the periods before and after 1992 respectively. For the period before 1992 the share of indirect taxes in total revenue was higher than the period 1992-2002 indicating that more sources of revenue were added in the 1990s, as well as the fact that the federal government started to rely more on direct taxes. The share of direct taxes in the total government revenue was 16.7% and 22.5% for the periods 1981-1991 and 1992-2002, respectively. On the other hand, indirect taxes averaged 6.3 per cent of GDP during 1980-1991 and dropped to 4 per cent during the period 1992-2002, whereas the ratio of the direct taxes to GDP was much lower, averaging 1.8 per cent for the whole period 1980-2002.

A recommendation based on the forgoing analysis is in order: there is considerable potential for boosting the role of direct taxes as the main sources of generating revenue, instead of relying so heavily on indirect taxes. In response to an increase in demand for its services and in conformity with fiscal-balance requirements, the government may do well to rely on generating more revenue through taxes that have higher income elasticity. A progressive personal income tax can be a good tool for income distribution in favour of the poor. It is

³⁸ But as Babiker, Bell and Medani (2004) (Table 2.2) show, tax revenue has also been falling as a proportion of total revenue, particularly during 2000-2002. For those years, the ratio of non-tax revenue surpassed the ratio of tax revenue in total federal revenue, thanks to oil revenue, which appeared as an important factor in the fiscal equation of the Sudan.

³⁹ If we decompose the direct taxes into some of its components, we find that Business Profit Tax [BPT] and Personal Income Tax [PIT] are the most significant ones in this category. For instance, BPT scored on average 11% and 14.7% for the periods 1981-1991 and 1992-2000 respectively, whereas PIT on average amounted to 2.95% and 1.7% of total federal revenue for the same periods. In addition, the contributions of Sudanese Nationals Working Abroad (SNWA) were 1.5% and 2.3% for the same period; although it improved in the period after 1992, their share in total revenue has been very small indeed. Likewise, the share of development tax in total government revenue was very low amounting to 0.8% and 0.2% for the same sub-periods (Babiker, Bell and Medani (2004): 17-18).

simple and can generate substantial revenue for the federal government.⁴⁰ In addition, the incidence of the income tax rests with the taxpayers.

Given the positive characteristics of direct taxes (income and profit taxes), the Sudanese government may achieve pro-poor growth by relying mainly on direct taxes instead of indirect taxes. For instance, the share of Business Profit Tax in both direct taxes and total government revenue could be increased substantially with the expansion of the productive activities of the private sector and enhancing the growth of the economy. This calls for rethinking/changing the existing investment policy manifested by The Investment Encouragement Act. The enormous fiscal and non-fiscal incentives offered by such policy, most important of which is the exemption from BPT for more than five years, deprives the economy of significant amounts of revenue.⁴¹

A serious study of the cost-benefit of BPT exemptions should be undertaken to determine their viability and cost effectiveness. It should take into consideration that exemptions are no longer deemed the main factor in attracting foreign investment as investors start to value more the enabling environment and macroeconomic stability, good governance, transparency, accountability and rule of law. Also, the adjusted after-tax rate of return on investment becomes critical for foreign investors in a risky environment. Finally, low productivity caused by many distortions and institutional deficiencies (including overvalued exchange rates, poor infrastructure, bad governance, corruption, lack of competition, and prevalence of domestic monopolistic structures in many sectors especially agriculture) may outweigh the attraction of any fiscal incentives to foreign investors.

We note from Figure 4.2 that the share of indirect taxes of total federal revenue has increased significantly immediately after 1992. Despite some decline in the share of indirect taxes in the period after 1996, their share of total revenue has continued to be very high. The composition of indirect taxes has also changed significantly, with some components rising in relative terms. As reported in Babiker, Bell and Medani (2004) (Table 2.3), Customs Duties, for example, have on average constituted 43.6% for the period 1981-1991 and declined to an average of 32.2% over the period 1992-2002. Import Duties' share of total government revenue, separately, contributed 18.7% in the period before 1992 and amounted to 16.8% in the period after 1992 showing a slight decline. On the other hand, Export Duties as a ratio of total government revenue, on average, experienced a more drastic reduction from 6.7% to 2.1% between the two sub-periods. The fall in export duties in the period after 1992 is due to the implementation of export promotion strategy that resulted in substantial reduction of the duties on exports. The impact of foreign trade liberalization policy can also be felt in the sharp fall of the import duties in the 1990s. In this regard, the Sudanese government signed a number of trade agreements that abolished dual tax systems and reduced tariffs on imports,

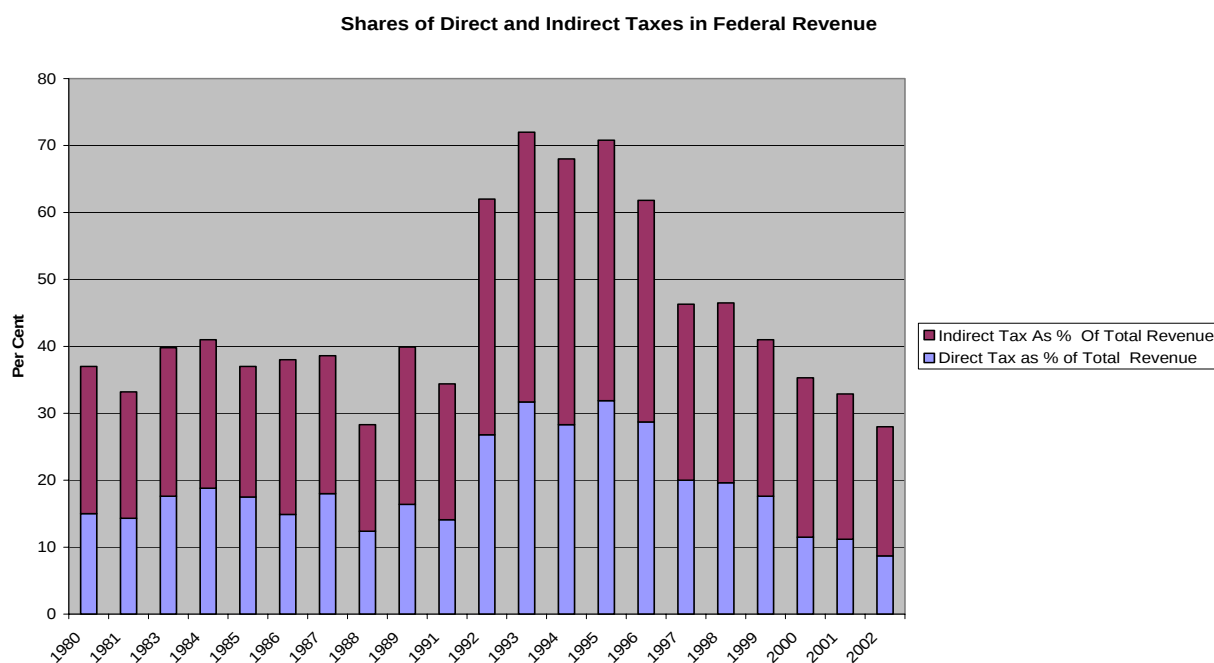
⁴⁰ In fact, as part of agreements with the IMF, the government of Sudan has included in its 2004 budget measures to increase the personal income tax on wages and salaries by two per cent.

⁴¹ Based on agreements with the IMF, Sudan has been moving toward reducing these exemptions in an attempt to reform the tax incentive regime of the Investment Encouragement Act. Specifically, the GoS has recently made progress in tightening exemption criteria, centralizing the authority to grant exemptions, and setting limits on renewing exemptions. The 2004 budget includes measures to abolish the corporate tax exemptions for rehabilitation purposes and cancel the tax privileges of the oil distribution companies. Finally, the GoS is committed, as part of the peace process, to enforcing an immediate ban on all tax exemptions granted outside the Investment Encouragement Act.

and gave generous exemptions from taxes and tariffs on mutual investments. The net effect on the poor of a simultaneous reduction in export duties and import tariffs may be hard to determine. But since the share of import duties fell by only 10 per cent, while the share of export duties fell by almost 69 per cent, the effect of a the decline in export duties should dominate.

On the other hand, other types of indirect tax experienced an increase in their share in total revenue during the 1990s compared to the 1980s. One example is the Excise Tax, whose contribution to total government revenue averaged 11.4% over the period 1981-1991 and 13.2% over the period 1992-2001. Also, the Consumption Tax recorded average shares in total government revenue of 5.7% and 9.1% for the same periods; with a clear rise in the 1990s. Such types of indirect taxes have low income elasticity because their tax bases increase less rapidly than income. Furthermore, they are considered regressive. In addition, as their incidence falls on consumers, they tend to depress aggregate demand. Since most people in Sudan have a relatively low per capita income and hence high propensity to consume, they have no way to avoid these taxes (i.e., have little or no choice to shift to other non-taxed goods). The impact of these taxes have been regressive and further reduced the consumption levels. The negative implications for the welfare level of the poor are very clear.

Figure 4.2: Shares of Direct and Indirect Taxes in Federal Revenue



4.2 Government Expenditure

The data on government expenditure presented in Table 4.1 indicates clearly that there is a general decline of total expenditure as ratio of the GDP starting from fiscal year 1980/81. This

has been influenced by the implementation of stabilization and adjustment programmes, which focused on reducing government spending.

In order to examine the impact of fiscal policy on the poor through the expenditure instrument, decomposition of total government expenditure by functional classification is needed. But such classification is not consistently available for the entire period 1990-2002, since the beginning of the 1990s the functional classification of expenditure in the federal budget has been discontinued and aggregate allocations of spending are grouped in four chapters as follows (Chapter II: 25-26)⁴²:

Chapter I: This aggregate expenditure category consists of wages and salaries for all federal employees.⁴³ Also included are central government contributions to the Pension Fund and central government contributions to the Social Security Fund. Allocations to this category indicate the extent of involvement of the federal government in the provision of jobs in the economy.⁴⁴ It is worth noting that during the decades of the 1970s and 1980s wages and salaries offered to government employees were high enough to protect them from falling under the poverty line. However, in the 1990s, those wages and salaries fell steadily in real terms as a result of runaway inflation – a situation that forced most of the employees to seek part time jobs to escape poverty.

Chapter II: This expenditure category consists of goods and services purchased for governmental units. In addition, it includes social subsidies that directly benefit the poor, which are mainly directed to subsidizing electricity⁴⁵, free medication in emergencies, free medicines for kidney dialysis and heart disease, and support to poor students in higher education. Also included here are centralized obligations, which include internal debt, external debt, travel abroad, subscription in international organization, custom duties for government units, pipeline fees, training, replacement of equipment and emergency reserves.

Chapter III: This expenditure category consists of current and development transfers to states, as well as agriculture tax compensation for states through the Federal Rule Chamber (FRC). These transfers are called Central Grant-in-Aid to the States. At the time the states prepare their budgets (including revenue and expenditure estimates), the federal government finances their deficits through these transfers. They are strictly unconditional transfers, and the states are not required by law to report details of their spending to the federal Ministry of Finance and National Economy. It is important to mention that these transfers are a significant means by which the government redistributes resources and income in favour of poor people and regions. Benefits accruing from these transfers in terms of enhancing social, human and economic development are much higher compared to their negative effect on resource allocation between private and public sectors.

Chapter IV: This expenditure category consists of national development expenditure, transfers of development funds to states, capital contributions in government projects financed by foreign loans and financing of agriculture. Allocations in this chapter for development are directed to maintain and sustain the functioning of existing projects. Contributions in capital in late 1990s became significant as the government started to undertake some serious investments in oil sector projects.

⁴² One major problem we encountered in this project was the fact that the Ministry of Finance and National Economy did not systematically classify expenditure by function in the 1990s. We talked to very senior officials of MFNE who strongly confirmed that such classification no longer existed. The Economic Survey published by the Ministry of Finance and National Economy did have some data on government expenditure classified by function for the period 1978/79-1988/89. Since the beginning of the 1990s, the only official data available classifies expenditure by chapters.

⁴³ Primary and secondary education teachers, medical staff for all health units, except specialized hospitals, and water supply employees are not paid under this chapter of the federal budget. Since they are considered states' responsibilities, they are included under Chapter I of state spending.

⁴⁴ It should be noted that wages and salaries for armed forces do not appear in Chapter I. As already mentioned before, they are actually an off-budget item.

⁴⁵ For those who consume up to 500 KWHs per month at subsidized price of SD 17 per KWH for the first 200 and a price of SD 22 for the remaining 300. Beginning of March 2004, the subsidy was retained only on the first 200 KWHs at the old rate, and the price of the remaining 300 was raised to SD 26 instead of SD 22 per KWH. (Babiker, Bell and Medani (2004): 27)

A growth and poverty-reduction strategy should allocate more resources to investment and development projects that broaden the productive capacities of the economy and create employment opportunities to the poor and the unemployed labour force.

As noted in Hassan and Khan (2004), agricultural projects in the irrigated, rain-fed and livestock sub sectors should be prioritized. Public works projects to build infrastructure, particularly roads, small dams, ducts, etc. could generate high rates of return through externalities. Adoption of appropriate technology, know-how and how-to techniques and practices, use of highly productive seed varieties and effective organization and administrative methods should be adapted and generalized in agriculture. Textile, tanneries and oil seeds industries should be encouraged and investment in them be increased to generate more employment for the unskilled and semi-skilled people. As shown below, these industries are currently working at very low capacities (some times not exceeding 20% of installed capacity, see Dagdeviren and Mahran (2004)). They need a life-saving strategy to use resources more efficiently, reduce costs of production and raise productivity of labour and capital to raise profitability.

Within this perspective, our discussion will focus in the following section on the behaviour of government expenditure over the two sub-periods: 1981-1991 and 1992- 2002.⁴⁶ First, analysis is directed at investigating some of the fiscal measures that have affected the behaviour of total expenditure. Second, we also examine changes in the structure of this expenditure and their impact on the poor. Needless to say, this is very difficult to achieve in the light of such aggregate level of data.

4.2.1 Structure of Federal Expenditure, 1981/82-1991/92

According to the data presented in Babiker, Bell and Medani (2004) (Table 4), total debt service topped all expenditure items averaging 17.8% of GDP for the period 1978-1988, followed by military and defence spending averaging 15.2%. Expenditure on social services claimed a meagre 4.0% of total expenditure, out of which spending on education and health was the lowest, with ratios averaging 1.2% and 1.9% respectively. As already mentioned before, this puts Sudan far behind comparable nations in the developing world, and even behind SSA countries for spending on education and health, which is generally thought to directly benefit the poor and to generate benefits for society and the economy at large. This indicates how inappropriate this pattern of government expenditure is for social and human development in Sudan. By all accounts, pro-poor spending has been very limited and small

⁴⁶ As mentioned earlier the government of Sudan, under pressures from the IMF-supported programmes, applied some SAPs in the late 1970s and continued until mid 1980s, when the relation with the IMF started to deteriorate. Eventually, it was almost severed by the end of 1989 and early 1990s, and Sudan became a non-cooperating member. However, the process of terminating its membership and expulsion has miraculously been escaped. The SAPs targeted managing aggregate demand through control of both money supply and credit expansion, reducing government expenditure by cutting allocations for social services, increasing taxes to augment revenue, and liberalizing foreign trade and foreign exchange.

since the beginning of the 1980s. Even more disconcerting, allocations for social expenditure have been treated as balancing items.⁴⁷

⁴⁷ Despite the big increase in total government expenditure in 1984/85-1985/86, the share of expenditure on education, health and other social services fell drastically during those two years. For example, the share of expenditure on health dropped from 1.9 per cent in 1983/84 to 0.5 per cent and 0.3 per cent in 1984/85 and 1985/86 respectively. The share of expenditure on education fell from 1.3 per cent to 0.8 per cent and 0.5 per cent between the same years. (Babiker, Bell and Medani (2004), Table 4).

4.2.2 Structure of Federal Expenditure, 1992/93-2001/02

Unfortunately, expenditure data available for this period are classified by chapter, not functionally, as already mentioned. According to data in Table 4.2, Chapter I on average accounted for 26.4%; Chapter II, 52.4%; Chapter III, 10.3%; and Chapter IV 10.9% of total central government expenditure for the period 1992-2002. It is clear from these figures that direct transfers to the states (Chapter III) claimed the smallest share of total government spending. Fewer resources have actually been transferred to support states to cope with their rising obligations to provide essential social services (education, health, water and sanitation). As an integral part of its effort to eradicate poverty in the country, the government should allocate more resources to the states.

Table 4.2: Allocation of Federal Expenditure by Chapters, 1992-2002 (in %)

Year	Chapter I	Chapter II	Chapter III	Chapter IV	Total
1992/93	2.6	66.3	25.7	5.4	100
1993/94	8.6	73.9	15.2	2.3	100
1994/95	14.6	72	11.6	1.8	100
1996	31.8	45.6	14	8.6	100
1997	36	52	4	8	100
1998	37.7	46.4	5.6	10.3	100
1999	38.8	42.6	5.6	13	100
2000	31.2	45.6	8.4	14.8	100
2001	31	45	6	18	100
2002	31.8	34.6	6.4	27.2	100
Average	26.4	52.4	10.3	10.9	100

Source: Babiker, Bell and Medani (2004), Table 2.5

Table 4.2 shows that allocations for Abu-Ismael and Elhiraika (2004) (for development expenditure and contributions to the capital of productive projects) were rather modest – about 10.9% of total federal expenditure for the 1990s. In relative terms, development expenditure sustained a decline during the 1990s; according to available evidence, it did not exceed 1.9% of GDP for most of the 1990s, whereas during the 1980s it averaged 3.8% (Babiker, Bell and Medani (2004), Table 2.6). From a developmental poverty-reduction perspective, the small share of Chapter IV in total spending highlights the strong need to allocate more funding for broadening the productive base in the economy. Of particular importance is the need for investment in a large number of labour-intensive projects in the productive sectors of the economy, which provides critically needed jobs for the poor. Chapter 7 makes a strong case for this policy direction, arguing that it will be both growth enhancing and inequality reducing. The creation of employment opportunities will reduce the number of the poor, strengthen aggregate demand and induce investment, and thereby enhance the rate of growth of GDP.

In Sudan, development expenditure has too often been treated as budget-balancer, or as a residual item – reduced or eliminated in order to balance the budget on an annual basis (Babiker, Bell and Medani (2004)). It is generally agreed that infrastructure investments

(airports, roads, water and power, and other core infrastructure services) are important ingredients to a modern productive economy.

It was demonstrated in Chapters 5 and 6 that infrastructure was a major constraint of the growth of the two main productive sectors in the Sudanese economy – namely agriculture and industry. In addition, public infrastructure investments increase output by providing services that are a direct input into the production process and which create an enabling environment, making other private resources (labour and capital) more productive. Finally, infrastructure investments that provide a high-level of service may attract labour and private capital from other places (Bell and McGuire, 1997). Development expenditure has intrinsic value and should not be treated as a budget-balancing category. For Sudan, public investment in this critical area crowds in private investment, not the reverse.

On the other hand, Babiker, Bell and Medani (2004) continued to claim the biggest share of total government expenditure. As already mentioned (Babiker, Bell and Medani (2004)), expenditure accounted for 52.4% for the 1990s on average – reaching 66.3%, 73.9% and 72% for the fiscal years 1992/93, 1993/94 and 1994/95 respectively. This reflects the significance that the federal government attaches to spending on centralized and steering items. Its relative share, however, has declined since 1996, as the relative shares of expenditure increased (Suliman (2004) and Abu-Ismael and Elhiraika (2004)).

Furthermore, with the implementation of strong stabilization policies in 1996 to combat runaway inflation, the increases in expenditure (Suliman (2004)) were aggressively controlled and the chapter's share of total government spending on average did not exceed 34% for the period 1996-2002. However, this share was higher in the 1990s than it was in the 1980s, reflecting an expansion of the federal budget and increased government involvement in the economy.

In summary, the classification of expenditure by chapters indicated clearly that Chapter II accounts for the largest share of government spending followed by Suliman (2004) and then Chapters IV and III, respectively.

As mentioned earlier, categorizing expenditure by chapter does not provide sufficient information to determine the impact of government spending on poverty alleviation. One effort to move toward a functional classification of spending is provided by the World Bank (2003, Vol. II). In Table A.6.7 of Appendix 6, the World Bank provides economic classification of federal expenditure as a per cent of total expenditure for four years 1998-2001.

The data in that table indicate that the government wage bill (Suliman (2004)) accounted for about one third of total federal expenditure for 1998- 2001. On the other hand, operation and maintenance accounted for the highest ratio of total spending, averaging 35.1% of total for 1998-2001. Development expenditure (part of Abu-Ismael and Elhiraika (2004)) accounted for 7.8%, 12.1%, 16.7% and 16.8% for the same years, with an overall average of 13.4% for the period 1998-2001, ranking third in importance. In addition, debt service payments, ranked fourth in importance, with ratios of 8.6%, 8.9%, 9.9%, and 7.9% for the years 1998, 1999, 2000 and 2001 respectively, with an overall average of 8.8% for the same period. Furthermore, transfers to states (Sobahi (2004)) ranked fifth in significance with ratios of 5.3%, 5.6%, 5.7%,

and 8.2% for the same years, with an overall average of 6.2%. Finally, social subsidies (Suliman (2004)) accounted for 5.2%, 3.5%, 2.5% and 3.9% of total government expenditure for the years 1998, 1999, 2000, and 2001 respectively, with an average of 3.8%.

The above figures demonstrate that the federal government in Sudan has been systematically following a pattern of spending that is not beneficial to the poor. Spending on administration and debt service payments claimed the lion's share of government expenditure, whereas social subsidies that directly benefit the poor, for example, received a very modest share (3.8%) of total spending during 1998-2001.

Additional insights into the composition of central government spending by function can be taken from data prepared for this project by the Ministry of Finance and National Economy. Specifically, they provided three years of data on actual expenditure in Chapters 1, 2 and 4 by functional classification (Babiker, Bell and Medani (2004), Table 2.7). As clearly explained in Babiker, Bell and Medani (2004), such data corroborate our conclusion that the central government has been systematically allocating only limited shares of its budget to social services such as education and health.

For example, during the three most recent years for which actual spending data are available (2001-2003), the central government allocated an average of 6.3 per cent of total expenditure for social services (education 4.4 per cent, health 1.6 per cent, and water 0.3 per cent). Transfers to states accounted for an average of 8.8 per cent of government spending during this period, and state administration accounted for an average of 5.4 per cent. On the other hand, defence and security activities accounted for an average of 23.8 per cent of government spending during this period, while external and internal debt service accounted for 9 per cent. Infrastructure expenditure averaged 9.9 per cent, as shown in Table 4.3.

Federal expenditure is calculated according to functional classification in a summary form for 2001-2003.

Table 4.3: Federal Expenditure by Functional Classification, 2001-2003

Year	2001	2002	2003
Wages and salaries	24.80%	26.00%	22.30%
Goods and services	11.40%	10.00%	8.50%
Social Subsidies	3.90%	4.10%	2.80%
Development	15.00%	22.40%	22.50%
Total	55.10%	62.50%	56.10%
Miscellaneous	44.70%	37.30%	43.50%

Source: Ministry of Finance and National Economy.

Miscellaneous expenditure accounts for an unusually high proportion of total expenditure, averaging more than 40%. It includes several items, the most important being a vague category called central obligations. In addition, miscellaneous also includes transfers to states, external debt, reserves for wages and salaries, internal debt, and pensions and social security. Aside from miscellaneous expenditure, about one quarter of federal government expenditure was allocated to wages and salaries, close to one tenth to goods and services and only a modest 3 per cent to social subsidies. From the perspective of poverty reduction, the structure

of government expenditure in Sudan leaves much to be desired. There is both a possibility and an imperative for restructuring that expenditure to make it both growth enhancing and inequality reducing – given standing commitments in connection with public debt⁴⁸.

4.3 National State Support Fund

The State Support Fund (SSF) was established according to the 1998 Constitution as a Federal Chamber to administer the intergovernmental grant system.⁴⁹ As a manifestation of fiscal federalism, it was intended to be a channel through which the federal government and able state governments contribute to assist needy states. Transfers from the SSF to individual states are generally determined on the basis of the size of the population and the level of development. The vertical transfer (contribution from the federal budget to the SSF) is determined using all federal government revenue (including oil revenue) excluding receipts from VAT, joint venture companies, privatization and sale of government assets. The allocations of SSF are made through three components:

- (i) Current Transfers,
- (ii) Development Transfers,
- (iii) VAT and Agricultural Compensation grants. States and localities are expected to use the Current Transfers to make wage payments.

The specific amount of **current transfers** allocated to each state is determined by a formula that includes nine factors.⁵⁰ From a pro-poor perspective, one would expect SSF transfers to states to be strongly linked to poverty at the state level; however, available evidence for 2002 and 2003 suggests that there was no systematic relationship between the actual SSF current transfers to states and poverty. Rather, those transfers correlated more strongly with state population size than with the percentage of rural population (Babiker, Bell and Medani (2004)).

Development transfers are made to finance-specific development projects (Abu-Ismaïl and Elhiraika (2004)), selected on the basis of certain criteria.⁵¹ But available evidence (Babiker, Bell

⁴⁸ In fact, the case of Sudan discussed here adds more support to the proposal for reduction and /or write-off of the debt of poor countries, as put forth by Tony Blair during the World Economic Forum in Davos (January 2005) and discussed in the G-8 summit in London (February 2005). Needless to say, debt reduction or write-off can release much needed resources for achieving the MDGs.

⁴⁹ A Supreme Council that includes representatives of the Ministry of Finance and National Economy, the SSF and state governments selects the specific sharing rate for each year. The rate was 11 per cent of federal revenue in 2000, 14 per cent in 2001, 15 per cent in 2002, and 10 per cent in 2003.

⁵⁰ Financial performance, population density, natural resources, human resources, infrastructure condition, educational attainment, health status, security, and per capita income. All factors in the formula receive a 10 per cent weight except for financial performance, which receives a weight of 20 per cent. But the failure to pay the full amount budgeted on a regular basis suggests that this horizontal transfer is determined, at least in part, by discretionary decisions. All factors in the formula receive a 10 per cent weight except for financial performance, which receives a weight of 20 per cent.

⁵¹ Eight criteria are used to evaluate state development projects for funding from SSF development transfers. These criteria and their respective weights are: (i) Economic Response – the project feasibility study shows the economic response which plays an important role in the state's resource development (10 per cent weight); (ii) Social Target – the project contributes to promotion and development of social change (10 per cent weight); (iii) Size and Cost – the

and Medani (2004)) indicates that the allocation of SSF development grants does not seem to be motivated by reducing disparities across states.⁵² It may be more desirable from a poverty-reduction perspective to assign larger weight to the fourth criterion (which reflects geographical concerns).

The **VAT grant** is a portion of the VAT collected that is returned to the state of origin. The three wealthier states – e.g., Khartoum, Gezira and Red Sea – received about 78 per cent of VAT transfers in 2002 and 2003. Gezira, Gadaref and Sinnar received about 38% of Agricultural Compensation grants in both 2002 and 2003. As shown in Babiker, Bell and Medani (2004), data on actual VAT and Agricultural Compensation grants to individual states in 2002 and 2003 indicate that such grants would have very limited, if any, impact on reducing fiscal disparities across states. For most of the funds allocated to the states by the SSF (e.g. Current Transfers, VAT allocations, and Agricultural Compensation grants) data problems preclude determining the impact they have on poverty alleviation. Based on simple correlation coefficients, it appears that most of these transfers are not redistributive and do not reduce fiscal disparities between states. There is a feeling on the part of many analysts that these intergovernmental grant programmes need to be revamped and targeted more to the states most in need.⁵³ In their case study of the Sudan compared to other African countries, Brixiova *et al.* (2003) concur with this conclusion. They suggest that fiscal decentralization in Sudan did not boost spending on social sectors, which is still very low. Also, Sudan JAM (2004) maintains that despite its federal political structure, fiscal policy remains centralized in the national capital. Actually, Sudan is yet to establish fiscal federalism.

4.4 Zakat Chamber: An Indigenous Mechanism for Poverty Reduction?

The *Zakat* Chamber is charged with the off-budget activity of collecting and distributing revenue according to the Islamic tradition of *Zakat*.⁵⁴ Available data indicates that total *Zakat* proceeds in 2001 and 2002 averaged about 15 billion Sudanese Dinars, which barely represents 1 per cent of GDP. This is a trickle, compared to the poverty-reduction effort needed. About half of the revenue comes from agriculture and animal production. A little less

state is not capable of financing the project on its own (10 per cent weight); (iv) Geographical Concerns – the project represents an addition to an area that suffers from marginalization (10 per cent weight); (v) Strategic Importance – the project has a direct effect on boosting development in the state (15 per cent weight); (vi) Effect on Man and Animal – the project insures basic human needs like food and water (15 per cent weight); (vii) Importance of the Project – the project is vital to life (15 per cent weight); and (viii) Coincidence Target – the project is consistent with national development plans (15 per cent weight). (Babiker, Bell and Medani (2004): 43-44).

⁵² It is interesting to observe that 37% of total development grant funds for 2003 went to Khartoum and Red Sea – two relatively wealthy states. This should not be surprising, since the criteria for individual state project's eligibility for SSF funding did not adequately reflect this concern.

⁵³ In part, this concern is addressed by the peace process. According to the agreement on wealth-sharing between the Government and the SPLM, a Fiscal and Financial Allocation and Monitoring Commission (FFAMC) will replace the SSF. The purpose of the FFAMC is to ensure transparency and fairness both in regard to the allocation of nationally collected funds to the states/regions and the Government of Southern Sudan. Among other things, one of the most important duties and responsibilities of the FFAMC will be to monitor the equalization grants from the National Revenue Fund to ensure that they are promptly transferred to respective levels of government.

⁵⁴ Zakat is the amount of money that every adult, mentally stable, free, and financially able Muslim, male and female, has to pay to support specific categories of people. Zakat is obligatory when income reaches or exceeds a certain level, called the Nisaab, excluding his or her personal needs (clothing, household furniture, utensils, cars etc. are termed article of personal needs).

than half the expenditure is allocated to the poor and destitute (*fuqara and masakeen*), while approximately 17 per cent are claimed by those working for the *Zakat* Chamber responsible for collecting *Zakat* (Babiker, Bell and Medani (2004)).

Many scholars and experts on *Zakat* are of the view that the *Zakat* Chamber should be much more involved in dealing with the mounting problem of poverty in Sudan. Yet, despite its large potential, *Zakat* has played only a minor role so far. As suggested in Babiker, Bell and Medani (2004), several prerequisites must be met if the *Zakat* Chamber is to develop into a strategic institution of poverty reduction. First, collecting more revenue commensurate with the *Zakat* obligation limits. Second, allocating increasingly more resources to the categories of *fuqara and masakeen*, as they constitute most of the poor in Sudan. Third, significantly reducing the cost of running the *Zakat* programme in the Sudan.⁵⁵ If these prerequisites are fulfilled, *Zakat* may play a role as an indigenous mechanism for poverty reduction.

4.5 State and Local Revenue and Expenditure

For a comprehensive understanding of the impact of government taxing and spending decisions on poverty alleviation, we need to examine state and local government fiscal decisions in addition to central government fiscal decisions. While such an effort should be relatively straightforward, in the Sudan this proved to be a daunting task. The major problem we confronted was the lack of consistent and accurate data on state and local government revenue raising and spending experiences.⁵⁶ In an effort to overcome some of these deficiencies, the Ministry of Finance and National Economy initiated field work in the four states of River Nile, Sinnar, Red Sea and North Darfur, with the objective of developing more detailed information about state and local revenue raising and spending practices for 2003.

As an example, let us look at the case of North Darfur, which is the third most rural state, with and estimated 80.6 per cent of its population living in rural areas; only the Northern state (84.8 per cent) and West Darfur (87.4 per cent) have more rural populations than North Darfur. In 2003, state revenue and expenditure for North Darfur indicate that own-source revenue account for just about one-fourth of total revenue, with the rest funded by transfers from the central government. Chapter I accounts for 52.4 per cent of total expenditure, followed by Chapter II (33.5 per cent) and Chapter IV (13.9 per cent). Nearly 86 per cent of development funds were allocated for water projects in the state and an additional 11.4 per cent was used to finance health and education projects. Although in general, these spending priorities are consistent with a strategy of poverty alleviation, they raise two issues: the rather modest level, and the real beneficiaries of these specific projects. Unfortunately, data problems preclude seriously addressing the second issue.

⁵⁵ International experience indicates that in many countries the cost of administering an individual income tax, or a corporate income tax, or even a local property tax, is often less than five per cent of revenue collected. The *Zakat* Chamber should learn from these experiences to minimize administration cost.

⁵⁶ For example, the accounting system used by the central, state and local governments is not unified – every state has its own accounting system, albeit they report expenditure by chapters as does the central government. But there are no consolidated budgets or accounts and, as a result, the economic activity of government cannot be fully reflected. In addition, the activities of the southern states are not reported to the central government.

CHAPTER FIVE

Monetary Policy, Exchange Rate and Inflation: Is Sudan Headed for Dutch Disease?

What are the likely implications of monetary and foreign exchange rate policies adopted since 1992 on the lot of the poor in Sudan? Generally speaking, monetary policy in its wider definition can affect the poor through three main channels: inflation, output, and real exchange rate (Ames *et al.*, 2001). But the case of Sudan is rather unique, in at least two respects:

- First, monetary policy is conducted in an Islamic setting.
- Second, the conduct of monetary policy will be constrained by a dual monetary and financial system under the recently-signed Peace Agreement.

The “Salvation Programme” was the first official document to state clearly that the target of monetary policy is to maintain price stability and low inflation. However, the main concern of the Bank of Sudan (BOS) in practice has been to finance the government budget deficit (including net lending to the state enterprises), and to prescribe credit ceilings for priority sectors (Sobahi (2004)). As already noted, throughout the NCP period all sectors of the economy were subdivided into priority sectors, non-priority sectors, and sectors excluded from credit.⁵⁷

But against the escalation of inflation to historically unprecedented levels during the first half of the 1990s (accompanied by a sharp deterioration in the balance of payments), a strengthened programme focusing on macroeconomic and price stabilization was formulated for the period 1997-2001. The programme incorporates four main objectives (Sobahi (2004)):

- Restoring a stable macroeconomic environment and combating running inflation through a programme of enhanced revenue collection, expenditure control, and prudent monetary stance.
- Securing incentives for production and exports through measures emphasizing market-oriented policies, deregulation, and abolition of controls.
- Adopting structural measures to limit the role of the state by privatizing public enterprises and extending the domain of the private sector to all activities, including education, health and utilities.
- Encouraging savings by stabilizing the economy, introducing new saving instruments, and reforming the banking sector through prudential regulations.

⁵⁷ As late as 1996 the government issued a list of 13 priority sectors, which were intended to receive 90 per cent of total credit. Up to 40 per cent of commercial banks total credit had to be allocated to agriculture, and within agriculture certain amounts were prescribed to various sub-sectors. In addition, the cost of credit was regulated and differentiated depending on the nature and financial adequacy of the lending institution.

The main aim of monetary and credit policy during this reform period centred around achieving positive rates of growth in real GDP and stabilizing prices to acceptable levels, concomitant with a general reduction in the rate of growth of broad nominal money supply to specified levels. Projections and actual performances of growth rates of the main macroeconomic and monetary variables are reported in Table 5.1. The table shows indication of a clear “slippage” in controlling nominal broad money supply, while figures on the rate of inflation depict a tendency of convergence between actual and projected levels.

Table 5.1: Monetary Policy Targets, 1996-2002

Period	Real GDP Growth (%)			M2 Nominal Growth (%)			Inflation Rate (%)		
	Projected	Actual	Deviation	Projected	Actual	Deviation	Projected	Actual	Deviation
1996	7.6	4.5	-3.1	45	65	+20	30	133	+103
1997	9.6	6.6	-3.0	24	37	+13	20	47	27
1998	6.2	6.0	-0.2	22.6	29	+6.4	14	17	+3
1999	6.2	6.2	0	22.6	25	+2.4	12	14.2	2.2
2000	6.5	8.3	+1.8	19.4	32.9	+13.5	10	8.1	-1.9
2001	6.5	6.4	-0.1	15	24.7	+9.7	7	7.4	+0.4
2002	7.0	6.5	-1.5	18	30.3	+12.3	5	8.3	3.3

Source: Sobahi (2004), Table 3.2

In the light of the broad objectives mentioned above, a tight fiscal policy was adopted in 1997 (as discussed in Babiker, Bell and Medani (2004)), which restricted central government resort to deficit financing from the BOS. The BOS became more active in conducting a market-oriented monetary policy and started engaging in open market operations using indirect instruments based solely on Islamic modes of finance. Interventions were facilitated by the use of Central Bank and government Musharaka certificates (CMCs, and GMCs respectively) (Sobahi (2004)).

Monetary policy decisions were taken by the BOS in coordination with the Ministry of Finance and National Economy (MoFNE). A strengthened economic reform programme aimed at consolidating macroeconomic stability, reinforcing the reform momentum, and modernizing the macroeconomic management regime has been activated since 2002 – as Sudan switched to indirect monetary policy management and broad monetary targeting, and introduced a managed-float exchange rate system.

The signing and subsequent implementation of the Peace Agreement between the Government of Sudan and the SPLM raises several issues with respect to monetary policy. One issue concerns the move back to a dual banking system. The BOS will be charged with a unified monetary policy, but conventional instruments of monetary policy shall be applied in the South by the BOS branch in the South- to be called Bank of Southern Sudan (BOSS). The currencies circulating in the South shall be recognized during the interim period until a new national currency is issued.

Another issue relates to the constraints that might encounter monetary policy operation and monitoring, at least during the interim period. How to conduct a unified monetary policy in two distinct currency areas: the North using the Dinar, and the South using a number of currencies over which the national monetary authorities have no control? Obviously, there is a need to innovate regarding monetary goals and indicators (more on this in Sobahi (2004)).

5.1 Monetary Policy within the Framework of Islamic Interest-Free Measures and Instruments

While most of the conventional instruments of monetary policy are at the disposal of Islamic central banks, indirect monetary instruments based on interest are precluded from their consideration. Therefore, they are faced with the challenge of creating new market-oriented instruments consistent with Sharia principles. Such instruments are equity-based with a variable yield (such as Murabaha and Musharaka), according to profit-and-loss sharing⁵⁸ in place of the conventional interest-based securities usually involved in the open market operations (OMO).

Sudan's monetary policy seems to have been drawn and executed to achieve the conventional textbook macroeconomic objectives, which include raising the growth rate of GDP and maintaining monetary stability through controlling monetary aggregates and maintaining stability in the exchange rate. To attain these objectives, the BOS uses a set of direct and indirect instruments of monetary and credit control. Considerable improvements both in the nature and magnitude of these instruments have taken place since the beginning of the early 1990s. In addition to moral suasion and qualitative measures, the BOS experimented with several instruments: Statutory Reserve Ratio (SRR); Internal liquidity Ratio (ILR); Financing Windows; Credit Ceilings; Open Market Operations (OMO); Foreign Exchange Operations; and Setting Minimum Rates.

As indicated in detail in Sobahi (2004), the SSR was raised from 20 per cent in 1992 to 30 per cent in 1997, but steadily declined after that (Sobahi (2004), Table 3.4). Sub-ceilings were maintained for credit to priority sectors, but were then gradually abandoned in the wake of the liberalization measures of 1997.⁵⁹ With regard to OMO, it was used as a conventional tool of monetary policy. In its attempt to achieve the dual goals of monetary and financial stability and to develop the financial market in Sudan, the BOS created the Central Bank Musharaka Certificate (CMC) as a market-oriented instrument compatible with the Sharia law.⁶⁰ This ushered in the second phase of using OMO in 1998. In 1999 the MoFNE issued GMCs with the primary goal of financing the budget. Part of the GMCs was transferred to the BOS in 2000 to be used as an additional tool for OMO. Both instruments are based on Musharaka contract, under which the investor shares profits generated by underlying funds. More securities are

⁵⁸ All commercial banks operating in Sudan are required to compile and report their Murabaha profit margin and Musharaka share on a weekly basis to the BOS. The reported data include the highest and the lowest Murabaha profit margin and Musharaka share for each individual bank. The Statistics Department of the BOS calculates weighted average rates of Murabaha profit margin and Musharaka share that are expressed as per cent per annum for publication and for analytical purposes.

⁵⁹ The only exception is the imposition of 10 per cent of total private sector credit for social development activities such as productive families, craftsmen, and small professionals.

⁶⁰ The Sudan Financial Services Company (SFS) on behalf of BOS's and government's ownership or investments in commercial banks issued these securities in July 1998. The CMC has no maturity date; has no uniform value; the holders are not owners of BOS or MOF shares in the commercial banks, and they may trade their certificates in the secondary market. The authorized primary bidders are all the commercial banks having accounts with BOS

being marketed, and new ones issued most notably the newly issued Government Investment Certificates (GICs).⁶¹

The gradual increase in the values of securities transacted through the market is shown in Table 5.2, where the total increased from SD 5.7 billion in 1999 to SD 70.0 billion in 2002.

Table 5.2: Total Issues of CMCs and GMCs (SD million)

Year	CMCs	GMCs	Total
1999	4202	1473	5675
2000	5791	7677	13468
2001	5340	43792	49132
2002	5638	64402	70040

Source: Sobahi (2004), Table 3.6.

Foreign Exchange Operations were used as a monetary instrument during 1997 – 99, (before the CMCs became operational), for purposes of controlling liquidity. To foster the impact of this tool, the BOS established a separate chamber for foreign exchange dealings in 1999, which developed later into separate chambers for inter-bank transactions for members of the two groups of banks.⁶² Data on foreign exchange transactions through OMO for the period 2000-2002 indicate that the end-result of the operations were contradictory (Sobahi (2004), Table 3.7). Currently the BOS stands ready to buy and sell foreign exchange on demand; targeting exchange rate stability, foreign-exchange operations largely lost their liquidity control function.

To regulate the cost of borrowing, the BOS extensively and successfully used profit margins (under Murabaha) and participation shares (under Musharaka), in addition to other demand-side measures during the 1990s.⁶³ Among the qualitative measures, the most important from a poverty-reduction standpoint is that banks must ensure that the total amount of credit advanced to rural areas at any given time by any of their branches, is not less than 50 per cent of total deposits received from these areas.

5.2 Exchange Rate: Regime, Policy and Performance

The changes in the exchange regime in the Sudan, both before and after the adoption of liberalization policies in 1992, are remarkable. Their implications for equity and poverty can hardly be over-estimated. In the wake of independence, Sudan adopted a fixed-exchange rate regime as part of the accession agreement to the IMF in July 1957. The entire 20-year period 1957-1978 witnessed remarkable stability of the value the Sudanese Pound under the peg (first to the Pound Sterling until 1971, and then to the U.S. Dollar).

⁶¹ GICs are a form of Murabaha contract issued by the government to finance particular development outlays for Ministry of Education, Ministry of Higher Education, Ministry of Health, and Department of Medical Supply to the tune of SD 6 billion. These certificates have a maturity date of six months starting from the date of issue, and bearing a net return of 10%. Investment in these certificates is open to private and public sector units and individuals.

⁶² There exist two bank consortia for coordinating dealing in the foreign exchange market: Nilein and United groups.

⁶³ The BOS sets the floor rate, rather than the ceiling, that is used mainly as a tool for moral suasion to signal the stance of monetary policy to banks, which are expected not to exceed the minimum rate significantly.

Under mounting pressure in the foreign-exchange market in the late 1970s, a new phase of multiple exchange rates and/or controls started. During the period 1978-1987 a series of devaluations, and two failed unification-cum-devaluation attempts (in July 1979 and October 1987), brought the exchange rate from Ls 0.35 to Ls 4.5 per US\$1 (see Sobahi (2004) for details). The third failed attempt to unify the exchange rate was in October 1992, where the rates in the official and parallel markets of foreign exchange were unified as part of the economic liberalization policy. But a new round of devaluations followed before the fourth unification attempt, which came in 1996, when exchange rate markets were unified again, and dealers were free to determine their exchange rates and transact freely within the unified regulatory framework.⁶⁴ The value of the Sudanese Pound continued to deteriorate, losing almost 75 per cent of its value against the dollar (sliding from Ls. 836.0 at the beginning of 1996, to Ls. 1460.0 by the end of the year). Efforts aimed at the unification of the exchange rate continued during 1997. Commercial banks and private exchanges continued to fix the selling and buying rates, while the Central Bank calculated a weighted average of these prices as its own rate. At the beginning of 1997, the Central Bank's rate reached Ls. 1462.0 per dollar and depreciated further to Ls. 1722.0 per dollar by the end of the year.

In 1998 a more comprehensive strategy for exchange-rate reform was introduced whereby the exchange rate was unified. The official exchange rate was replaced by a moving average of the market rates, and the BOS progressively implemented steps to strengthen the prudential regime and lift exchange controls. Consequently, the mandatory immediate surrender of foreign exchange receipt from exports was extended to six months, while existing restrictions on means of payments for foreign trade and on financing imports were lifted. For the purpose of mopping up excess liquidity, indirect instruments of monetary policy controls were developed.

The Sudanese Dinar is currently floating, as a managed-float exchange-rate regime. This was adopted in May 2002, replacing the *de facto* fixed exchange rate. In an effort to enhance the flexibility of the system, the BOS introduced a formal band of ± 1.5 per cent (later broadened to 2 per cent) around the official rate, and began auctioning its foreign exchange within the band. The spot-market exchange rate of Sudanese Dinar *vis-à-vis* the US Dollar is determined by the indicative rate calculated by the BOS as a weighted average of buying and selling rates of the previous day.⁶⁵

5.3 Enter Oil Revenue: Will the Sudanese Economy Catch the Dutch Disease?

The World Bank suggests that such a danger is not immanent; maintaining that the exchange rate overvaluation associated with large oil export revenue, rising wage cost resulting from demand pressures for non-tradeables and reduced competitiveness of traditional exports

⁶⁴ Both the commercial banks and bureaus of exchange started to determine their exchange rates in light of a weighted indicator based on the last previous day rates issued by the BOS.

⁶⁵ It is the rate used in transactions of the commercial banks, exchange bureaus, the exporters and importers, and in the foreign exchange operations of the BOS. The indicative rate constitutes the buying rate for the BOS, while the commercial banks and the exchange bureaus determine their daily buying and selling rates freely within a band ± 2.0 per cent of the indicative rate. The quotations of the exchange rates against other currencies are determined by the BOS using the cross exchange rates of these currencies *vis-à-vis* the US Dollar shown on the Reuters website.

caused by wage-rate increase are not serious concerns at present, (World Bank, 2003). But the JAM Report (December, 2004) identifies the need to avoid the “oil curse” as one of the critical challenges for macroeconomic management in Sudan. On the other hand, Sobahi (2004) suggests that it is highly debatable whether Sudan would be subjected to the symptoms of Dutch Disease⁶⁶ -- maintaining that this possibility could be averted if the government continues to carefully monitor the responds to the pressures on the foreign exchange market.⁶⁷

But the Dutch Disease could be approached also from a structural perspective, eg. by examining the changes in the sectoral allocation of resources and hence economic activity, particularly between tradeable and non-tradeable sectors. Detailed sectoral GDP data necessary for such classification are not readily available for the Sudan.⁶⁸ Barring such data, we will use some rough indicators of the relative shares of tradeables and non-tradeables in GDP and the allocation of fixed capital formation among the main tradeables sectors (Agriculture, Mining and Quarrying and Manufacturing) and the main non-tradeables (Construction and Real Estate). Table 5.3 summarises the results of our calculations, which reveal an interesting pattern.

Until 1991/92, the share of non-tradeables sector in GDP has been rising; but it declined steadily afterwards. It should be noted, however, that the development of tradeables/non-tradeables contribution to GDP in Sudan over the period 1981/82-2003 is largely a reflection of the behaviour of the share of agriculture and oil; both of them are not strongly related to exchange-rate changes. If we therefore gauge the existence of Dutch Disease by the concentration of GDP in non-tradeables, it may be unwarranted to conclude that there is no hard evidence of DD after 1991/92. The data on the allocation of investment between tradeables and non-tradeables reveal a different pattern, but unfortunately data are available until 1998 only (World Bank, 2003: Table A3.10).⁶⁹ Although the share of investment allocated to the main tradeables (Agriculture, Mining and Manufacturing) fluctuated considerably during the period, the share of investment going to the main non-tradeables sectors (Construction and Real Estate) exhibits a more stable pattern, indicating a steady increase starting 1993/94. Accordingly, if the share of investment could be considered an *indication of DD*, then the conclusion we reach based on sectoral investment shares is the opposite to the conclusion based on sectoral GDP shares.⁷⁰

⁶⁶ It is argued that the recent decline in traditional exports such as cotton and livestock is not attributed to the Dutch Disease. Cotton production declined in the 1990s to less than 50 per cent of what it had been in the 1980s, mainly as a result of problems in the government-owned irrigation schemes. In the case of livestock, exports declined in 2000 and 2001 due to a ban on meat and livestock imports across the Gulf countries. Livestock exports rebounded strongly in 2002, when the ban was lifted.

⁶⁷ But the experience of Sudan with exchange-rate management under the 1998 comprehensive strategy for exchange rate reform does not support this view; oil-related inflows of foreign currency coupled with BOS intervention to stabilize the exchange rate against the US Dollar have contributed to stabilize the nominal exchange rate, but the real exchange rate appreciated.

⁶⁸ The CBS is known to have detailed sectoral GDP data. But due to technical reasons, we could not access this data in time for us to use in this report despite the effort of the IT experts at the UNDP CO in Sudan.

⁶⁹ We could not obtain data on the allocation of investment. CBS did not happen to have such data in a format suitable for our analysis.

⁷⁰ But there is an important caveat: the conclusion is based on a shaky data foundation (problems of geographical coverage, definitions and classification) and a rather short period for investment data.

One of the challenges associated with the advent of oil production is the risk of instability, which might be caused by oil price fluctuations. Another challenge is the danger of Dutch Disease. However, it is argued in Sobahi (2004) that the potential fiscal and exchange rate risks are being addressed in order to avoid the fate of most other oil-producing countries, where booms have not led to sustainable improvements, but busts have led to permanent declines. As yet there is no evidence of a Dutch Disease, and as for now the symptoms, as reflected in exchange rate overvaluation resulting from large oil receipt, rising wage costs caused by demand for non-tradeable goods, and diminished competitiveness of traditional exports caused by the wage rate increases, are not noticeably detected.

Table 5.3: Ratios of Tradeables and Non-tradeables to GDP (%) 1981/82 – 2003

Year	Tradeables	Non-Tradeables
1981/82	44.6%	50.0%
1982/83	41.2%	53.0%
1983/84	41.7%	54.5%
1984/85	40.5%	56.2%
1985/86	42.7%	54.6%
1986/87	41.8%	56.3%
1987/88	38.1%	56.9%
1988/89	43.6%	54.5%
1989/90	37.7%	61.0%
1990/91	35.0%	63.0%
1991/92	41.3%	55.8%
1992/93	39.8%	57.2%
1993/94	31.4%	51.1%
1994/95	37.2%	60.7%
1996	47.8%	50.5%
1997	48.6%	49.7%
1998	48.1%	50.0%
1999	48.0%	50.5%
2000	50.6%	48.0%
2001	51.2%	47.5%
2002	51.8%	46.9%
2003	52.4%	46.4%

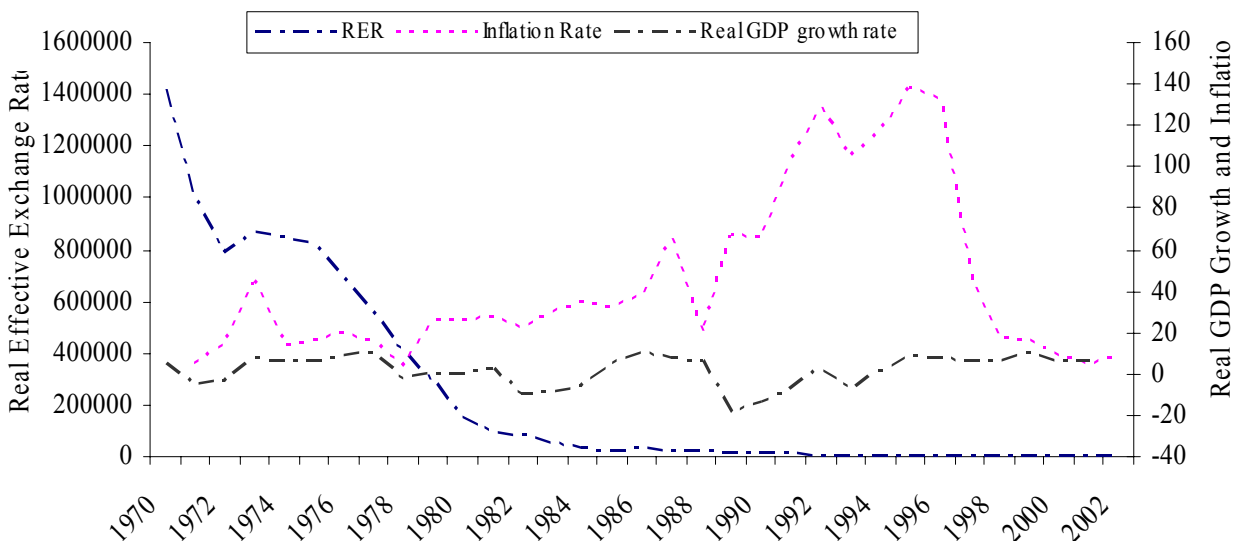
Source: Calculated from CBS unpublished data

There is no doubt that oil-related inflows of foreign exchange have contributed to stabilize the exchange rate, and, in addition, the BOS followed a proactive interventionist policy in the foreign-exchange market to keep the exchange rate stable against the U.S. Dollar. As a result the real exchange rate appreciated significantly while foreign reserves declined. But this is more a result of a deliberate policy by the BOS to keep the nominal exchange rate stable against the U.S. Dollar. But herein lurks the danger of Dutch Disease (Sobahi (2004)).

Figure 5.1 shows the performance of real exchange rate, inflation, and real growth of GDP for the Sudan during the longer period 1970-2001. The movements of the nominal exchange rate are shown in Sobahi (2004) (Appendix Table 2.1). One might notice that real exchange rate continued to appreciate (slide down) throughout the first two decades, indicating an overvaluation of the Sudanese currency, coupled with a rising trend in inflation, and a hectic performance of the GDP. With the introduction of the new economic reforms, the corrective

measures taken in the foreign exchange sector had their immediate impact on the real exchange rate performance form 1992.

Figure 5.1: Real GDP Growth, Real Effective Exchange Rate and Inflation, 1970-2001



The commercial exploitation of oil since 1999 represents an important structural shift in the Sudanese economy. In comparison to other resource rich LDCs, the estimated oil revenues of about 10 per cent to the GDP in 2003 – a share that expected to increase in the near future – represents a larger windfall than Venezuela received during 1974-78. Even countries with modest oil windfall in the 1970s, like Mexico, experienced considerable effects suggestive of the Dutch Disease. Therefore, it is important to assess the vulnerability of the Sudanese economy to the Dutch Disease symptoms. The next section will address this issue.

Regression results based on quarterly data suggest that the RER has a statistically significant negative quarterly logarithmic trend growth of about 1.26 per cent. Such declining trend growth suggests that the RER was depreciating over the estimated sample. This can be taken as an indicator that Dutch Disease-induced real appreciation of the exchange rate does not appear as a policy problem in Sudan (Suliman (2004)).⁷¹ Another important symptom of the vulnerability of Sudan to the Dutch Disease is the contraction in the non-booming sector's exports, and even slacks in aggregate supply response. The contraction in exports performance can continue if the revenues from the booming sector are not used to stimulate non-oil exports, which are produced mainly by the agricultural sector where most of the poor live.

The relatively low and declining government spending implies negligence of the productive sectors of the economy; it also implies low tax efforts. With the coming easy oil money this may provide lack of incentive to develop alternative tax bases and/or improve the existing ones, which in turn reduces public accountability, lead to an increased destructive rent

⁷¹ We note that positive trend growth of the RER was estimated by extending sample back into the early 1990s.

seeking activities as well as to reduced role of the public sector in enhancing an efficient allocation of the resources in the economy.

The growing contribution of oil revenues to the federal budget should not fetter the development of state-contingent exports-subsidy and import-tax system. The government also needs to provide hedge against appreciation of the real exchange rate. Adoption of such policy stance is important in order to improve incentives especially in the declining non-booming export sector.

The current policy of the Central Bank involves active interventions in the foreign exchange market especially through nominal depreciation of the exchange rate per unit of foreign currency. This does not appear prudent in view of the depreciated real exchange rate. It follows that the choice of a nominal anchor should take into consideration the analysis of the trends of the key policy variables. However, priorities for alternative policies include the enhancement of liberalization and a free functioning foreign exchange market, as well as the institutionalization of non-inflationary fiscal and monetary policies.

CHAPTER SIX

Financial Sector Policy and Poverty Reduction

6.1 Islamic Finance and Structure of Banking Sector

The introduction of Islamic finance⁷² in Sudan began with the incorporation of the Faisal Islamic Bank in 1978, which was followed by a number of other Islamic banks in the early 1980s. The evolution and performance of Islamic finance in Sudan was influenced by political economy considerations and government policy. The universal adoption of Islamic principles of finance in 1990 was both politically motivated and closely linked to the economic interests of the elite members of the ruling party (Elhiraika, 2004).

As indicated in Abu-Ismaïl and Elhiraika (2004), the complete shift to Islamic finance was rushed,⁷³ without addressing the needs for proper corporate governance, internal controls, and training of bank staff on Islamic financial instruments and *sharia*-compatible regulation and supervision. Both non-Muslims and Muslims who were not affiliated to the ruling party viewed the Islamic financial institutions as tools of economic and political domination.⁷⁴

With the Bank of Sudan (BOS) at the top, Sudan's financial system today consists of 19 active commercial banks (of which 6 are state-owned banks), 10 are owned jointly and 3 owned by foreign capital (see Abu-Ismaïl and Elhiraika (2004), Appendix Figure A1). In addition, there are 4 specialized banks and 2 investment banks, plus an unspecified number of non-bank financial entities, mainly Islamic insurance (*takaful*) companies. There are no formal financial institutions in the parts of the South controlled by SPLA/SPLM, where the *sharia* law was not

⁷² For more details on the different forms of Islamic financing see the Appendix to Abu-Ismaïl and Elhiraika (2004). In brief, the fundamental difference between Islamic and traditional banking systems is that an Islamic system does not allow the use of interest rates, and instead relies on profit and loss sharing and other arrangement to mobilize resources. The most common financing instruments used by the banking sector in Sudan are: (i) *musharaka* or partnership, wherein the bank and the client share the capital of a project and profits are shared according to an agreed-upon ratio and losses according to ownership; (ii) *mudharaba* or silent partnership when one party provides the capital, the other the labour; and (iii) *murabaha* or deferred payment on purchases, similar in practice to an overdraft facility. The latter is the most preferred Islamic banking instrument in Sudan, and is also the closest to conventional interest-bearing instruments. *Salam* is the exact opposite of *murabaha*, in the sense that the bank purchases the goods from its client, which is delivered at a later point in time. This contract is therefore more suitable to agriculture.

⁷³ Shortly after the present Islamist government came to power in a *coup d'état* in June 1989.

⁷⁴ Widespread public suspicion, a deteriorating macroeconomic environment, and restrictive credit policies seriously constrained the ability of Islamic banks to mobilize resources. This led to an unprecedented level of financial disintermediation in the recent history of Sudan (Elhiraika, 1998). However, a process of financial recovery has been underway since the implementation of the 1997 financial reform programme.

applied (Abu-Ismaïl and Elhiraika (2004)).⁷⁵ It is important to note that two state-owned banks (Omdurman Bank and Bank of Khartoum) dominate the Sudanese banking system.

Table 6.1 shows the evolving distribution of the banking network in Sudan from 1991-2001. According to the information in that table, the geographical distribution of banking units in Sudan is highly skewed. Khartoum claimed one third of banking units in 2001, although its share of its total population was barely 16 per cent. On the other hand, only 7 per cent of banking units are located in Darfur, whose population share was almost 19 per cent. For the South, the respective shares were extremely disproportionate: 3 per cent of banking units to serve 15 per cent of the population.⁷⁶ In short, the banking network is predominantly concentrated in big cities in the North; both rural areas and the South are marginalized in terms of banking and financial services.

Table 6.1: The Distribution of the Banking Network in Sudan (%)

Region	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Khartoum	30	27	29	29	30	32	32	32	32	33	33
Middle	22	23	22	22	22	24	23	24	23	22	23
East	13	15	14	14	13	15	14	13	15	14	11
North	14	14	13	13	13	10	12	11	12	11	10
Kordofan	9	10	10	11	10	9	9	9	8	9	10
Darfour	8	8	9	8	8	7	7	8	7	8	7
South	4	3	3	3	4	3	3	3	3	3	3
Total	100	100	100	100	100	100	100	100	100	100	100

Source: Kireyev (2001) for data before 1999, and Bank of Sudan for data from 1999-2001, as reported in Abu-Ismaïl and Elhiraika (2004), Table 4.1.

The main structural features of the banking sector in Sudan may be summarized as follows:

- The Sudanese banks are very small by international standards, with a total amount of deposits in the entire banking system of around \$500 million since 1995. The average capital and total assets of a Sudanese bank is \$3.5 million and \$24 million, respectively (Kireyev, 2001).
- The deposits structure of the Sudanese banks differs from most Islamic banks in that until 1992, total deposits were dominated by demand deposits (with a share of over 70 per cent), whereas saving and investment deposits remained relatively small.
- Prior to the reform programme initiated in 1997, the Sudanese financial system was characterized by its extensive and unmanageable regulatory system.⁷⁷

⁷⁵ In these areas, the financial sector consists of informal exchange bureaus and small micro-credit schemes, funded by NGOs or bilateral aid agencies that can also provide loans at an interest.

⁷⁶ Based on population figures for 2003, from CBS and UNFPA, *Population Sheet for Sudan by States- 2003*.

⁷⁷ These include cumbersome guidelines for credit allocation, centralized lending by the Central Bank to public enterprises, absence of indirect monetary policy instruments, fixed and negative real rates of return, an inadequate accounting system, detailed minimum and maximum limits of lending to individual sectors, restrictions on financing trade in individual commodities, restrictions on inter-bank transactions, prior approval for large loans, geographical allocation of credit, etc. (Kireyev, 2001, cited in Abu-Ismaïl and Elhiraika (2004)).

6.2 Financial Sector Reform and Impact

Beginning 1997, the BOS undertook several measures to reform the financial sector (Kireyev, 2001). Those measures included: eliminating long-standing, cost-free loan facilities to banks and public enterprises; removing regional floors on credit allocation, and minimum customer's share under the *musharaka* contracts; establishing a programme to monitor non-performing loans, and new rules on credit concentration and lending in a foreign currency; introducing uniform accounting principles for all banks and financial institutions in 1998; strengthening bank supervision; improving the existing loan classification system; revising the asset risk-weighted scales for some Islamic modes of finance to better reflect the specific risk facing banks; and restructuring the financial sector through mergers and liquidation of state owned and private sector banks.⁷⁸

But the adoption of sector-wide Islamic finance in 1990 and of the reforms undertaken during 1997-98, which resulted in substantial liberalization, did not enhance the sector's contribution to economic development. This conclusion was reached by Kireyev (2001), based on an in-depth analysis for the period 1990-1999, in Sobahi (2004). His analysis is extended to cover the period 1980-2003, but focuses on the discussion on the reform era – before and after. Following Kireyev, Elhiraika and Abu-Ismaïl studied the impact of reform on financial intermediation, cost of borrowing, size and structure of deposits, credit to the private sector, credit allocation by instrument and economic sector, and resource mobilization. They basically concur with the main conclusion reached by Kireyev: the universal application of Islamic finance in 1990 and the liberalization of the financial sector during the 1997-98 did not actually enhance the developmental contribution of the financial sector in Sudan. This indeed is an extremely interesting conclusion from a poverty reduction standpoint, especially considering the clear negative impact of reform on financing agriculture. The specific empirical findings upon which the above conclusion is based are highlighted below (for more details see Abu-Ismaïl and Elhiraika (2004)).

- Following the big drop in inflation in 1997, the gradual relaxation of controls on bank rates of return following the financial reform programme dramatically increased the real cost of borrowing, which peaked at 28 per cent in 1998 before falling to 8 per cent in 2003.⁷⁹
- Although the main indicators of financial disintermediation have begun to improve following the reform programme, the reversal has not yet succeeded in returning the financial sector to its level during the 1970s. Moreover, the level of financial intermediation in Sudan remains much lower than that of comparable developing countries.⁸⁰

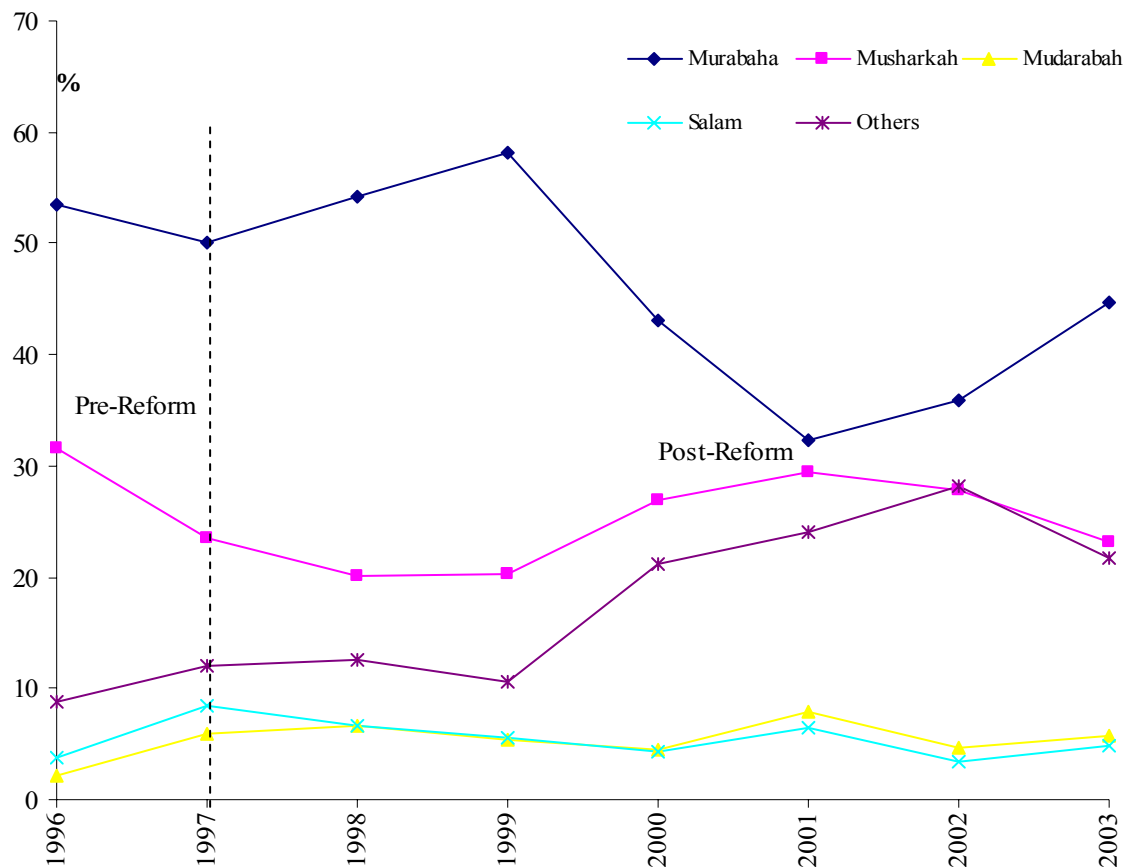
⁷⁸ The Unity Bank and the National Bank for Exports and Imports were merged into the Bank of Khartoum Group. Also the Sudanese Industrial Bank was merged with Elnelien Bank to form Elnelien Industrial Development Bank. The Middle East Bank and the Internal and International Trade Bank were liquidated. Subsequently, the Central Bank banned the establishment of new commercial banks (Elhiraika and Abu-Ismaïl, 2004)

⁷⁹ Clearly positive rates of return should be encouraged for promoting both financial and real development in a capita scarce situation like that of Sudan. Positive rates of return on financial assets can help banks to attract more savings, and thereby finance more investments in the country.

⁸⁰ For example, the ratio of broad money to GDP is currently around 10% in Sudan compared with 30-40% for countries such as Kenya and Tanzania, and 50-90% for other Arab countries.

- Despite a visible increase in the share of investment deposits since 1997, the deposit structure is still heavily dominated by demand deposits. Investment and savings deposits, which banks can use at their discretion for extending loans, remain relatively small.
- Real credit to the private sector declined by 23 per cent in 1993-99. As a result, income from loans or financing accounted for only 42 per cent of commercial banks' total income in 1991-2001, and ironically, the share of non-credit income rose conspicuously in the reform period to reach 70 per cent in 1999-2001, a manifestation of strong disintermediation. The sectors that were particularly affected were construction and agriculture.
- Recent growth in private sector credit is mainly due to increases in lending to commercial activities rather than productive sectors. In fact, agriculture and industry, as opposed to local trade and other commercial activities, have been receiving a lower and declining share of total private sector.
- High yields on CMCs and GMCs divert financing from the private sector by raising the opportunity cost of bank loans. This is particularly true when Sudanese banks are instructed to comply with strict prudential regulations. Compared to investing in such assets as government bonds, lending to the private sector obviously carried a higher risk.
- Specialized banking services are no longer available for the most vulnerable sectors, such as rain-fed agriculture. This is a crucial issue for the prospects of poverty reduction in Sudan. Some specialized banks have been merged with commercial banks, while others are shrinking in size and operations despite their declared commercial orientation in recent years.
- There is no evidence that financial sector reform and liberalization efforts had any significant impact on credit allocation by modes of financing. As shown in Figure 6.1, *murabaha* seems to be the mode most preferred by banks; curiously, it is the mode of Islamic finance closest to conventional banking in the sense that the loan is collateralized and hence offers greater security. The relative importance of *musharaka* and *mudaraba* modes of financing by Sudanese banks is low and also generally falling. Since those are the modes of medium and long-term financing needed to finance productive activities, it is therefore evident that the current structure of the Sudanese financial sector is not conducive to poverty reduction whether indirectly through the financing of investment and growth or directly through the financing of small entrepreneurs and the poor.
- The combined share of agriculture and industry in private-sector credit dropped from almost 48 per cent in 1992 to 22 per cent in 2003, while the share of imports and local trade jumped from about 13 per cent to 39 per cent over the same period.
- Despite the financial reforms, increases in real GDP growth were not sufficient to bridge the overall resource gap (between investment and saving). The domestic saving rate in Sudan has remained very low, averaging 15.6 per cent of GDP over the period 1994-2002. With total deposits averaging about 7.3 per cent of GDP during the same period, the Sudanese financial sector was clearly not able to mobilize adequate domestic savings. Liberalization is not the answer; radical institutional and policy shifts are imperative for the Sudanese financial sector to provide wider and sustainable finance for poverty reduction, especially in the rural areas of the different states.

Figure 6.1: Distribution of Credit by Mode of Finance (1996-2003)



6.3 Why Specialized Banks Failed to Serve the Poor?

Sudan's experience with specialized banks may provide a classic example of the wasted potential of development banks in developing countries, which has been extensively analyzed by Seibel (2000). Due to a lack of financial viability, the government had to merge and/or privatize some of the public development banks, including the Industrial Bank and the Real Estate Bank. The remaining two state-owned specialized banks (The Agricultural Bank of Sudan and The Saving and Social Development Bank) continued to experience difficulties, despite government attempts to revamp them. In addition to the public banks, there are two other specialized banks, largely privately owned (The Farmers Bank and the Animal Resources Bank).

Table 6.2 shows the performance of all four banks in terms of resource mobilization and outreach to agriculture during 1995-2001. This might be due to the financial reforms witnessed through the period 1997-1998. Although they failed to achieve financial viability,⁸¹ subsidized lending by the state-owned banks continues because of a lack of efficient

⁸¹ Their rate of return on assets remained largely negative even after reforming the financial sector.

alternatives and a strategic vision for the restructuring of the agricultural financial market in Sudan, while the government remains committed to meeting the financial needs of the irrigated schemes (Elhiraika, 2003). On the other hand, the two private specialized banks appear to have achieved financial viability,⁸² only by focusing on lending to sectors other than agriculture and diversifying through non-credit income⁸³.

Table 6.2: Resource Mobilization and Allocation by Specialized Banks

	1995	1996	1997	1998	1999	2000	2001
Agricultural Bank of Sudan							
Real Total Deposits (SD bn)	0.52	0.53	0.56	0.62	0.75	0.87	0.73
Real Total Loans¹	1.02	1.46	1.52	0.88	0.86	0.79	1.28
Sudanese Saving and Development Bank							
Real Total Deposits (SD bn)	0.4	0.5	0.5	0.4	0.5	0.7	0.8
Real Total Loans¹	0.3	0.3	0.2	0.3	0.6	0.9	1.0
Agricultural Loans (% of total)	29.3	35.3	35.4	29.2	19.4	23.3	20.9
The Farmer's Bank							
Real total Deposits (SD bn)	1.3	1.6	1.4	1.2	1.8	2.6	3.6
Real Total Loans¹	0.6	1.6	0.8	0.3	1.1	1.5	2.8
Agricultural Finance (% of total)	36.1	30.3	27.7	63.3	85.7	26.2	33.2
The Animal Resources Bank							
Real Total Deposits (SD bn)	0.85	1.38	0.98	1.28	1.81	3.15	3.69
Real Total Loans¹	0.10	0.94	1.00	1.21	1.65	3.05	2.86
Agricultural Finance (% of total)	36.9	29.2	28.2	22.7	37.9	20.3	4.39

Notes: ¹ = Outstanding loans (no information on loan flows)

Source: Elhiraika, 2003.

Thus the experience of both private and state-owned specialized banks suggests that the reform-cum-liberalization of the financial sector in the Sudan resulted in increased exclusion of the poor, both in agriculture and in manufacturing. Radical reform is needed in order to develop self-sustaining pro-poor financial institutions in the Sudan. In many parts of the world micro-finance schemes have evolved as complementary means to widening access to finance by micro entrepreneurs and the poor, especially women, who eventually contribute significantly to job creation and poverty reduction in developing countries. But the creation of micro-finance institutions does not obviate the critical need to enhance the role of specialized and development banks.

6.4 Islamic Banking, Microfinance and Reformed Specialized Banks

As argued in Abu-Ismaïl and Elhiraika (2004), Islamic financial institutions (IFIs) and micro finance institutions (MFIs) may provide ways and means to overcome the information and other constraints of collateral-based lending that excludes the poor and SMEs.⁸⁴ Thus instead

⁸² It is curious to note that although continuing to make profits, the rate of return on assets of private specialized banks fell after the 1997-98 reform. (see Abu-Ismaïl and Elhiraika (2004), Table 11).

⁸³ Elhiraika (2003) argues that essentially, as private banks, they seem to concentrate on serving the interests of their influential shareholders and established clients in the business community, predominantly outside agriculture.

⁸⁴ Since IFIs are more closely involved in project assessment and monitoring than interest-based institutions, they can significantly mitigate the information problems constraining access to finance by the poor and SMEs in a

of forcing commercial banks to provide micro-financing, the government should promote specialized market-oriented MFIs (Islamic and non-Islamic) which are devoted to serving the poor in a decentralized participatory framework that covers all the regions of the country. Some researchers even emphasize the need for social financial intermediation in which social capital can serve as collateral, and this represents one of the fundamental mechanisms for MF schemes. Many instruments of Islamic finance (e.g. *mudaraba*, *musharaka* and *murabaha*) could be incorporated in the design of successful MF programmes.⁸⁵

In principle, Islamic finance may be more conducive to social justice because of its risk-sharing and could be more effective in the fight against poverty because of its limited or no-collateral requirement. But from a poverty-reduction perspective, the relative cost of finance of Islamic and traditional financial institutions should be considered. It was demonstrated in Abu-Ismaïl and Elhiraika (2004) that in Sudan's system of universal Islamic finance, (in the North), the cost of finance is not really lower than under the traditional banking principles. Another example is the case of Bangladesh, where the experience of IMFIs is very recent compared to their secular counterparts. Secular MFIs pay a fixed 5-6 per cent interest on deposits, while IMFIs pay a variable profit rate. On the lending side, traditional MFIs charge a lending rate that varies between 20-30 per cent per annum on cash loans. IMFIs do not give cash finance but mainly resort to sale on credit (*bay muajjal*) to provide goods at cost plus a certain mark-up (*murabaha*). The mark-up rate ranges between 12-12.5 per cent with a compounding annualized implicit interest rate of 24-25 per cent (Hassan and Alamgir, 2002, cited in Abu-Ismaïl and Elhiraika (2004)).

Thus, in spite of its great potential in theory, available evidence based on experience of Sudan (and other countries such as Bangladesh) clearly indicates that Islamic finance has not enabled more access to finance by the poor at lower cost when compared to traditional modes of finance. Perhaps the problems lie with the structural features of the rural credit market more than the mode of finance. As argued by Besley (1994), rural credit markets in developing countries differ from other credit markets. In the former, the problems associated with collateral insecurity,⁸⁶ underdevelopment of complementary institutions,⁸⁷ and covariant risks,⁸⁸ are much more acute. Such problems are more acute in Sudan's case, given the

conventional financial market. MFIs charge full interest rates and fees that cover costs, and they locate close to poor clients and provide them with timely and flexible services that are tailored to their needs.

⁸⁵ For example, through a *mudaraba* contract the MFI may take equity in the micro-entrepreneur's project. The share of the financier declines as the entrepreneur pays part of the capital financed plus profit. The MFI ceases to be a partner when all the contributions and profits due to it are fully paid. Through a *murabaha* agreement, the MFI may buy goods and resell them to the poor or micro entrepreneurs, at cost plus a certain mark-up, for later repayment in equal instalments or a lump-sum. *Murabaha* and other instruments of Islamic finance such as *ijarah* may be applied to group-based as well as individual financing schemes. Besides being easy for clients to understand, this arrangement simplifies administrative and monitoring procedures. Indeed, various Islamic financing modes used by MFIs in Bangladesh (and other countries such as Iran) proved to be acceptable to clients and successful in terms of profit and repayment.

⁸⁶ This may be because borrowers are too poor to own assets which could be collateralized, or because of undeveloped property rights in rural areas of many developing countries which render difficult- if not impossible- the appropriation of collateral in the event of default.

⁸⁷ Such as poor communications, absence of complementary markets, etc.

⁸⁸ In rural areas where agricultural activity is predominant, the risk of income shocks is fairly high. Such shocks may be associated with weather fluctuations that affect whole regions or commodity price gyrations affecting all producers of a particular commodity, thereby creating the potential for a group of farmers to default simultaneously. This is particularly true in traditional rain-fed agriculture in Sudan.

importance of traditional rain-fed agriculture. This creates a situation of market failure in which a free market cannot bring about a constrained Pareto-efficient allocation of credit. In such a case, interventions in the rural credit market in developing countries to correct for market failure are common and take several forms. These include government ownership of major banks (such as in India and Mexico), obligating commercial banks to allocate a given fraction of total credit to farmers (such as in Nigeria and the Philippines), in addition to government provision of subsidized credit (Besley, 1994). As discussed in Section 7, reform of the land ownership system in Sudanese agriculture, among other things, can go a long way in solving the problem of collateral insecurity.

CHAPTER SEVEN

Agriculture: Sources of Fast Growth and Trends in Poverty and Inequality

The growth of the agricultural sector in the Sudan averaged an impressive 10 per cent during the 1990s (Hassan and Khan (2004)). This is much higher than the growth rate during the 1980s. There is, however, a widespread feeling that poverty has also been on the increase alongside faster growth. How do we account for the faster growth? And, if indeed poverty has increased, how do we explain such development?

In Sudan, crop production contributes approximately 45 per cent of the GDP originating in agriculture, livestock contributing most of the remainder, with forestry and fishery contributing just over 5 per cent.⁸⁹ Of this vast country, only about 40 million feddans⁹⁰ of land – less than seven per cent of the surface area – is used for crop cultivation. Except for less than one per cent cultivated by registered private farmers, the remaining land is owned by the government and allocated for use organized under three distinct systems of farming. These are the Irrigated Agriculture (IA) mainly found in Central Sudan, Mechanized Rain-Fed Cultivation (MRFC) in the Eastern Region, and Traditional Rain-Fed Farming (TRFF) in the Western parts of the country (i.e., Kordofan and Darfur regions).⁹¹ In 1999 TRFF generated for 56 per cent of agricultural GDP and supported about 70 per cent of the rural population, compared to 22 per cent and 12 per cent for IA, and 7-8 per cent and 0.7 per cent for MRFC, respectively. Obviously, TRFF is where the bulk of the rural poor are to be found.

Applying a diversified system of cultivation, IA is almost the sole producer of cash crops like cotton and sugarcane, and more recently food crops such as wheat. In addition, it produces sorghum, groundnut, fruits and vegetables.⁹² Irrigated land is parcelled out in average plots of approximately 15 feddans to tenants who are effectively under fixed rental contract operated according to a complex system.⁹³ Tenant households supply a relatively small proportion of labour and rely upon hired migrant labour, which is estimated to be as much as 80 per cent of total labour needs (Hassan and Khan (2004)). These workers are often seasonal migrants from traditional farms. Under MRFC, large parcels of land, typically more than a thousand feddans but sometimes ranging between 50,000 or even a million feddans, are leased out to individuals who often engage in subletting land and themselves become absentee landlords.

⁸⁹ Source of data in this section, unless specifically mentioned otherwise, is the Central Bureau of Statistics.

⁹⁰ A feddan is 0.42 hectare or approximately 1.04 acres. As shown in Hassan and Khan (2004), area under cultivation has increased over time.

⁹¹ For more details on land-holding system, production technology and crop pattern, see Hassan and Khan (2004).

⁹² Initially, livestock was not allowed on irrigated land. But the system was changed later to allow tenant farmers to raise livestock.

⁹³ In the Gezira scheme, which accounts for about half of all land under large-scale irrigation, the average size of tenancy was 16.2 feddans in the late 1990s. See, World Bank, *Sudan: Options for the Sustainable Development of the Gezira Scheme*, October 27, 2000, Washington, D.C., p.40.

Labour in the MRFC is again largely supplied by the households engaged in traditional farming. Farms in this sector are very heavily specialized in the production of sorghum, which accounts for nearly 90 per cent of the gross output, with sesame, sunflower and millet accounting for the rest.

TRFF is where most rural households are believed to belong. Within this sector, land is government-owned, and the usufruct right to land is assigned to the tribe or the community, which in turn transfers such right to individual members, typically in plots of 4-5 feddans per *worker*. Farmers in this sector engage in farm operations for only up to four months a year and engage in a variety of other occupations, notably small-scale livestock production. This sector is the reservoir of labour for the economy of Sudan, supplying most of the wage labour to IA and MRFC (Hassan and Khan (2004)). Crop production in these farms is quite diversified; two food crops (sorghum and millet) and two cash crops (sesame and groundnuts) account for most of cropping, and fruits and vegetables dominate the rest.

The livestock sector transcends all the above forms of cultivation by overlapping with cropping. In addition, a wide spectrum of livestock farming takes place on natural pasture with the vast majority of the herders operating on dry lands. While subsistence farmers and tenants on irrigated land diversify into small-scale livestock, very large herders dominate production and export, which dramatically expanded in the 1990s.

7.1 Performance of Sudanese Agriculture

As shown in Hassan and Khan (2004), close examination of the limited data on Sudan's agriculture reveal a break in the sector's growth performance around the end of the 1980s, suggesting that the sector suffered from relative stagnation mostly throughout the 1980s, with its growth rate sharply accelerating thereafter.⁹⁴ The main features of the story are documented in Table 7.1.

As can be deduced from the table, the dismal trend in agricultural performance was reversed in the period beginning around the turn of the decade. It appears that rural output per capita increased at an annual rate of over 3.5 per cent sustained over a decade, a remarkable performance by Sub-Saharan African standards. In Hassan and Khan (2004), it is suggested that the only obvious source of increase in agricultural output was the increased use of land in the TRFF sector, leading to a sharp fall of yield per unit of cultivated land (by the evidence of the data about the change in yield of cereals in Table 7.1).⁹⁵ This could very well be a case of

⁹⁴ One should keep in mind that the 1980s witnessed severe droughts in 1982/83, 1984/85, and 1987/88, compared to only a single drought during the 1990s – namely the drought of 1990/91. Therefore, the 1990s may be considered as a decade of catching-up.

⁹⁵ As suggested in Hassan and Khan (2004), this resembles the classic response of the rural population, driven by poverty and lack of access to productive resources, to cultivate increasingly more marginal land to eke out a living. The only difference between the classic survival strategy and what is reported to have happened according to the data in Table 7.1 is that in Sudan the strategy seems to have led to a rapid growth in output per capita, an outcome which is different from the more typical one of stagnant or declining output per capita that “diminishing returns” associated with survival strategies usually result in.

horizontal expansion, made possible by favourable weather conditions and good rainfall during the 1990s compared to the 1980s.

Table 7.1: Agricultural Performance and Related Indicators (% growth per year)

	Between 1979-81 and 1989-91	Between 1989-91 and 1999-2001	Between 1979-81 and 1999-2001
Crop Production	-2.60	4.79	1.02
Arable Land	-	-	1.35
Food Crop Production	-0.50	4.92	2.18
Cereal Crop Yield per Ha	-	-	-1.43
Land under Cereal Crop Cultivation	-	-	2.12
Livestock Products	1.14	4.70	2.90
Fertilizer per Ha of Arable Land	-	-	-4.10
Tractors per Ha of Arable Land	-	-	-1.50
Rural Population	-	-	1.2

Notes: (*) means between 1980 and 2000, (**) means between 1979-81 and 1998-2000.

Source: Hassan and Khan (2004) Table 5.1

A better insight into Sudan's agricultural performance during the 1990s may be gained by estimating the rates of output growth for each of the four different forms of agriculture identified in the preceding section. The results are shown in Table 7.2. Real value added in agriculture increased at an amazingly rapid rate of ten per cent per year. It is much faster than the rate of growth for the comparable (though not exactly the same) period based on World Bank data. Value added in livestock increased faster than the value added in crop production; but the rate of growth in the latter – estimated separately for the three sub-categories – was also very high, well over 7 per cent per year.⁹⁶ It is especially remarkable that value added in traditional rain-fed cropping increased at an amazingly high annual rate of 20 per cent. The trend growth rate of traditional agriculture based on the national accounts (GDP) data, is much higher than the more moderate, though still very high, growth rate suggested by the increase in output of the major crops.

If one takes the latter as the more accurate reflection of the performance of traditional agriculture, one still has to grapple with the task of explaining such growth, which, by any standard, is extraordinarily high. There could be a problem with the accuracy of the data; but we cannot settle this issue or establish the case. So given the data, the question is: what is the source of this very high growth of TRFF sector?⁹⁷

⁹⁶ Growth rates for different types of crop production are estimated and reported in Table 7.2. No estimate is made of the trend rate of growth for value added in total crop production. The rate of growth for non-livestock agricultural value added, residually estimated from the growth rates with dummies in Table 7.2, is 9.9 per cent.

⁹⁷ There was a large controversy regarding the true growth rate of the agricultural sector, and consequently the share of agriculture in GDP in Sudan. Nobody knows what the real numbers are at the moment – only when the agricultural and population censuses are taken will we be able to get a sense of what GDP really is in agriculture. For now, the consensus that appears to be emerging is that there has been a substantial reduction in the share of agriculture in the last 6 years, compensated by an increase in government services and oil.

Table 7.2: Estimated Annual Growth Rates in Value Added and Output

	<i>Without Dummy for 1990/91</i>		<i>With Dummy for 1990/91</i>	
	Growth Rate	Adjusted R²	Growth Rate	Adjusted R²
Value Added (1989/90 – 2000)	10.1**	0.95	9.9**	0.95
Irrigated Agricultural Crops	7.3**	0.69	7.4**	0.65
Mechanized Rain-Fed Crops	5.9	0	0.9	0.38
Traditional Rain-Fed Crops	20.1	0.93	19.8	0.94
Livestock	12.6	0.96	12.8	0.95
Total GDP	5.6**	0.99	5.7**	0.99
Output (1989/90 – 2000/01)				
Sorghum	14.8**	0.60	11.7**	0.74
Millet	13.3*	0.41	9.8*	0.60
Sesame	12.4*	0.30	9.4	0.36
Groundnut	29.5**	0.80	23.9**	0.89

Notes: ** Means that the coefficient showing the growth rate is significant at 1% level and * means that it is significant at 5% level. Growth rate shown without an asterisk is not significant at any reasonable level of confidence.

Source: Hassan and Khan (2004), Tables 5.2 and 5.3.

Several factors may be put forth as explanations. As suggested in Hassan and Khan (2004), the main driving force behind this high growth in traditional agriculture is the response of farmers in TRFF to structural changes in the rural labour market, notably the decline in the demand for labour outside TRFF. Demand for labour in IA declined as a result of the drop in the area under cotton cultivation,⁹⁸ and the stagnation of demand for labour in MRFC. Together, these two factors must have led to a serious loss of livelihood for the traditional farmers, who had to look for alternative means of survival. Migration to urban areas may have provided an outlet; but it was limited due to the very slow growth of the non-agricultural urban activities. Thus the response on the part of the traditional farmers for survival appears to have been a more intensive effort to eke out a living from rain-fed traditional agriculture.⁹⁹ The primary form of the survival response was to extend rain-fed traditional cultivation on more land. In 1989/90, the area under the four main crops of traditional farming was 10,025 thousand feddan. By 2000/01 such area had expanded to 19,764 thousand feddan, a 97 per cent increase!¹⁰⁰

⁹⁸ As recently as the mid 1980s, cotton was cultivated on about 875,000 feddans of irrigated land. By the turn of the century, cotton had lost more than half a million feddans, the average area harvested having dropped to 336,000 feddans in the three years ending in 2000/01. This change was due to conscious state policy of crop rotation away from cotton and in favour of food crops, which are much less labour-intensive than cotton, to promote self sufficiency in food.

⁹⁹ Data in the Draft NHDR 1998 (reported in Chapter 7) indicate that during 1990-96 rural employment increased by 4.2 per cent per annum, with female employment growing by 9.3 and male employment growing by 2.3 per cent.

¹⁰⁰ The response of the traditional farmers was, however, more complex than a mere extension of the area under cultivation. Table 4 in Hassan and Khan (2004) shows rather disparate trend-growth rates in area and yield of the four traditional crops.

However, although the area under the two main food crops (sorghum and millet) each increased at a very high annual rate of just over seven per cent per year, the rate of change in yield per feddan was somewhat dissimilar. There was at least a weak increase in yield for sorghum (about 3 per cent), whereas yield for millet experienced a negative (albeit statistically insignificant) rate of increase. It should be noted that sorghum is the more tradeable compared to millet, and the two crops are grown under very different conditions. Data for 1994/95 (the only year for which this information was available to the authors of Hassan and Khan (2004)), shows that gross revenue per feddan was 55 per cent higher for sorghum than for millet. The performance between the two cash crops was even more asymmetrical: sesame actually stagnated both in area and yield, while both the area and the yield for groundnut increased at high rates. These matters should be analyzed in greater depth in order to get insights into the kind of policies that are likely to promote continued growth of traditional agriculture.

7.2 Explaining Past Poverty Trends

We reiterate here the main conclusions that were reached earlier regarding the incidence of poverty in Sudan (see Table 2.7 above). The following features of poverty and its change over time are worth noting:

- The incidence of poverty has been higher in rural areas than in urban areas, a well-known phenomenon for the developing countries.
- The rate of increase in the incidence of poverty has, however, been far greater for the urban areas than for the rural areas. This is almost certainly due in part to the migration of a part of the rural poor to urban areas.
- Despite the much faster *rate* of increase in urban poverty over any given time period shown in the table, the increase in the *absolute number* of the poor has been higher for rural areas than for urban areas in each period.

The increase in agricultural output per capita is no guarantee, in and of itself, for the avoidance of increased impoverishment. We do not know what actually caused the breakdown in the linkage between the two during 1968-78 and 1986-92, but it could be due to any number of plausible factors. Personal income of the rural households may have failed to grow at the same rate as agricultural output: the deterioration in agriculture's terms of trade; heavy intervention in agricultural prices; a slower increase in household income from non-agricultural sources; the change in the export marketing arrangements for livestock to Sudan's main customers from a competitive one to a monopoly; the discrimination against gum Arabic producers by the state monopoly (Gum Arabic Corporation).¹⁰¹ The distribution of rural income may also have changed adversely for the poor.

¹⁰¹ As a result, prices that producers received as a proportion of world markets steadily declined during the 1990s, reaching a mere 21 per cent in 2000/2001. (World Bank, 2003, Vol I, p.95).

As shown by Hag Elamin and El Mak (1997, quoted in Fadia Hassan, 2004), agriculture continued to be taxed throughout the period 1994-1998.¹⁰² The effective protection coefficient estimates indicate that producer prices of the major traditional and non-traditional agricultural tradeables were lower than the corresponding export prices by 6 to 71 per cent. This implies that producer incomes from these crops were heavily taxed. On the other hand, the more than unity EPC of the main staple food crops indicates that these crops were protected by the government in accordance with the “food first” strategy adopted by Sudan. Furthermore, after liberalization in 1992 the contribution of imported inputs in the total cost of production of the main cash crop like cotton and wheat increased to more than 50 per cent (Ministry of Agriculture data, reported by Fadia Hassan, Hassan and Khan (2004)).

Moreover, as a result of the liberalization policies all input markets have been liberalized, resulting in higher input prices. Even an important input such as fuel, which is under the monopoly of the government, exhibited increasing prices which are far above the equivalent world prices most of the time. All these factors resulted in astronomic increases in the total cost of production of all agricultural products, as shown by Table 7.3. Particular attention should be given to the marked jump in the cost of production between seasons 1991/92 and 1992/93. Following the announcement of liberalization policies in February 1992, the cost of harvesting jumped so drastically – especially in the mechanized rain-fed areas – that farmers were forced to leave their crops in the fields. This is corroborated by the fact that harvested area fell much below cultivated area.¹⁰³

The high cost of such important inputs as fertilizers, insecticides and agricultural machinery is one of the main causes of the observed very low productivity of agricultural products in Sudan, compared to other similar countries.¹⁰⁴ Low yields, coupled with low output prices, poor infrastructure, inadequate finance, etc., led to notable fluctuations and decreases in returns to farming (Fadia Hassan in Hassan and Khan (2004)). All these factors put together may explain the increasing trend in poverty in the agricultural sector.

Table 7.3: Total Cost Index Numbers

Year	Cotton (1)	Wheat (2)	Groundnut (3)	Sorghum (4)	Sesame (5)	Sorghum (6)
1990/91	170	220	280	232	n.a	n.a
1991/92	350	522	601	381	n.a	n.a
1992/93	947	907	872	860	n.a	n.a
1994/95	3,573	3,601	4,345	4,493	942	n.a
1998/99	24,035	25,518	23,041	21,333	4,489	1,087
2001/02	n.a	n.a	n.a	n.a	7,539	1,502

Note: For columns 1, 2, 3 and 4 the base year is 1989/90. Columns 5 and 6 are calculated according to 1992/93 and 1994/95 as base years, respectively.

Source: Fadia Hassan contribution to Hassan and Khan (2004)

¹⁰² Any local or state authority can actually impose a tax on producers in the TRFF sector exceeding the 15 per cent mandated by the federal cabinet. Furthermore, transit charges are levied on the produce on its way from production locality to markets inside Sudan or to ports for export (Abdu, 2003: 80).

¹⁰³ During 1990-2001, cultivated area in the TRFF averaged million 28.4 feddan annually, but harvested area averaged only million 22.2 feddan (Abdu, 2003, p.18)

¹⁰⁴ For example, wheat yield in Sudan for the period 1995-2000 on average was 1951 kilograms per hectare, compared to an average of 5892 kilograms in Egypt.

The cost of finance was another factor that contributed to immiserizing growth in Sudanese agriculture. The profit margin of the newly introduced modes of credit is very high when compared with the extremely low interest lending previously provided by the ABS. Many observers believe that the adopted profit margins are so excessively high that they may adversely affect farmers' profitability (Hag Elamin and El Mak (1997:14)). Structural adjustment measures, notably privatization, produced unfavourable labour-market outcomes. Dagdeviren, (2004), concluded that the employment outcome of privatization has been mostly negative. Most enterprises and agricultural schemes opted for varying degrees of labour cuts. Although no reliable estimate exists on the overall scale of redundancies,¹⁰⁵ Table 7.4 provides some insight in this respect.

As emphasized by Dagdeviren (2004), privatization in agriculture seems to have failed to a great extent in Sudan and contributed to the aggravation of poverty. A part of the reason was the complete withdrawal of the federal government from the agricultural schemes, which in most cases were transferred entirely to local governments, or to farmers and local governments jointly. The resource-strained local governments were not able to inject capital needed to keep up the required services to strengthen the performance of the privatized agricultural schemes, nor could the credit-starved poor households in the rural sector create the conditions that would help them benefit from scale economies.

Table 7.4: Employment Impact of Privatization in Agriculture

Privatization and Employment in Agriculture	
Delta Toker Scheme (Free transfer)	All 93 employees were dismissed. At the time of survey, 32 casual workers were hired (monthly basis)
White Nile Corp (Restructured)	All workers were dismissed after privatization except for some trained technicians.
Blue Nile Scheme (Free transfer)	No data on employment prior to privatization. Total number of workers in 1996 was 487.
National Poultry Project (Direct sale)	Increased from 24 employees in 1995 and 54 in 2001. (+55%)
Rabak Cotton Ginnery (Sale by tender)	The ginnery had 17 workers prior to privatization who were all dismissed. It now offers seasonal jobs from Nov. to June each year. (369 workers were employed at the time of survey)

Note: The post-privatization figures reflect the level of employment either in 2000 or 2001, while those before privatization give the number of employees at the time of privatization. Labour cuts that took place during the restructuring prior to privatization are not reflected by the data.

Source: Dagdeviren (2004), based on TCDPE Report, 2002.

7.3 What Happened to Rural Poverty During the 1990s?

An unpublished report by the Ministry of Manpower in collaboration with the International Labour Organization includes estimates of three poverty indicators by region and by sector for the years 1990 and 1996. These are reproduced in Table 7.5.

Table 7.5 shows that in 1990 those employed in agriculture recorded the lowest incidence of poverty for all P_a measures. However, in 1996 the situation was completely reversed and their

¹⁰⁵ TCDPE indicates that lay-offs are not more than 13,000 workers but this figure excludes enterprises privatized through transfer of ownership, which account for the bulk of privatization.

poverty measures recorded the highest incidence among all sectors. The agricultural sector recorded the biggest change between 1990 and 1996: thus the head-count ratio (P_0) increased by 26.4 per cent, the depth of poverty (P_1) increased by 66.3 per cent and the severity of poverty (P_2) almost doubled (recording an increase of 99 per cent). This suggests that vulnerable groups within the agricultural sector, namely the landless and small holders, have become worse off. The pattern in the table raises the crucial but difficult question: Why did rural and agricultural poverty increase so sharply between 1990 and 1996 despite the record of impressively fast growth during the 1990s?¹⁰⁶ Is it conceivable that the incidence of poverty among the traditional farmers could have persisted or even increased, despite the phenomenal growth that they appear to have achieved? One could discount the extraordinarily rapid growth that the GDP accounts attribute to this sector; but a careful look at the output trends of individual crops indicates that the rate of output growth has been higher than 10 per cent per year sustained over more than a decade (Hassan and Khan (2004)).

Table 7.5: Poverty Indicators by Region and Economic Activity

	1990			1996		
	P0	P1	P2	P0	P1	P2
Region						
Rural	75.4	47.3	34.4	94.8	75.8	64.3
Urban	79.6	51.1	37.3	81.4	53.9	40.3
Economic Activity						
Agriculture	76.0	47.8	34.7	96.1	79.5	68.9
Industry	79.9	50.9	36.8	83.3	76.1	41.9
Services	78.1	49.2	35.6	85.4	58.9	45.4

Notes: P_0 = Head Count (extent of poverty), P_1 = Poverty Gap (depth of poverty), and P_2 = Severity of Poverty. These are special cases of the general Foster-Gear-Thoebecke (FGT) poverty measure: $P_\alpha = (1/n) \sum [(z-y_i)/z]^\alpha$, for $\alpha = 0, 1$, and 2 respectively.

Source: Ministry of Manpower and the ILO, "Trends and Profiles of Poverty in Sudan: 1990-1996", 1997 (unpublished), Tables 3-9, 4-9 and 4-12.

According to basic principles, the growth-poverty nexus is determined by the following identity:

Change in Poverty = f(initial average income, initial income distribution, change in income (growth), change in distribution)

To put it plainly, the change in poverty is the result of two effects: growth effect and distribution effect. Those two effects may be supportive of each other in reducing poverty – this is the case of pro-poor growth. Applying this conceptual framework to the performance record of Sudan's agriculture over the 1990s, it implies that fast growth in this case must have been associated with significantly rising inequality. Table 2.9 "Income Inequality in Sudan,

¹⁰⁶ Notice that during the same period the increase in urban and non-agricultural poverty was more modest. A possible explanation is that the 1995/96 crop year experienced a sharp fall in output of all major crops (see the figures for traditional rain-fed agriculture in Hassan and Khan (2004), Annex Table 1, which represent the change for the entire crop outputs for the year) and that the income figures for 1996 reflect a slightly lagged response of farm and rural income to that event. No numerical estimates are available to suggest that the change shown between 1990 and 1996 in Table 7.5 persisted in subsequent years.

1968-1996" (after correcting for an apparent error as noted) provides partial evidence in support of this hypothesis, with the requisite correction. The table shows that the Gini Coefficient for the rural sector rose by about 10 per cent during 1990-96.

Could this growth-inequality combination have failed to reduce the incidence of absolute poverty in the rural sector?¹⁰⁷ It is of particular importance to address the question in view of the often-reported and widespread perception that the incidence of rural poverty in Sudan has actually increased during the last decade, and that such increase in rural poverty in the rural sector between 1990 and 1996 is largely symptomatic of increased poverty among the traditional farmers over the entire decade.

We do not have a clear idea of the sources of income of a traditional farm household. It is however obvious that farming, limited to the rain-fed season, provides employment and income during only a part of the year, perhaps for no more than four months. A traditional household that used to obtain a substantial proportion of its income from wage employment in IA and MRFC is likely to have experienced a sharp fall in wage income due to reduced demand for labour in those sub-sectors. There is also the possibility that it produces cash crops which faced deterioration in relative prices. If we also consider the possibility that it faced a reduced price for livestock products, due to the recent change in marketing arrangements concerning exports,¹⁰⁸ the overall effect may have been to reduce the per capita income and welfare of the typical household in the TRFA sub-sector.¹⁰⁹

Although the high growth rate of agricultural value added claimed by the national accounts data may be an overstatement, it is hard to deny that overall agricultural output increased at a minimum of close to 5 per cent per year, as claimed in Table 7.2 compiled from World Bank sources. Should this significant impoverishment of traditional farm households have taken place, then who were the beneficiaries of real output growth in agriculture? A great deal of information is needed to answer this question with confidence. Given that this information is not currently available, one can only make informed guesses.

The first question that needs to be answered is whether some part of the benefit of this growth was transferred out of the agricultural sector through a deterioration of its terms of trade with the rest of the economy and the outside world. Sudan's net barter terms of trade fell as much as 24 per cent between 1990 and 1998 when exports were almost entirely agricultural (World Bank, 2001).¹¹⁰ This could have resulted in the growth of factor income in agriculture lagging behind the growth of output, although it seems unlikely that it could have

¹⁰⁷ Some authors conduct studies involving estimation of growth-poverty elasticities based on time-series cross-section data. Although such exercises may be interesting, it should be noted that the process of growth modifies income distribution depending on the forces behind growth. But those forces may be attenuated or compounded by policies of growth and distribution. Therefore, it would be illusory to rely on estimates of poverty-growth elasticities derived from time-series cross-section data.

¹⁰⁸ A few years ago the government of Sudan handed over the rapidly expanding export of livestock to a monopoly. While this may have created a bilateral monopoly situation for the large herders, it is quite likely that this has deprived small livestock producers of the benefits of a more competitive market.

¹⁰⁹ Indeed, the story suggesting that the impetus for the recent spurt in the growth of traditional agriculture came from the reduction of wage employment in IA and MRFA sub-sectors implies that this is the most likely outcome. Given the current state of information, it should be stressed that this is being suggested as simply a possible outcome.

¹¹⁰ Since then the terms of trade have improved, but agriculture has been replaced by oil as the main export earner.

offset all or most of agricultural growth. In irrigated agriculture, the distribution of factor income was determined by changes in input costs charged by the public and private owners of irrigation projects, although it seems likely that the rapid output growth did result in higher earnings for larger, profitable farms. There is very little that is known about these changes. Large herders and the monopoly export agency appear to have benefited from the rapid growth in livestock exports. All these factors point to a substantial worsening of the distribution of income in agriculture.

7.4 Policies for Poverty Reduction in Sudanese Agriculture

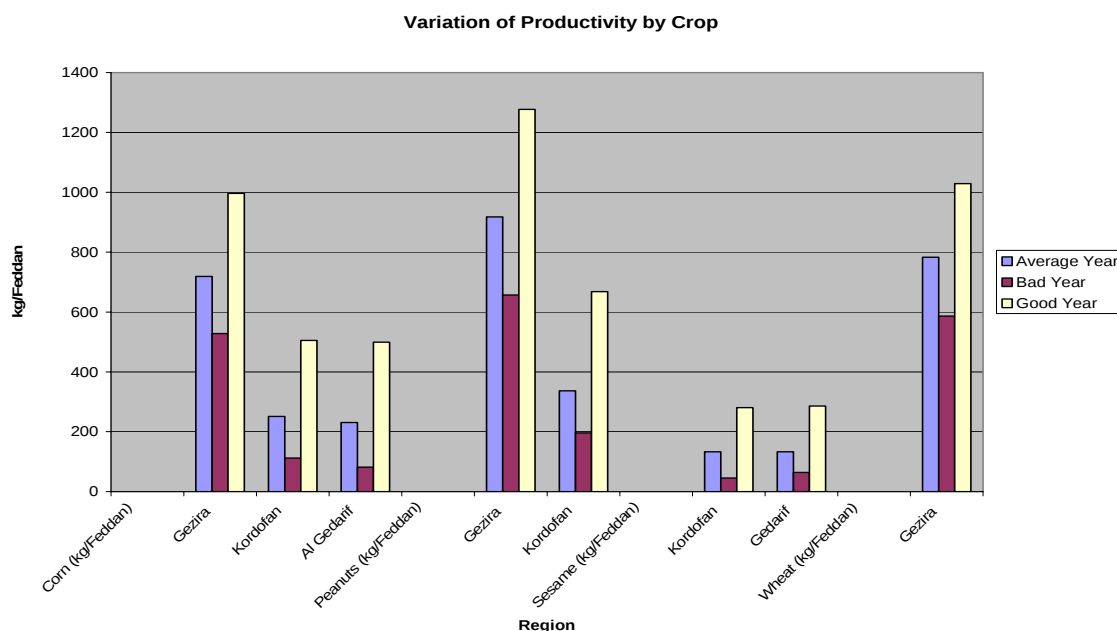
In this section we discuss policies conducive to poverty reduction in Sudan's agriculture. But it should be emphasized at the beginning that detailed policymaking for continued growth of Sudan's agriculture, combined with a steady reduction of rural poverty, will require information on many areas of gaps in knowledge, which have been identified in this report above. The uppermost priority for poverty-alleviating policymaking for Sudan's agricultural and rural development thus consists of setting up a system of generating information for the sector. The principal task is to institutionalize regular surveys of: (a) household income and expenditure, possibly expanded to cover basic information concerning costs and returns of household farm and non-farm activities; (b) an agricultural census (possibly beginning with a quick sample-census) covering both cropping and livestock; and (c) a labour force survey. However, there are many other indicators on which information is currently not available on a regular and timely basis. These include prices of inputs and outputs, domestic and international, and wages. Their collection and dissemination should improve both policy-making by the government and decision-making by farmers and service delivery of agricultural finance institutions.

While an information base is essential for operationally detailed policy-making, we can still indicate the broad features of reform necessary for poverty-alleviating rural development with the current level of information. (Hassan and Khan (2004): 22-30)

It is indicated in Section Six, (with more details in Abu-Ismaïl and Elhiraika (2004)), lending to agriculture in general and rain-fed agriculture in specific is constrained by a number of risk and return factors. High variability in agricultural output, prices, and income discourage lending to agriculture, but also raises the need for credit as a means for farmers to smooth consumption over time. The following figure (Figure 7.1) shows the variation of productivity by crop in various regions in the Sudan. It shows that weather-related variability is more pronounced in Kordofan and Al Gedaref compared to Gezira, although there is large variability in all regions: the ratio of good- to bad- year productivity is 2:1. Such strong variation in farm output has significant effects on the entire production process across entire regions, generating covariant risks, and posing tremendous challenges for the financing of agriculture.¹¹¹

¹¹¹ These effects are particularly important in view of the fact that farm households are generally poor and have a limited range of assets that can be collateralized. The ownership of assets, such as tractors and ploughs, varies tremendously by region, ranging from 3 per cent of owned tractors in the Nile region to 69 per cent in Gedarif. Similarly ownership of ploughs ranges from 10 per cent among farmers in the Gezira to 65 per cent in Gedarif (Fiqui *et al*, 2003).

Figure 7.1: Variation of Productivity by Crop



As argued in Abu-Ismaïl and Elhiraika (2004), these structural features of Sudanese agriculture call for types of finance consistent with the nature of the rural credit market. A Commercial Banks Consortium (CBC) was also formed in 1992 with the objective of pooling resources for increased lending to agriculture,¹¹² and commercial banks were instructed to channel one-third of their mandatory lending to agriculture through the CBC. But as already noted, this trend has been gradually reversed since the start of the financial reform and liberalization programme in 1997. By 2003, lending to agriculture amounted to only 12 per cent of total bank credit (Abu-Ismaïl and Elhiraika (2004)).¹¹³ Consequently, the government has practically returned to the custom of direct lending to the schemes as it used to do before the 1990s period, and formal credit to rain-fed agriculture declined to negligible levels in both absolute and relative terms. This has clear implications for poverty in the TRFA sector in particular, and in the rural sector in general.

¹¹² The formation of the consortium was part of government efforts to force commercial banks to increase lending to agriculture directly or indirectly, according to a policy that is essentially based on the financial needs of farmers in the irrigated schemes in particular. Each year the MOF, in consultation with the Ministry of Agriculture and Schemes' administrations, determines the cost of agricultural production per *feddan*. After estimating potential self-finance, the external funding requirement per *feddan* is accordingly determined, and efforts made to mobilize funds from various sources (Elhiraika, 2003).

¹¹³ This squeeze was attributed to relatively high risk coupled with relatively low or even negative real rates of return on agricultural finance. According to bankers surveyed by Elhiraika (2003) low return – and high cost of administering agricultural loans – is the key factor constraining the supply of funds to farmers, followed by lack of resources (capital, deposits, and grants or lines of credit), lack of qualified and adequately trained personnel and a repressive credit policy.

As already demonstrated in Section Six, financial reform and liberalization has led to a remarkable squeeze in farm credit. It is clear that commercial banks in Sudan cannot be relied upon to finance rain-fed agriculture or contribute significantly to capital formation in agriculture in general. Government intervention in the agricultural credit market through direct lending or lines of credit may not be conducive to the creation of a stable and viable credit system. But there has to be a role for the government to correct for the failure of the agricultural credit market, as indicated in Section Six. Specifically, establishing truly development banks and specialized agricultural credit institutions is a top priority if efficiency in agriculture is to be enhanced and poverty reduced.

CHAPTER EIGHT

Trade and Industry – What Role for Poverty Reduction?

In terms of the contribution of manufacturing value added to GDP, Sudan has been lagging much behind comparators in of North Africa and developing countries in general, as indicated by the data in Table 8.1.

Table 8.1: Trends in Manufacturing Value Added (MVA), 1992-2002

Indicator	Year/Period	Sudan	North Africa	Developing countries
MVA as percentage of GDP at constant 1995 prices	1992	8.69	14.8	20.17
	1997	7.99	14.91	20.24
	2002	8.26	15.57	20.3
MVA per capita, in constant 1995 US\$	1992	21	154	443
	1997	22	164	536
	2002	28	190	908

Source: UNIDO, reported in Dagdeviren and Mahran (2004), Table 11.

In the pre-1992 period, Sudan followed an import-substitution strategy, first by choice (1960-77), then out of necessity (1978-1991) (Dagdeviren and Mahran (2004)). In the last three decades prior to liberalization, protection was provided through the international trade and foreign exchange regime, in addition to other measures, to promote industrial development (promoting the role of the public sector in the economy; promulgating an investment incentive scheme; fixing prices on a mark-up basis, etc.).

The combined effects of protectionist trade and industrial policies were such that in key import-substituting sectors like spinning and weaving, effective protection rates were as high as seven hundred per cent. For most sectors, effective protection rates were substantially higher than the nominal protection rates. In agriculture, sorghum and sesame enjoyed relatively high positive rates of protection, while cotton faced negative protection (Dagdeviren and Mahran (2004)).

A shift from protectionism to liberalization was signalled by the medium-term National Economic Salvation Programme (NESP, 1990/91-1992/93), involving adjustment policies commonly believed to be more stringent than those that the IMF and the World Bank would have dreamt of (Dagdeviren and Mahran (2004)). But the most comprehensive liberalization programme, however, came in 1992, with further gradual liberalization continuing until the end of the decade. Three main components of this programme were: (i) devaluation of the Sudanese Pound and liberalization of the exchange-rate regime; (ii) export promotion through reduction of export duties, establishment of seven commodity export – promotion councils, simplifying export procedures and directing credit to exports; and (iii) import

liberalization through abolishing import bans,¹¹⁴ allocating 80 per cent (subsequently reduced to 50 per cent) of free-market foreign exchange resources for strategic imports, and reducing tariff bands and lowering import duties gradually from 13 bands with maximum tariff rate of 1,000 per cent in 1990 to 5 bands in 2003 with maximum tariff rate of 45 per cent.

8.1 International Trade Performance

Trade performance in Sudan reflects the dismal achievements in the domestic economy up to the late 1990s. Table 8.2 displays sub-period averages of main indicators of trade performance. Excluding the effect of oil exports after 1999, the export-GDP ratio remained at around five per cent at best before and after liberalization. The proportion of imports, however, was at least twice as large as that of exports. The period from the late 1970s through the 1980s witnessed severely depressed export and import shares of GDP largely due to the negative growth rates of exports and imports in the earlier period, resulting from a set of domestic problems.¹¹⁵ There was also considerable deterioration in the terms of trade (ToT) of Sudan, until the slight improvement during 1999-01 (largely related to oil).

Table 8.2: Selected Indicators of International Trade (per cent)

	1970-77	1978-85	1986-91	1992-98	1999-01
Exports - GDP Ratio	---	5.5	2.4	5.4	11.7
Imports - GDP Ratio	---	11.1	5.1	16.5	12.7
Terms of Trade (index no)	---	147.4	99.9	50.0	61.7
Growth of Exports	13.1	-4.3	1.8	10.6	52.2
Growth of Imports	22.0	-2.0	6.1	12.4	-4.8
Curr. acc. balance- GDP ratio	-3.6	-2.8	-1.7	-9.2	-4.4

Source: International Financial Statistics, reported in Dagdeviren and Mahran (2004), Table 4.

The balance of trade and current account deteriorated after liberalization because of the greater growth in imports in comparison to exports. It was only after 1999 that the gap between exports and imports narrowed.

Prior to liberalization, Sudan's raw cotton dominated exports. The estimates suggest that between 70-75 per cent of cotton was exported in raw form. During 1977-89, cotton exports accounted for over 45 per cent of total exports. For most years during this period, its share varied between 40 and 60 per cent of the total. The remainder of export proceeds was obtained mostly from raw agricultural products such as oil seeds, gum Arabic, and livestock. On the other hand, petroleum products, machinery and transport equipment accounted for about 60 per cent of total imports during 1977-89, (see Dagdeviren and Mahran (2004), Table 2A in the Appendix).

It is interesting to note, as suggested in Dagdeviren and Mahran (2004), that trade liberalization did not significantly alter the commodity composition of Sudan's foreign trade. It remained largely concentrated in a few primary goods that constituted the bulk of exports,

¹¹⁴Except on alcohol, gambling instruments, weapons and ammunition.

¹¹⁵E.g. political instability, disincentives created by dual exchange rates, black market activities, other unfavourable economic policies, and foreign exchange bottlenecks.

(despite the shifts in the relative importance of these items over the years).¹¹⁶ But the export proceeds from these traditional items were dwarfed after 1999 by the revenues generated from crude petroleum exports, which accounted for over 65 per cent of total export in 2000.¹¹⁷ Cotton was the biggest loser, with its share slashed from around 18 per cent in 1998 to 3 per cent in 2000. This change in the export structure has clear implications for welfare and poverty in the rural sector.

With regard to imports, the three main categories (crude petroleum and its derivatives; wheat, flour and beverages; and machinery and vehicles) continued to dominate until 1999 (Dagdeviren and Mahran (2004), Table 4A in the Appendix). While the relative importance of petroleum and its derivatives declined, especially after 1995 and even more so after 1999, that of main foodstuff items (wheat, flour and beverages) remained robust. A rise in the shares of iron and steel reflects the increased activity in the construction sector until 1998. Imports competitive to local production (such as plastic materials, fertilizers, tires and tubes, textiles, jute and sacks, paper, board and printed-matter) altogether accounted for between 9 and 14 per cent of total imports during 1990 and 1998.¹¹⁸

8.2 Performance of the Manufacturing Sector

Adopting a before-and-after approach to analyze performance, we take 1992 as the cut-off point. As already indicated, international trade policy of Sudan after 1992 became less regulated, involving a significant drop in the privileged position of the domestic industry. Our main conclusion in this regard is that the contribution of manufacturing to the Sudanese economy has been rather modest in terms of its absorption of employment, its generation of added value, and its contribution to exports.

The structure of the manufacturing sector in Sudan is highly lopsided and dominated by resource-based industries. Food, beverages and tobacco remained the backbone of the manufacturing industry, accounting for over 40 per cent of all manufacturing value-added (MVA) during 1971-1981. According to the 2001 Comprehensive Industrial Survey, there has been a big jump in the contribution of this industry to 64.6 per cent of MVA (Dagdeviren and Mahran (2004), Table 6A in Appendix).¹¹⁹ The more labour-intensive textiles – wearing apparel and leather processing – as the second largest sector in 1971 (in terms of value added generated in the manufacturing), lost ground over the years with its share in MVA going down from 26.1 per cent in 1971 to 12 per cent in 1981 and further to 4.4 per cent in 2001. This industry sustained a 75 per cent decline in value added per worker during 1971-81, with only a

¹¹⁶ Thus, for instance, the share of cotton exports declined from an average of over 45 per cent earlier to less than 25 per cent in most years during 1992-1998. The same holds for gum Arabic, whose export share declined from 13 per cent of the total in 1990 to less than 4 per cent in 1998 (See Table 3A in the appendix). Against this, we observe an expansion in the exports of livestock, vegetable oils, groundnut, sesame and melon seeds and karkadeh in most years after 1991 and 1992.

¹¹⁷ The first shipment of crude oil was exported in August 1999.

¹¹⁸ The share of competitive imports is likely to be much greater than this, since a good proportion of items in the ‘other imports’ category are also likely to be produced in the domestic markets.

¹¹⁹ The data for the 2001 base on the new Industrial Survey may not be comparable to the data for the earlier years. However, it seems that the contribution of Food Beverage and Tobacco to MVA has been steadily rising.

marginal improvement in 2001 (Dagdeviren and Mahran (2004), Table 5 and Comprehensive Industrial Survey 2001).

Although overall manufacturing employment trebled from 1971 to 1981, manufacturing employment accounted for only about 1.5 and 2.8 per cent of the total active population (counting adults aged 15 to 60 years) in 1971 and 1981 respectively, (Dagdeviren and Mahran (2004), Table 6). The bulk of employment generation, with approximately four-fold growth, took place in the food processing industries. It is interesting to note that value added per worker has fallen on average by 9.3 per cent, and real wages have declined on average by almost 50 per cent between 1971 and 1981. Clearly, this implies a significant decline in the share of wages in value added from 46 per cent in 1971 to 26.6 per cent in 1981. Results of the 2001 Comprehensive Industrial Survey indicate a further decline to 12.5 per cent. Data comparability aside, it follows that growth in manufacturing over the past 30 years (1971-2001) was not pro-poor; in fact it is the closest one can get to (labour) immiserizing growth.

A remarkable feature of the performance of manufacturing is the deterioration in the output level of the textile industry, which started in the late 1970s and continued into the 1980s and 1990s up to recent times. This shows that the decline of textiles has taken place irrespective of the trade regime pursued in the country in different time periods; despite enjoying the highest rate of protection, the textile industry (which includes yarns, fabrics, blankets, and garment producing units) failed to meet expectations. Various factors accounted for its failure – perhaps the most important in this respect was the inadequate supply of cotton. Leather tanneries fell victim to problems similar to those experienced by the textile industry. This raises a pertinent question for alternative policies to liberalization and privatization: could vertical integration be the answer? In that case, the integrated cotton-producing enterprise will internalize the profit resulting from procuring cotton at a price lower than the export price.

Based on the 2001 Comprehensive Industrial Survey, the following points are worthy of noting (Dagdeviren and Mahran (2004)):

- The main features of the manufacturing sector are: First, its contribution to overall economic activity is still relatively minor –its share in GDP and total employment is less than ten and two per cent, respectively. Second, it is dominated by small and micro enterprises with less than ten workers. Third, large firms (with 50 and more workers) create about 80 per cent of the sector's added value. Fourth, two-thirds of establishments are located in four states, all in the north. Finally, public sector has limited involvement in the manufacturing industry both in terms of the number of establishments and employment. However, its share in manufacturing value added might be relatively higher because all public firms are classified as large enterprises.
- The food processing industry is still the leader of the manufacturing sector in terms value added created, employment, and investment (with 65, 56 and 47 per cent shares in total, respectively). On its own it determines most characteristics of the manufacturing sector. Since the start of oil production in 1999, the petroleum sector has risen to the rank of second biggest with its share of total value added standing at 11 per cent in 2001. All other

sectors, excluding the food processing and petroleum, together create less than one-third of total manufacturing output.

- Labour's share of total manufacturing value added was 14 per cent, while that of capital is 86 per cent. There is considerable wage-inequality across the sectors. On average, wage levels are more than three times higher in large establishments than those in small manufacturing units. There is a high correlation between sectoral average wages and labour productivity (the correlation coefficient is 0.98). Except for a few sectors, high wage sectors have higher than average labour productivity. A number of sectors stand out in this respect. Petroleum (23), machinery (29), motor vehicles (34), office equipment (30), food and beverages all pay higher than average wages.
- The export orientation of Sudan's manufacturing industry is very limited. Only 11 of the 82 manufacturing sub-sectors are involved in export activities. Exports of sugar and refined petroleum sectors constitute 87.3 per cent of total manufacturing exports and 11.2 per cent of total exports. While Sudan is endowed with enormous animal resources, exports of leather contribute only 9.6 per cent of total manufacturing exports and 1.2 per cent of total exports (Dagdeviren and Mahran (2004), Table 8A). With abundant domestic production of cotton, the textile sector has not even been listed among the sectors involved in export activity. The potential in these two areas for domestic processing, creation of value added and employment can be better exploited.
- A limited degree of product diversification has started and /or is continuing. This is implied by the increase in the contribution of the metal and machinery, as well as chemicals and plastics, to manufacturing output and value added – they occupy the third and the fourth places and are followed by textiles and the garments industry, (Table 8.3).

Table 8.3: Main Indicators of Manufacturing in 2001

	No of Establish-ments	Gross Capital Formation	Gross Output	Gross Value Added (VA)	VA-output ratio
	Sectoral Shares - %				
Food, Beverages and Tobacco	31.9	48.1	54.3	62.5	51.4
Textiles & Garments	3.2	0.8	3.6	3.2	40.3
Leather Products & Footwear	2.6	1.4	1.8	1.6	38.6
Wood Products & Furniture	2.3	0.2	0.1	0.1	35.4
Paper & Printing	4.5	15.1	2.1	3.4	72.7
Refined Petroleum Products	0.2	0.6	20.5	13.3	28.9
Chemicals & Plastics	8.8	9.4	6.9	6.8	44
Non-Metallic Minerals	39.9	7.2	1.7	2.6	69.9
Metal & Machinery	6.7	17.3	9.0	6.5	32.5
TOTAL	100	100	100	100	44.7

Source: Ministry of Industry, 2001 Industrial Survey.

8.3 Trade, Industry and Poverty Reduction

The impact of the liberalization of trade and industrial policy on poverty can be traced through its influence on: employment generation, factor and commodity prices, fiscal implications, and extent of vulnerability to external shocks. As argued in Dagdeviren and Mahran (2004), the dismal performance of manufacturing industries in the 1980s and 1990s limited their capacity for employment generation and poverty reduction.

Due to the geographic concentration of manufacturing activities, employment in the manufacturing sector has been an opportunity for the urban population. Therefore, its role in the alleviation of rural poverty has been limited with the extent of the migration from rural to urban centres. In the early 1980s, over 75 per cent of industrial activity was located in Khartoum and Central regions ILO (1987). The picture changed only slightly in 2001, with two-thirds of manufacturing establishments being located in Khartoum and a few provincial centres, (Table 8.4).

Table 8.4: Characteristics of the Manufacturing Sector, 2001

Small sized establishments with less than 10 workers (% of total)	93.1
Large establishments with more than 10 workers (% of total)	6.9
Establishments in Khartoum, El Gezira, Darfur & Kordofan (% of total)	66.1
Public & Public-Private Establishments (% of large firms)	6.8
Manufacturing Value Added (% of GDP)	9.4
Value-added by small firms (-10) (% of total manufacturing value-added)	16.3
Value-added by large firms (50+) (% of total manufacturing value-added)	78.2
Manufacturing Employment (% of total employment)	1.7
Employment Share of Public Enterprises (% total)	12.5

Source: Comprehensive Industrial Survey 2001

- Micro- and small-sized enterprises represent an overwhelming share (93 per cent) of total enterprises, although 78 per cent of the MVA is accounted for by enterprises with 50 and more workers (Table 8.4). In other words, small- and micro-enterprises account for most of the employment in the sector, and have the greatest potential for poverty alleviation, at least in the short- and medium-term. The current industrial policies in Sudan also put an emphasis on the role of small- and micro-enterprises. Nevertheless, over reliance on these enterprises may not be necessary for a country like Sudan in the long-run, given that it is not a typical labour-surplus economy. Rather than using a model developed for labour-abundant economies as a blueprint for Sudan, considerations and efforts for achieving optimal factor intensities in production should be given prominence in policymaking for longer-term goals.
- The dependence of Sudan on international trade taxes has been very high in the past. As a result of trade liberalization, the share of import and export duties in total revenue dropped from 40 per cent during the 1980s to 20 per cent during the 1990s (Table 8.5).

Table 8.5: Trends in Export and Import Duties, 1980-2002

	Import Duties (% of total revenue)	Export Duties (% of total revenue)	M & X duties (% of total revenue)
1980-1991	37	3	40
1992-2002	18	2	20

Source: Bank of Sudan, Annual Report, cited in Dagdeviren and Mahran (2004).

Unless increasing economic activity and hence employment, the declining trend in international trade taxes resulting from trade liberalization typically has a serious negative impact on the government budget in general and on expenditure on education, health, and transfers to the poorer segments of the society – as already indicated in Section Four above. This is likely to have contributed to the aggravation of absolute poverty. The experience of trade liberalization in African countries underscores the need for proper tax policy responses and macroeconomic stability to contain the negative fiscal effects of trade liberalization. When the market structure of agricultural exports is oligopolistic, as in most African countries, trade monopolies (not the producers) are the main beneficiaries of any increase in the price of exports resulting from trade liberalization (ECA, 2004).

The unimpressive performance of manufacturing can be attributed to three main factors, namely, political instability, supply side rigidities and policy problems. Political instability and the civil war in the South have drained enormous amounts of human, environmental and financial resources with a considerable social cost (Abdel Gadir (2004)). In what follows, we present an evaluation of the impact of supply-side rigidities and the policy issues in relation to manufacturing sector.

Supply-side rigidities: The policies and development efforts for most of the period under consideration have neglected the importance of infrastructure, such as power, water supply and transport services. Acute shortages in these vital areas have persisted,¹²⁰ and as a result capacity under-utilization has remained a major problem for the manufacturing sector, irrespective of the trade regime during the whole period (Dagdeviren and Mahran (2004)). As shown in Table 8.6, the rate of capacity utilization during the 1990s is much lower than in the mid-1980s in almost all branches of manufacturing – cement and sugar are perhaps notable examples.

¹²⁰ For example, many enterprises have installed their own electricity and power generation systems as a response to frequent failures. According to the results of the 2001 industrial survey, enterprise-based private power generation accounted for about 21 per cent of electricity in the overall manufacturing sector. Private generation of power comes at a higher cost, thus causing the rise in the unit cost of production and deterioration in the competitiveness of the industry. According to MOI and MOF (1995), private generation costs 40 per cent more.

Table 8.6: Average Capacity Utilization in Selected Sectors (% of Installed Capacity)

	1985		1992	1994	1995	1996	1997
Textile	30	Textile	15	10	8	9	10
Oil milling	25	Vegetable oils	5	15	12	17	19
Beverages	50	Soft drinks	7.6	48	55	42	50
Food canning	30	Sugar	64.7	63	69	68	74
Soap	15	Flour	33.2	25	29	31	21
Leather	60	Tanneries	60	60	-	-	-
Footwear	45	Shoes	30	30	34	28	31
Plastics	50	Cigarettes	26.9	19	18	23	28
Paints	40	Cement	-	65	59	75	88

Source: 1985 figures are from the World Bank (1987). The 1990s data are from the Ministry of Industry, as reported in Dagdeviren and Mahran (2004)

As pointed out in Dagdeviren and Mahran (2004), the reason for unutilized capacity in some industrial units is the lack of action by the government for corrective policy measures. The case of fertilizers is a good example in this respect, (Dagdeviren and Mahran (2004), Box 1). Fertilizer should be regarded as a strategic commodity in Sudan, where the agricultural sector has been given a prominent role for poverty reduction. If the private sector is not forthcoming to invest in fertilizers production, then the government should take the initiative. It should distance itself from the dogmatic stance that prohibits its involvement in productive activities of a strategic nature “at any cost”. Investment in this area can achieve a number of objectives – notably producing fertilizers at a relatively lower cost (given the availability of inputs from the domestic petroleum sector), creating employment, enabling wider use of fertilizers in agriculture (particularly mechanized rain-fed and traditional rain-fed sectors), as well as saving on imports. This should enhance productivity and help reduce rural poverty.

Box 1. The Tragedy of the Fertilizer Factory

Sudan had a fertilizer plant built over 1975-1984. The cost of construction was estimated to be around 40 per cent of the total cost of construction of the thirty-five SOEs owned by the central government in the early 1980s. The factory never became operational, partly due to the inappropriate design of the unit and partly because of the unexpected changes in the world prices of naphtha, the main input to be used in production. The latter development drastically raised the cost of production. It rendered the operations of the fertilizer plant economically unviable because the installed capacity (which is 90 thousand metric tons of urea per annum) was limited. Both naphtha and nitrogen should now be available from oil refineries. Despite this, the fertilizer plant is still non-operational, mainly for two reasons: First, the price of naphtha as well as nitrogen in the world market remains high, which makes exports more attractive. More importantly, the existing production capacity needs to be augmented from 90 to 270 thousand metric tons per annum for the plant to operate profitably. Although it is suitable for extension, there is no plan in that direction. The government has withdrawn itself from investing in productive sectors as a part of the liberalization programme. The plant was listed for privatization a long time ago, but so far private investors expressed no interest.

8.4 Policy Issues

In addition to supply-side rigidities, there are policy issues in a number of areas. As pointed out in Dagdeviren and Mahran (2004), policy-induced acute scarcity and black market activities¹²¹ have distorted resource allocation, particularly in critical areas like foreign exchange and credit. Measures of trade and industrial policy that stressed protection in the absence of viable supply conditions were misguided, and proved either inappropriate or inconsistent and/or were rendered ineffective. The tale of the highly protected textile industry illustrates a classic example of this syndrome.¹²² Not only the textile industry, but also a number of other industries such as tannery, and edible oil industries have suffered from serious input supply problems, in addition to a host of other problems related to the supply of utilities, transport facilities and capital shortages.

Another policy issue is the excessive focus on correcting “price distortions” and “getting prices right” (Stiglitz, 2001). As already noted, this was the hallmark of the 1992 policy package. Under this package, gradual but substantial trade liberalization turned Sudan into one of the most liberal economies in Africa, with an average tariff rate of 22 per cent. Yet the 1992 package did not deliver the anticipated solutions to Sudan’s economic difficulties. In spite of this fundamental change in the trade and exchange-rate regime, involving successive maxi devaluations of the local currency,¹²³ the disappearance of the black market for foreign exchange, and considerable liberalization of imports, since 1992 the country recorded no significant achievement in terms of export diversification and revenues. Furthermore, it has failed to stimulate domestic production through the expansion of the external market and diversification of exports.¹²⁴

An important reason for these modest achievements on the international trade front is that the trade and foreign exchange policies targeted merely the so-called ‘price distortions’. Indeed, this is the problem with using monetarist and neoclassical *recipés* to seek solutions to the structural problems of a developing country such as Sudan.¹²⁵ Due to low import and export elasticities, structural factors, and supply bottlenecks, price related incentives are insufficient. Without diversification of production and productivity improvement, industrial

¹²¹ The persistent scarcity problem, both in terms of inputs (domestically produced as well as imported) and final consumer goods from the 1970s to the late 1990s, together with trade and exchange restrictions, resulted in the emergence of a huge black market for goods, services and foreign exchange which involved illicit dealings in foreign exchange, smuggling of exportable commodities, illegal importing, the diversion of remittances to black market, stock piling and hoarding of strategic (and scarce) goods, and illegal transfers of capital.

¹²² In 2003, the highest tariff band of 45 per cent was applied to the textiles and clothing.

¹²³ Those drove its value down from Ls 135 to the US Dollar in 1992 to over Ls 2500 in the year 2000, a staggering 1752 per cent depreciation.

¹²⁴ The commodity composition of exports has not changed significantly since the 1970s. It remained largely concentrated in primary commodities, which continued to account for the bulk of exports, although there have been some shifts away from traditional export crops like cotton over the years. Most agricultural products are exported in raw form. Except for a few products like sugar and semi-processed leather, manufactured products hardly figure in the commodity composition of exports.

¹²⁵ It is unrealistic to expect international competitiveness to be achieved and sustained through price incentives and devaluations without real improvements in productivity, quality, order processing and delivery. Besides, the low elasticities of demand for Sudan’s exports and imports reported in Dagdeviren and Mahran (2004) is likely to render the policies of price adjustments irrelevant. According to those estimates, the sum of export and import elasticities has been too low for the Marshall-Lerner condition to apply in the case of Sudan.

development will be a myth. As theoretically demonstrated by Linder (1961), total liberalization of the trade regime may result in the disappearance of some of the key sectors (i.e., instead of effecting reallocation of resources along the edge of the production frontier, trade liberalization may drive the economy to an interior point inside the frontier). In dynamic terms, the disappearance of such sectors may endanger the future growth and development of the country. The general policy implications of the foregoing analysis are the following: First, investment in infrastructure, especially transport network, power and water supply must be given priority in the allocation of public investment expenditures. Second, the regular flow of locally produced and imported inputs to the domestic industries must be given utmost attention. Third, availability of working and investment capital for manufacturing at reasonable rates has a crucial importance for the elimination of disruptions in the production process. Until 1999, BOS intervened in the credit allocation in an *ad hoc* manner without being systematic and regular. Since then, BOS moved away from intervention. Currently, industrial entrepreneurs obtain credit mostly on a commercial and short-term basis. Finally, efforts must be put in place to improve the skills of the workforce and quality and product-design capacity in the industry.

CHAPTER NINE

Employment Generation and Poverty Reduction

Gainful employment is the main source of household income in a developing economy. In a poor country such as Sudan, with a fast population growth and a rising labour force participation rate, creating employment opportunities becomes the top priority for a strategy of poverty reduction. According to the population census data, the average rate of growth of the Sudanese population was 2.6 per cent between 1983 and 1993 (Chapter 7). In the absence of a population census (the last was in 1993), the CBS and UNFPA estimate total population at 33.6 million for 2003, and annual growth rate at 2.63 per cent during 1998-2003 (UNFPA and CBS, 2003). The urban population grew about twice as fast as the total population, reaching 29.3 per cent of the total population by 1993. The population in Khartoum grew the fastest, with growth averaging 6.6 per cent annually in the decade prior to 1993. Meanwhile, poorer areas, such as Kordufan and the Southern regions, had the slowest rates of growth as people were migrating out of these areas. Thus, at the regional level within Sudan, population growth seems to go hand in hand with socio-economic conditions.

According to population census data, the overall participation rate (for the population aged 15 years and older) stayed virtually the same, namely, about 48.5 per cent, between 1983 and 1993. However, according to the Migration and Labour Force Surveys, the comparable participation rate rose from 39.3 per cent in 1990 to 45.5 per cent in 1996. Table 9.1 indicates that the most dramatic increase was in the female participation rate (from 18 per cent to over 28 per cent), whereas the participation rate rose only modestly for both urban and rural areas.¹²⁶

Table 9.1: Labour Force Participation Rates 1990-1996 (%) (15 Years and Older)

Year	Total	Urban	Rural	Male	Female
1990	39.3	37.2	44.3	59.7	18.0
1996	45.5	38.7	46.6	63.6	28.2

Source: Chapter 7, Table 3.

Between 1990 and 1996, the working age population (10-64 years) increased by 3.9 per cent per year – faster for women than for men (4.2 per cent and 3.7 per cent, respectively) (1998 draft NHDR for Sudan). The labour force grew even faster, namely, at 4.9 per cent per year, than the working age population, with the female labour force the fastest growing at 7.8 per

¹²⁶ Note that between the two survey years the participation rates for the urban and rural areas rose by only 4 per cent and 5 per cent, respectively, while the total participation rate rose almost 16 per cent. As suggested in Chapter 7, a change in the sample weights for the two areas most probably explains much of the rise in the total rate. In support of this hypothesis, one observes that in 1990 the total participation rate was much closer to the (lower) rate for urban areas, while in 1996 it was much closer to the (higher) rate for rural areas. However, it may be difficult to explain the quantum leap in the female participation rate totally by the changing sample weights.

cent, compared to less than four per cent for the male labour force (See McKinly 2005, Chapter 7, Table 4¹²⁷). Growth of the total labour force was most rapid in urban areas, namely 7.4 per cent. However, the urban female labour force, although small in size, was growing by a very rapid 11.6 per cent, compared to 6.3 per cent for male labour force. At the same time, the rural female labour force was growing by 6.8 per cent, while the rural male labour force was growing by only 3 per cent.

As a result of accelerating labour force growth and sluggish economic growth, the increase of labour supply surpassed the growth of demand. The unemployment rate appears to be rising since 1973 – according to available evidence reported in Table 9.2. Thus, based on population census data, the unemployment rate in Sudan rose steadily from 5.5 per cent to 11.1 per cent during 1973-1993. However, according to MLF Survey data, it seems to have stabilized around 15 per cent during 1990-1996. As a result of the rate and pattern of economic growth of the Sudanese economy during the 1990s, already discussed in this report, the rate of open unemployment stayed at about 13 per cent for men between 1990 and 1996, but it dropped slightly for women from a very high rate of 28 per cent to 24.3 per cent.

Table 9.2: Unemployment Rates in Sudan, 1973-1996

Year	Total
1973	5.5 Population census
1983	8.0 Population census
1990	15.0 MLF survey
1993	11.1 Population census
1996	15.1 MLF survey

Source: Draft NHDR 1998.

As reported in McKinley 2005 Chapter 7 (Table 5), women entered the workforce in increasing numbers during the early 1990s, particularly in urban areas. Overall, their employment increased faster than men's – by about 10 per cent per year, versus 3 per cent. The likely explanation is that while economic growth was producing job opportunities, these were in lower-paying occupations that women were willing to accept to supplement the household income. In rural areas, the growth of female employment was four times that of male employment. Male employment in rural areas was relatively stagnant, and hence the rate of male unemployment grew faster (4.0 per cent per annum). By contrast, the growth of the rate of male employment (a mere 2.3 per cent) was much lower than the growth rate of the labour force.¹²⁸

In urban areas the unemployed were growing at a much more rapid rate (12 per cent) than the employed (5.9 per cent), (McKinley 2005, Chapter 7, Table 5). Men entered the ranks of the open unemployed slightly more rapidly than women. Open unemployment is usually associated with workers who have been laid off from decent-paying jobs and are waiting for comparable job opportunities. As pointed out in Dagdeviren and Mahran (2004), privatization

¹²⁷ Employment Generation and Poverty Reduction in Sudan, McKinley, 2005

¹²⁸ These results (especially for open unemployment) should be treated rather cautiously. However, they do give us some insight into the broad employment trends in Sudan during the 1990s. They illustrate a process of jobless growth over that period.

of SOEs during the 1990s contributed to increased unemployment of the labour force. With less opportunity to secure decent-paying jobs, women were more likely to take low-income employment in the informal sector. In other words, women were swelling the ranks of the underemployed, i.e., the “working poor”. However, many of them were suffering from open unemployment.

Rural-urban migration during the 1970s and 1980s – in addition to displacement of the population as a result of drought and civil strife, and the immigration from neighbouring countries – overburdened the urban sector in Sudan.¹²⁹ Since the modern urban sector failed to create enough demand for labour to absorb the increased supply, the informal sector considerably expanded to provide an outlet for surplus labour. Thus, it is estimated that the share of this sector in urban employment increased from 25 per cent in the 1970s to 65 per cent in the 1990s (ILO, 1976; and MLFS 1996, reported in Ibrahim et al., 2001: 24). Referring to the MLFS 1996, Ibrahim et al. interestingly note that during the period 1990-96, more than 400,000 jobs were destroyed in the modern sector, and 1.6 million jobs were created in the informal sector. But it should be noted that the liberalization measures implemented since the beginning of the 1990s negatively impacted the informal sector, and constrained its ability to absorb more labour.¹³⁰

¹²⁹ Close to 3 million Sudanese were recorded at one time as displaced. To this should be added another million refugees from neighboring countries (Ibrahim et al., 2001).

¹³⁰ For an interesting discussion of the potential and constraints of informal sector units in Greater Khartoum on the basis of field work, see Kakwani, Nanak and Ernesto M. Pernia, “What is Pro-Poor Growth?”, Asian Development Review, Vol 18, No.1, 2000.

CHAPTER TEN

The Post-Conflict Era: Opportunities and Challenges of Poverty Reduction

Peace negotiations between the Government of Sudan (GOS) and the Sudan People's Liberation Movement/Army (SPLM/A) proved difficult and protracted.¹³¹ But at long last, the longest civil war in Africa came to an end: the Comprehensive Peace Agreement was signed on 9 January 2005 and unanimously approved by the Sudanese Parliament on 1 February 2005. In the framework agreement, the parties agreed on a six-month pre-interim period and a six-year interim period, the objective of which is to establish the institutions and mechanisms for the implementation of the peace agreement, including the establishment of a constitutional framework. At the end of the interim period in 2011 the two parties shall organize an internationally monitored referendum for South Sudan on the issue of unity versus secession.

Among the agreed upon principles of the framework agreement is the establishment of "a democratic system of governance taking account of the cultural, ethnic, racial, religious, and linguistic diversity and gender equality of the people of Sudan". This principle summarizes the complex nature of the causes behind the civil conflict that characterized post independence Sudan.¹³² Another principle requires that the parties should find "a comprehensive solution that addresses the economic and social deterioration of the Sudan and replace war not just with peace, but with social, political and economic justice which respects the fundamental human and political rights of all Sudanese people", (Abdel Gadir (2004)).

Sudan's internal strife finds its origin in four causes: historical, political, socioeconomic, and spill-over/contagion from neighbouring regimes, (Abdel Gadir (2004)). At the time of Independence on 1 January 1956, colonial rule bequeathed a legacy of regional inequality to

¹³¹ The Nairobi Declaration on the Final Phase of Peace in the Sudan, signed on 5 June 2004, notes that the Government of Sudan (GOS) and the Sudan People's Liberation Movement/Army (SPLM/A) have met in continuous negotiations between May 2002 and May 2004. The Declaration enumerates the agreements reached by the two parties: The Machakos Protocol (signed 20 July 2002); Agreement on the Security Arrangements During the Interim Period (25 September 2003); Agreement on Wealth Sharing During the Pre-Interim and Interim Period (7 January 2004); Protocol on Power Sharing (26 May 2004); Protocol on the Resolution of Conflict in Southern Kordofan/Nuba Mountains and Blue Nile States (26 May 2004); and, Protocol on the Resolution of Conflict in Abyei Area (26 May 2004). In the Declaration the parties jointly agreed "that the Protocols and agreements already signed, together with the Annexes that remain to be negotiated on the Permanent Ceasefire Arrangements and the Agreement on the Modalities of Implementation of the Agreement that shall also include regional and international guarantees, shall constitute the Comprehensive Peace Agreement, which, when signed, shall initiate the Pre-Interim Period." That Comprehensive Peace Agreement became a reality at long last. The full texts of the various agreements can be found at www.gurtong.com.

¹³² Most writers on the historical background of Sudan's civil conflict relate the war in the South to the policies adopted by the colonial British administration of Sudan over the period 1920-1947.

the new national government of Sudan. For example, information reported in Abdel Gadir (2004) reveals that at the time of independence the South, with 27 per cent of the population, claimed only less than 14 per cent of GDP. At the other end of the scale, the Blue Nile province, with only 20.2 per cent of the population, claimed 30 per cent of GDP, (Abdel Gadir (2004), Table 4).

As is clear from Table 10.1, since its independence in 1956, Sudan has lived under democratic governments only 32 per cent of the time. Military regimes tended to last longer than the democratic regimes that they deposed, but none of the regimes was able to come up with a durable solution to the civil conflict.¹³³ Therefore, a most relevant question is whether the implementation of the Peace Agreement can help break this cycle and put Sudan on a new course of stability and sustainable development.

Table 10.1: Political Regimes in Sudan, 1956-2001

Period	Regime Type	Duration in Months	Ideology	Participation
1st January 1956- 16th November 1958	Parliamentary-Democratic	35	Pragmatic	Multi-party Bicameral Parliament
16th November 1959- 25th October 1964	Military (Generals)	71	Pragmatic	No Parties Single Chamber Assembly
26th October 1964- 24th May 1969	Parliamentary-Democratic	55	Pragmatic	Multi-party Single Chamber Parliament
25th May 1969- 5th April 1984	Military (Young Officers)	178	Left + Arab Nationalism+ Islamic	One Party Single Chamber Assembly
6th April 1984- 30th June 1989	Parliamentary-Democratic	63	Pragmatic	Multi-party Single Chamber Parliament
30th June 1989- Present	Military-Civilian	78	Islamic	One Party Single Chamber Assembly
Total	-----	480	-----	-----

Source: Abdel Gadir (2004)

Another important dimension of the conflict is the ethnic, linguistic and religious diversity in Sudan, (see Appendix). Thus, for example, at independence the first population census of Sudan enumerated eight major ethnic groups, comprising Arabs, Beja, Nubiyin, Southern Nilotic, Southern Nilo-Hamitic, Southern Sudanic, and Westerners. There are three main religious groups: recent estimates put the shares as 70 per cent Muslims, 25 per cent followers of indigenous beliefs and 5 per cent Christians, (Abdel Gadir (2004)). Linguistic diversity is even much bigger. According to the most recent information, there are 134 living languages listed for Sudan, in addition to eight extinct languages.¹³⁴

¹³³ It should be noted that the political parties were largely consumed by their factional politics and as such were unable to articulate political platforms on the basis of which a durable solution could be established. The military regimes, on the other hand, suspected that they could settle the issues involved either through the barrel of the gun, or alternatively by playing an elaborate game of divide and rule. Both practices misfired and the political game contributed to the complexity of the civil conflict, (Abdel Gadir (2004)).

¹³⁴ According to recent advances in linguistic studies, the 1,500 African languages have been shown to belong to just five families: Afro-Asiatic; Nilo-Saharan; Niger-Congo; Khoisan and Austronesian. Sudan's 134 languages belong to the first three families. For an appreciation of classification by regional location, religious affiliation and linguistic background see the Appendix and the included map of Sudan.

The regional background of the conflict is also important. Of Sudan's original nine neighbours (prior to the independence of Eritrea), seven had at least one ethnic civil war since 1960. Only Egypt and Libya did not experience ethnic civil wars. There is evidence to suggest that during the two civil wars experienced by Sudan (1956-1972 and 1983-2005), external intervention played an important role in the organization, and support, of rebel movements on the one hand, and in bailing the government out of difficult military situations in the battle field on the other. Neighbouring countries, acting on their own or as a proxy for distant powers, were the vehicles through which this external intervention was mediated.

10.1 The Cost of the Civil War

There are the direct and indirect costs of war. In addition to the economic costs, the direct cost includes the war casualties, sufferings and displacement of the population in war-affected areas. A recent report summarized the human cost of the second civil war (1956-2005) in Sudan. According to International Crisis Group, an "estimated two million people have died as a result of the fighting over the past 18 years, victims of direct violence or related starvation and disease." Half a million refugees have spilled into neighbouring countries, and roughly four million people have been displaced and driven from their homes within Sudan", (ICG, 2002: 3-4). As noted in Abdel Gadir (2004), the plight of internally displaced people is also recognized by the UN Internally Displaced People Project (IDP) (www.db.idpproject), as well as the UNHCR. According to UNHCR (2001), about 215,500 Sudanese children under 18 years of age were refugees by the end of 2000, 46 per cent of whom are females.

The economic cost of the war covers the immediate and substantial decline of output, destruction of physical, human and "social" capital¹³⁵. The loss of productive capital, especially human and social capital, takes more time to reverse than the loss of output. According to Abdel Gadir (2004), over only four years (1994-1998) the overall direct cost of the Sudanese civil war has reduced the country's investment rate to less than one-third of its potential ratio under normal conditions and to reduce per capita GDP by a cumulative rate of 8 per cent. The average cost per annum comes to about 2 per cent in real per capita GDP growth (Elbadawi, 1999). The indirect cost of the war, (in terms of foregone development), was estimated in Abdel Gadir (2004) using a growth-regression methodology/model with a war dummy. Measured by the reduction of real GDP per capita growth, this cost ranges between 2.71 and 2.18 percentage points per annum.

¹³⁵ "Social capital" is defined as "the features of social organization, such as trust, norms, and networks, that can improve the efficiency of society by facilitating coordinated actions". It also includes social solidarity and support in situations of need.

10.2 Opportunities of Post-Conflict Era: A Peace Dividend?

Three opportunities present themselves in the post-peace era: (i) ensuring the political will to minimize the risk factors of the occurrence of future wars; (ii) sustaining the growth process that started in the mid-1990s; and (iii) structurally transforming the economy.

(i) Among the risk factors for the recurrence of the conflict that are amenable to policy manipulation are the per capita GDP, the GDP growth rate, and the peace duration. Of these three, the peace duration is a factor that requires political will of the type displayed in Machakos, Kenya in July 2000 and the ratification of the Peace Agreement in February 2005. Thus, for example, anticipated peace during the pre-interim and interim periods of about 78 months will reduce the probability of civil war in Sudan to 0.061, (Abdel Gadir (2004)). The level of per capita GDP in turn depends on the growth rate of GDP. Thus a major opportunity for the peace era is for the country to be able to maintain the high GDP growth rates it was able to achieve during the second half of the 1990s.¹³⁶ To be able to do this, the sources of growth are no less important than overall GDP growth, as already indicated in Section Two above.

(ii) Based on the record of Sudan's recent growth experience (see above, Section Two), inflow of foreign direct investment (FDI) into the oil sector was substantial during the second half of the 1990s. The advent of peace should present the country with the opportunity of increased FDI flows into the oil and related sectors, on account of improved institutional incentives provided by the peace process. As a result, the positive impact on total factor productivity growth could be enhanced, thereby sustaining the growth process.

(iii) The continued "lack of development" of the South, especially during the inter-conflict period of 1972-1983, can be looked at in terms of the pattern of resource allocation and the nature of structural transformation that occurred in the country since independence. The experience of Sudan clearly demonstrates that diversifying an agrarian economy is not a mundane business that can be undertaken by marginal changes within the existing socio-political and economic structures. The discovery of oil may present the Sudan with the opportunity of diversifying its economy away from the inherited agricultural base toward a modern structure. However, effecting such a transformation requires a disciplined role for the state, including a planning role.¹³⁷

¹³⁶ Of course there are a number of macroeconomic pre-conditions for the sustainability of the growth process. Currently, despite the civil war and various embargos, the economy is judged to have been stable over the past few years. For details see IMF (2003). More generally, the broad requirements for growth – conducive stability is to avoid extreme values for the relevant macroeconomic indicators: inflation rates and black market premiums more than 35 per cent; real overvaluation of the exchange rate of more than 68 per cent; budget deficits greater than 12 per cent of GDP; broad money to GDP ratio of more than 100 per cent and trade to GDP ratio of more than 120 per cent (see, for example, Easterly (2003)).

¹³⁷ Prospects for such a role are now better, thanks to the opportunity presented by the initiative of the World Bank on the imperative of conducting the business of development lending in the context of a Comprehensive Development Framework (CDF). The CDF reflects a realization, albeit a belated one, that effecting meaningful development is a much more complex undertaking than managing economies for short-run macroeconomic stability purposes. The CDF encompasses four major principles: (a) country ownership of development programmes (including broad participation of various stakeholders in the design of the development aspirations of countries); (b) the articulation of the development aspirations of countries in a comprehensive, holistic and long-term perspective;

10.3 Challenges of the Post-Peace Era

As already shown in Section Two of this report, the impressive growth that the economy of Sudan experienced since the mid-1990s was not pro-poor. We also demonstrated that the liberalization package implemented since 1992 entailed very high cost in terms of human capital. Against this background, the sharing of oil revenue for poverty reduction and building human capital may be the two main challenges of the post-peace era in Sudan from a poverty-reduction perspective.

Abdel Gadir (2004) demonstrates that poverty is a major risk factor in civil wars, and hence the prospects of peace in Sudan will be crucially affected by the initial poverty levels and the prospects for its reduction. During the post-peace era the country has to grapple with the issue of the sharing of wealth among the various regions. The first article of the Agreement on Wealth Sharing between the government and the SPLM/SPLA specifies a set of “guiding principles in respect of an equitable sharing of common wealth”, which are likely to be invoked in the post-peace era. Among the guiding principles for equitable sharing of the common wealth of the country are the following:

- “the wealth of the Sudan shall be shared equitably so as to enable each level of government to discharge its legal and constitutional responsibilities and duties”;
- “the sharing and allocation of wealth emanating from the resources of the Sudan shall ensure that the quality of life, dignity, and living conditions of all citizens are promoted without discrimination on grounds of gender, race, religion, political affiliation, ethnicity, or region. The sharing and allocation of this wealth shall be based on the premise that all parts of Sudan are entitled to development”; and
- “Southern Sudan, and those areas in need of construction/reconstruction, shall be brought up to the same average socio-economic standard and public services as the Northern states”.

While these principles are generally acceptable, they remain vague as to the relevant indicators to be used to ensure the “equitable sharing”. Nevertheless, a specific formula for sharing oil revenue is specified in article 5 of the agreement. According to this formula, 2 per cent of the net oil revenue “shall be transferred to oil producing states/regions in proportion to output produced in such states/regions” after payments into the stabilization account, if any¹³⁸ The overall net revenue (i.e. after payments into the stabilization account and transfers to the producing states) from oil produced in Southern Sudan is to be allocated such that “fifty per cent (50%) shall be allocated to the Government of Southern Sudan as of the beginning of

(c) the design of development programmes with a partnership orientation that spells out the roles and relationships between domestic stakeholders and external partners; and (d) the design of the development programmes with a focus on outcomes and results.

¹³⁸ The formula defines the “net revenue from oil” in a very precise way, with appropriate caveats for possible future events on the price front. An “oil revenue stabilization account” is to be set up such that net oil revenue derived from sales at prices above an agreed benchmark (established annually in the context of the national budget) are to be deposited.

the Pre-Interim Period and the remaining fifty per cent (50%) to the National Government and States in Northern Sudan".¹³⁹

For the year 2000 the educational achievement of Sudan was only 2.4 years per person 15 years and above, (Abdel Gadir (2004), quoting Barro and Lee (2000)). This is much lower than that of the world average (6.7 years), and lower than the developing world average (5.1 years). It was also lower than that for Sub-Saharan Africa (an average of 3.5 years). Sudan clearly experienced a dismal achievement, falling far below the four years deemed necessary for take-off. While there exists no estimates for regional human capital stock for Sudan, recent information on conventional education indicators show that the historical educational handicap of the South persisted in the post-independence period. As already mentioned in Section Two, in terms of gross primary school enrolment the three Southern States lag behind the average for the country (of 51 per cent), as well as behind every Northern State.¹⁴⁰

Whether looked at in terms of human capital, or in terms of conventional educational enrolment ratios, it is clear that investment in education needs to be accorded a fairly high priority in the post-peace era in order to help reduce regional inequality and poverty and sustain the peace agreement.

The main conclusion based on the above discussion is that the key to realizing the post-peace opportunities is the minimization of the risk of future wars. This in turn requires sustaining the growth process that started in the second half of the 1990s. To sustain the growth process, an opportunity is presented by the commercial exploitation of oil. However, oil revenue and related FDI inflow may pose the threat of Dutch disease, as already noted in Section Two. If the Dutch Disease can be averted, oil will spearhead a structural transformation to move the country out of its post-independence low-level equilibrium trap. To do this Sudan needs to think through a long-term poverty-reduction development strategy along the lines suggested in this report.¹⁴¹

The signing of the historic Comprehensive Peace Agreement (CPA) in 2005 presents a unique opportunity to address these challenges. Endorsed by neighbouring countries, major global powers, regional organizations as well as the UN, and informed by the experiences of peace

¹³⁹ On the basis of the first Millennium Development Goal (MDG) of eradicating extreme poverty and hunger, Ali (2003) proposed a framework to derive wealth allocation formula. Abdel Gadir (2004) demonstrate that under certain conditions, the formula derived within an MDG poverty-reduction framework is consistent with the 50/50 formula stipulated in the Naivasha Agreement.

¹⁴⁰ According to this information, the highest recorded primary enrolment ratio in the South of 18.5 per cent is for the Upper Nile, followed by Equatoria (14.6 per cent) and Bahr Al Ghazal (6.2 per cent). The lowest recorded primary enrolment ratio in the North of 21.5 per cent is that for West Darfur, (See World Bank (2003, Vol. II: 17, Table A2.2)). The official figures pertain to the areas in the South under the control of the government, and thus the situation may be even worse. However, this observation is still further confirmation of the neglect suffered by the region in the area of primary education.

¹⁴¹ In addition to good governance and the resolution of conflicts in a peaceful fashion, the major elements of such a development strategy should include: combating poverty and the sense of marginalization and exclusion in all regions; meeting the Millennium Development Goals through development plans articulated and owned by all Sudanese; enhancing economic growth through rural development and transformation of traditional agriculture that is integrated with agro-industries; and finally delivering effectively social services through devolution and decentralization of power and the empowerment of people, (Garang, 2004, as outlined in his speech delivered on the occasion of signing the Nairobi Declaration.)

building in Sudan and elsewhere, the CPA presents the so far best chance to arrive at a lasting peace and development in Sudan. The international community has also made substantial pledges of support in order to help meeting the vast challenges of economic recovery. In addition, the discovery and exploration of large oil reserves provides a sound basis of domestic resources.

The Interim Constitution, reportedly the only one to include the MDGs, was signed into law in July 2005. A number of CPA commissions have been established. A Joint Assessment Mission (JAM) of World Bank and UN, with guidance and participation of Government of Sudan and SPLM, developed a 'Framework for sustained peace, development and poverty eradication' in 2005. The development of an MDG-based Poverty Reduction Strategy Paper (PRSP) is planned. Parallel to this, the National Council for Strategic Planning was revitalized that is developing a National Strategic Plan over 5 years, a revitalization plan for agriculture was launched, and the preparation for an application for membership in the World Trade Organisation (WTO) is pushed.

In order to meet the rising expectations of the population – delivery of a 'peace dividend' – the government has raised spending considerably. This underpins the process of fiscal decentralization and devolution of tasks to the state and community levels. It promises also to increase pro-poverty spending, as key expenditures for this – basic education and primary health - are paid by the state governments.

Based mainly on oil exports and investments, Sudan experiences an economic boom with growth rates expected to surpass 10% in 2006 and following years. This boom is, however, so far concentrated on Khartoum. The pattern of growth and development does not – yet – result in nation-wide balanced human development.

In sum, progress has been made, but it is slow, not without setbacks, and not matching the high expectations of the population for a peace dividend. Like elsewhere, these expectations tend to be exaggerated. Aid and oil incomes cannot shortcut a long and arduous process of reconciliation, trust-building, reconstruction and institutional capacity building.

The challenges that Sudan needs to address are numerable. They can only be mastered by a concerted effort of all concerned parties: not only the Government of Unity and the Government of South Sudan, but also the civil society, the private sector, and, importantly – especially in the first stage - , the international community. The most crucial tasks include:

- In order to attain a concerted effort, trust needs to be strengthened between Sudan's government and the international partners through continuous policy dialogue.
- Although the majority of the funds planned to finance the 'Framework for sustained peace, development and poverty eradication' are to come from Government, the international community needs to frontload its funds, i.e. to fund a higher degree of required funding in the first months and slowly phase out their funding. The international community needs to take full cognizance of the implications of the fragile post-conflict reconstruction phase the country faces at this time.
- In a systematic way institutional capacity in the public sector and beyond needs to be built up as a part of the recovery and development programmes and projects. This aim

of systematic developing capacity must not be sacrificed for the desire of quick delivery, a balanced approach is necessary.

- In particular the capacities of aid management and aid coordination need to be built up so as to minimize losses from duplication and conflict and to ensure that aid funds are in line with national and regional priorities.
- As a matter of priority, sound practices of financial management, autonomy, and accountability need to be introduced and strengthened. Only on this basis will large amounts of resources come forth and can be spent productively.
- In particular, the degree of transparency needs to be deepened in order to allow for scrutiny and building of confidence.
- The weak the civil society needs to be built up and strengthened in order to be able to demand accountability.
- Civil society and in particular a free press are also vital to move the priorities from a narrow focus on economic growth to a wider one of human development, i.e. enabling people to live full, creative lives with freedom and dignity.
- Only a democratic system will be able to deliver on these counts. Past experiences have shown that the hope for 'benevolent dictators' is simply unrealistic. The conditions of a democratic system go far beyond free elections. They include free access to information, rule of law, independence and strong capacity of parliament and judiciary.
- While the needs are manifold, programmes and projects need to be prioritized and sequenced. Only in this way, substantial and visible progress can be achieved rapidly.
- Fiscal decentralization and devolution of powers to the state and community levels is of key importance. The severe regional inequalities and the neglect of rural areas lie at the heart of Sudan's conflicts. Decentralisation has to be combined with the principle of regional equity through vertical and horizontal transfers, otherwise it would exacerbate inequalities. For its success it is also vital that it is accompanied by building autonomy and accountability on the state and local levels.



Appendix: Major Ethnic Groups in Sudan by Regional and Religious Affiliation and Linguistic Background

Region	Main Ethnic Groups	Religious Affiliation	Linguistic Background
a) Western Bahr el Ghazal b) Rest of Bahr el Ghazal	a) Sudanic Groups (Commonly known as the Fertit Groups who occupy most of the what is known as Western Bahr el Ghazal State: The major groups are the Ndogo, Balanda, Bongo, Kresh) b) The Nilotic Groups: Mainly the Dinka and the Jur, they occupy all of Lakes, Warab and Northern Bahr el Ghazal States	a) Over 60% are Christians with about 20% Muslims, majority are of Darfur Region and West African Migrants found mainly in Raga b) Less 50% Christians, and less than 5% Muslims; rest are classified as professing traditional religions	a) Sudanic Group of Languages, related to communities in Niger-Congo language group b) Nilo-Saharan Languages
a) Western Equatoria b) Rest of Equatoria	a) Sudanic Group, mainly the Azande, Muru, Baka, Mundu, Avukaya. Associated with this group are the Madi in Eastern Equatoria b) Nilo-Hamitic Groups, or sometimes called the Para Nilotic Groups; they include the Bari-Speaking (i.e. Bari, Kuku, Kakwa, Mundari, Nyangwara, and Pajulu); the Lotuho-Speaking Groups, the Toposa-Speaking Group, and the Didinga	a) Over 75% profess Christianity; less than 5% profess Islam, and about 20% believe in traditional religions. b) About 40% are classified as Christians; less than 6% are Muslims, and the rest believe in traditional religions	a) Sudanic group of languages, related to groups in "Niger-Congo" language group. b) Nilo-Saharan Languages
a) North Upper Nile b) Central Upper Nile c) South Upper Nile d) Western Upper Nile	All Nilotic Groups, which include the Dinka, Nuer, and Shilluk a) Dinka Abialang Group b) Mainly Shilluk, c) The Nuer and Dinka d) The Nuer and small number of Dinka	Dinka Abialang are mainly Muslims and are found in North Upper Nile State, Mainly in Renk. The majority of these groups are profess traditional religions, Christianity and Islam	Nilo-Saharan languages
Khartoum	Melting pot of all groups	Arab and Western Sudanese Groups are Muslims while the Ethnic groups from South Sudan profess Christianity and Islam	Arabic, which belongs to Semitic branch of the Afro-Asiatic language family.
a) South Blue Nile b) Rest of Blue Nile	a) The Fung, Kadalo, Berta, Dowala, Uduk, Gumuz, Wataweet, Koma b) People of Arab origin, with West Africans, (generally referred to as the "Fellata")	a) Muslims, Christians and traditional religions b) Muslims	a) Nilo-Saharan languages b) Arabic and Niger-Congo and Kurdufanian languages

Eastern Sudan	Mainly Beja Groups, with settlements of Arabs and West Africans	Predominantly Muslims	Afro-Asiatic language, classified as Cushitic.
Northern Sudan: River and Northern States	Arab Groups	Muslims	Arabic
a) South Kordofan	a) Mainly Nuba groups, with settlements of Arab Groups, mainly Baggara	a) About 50% Muslims, 30% Christians and the rest practicing traditional religions.	The Nuba belong to the language group classified as Niger-Congo and Kurdufanian language, while the Arab groups speak Arabic
b) Rest of Kordofan	b) Arab groups, mainly Baggara and Hamar; Abyei is occupied by the Dinka Ngok	b) The Arab groups are Muslims, while the Dinka profess both Islam and Christianity.	
Darfur	Composed of ethnic groups of African origin, e.g. the Fur, Zaghawa, Massalit, Berti, Borgo, Birgid, Tama, and Tungur. Ethnic groups of Arab origin include the Baggara (cattle nomads) and the Abballa (camel nomads)	Overwhelmingly Muslim	The people of African origin belong to the language Niger-Congo language group, while those of Arab origin speak Arabic

NB: Ethnic classification in Sudan has often been done on language differences, which are also used as symbols of ethnic identity. Some people have argued that such differences have been obstacles to the development of a "Nation-State" in Sudan and a source of division due to lack of communication. However, the adoption of Arabic as a *lingua franca* by the non-Arab has not reduced this obstacle.

CHAPTER ELEVEN

Policy Recommendations

The real challenge facing Sudan is to sustain growth and macroeconomic stability, while undertaking an ambitious development plan. To meet such challenge, it is necessary to develop a sound and modern financial system; an efficient federal system through more decentralization, coupled with adequate financial and technical resources and participatory mechanisms; and a just income and wealth distribution. To help Sudan's national effort in designing and implementing a comprehensive growth and poverty-reduction strategy, the main contours of such strategy and policy recommendations in specific areas are given below – based on the analysis in this report.

11.1 Main Contours of Poverty-Reduction Strategy

Although dated, the 1987 ILO report on Sudan (ILO, 1987) still provides a good starting point for elaborating a development strategy that is more growth inducing, more employment-intensive and more poverty reducing. Its analysis for the 1980s suggested that although Sudan's comparative advantage was in agriculture, its policies were biased towards large capital-intensive irrigation schemes and mechanized rain-fed farms, and neglected providing public support to traditional rain-fed farming and nomadic herding. In the present report, we also stress this issue, among other aspects, by putting forth several recommendations on how to remove this bias, and how to institute reforms in the irrigated and mechanized sectors in order to make them more efficient and employment generating.

Provided that the peace process is sustained, and the Official Development Assistance is substantially increased, the Government of Sudan should be able to mobilize additional domestic resources, and focus on a large public investment programme concentrated on improving productive conditions in traditional farming and herding. Employment-intensive public works programmes to build badly needed rural economic and social infrastructure should become the centrepiece of a pro-poor rural development policy. Many of these public works should be focused on small-scale infrastructure, such as storage facilities and rural roads, which could directly and immediately benefit poor farmers and herders.

Although Sudan's strategy of the 1970s to become the "Bread Basket" of the Middle East – which was fuelled by investment from the Arab region itself – was overly ambitious, Sudan should not forsake opportunities to export more agricultural commodities, such as cotton, sorghum or livestock, to the Arab region, Africa or elsewhere. Sudan's economy will continue, for the foreseeable future, to be decisively influenced by its ability to export agricultural products, in addition to oil. Whatever Sudan can do to add value to these primary commodities will be helpful. Exporting processed agricultural products could contribute to

the diversification of Sudan's exports and its manufacturing base. We maintain in this report that Sudan's comparative advantage also lies in agro-industrial products and therefore in a closer integration between its agricultural and industrial sectors.

The 1987 ILO report also notes that much of Sudan's manufacturing sector only slightly produced processed goods for export, and produced very few wage goods for the large majority of Sudanese. As a result, manufacturing became very import dependent and focused on a small domestic market of rich consumers. Alternatively, we suggest that Sudan's industrial strategy should focus more on small- and medium-scale urban and rural industries that have linkages to agriculture, i.e., backward linkages such as the processing of agricultural commodities, forward linkages such as the supply of agricultural inputs, and consumption linkages, i.e. the increasing demand of the rural population. It should maximize the newly acquired oil advantage for producing fertilizers. Food processing is a major example of such an industry. Such agro-industrial activities would be less import-dependent than average activities, and hence would have a higher multiplier effect on the rest of the economy.

But they would still be dependent on the provision of public infrastructure, such as energy, water, transport and communication – the lack of which has constituted a major roadblock to industrial development. Providing such infrastructure, some of it necessarily large-scale, would be another component of a comprehensive public investment programme. Thus the fiscal target underlying IPRSP should be made less stringent.

Developing public works focused on stimulating broader agricultural and industrial development will stimulate the employment-intensive construction industry and provide temporary employment to large numbers of Sudanese workers. And policies advocated here for broad-based agricultural and industrial development will be pro-poor, as they generate more permanent and widespread increases in employment. Such employment will provide to large segments of the workforce incomes that are significantly higher than current levels – namely, high enough and sustainable enough to substantially reduce poverty.

As formal-sector employment at decent incomes becomes more widespread, poor workers will move, of their own accord, out of the low-paying urban informal sector employment. Also, the increased agricultural prosperity that is generated in rural areas will create broader non-farm employment opportunities that will help supplement low farming incomes.

Although public investment is crucial for growth and employment generation in Sudan, it can only solve part of the problem. Additional resources will be necessary and these must come from the financial sector. Banking regulations need to be reformed to induce commercial banks to lend for long-term private investment. As in many other countries, financial liberalization in Sudan has not led to more lending to productive activities. Also, publicly owned, development-oriented banks need to be empowered to mobilize domestic savings to lend to small-scale entrepreneurs.

The traditional anti-poverty interventions focused on poorer and more vulnerable workers, such as microfinance or micro-enterprise, will be an integral part of the broad pro-employment development strategy that this report advocates. By improving the access of poor households to credit and other resources, such interventions will enhance their ability to

take advantage of the employment opportunities generated by the new economic policies and development strategy that this report is advancing.

However, such focused interventions alone cannot generate the broad-based employment opportunities that contribute to sustainable poverty reduction. General economic policies need to be reformulated in order to sustain rapid economic growth, broader employment generation and deeper poverty reduction. Part of the strategy involves more effective and better targeted fiscal policies focused on mobilizing domestic and external resources for ambitious public investment programmes. Small-scale poverty-focused infrastructure projects, especially in rural areas, are part of this strategy; but so are large-scale infrastructure projects designed to connect the far-flung reaches of such a large country to a common transportation, power and communications network.

Mobilizing substantially more domestic resources is critical to the success of this strategy. The increase in non-tax revenues from oil production can be harnessed for this purpose. But the very low level of taxes in Sudan also needs to be raised. In addition, external resources are absolutely crucial. A good-faith start for donors would be the cancellation of Sudan's onerous external debt (as happened recently in Iraq). Until its severe debt problem is resolved, Sudan will not be able to achieve sustainable long-term economic growth and development.

But the country is also badly in need of a huge infusion of new foreign aid in order to finance its reconstruction and development. If Sudan is to have any chance of accelerating progress toward the Millennium Development Goals, a substantial increase in Official Development Assistance will be necessary. A sizeable proportion of this new ODA will have to be channelled, early on, into building up state capacity to effectively disburse funds for development purposes. Developing such capacity is an indispensable part of the effort to strengthen "national ownership" of Sudan's development strategy.

11.2 Policy Recommendations

1- A growth and poverty-reduction strategy should allocate more resources to investment and development projects, which broaden the productive capacities of the economy and create employment opportunities for the poor and the unemployed labour force. Against this backdrop, it should be noted that the fiscal stance underlying the country's IPRSP is unnecessarily conservative – explicitly based on budget deficit within 1 per cent of GDP. Agricultural projects in the irrigated, rain-fed and livestock sub-sectors should be prioritized. Public works' projects to build infrastructure, particularly roads, small dams, ducts, etc., could generate high rates of return through externalities. The adoption of appropriate technology, know-how and the enacting of techniques and practices, as well as the use of highly productive seed varieties and effective organization and administrative methods, should be adapted and generalized in agriculture. With regard to manufacturing, textile, tanneries and oil seeds industries should be encouraged and investment in them be increased to generate more employment for the unskilled and semi-skilled. As already shown above, these industries are currently working at very low capacities. They need a life-saving strategy to use their resources more efficiently, reduce the costs of production and raise the productivity of labour and capital to raise profitability.

2- The exchange regime should be managed such as to preserve the stability of the real, not the nominal, exchange rate of the Sudanese Dinar.

3- Institutional changes are required to combat rent-seeking behaviour, and to liquidate all monopolies, particularly for Gum Arabic, livestock exports to the Gulf, and Sudatel.

4- This calls for reconsidering the existing investment policy manifested by The Investment Encouragement Act (IEA). The generous fiscal and non-fiscal incentives offered by such policy, most important of which is exemption from BPT for more than five years, deprives the economy of significant amounts of revenue. A serious study of the cost-benefit of BPT exemptions should be undertaken to determine their viability and cost effectiveness. It should take into consideration that exemptions are no longer deemed the main factor in attracting foreign investment, as investors have started to value more an enabling environment and macroeconomic stability, good governance, transparency, accountability and rule of law.

5- Given the structural characteristics of the Sudanese economy, financial liberalization is not a panacea; radical institutional and policy shifts are imperative for the Sudanese financial sector to provide wider and sustainable finance for poverty reduction, especially in the rural areas of the different states.

6- The first important task for poverty-alleviating policymaking for Sudan's economy (agricultural and rural development and manufacturing) consists of setting up a system of generating information for the sectors. The principal task is to institutionalize regular surveys of: (a) household income and expenditure, possibly expanded to cover basic information concerning costs and returns of household farms and non-farm activities; (b) an agricultural census (possibly beginning with a quick sample-census) covering both cropping and livestock; and (c) a labour force survey; and a population census. Though belated, the 2001 Comprehensive Industrial Survey is a welcome step.

7- Institutional reform in irrigated agriculture should be carried out on two distinct fronts. The first concerns the public and private owners of large irrigation projects, which should convert themselves into managers of irrigation water and divest themselves of all farming operations. The irrigation schemes should be converted into agencies maintaining the irrigation system, expanding them where necessary and selling water at an appropriate price to ensure its best use. They must cease to operate as gigantic farms that integrate irrigation with the management of farm production through lease contracts with tenants that are subject to crop rotations and input decisions centrally imposed. The second consists of converting the tenant farmers into full-fledged entrepreneurial peasant farmers who make all decisions concerning cropping pattern, technology and output disposal. But for agrarian reform to be successful, it has to be supported by continuing public investment (e.g. in infrastructure) and other services (e.g. support for inputs such as fertilizers, provision of veterinary services, pest control). This is true for labour surplus economies, but more so for countries like Sudan, with labour supply and credit constraints.

8- The tenant farmers must be given full control over land and other resources necessary to enable them to be truly entrepreneurial peasants. The current distribution of tenancy does

not appear to be incompatible with the creation of a reasonably egalitarian system of peasant farming, although this issue is worth studying at greater depth. The question of land rights is a thorny issue in Sudan – and will have to be reformed. Without claiming the expertise necessary to work out a solution from the present maze of land laws, we recommend that, pending the final settlement of this issue, the tenants be given enough rights to enable them to function as peasant farmers. In this context Sudan might learn from the experience of other countries. Some of the Asian countries (such as Vietnam and China) provide examples of outstandingly successful reform along these lines. However, caution needs to be exercised in creating a full-fledged market for land, as it could lead to a polarization of ownership and increased inequality. Safeguards need to be put in place to avoid such an outcome.

9- The need for reform is nowhere clearer than in *mechanized rain-fed agriculture*. It needs to be determined if indeed efficient economies of scale, dictated both by mechanization and by the condition of land under this form of cultivation, require the size of leasehold to be as large as it actually is. *A priori*, this appears most unlikely. Secondly, leases should be auctioned, under an expanded market of potential leaseholders created by the provision of credit, to ensure that land is being used most efficiently.

10- By focusing on the promotion of the traditional farmers, agricultural development in Sudan will combine growth with poverty reduction, because most of these farm households are poor. The process of converting them into productive peasant entrepreneurs must begin by endowing them with the kind of basic right to land that has been recommended above for the farmers in irrigated agriculture. These rights, designed with due care to protect the necessary elements of the role of the tribal and community organizations, will expand the access of the traditional farmers to credit and other resources – once the complementary reforms, outlined below, are implemented.

11- The targeting of food self-sufficiency by reallocating irrigated land from cotton to food crops through the centrally-enforced system of crop rotation ironically deprived large numbers of agricultural workers of their livelihood, due to the large net reduction in labour use. This may have been a major cause of the possible impoverishment of a large number of traditional farm households. However, implementing the institutional reform proposed above in irrigated agriculture may also eliminate the principal instrument of this discrimination against cotton. Additional disincentives to cotton in the system of taxation, trade or input pricing discrimination against agricultural products – especially those produced by and/or employing the poor – should be carefully identified and ended. Two particular examples are the monopolies in Gum Arabic and livestock exports. The creation of monopoly in the export marketing of livestock products had an adverse effect on both productive efficiency and income distribution. Marketing board type control over the export of Gum Arabic also amounts to a tax on its producers. These disincentives should be ended and replaced by the promotion of competition in marketing.

12- Domestic research capability needs to be created in the adaptation of seeds that have been developed elsewhere for uncertain and inadequate rainfall, which characterizes much of Sudan's agriculture. This needs to be complemented by the creation of a system of supply and marketing of seeds, fertilizer and pesticide that ensures the availability of these inputs at competitive international prices. Improved input supply needs to be backed by an enhanced

access to credit – especially in the traditional rain-fed sector. The *shail* and *salam* modes of finance work to the advantage of the money lenders and deprive agricultural producers of the fruits of their toil – even subjecting them to imprisonment because of their failure to repay. At the moment, the access of the traditional farmers to credit is dismally low. The implementation of institutional reform proposed above should help mitigate the problem of a lack of collateral. This needs to be backed by a banking infrastructure geared to serve small borrowers. Specifically, the Agricultural Bank of Sudan has to be re-designed to be a truly development finance institution.

13- The vulnerability of Sudan to Dutch Disease should not be underestimated, particularly in light of the expected large foreign exchange inflows in the post-peace era. There is a need to direct revenues from the booming sectors to stimulate non-oil production and exports, mainly to the agricultural sector where most of the poor live. The relatively low and declining development spending implies negligence of the productive sectors of the economy – particularly those producing tradeables. Easy oil money may eliminate the incentive to develop alternative tax bases and/or improve the existing ones – thus fuelling destructive rent-seeking activities. Such a possibility should be avoided at all costs.

14- With regard to manufacturing, the general policy implications of the foregoing analysis are the following: First, investment in infrastructure, especially the transport network, power and water supply must be given priority in the allocation of public investment expenditures. Second, the regular flow of locally produced and imported inputs to the domestic industries must be given utmost attention. Third, availability of working and investment capital for manufacturing at reasonable rates has a crucial importance for the elimination of disruptions in the production process. Since the BOS moved away from intervention in 1999, industrial entrepreneurs obtain credit mostly on commercial and short-term basis. Obviously, a system of finance more conducive to industrial development has to be devised. Finally, efforts have to be put in place to improve the skills of the workforce and quality and product-design capacity in the industry.

15- The small share of direct transfers to the states through the SSF (Chapter Three) in total spending (about 10.3 per cent for the 1990s) highlights the need to increase the share of this chapter for broadening the productive capacities in the economy, especially the need for investment in a large number of labour-intensive projects that provide critically needed jobs for the poor. The creation of employment opportunities will reduce the numbers of the poor, strengthen aggregate demand and induce investment in productive sectors of the economy and therefore enhance the rate of growth of GDP.

16- The correlation between the per cent of a state's population that is living in rural areas (a proxy for poverty) and actual SSF development grants was modest. There is a feeling on the part of many that these intergovernmental grant programmes need to be revamped and targeted more toward those states most in need.

17- The Zakat Chamber should work very hard to deal with the mounting problem of poverty in Sudan, allocating more of the Zakat revenues to the categories of the *fuqara* and the *masakeen*, as they constitute most of the poor in Sudan. As a result, resources consumed by administrative activities associated with running the Zakat programme in Sudan should be

reduce to about 5 per cent of revenues collected. The Zakat Chamber should learn from international experiences to minimize administration cost.

18- The derived value from indirect tax incentives used in Sudan (in the form of exemptions on raw materials and capital goods from VAT) is doubtful, as indicated by the experience of some LDCs. Recipients and beneficiary groups often abuse them when the exempted goods are not used in the manner intended by the incentive. We recommend that they be reconsidered.

19- Another challenge facing Sudan is to broaden the tax base and have a higher tax level, comparable to that in developing countries, to enable the government to provide essential services (education, health care, protection of the environment, reliable sanitation services, efficient infrastructure projects, etc.).

20- A comprehensive tax reform is highly needed if a viable fiscal policy is to play a fundamental role in enhancing macroeconomic stability and economic growth. One possible alternative for the government is to depend more on direct taxes, but without producing an economic disincentive to income earners or causing a flight of financial capital. The considerable potential for boosting the role of direct taxes as the main sources of generating revenue should be tapped, instead of relying so heavily on indirect taxes. Given the positive characteristics of direct taxes (income and profit taxes), the government of Sudan may improve the situation and achieve pro-poor growth by relying mainly on direct taxes instead of indirect taxes. In response to an increase in demand for its services and in conformity with fiscal-balance requirements, the government may do well to rely on generating more revenue through taxes that have higher income elasticity. A progressive personal income tax can be a good tool for income distribution in favour of the poor. It is simple, and can generate substantial revenue for the federal government. In addition, the incidence of the income tax rests with the taxpayers and is not shifted forwards or backwards.

21- It is also clear from our discussion in this work that Sudan, like most LDCs, used incentives to promote investment. Such incentives are probably justifiable in cases of investments that generate externalities to the economy at large, such as in technology-intensive industries, skill-intensive industries, advanced research and educational projects, and targeting the regional development needs of the country.

22- Another type of exemption, which is often given to foreign investors, embedded in most investment acts and which has caused considerable problems, is the tax holiday. Such holidays are criticized on many grounds; mainly they give a strong incentive for tax avoidance. Therefore, the government should stop offering them as incentives for encouraging foreign investments in Sudan.

23- On the expenditure side, our discussions have shown that the central government in Sudan has been systematically following patterns of spending which have not benefited poor people. Spending on administration (Chapter Two) and debt services payments and financing the war in the southern Sudan have consumed a disproportionately large share of total government spending, whereas social subsidies that directly benefit the poor, for example,

received a very small share of total spending (3.7 per cent) during the period 1998-2001. We recommend tapping the great scope for raising the share of social spending.

24- Furthermore, the direct transfers to states as a ratio of total government spending has been very small, indicating that fewer resources have been transferred to support states to cope with their rising obligations to provide essential social services (education, health, water and sanitation, etc.). The government should allocate more resources to the states in its effort to eradicate poverty in the country, as that could also redistribute resources in favour of the poor regions and enable them to spend more on the pro-poor projects and services.

25- In addition, we have seen that the share of (Chapter 1) expenditures in total federal government expenditures has also constituted a small ratio in total government expenditures. Although the rising share of this chapter points to a negative involvement of the government in the economy, yet in situations where poverty is widespread, the government should allocate more resources for employment generation, using this chapter as well as Chapter 4 (development expenditure). The increase of the shares of these chapters (1, 3, and 4) is critical for broadening the productive capacities in the economy through undertaking new investments in labour-intensive projects that provide critically needed jobs for the poor. The creation of employment opportunities will reduce unemployment rate among the poor, strengthen aggregate demand and induce investment in productive sectors of the economy, and therefore enhance the rate of growth of GDP.

26- On the expenditure side, pro-poor spending should target some specific areas and activities whose spending incidences are in favour of the poor people. Poverty is caused (among other things) by a lack of: opportunities, job creation, targeting credits for small producers, building of roads, small dams, water points provision of affordable electricity, building of schools, availability of clean and healthy water, supplying sanitation services, and securing essential health and education services. These issues are all extremely critical for eradicating poverty in the Sudan.

27- The government should also allocate adequate funds to reduce the vulnerability of poor producers arising from difficult circumstances; namely unemployment, natural disasters (floods and droughts), economic crisis, harvest failures, etc. This is essential in view of the fact that for the average farmer, the income from work outside of agriculture is very low, varying from 6 per cent in the Gezira to 18 per cent in the Nile region. Diversifying income sources will undoubtedly assist farmers to reduce the risk and cost of fluctuations in agricultural output and income. Also, reducing the risk of epidemics or diseases (HIV/AIDS and malaria, etc.) via public health programmes should be top priority in spending for the poor.

28- New investments in employment-generating projects in agriculture and industry should become a priority. Investment in agriculture is a certain way to raise factor productivity, produce wage goods, secure stable input supplies to manufacturing, expand productive capacity of the economy, and to generate employment for the unskilled rural poor.

29- There is an urgent need to undertake an institutional reform and capacity-building programmes in the Ministry of Finance and National Economy. One major area of need is developing the expertise and technical capacity to carry out functional classification of the

federal expenditures. This is essential in order to improve quality of data, and to have a detailed functional and economic classification of expenditures.

30- On the other hand, more emphasis on improving public resource management is needed. Developing effective mechanisms to monitor and control revenue generation and government spending at all levels, and with greater public accountability, is important for poverty-reduction strategy in Sudan. The proposed reform should eliminate all off-budget revenue and expenditure activities, and make the Ministry of Finance and National Economy more able to control and manage resource in the country.

31- Sudan is also in critical need of solving its formidable problem of external indebtedness. The country's external debt (over \$23 billion by 2002, representing more than 150 per cent of GDP) is accentuating financial and fiscal problems, and depriving the country from critically needed resources to provide essential social services and to undertake productive pro-poor investments in many sectors of the economy. External debt overhang will discourage private foreign investment in non-oil sectors by reducing the expected after tax rate of return on capital. Sudan is still waiting to benefit from the Blair Committee Initiative and the HIPC strategy to reduce substantially or write off its external debt after signing peace agreement with SPLA/SPLM.

32- It was surprising to discover that the cost of Islamic (PLS-based) modes of finance in Sudan are not lower than the cost of traditional (interest-based) modes, although Islamic finance should be more conducive to social justice (because of risk-sharing) and could be more effective in the fight against poverty (because of no or limited collateral requirement). Further credit allocated to the commodity producing sectors was significantly reduced in the wake of financial liberalization. The problem of agricultural and industrial finance in Sudan ought to be addressed within a framework that takes account all the factors that affect performance of those sectors. In the light of the continued inability of banks in Sudan to mobilize savings during the reform, radical institutional and policy shifts are imperative for the Sudanese financial sector to provide wider and sustainable finance for poverty reduction, especially in the rural areas of the different states

33- Islamic microfinance programmes should be closely linked to other socio-economic institutions involved in poverty reduction, such as *zakat* and *awqaf* institutions. This will strengthen the resource base of MFIs and, at the same time, ensure that *zakat* and *awqaf* funds are more productively allocated and efficiently used to curb poverty. Helping micro-entrepreneurs, for example, to build productive capacities would eventually increase the resources available to *zakat* and *awqaf* institutions to help more poor families.

34- MF programmes should be incorporated in national poverty reduction strategies (or Poverty Reduction Strategy Papers, PRSP). Governments should give priority and effectively mobilize domestic support for these programmes, and encourage informal MF institutions to register and small borrowers to set-up their own MFIs. If necessary, the government may contribute to start-up capital or provide a one-time capital injection tied to specific activities or services, but on-going financial support to MFIs should only be provided through an apex institution on market-based terms and confined to well-established MFIs that have proven successful strategies.

35- Privatization in agriculture seems to have had significant negative consequences in Sudan, and has contributed to the aggravation of poverty. Part of the reason was the complete withdrawal of the federal state from agricultural schemes that, in most cases, were transferred entirely to resource-poor local governments or jointly to farmers and local governments. Agricultural productivity in a country like Sudan, with land abundance and labour supply constraints, calls for scale economies to be utilized. The local governments were not able to inject capital and keep up with required services to strengthen the performance of the privatized agricultural schemes, nor could the credit-constrained poor households in the rural sector create the conditions that would help them benefit from scale economies.

36- Privatization resulted in considerable workforce reduction. The lay-offs in the sample of companies examined in this report were between 20 and 60 per cent as of 2000 or 2001, in proportion to the employment levels at the time of privatization. In some cases, the conditions of work were changed to casual labour. A number of issues need to be highlighted in this context. When loss making and underperformance in public sector enterprises results from excessive employment, rationalization of the workforce without privatization should be the first option. When labour cuts are unavoidable, with or without privatization, then this should be carried out in a socially responsible way, involving arrangements to limit the number of workers affected and to reduce the severity of the outcomes of unemployment for those who are affected.

37- The lesson of the Sudanese privatization experience is that the failure is not so much due to the method of privatization (i.e. free transfer of ownership) but the lack of resources and capacity (e.g. resources for inputs, maintaining rural services and infrastructure, investment, managerial capacity) after the withdrawal of the federal state. No reform strategy can afford a complete retreat of the state from agriculture in a country with characteristics similar to Sudan's. The reform process involving the corporations and schemes in the agricultural sector must be re-examined and revised in detail according to the nature, scale and variety of activities (e.g. cultivation of cash crops vs. food crops, large scale vs. small scale, marketing, distribution, processing, support systems). The importance of resource/credit availability, as well as managerial and administrative capacity, should not be undermined.

38- SOEs that are established for various economic and social objectives, including direct or indirect poverty alleviation, should be treated separately both in view of the method of reform to be used in these enterprises (which may not necessarily involve privatization) and for the evaluation of their performance. Redistributive transfers (including subsidies and underpricing of output) often account for a large portion of SOE losses. Once the necessary transfers are determined on the basis of economic and social goals, two options are possible: In some cases, they may be met by direct budgetary outlays, or reimbursement of the public or private enterprises indirectly. In other cases, provision of such transfers by the SOEs directly may be more effective (e.g. it may reduce the transaction costs) or necessary (e.g. fiscal constraints of the government). When this is the case, a shadow accounting system should be used in addition to that detailing the real transactions, for the purposes of transparency and accountability of the public sector. The former should reflect the net financial and perhaps social contributions of the SOEs through transfers to the society.

39- Despite enjoying the highest rate of protection, the textile sector failed to meet expectations, mainly due to an inadequate supply of cotton. Leather tanneries could have played a major role in the creation of added value, but they fell victim to problems similar to those experienced by the textile industry.

40- The prospects for manufacturing industry in Sudan are likely to improve with the stimulus provided by the oil industry, and the easing of foreign exchange constraints. Although the liberalisation process failed to generate a dynamic of labour intensive activities in the sector, as predicted by the standard trade theory, the growth of the oil sector can play an instrumental role in the diversification of productive activities and development of other sectors through the provision of vital inputs (e.g. petroleum derivatives, energy supply). It is important that this opportunity is captured and utilized by further investment and expansion in the sector.

41- Close to 80 per cent of industrial activity was located in Khartoum and the Central regions (ILO, 1987; Comprehensive Industrial Survey, 2001). Lack of infrastructure in other regions (especially transport, telecommunications, water and electricity supply), as well as civil war and inappropriate policy choices were the main obstacle for a more balanced distribution of industrial activity. Intensifying efforts for political stability and higher investment in infrastructure to enhance regional integration are vital for moderating the uneven distribution of industry in Sudan

42- The current industrial policies in Sudan put an emphasis on the role of small- and micro-enterprises. Nevertheless, over-reliance on these enterprises may not be necessary for a country like Sudan in the long-run, given that it does not have a typical labour-surplus economy. Rather than using a model developed for labour-abundant economies as a blueprint for Sudan, considerations and efforts for achieving optimal factor intensities in production should be given prominence in Sudanese policy making for longer-term goals.

43- In the presence of severe supply constraints, acute capacity under-utilization has remained as a major issue in the manufacturing sector, irrespective of the trade regime. Capacity utilization in some sectors for some years was as low as 5 per cent. This problem was widespread in the recent years, as well.

44- Fertilizer should be regarded as a strategic commodity in Sudan, where the agricultural sector was given a prominent role for poverty reduction. If the private sector is not forthcoming to invest in the production of fertilizers, then the government should take the initiative. It should distance itself from the dogmatic stance that prohibits its involvement in productive activities of a strategic nature. Investment in this area can achieve a number of objectives: saving on the import bill; producing fertilizers at a relatively lower cost (given the availability of inputs from the domestic petroleum sector); creating employment; and enabling wider use of fertilizers in agriculture, (which should enhance the productivity and help reduce poverty).

45- Deterioration and fluctuations in the terms of trade of the agricultural exports is a source of instability. This, coupled with the fluctuations in agricultural output due to external factors, reduces the reliability of a strategy that is based mainly on agricultural development.

Diversification of production in the manufacturing sector is essential for economic development.

46- The present industrial policy gives priority to agro-processing industries, as did past policies. The policy framework, as outlined in the five- and 25-year strategy papers of the Ministry of Industry, is vague and unspecific in terms of the instruments to be used for industrial development. The emphasis on agro-processing industries, after three decades of experiment along similar lines, indicates a lack of vision in terms of the long-term aspirations of the country. Industrial policies should be determined by a strategic approach with a much longer-term view than what the current plans envision. It should determine medium- and long-term industrial priorities; the forms of supportive instruments and interventions with indicative limits for the scope, timescale and conditions of assistance, as well as the coordination of policy implementation.

47- Sector specific integrated industrial programmes can be developed on the basis of these studies for viable industries in the short to medium term, where some capacity and strong backward linkages already exist (e.g. textiles and clothing, food processing, leather and leather products, pharmaceuticals, fertilizers, chemicals, paper and printing). Similar programmes should also be designed for industries in which the country may aim to build a capacity in relatively longer term (e.g. further and deeper diversification into chemicals and petrochemicals, agricultural machinery).

48- During the post-peace era the country has to grapple with the issue of the sharing of wealth between the various regions. The Agreement on Wealth Sharing specifies a set of "guiding principles in respect to an equitable sharing of common wealth". For a lasting peace in Sudan, these principles should be invoked in the post-peace era, where two major poverty-related challenges should be addressed. The first has to do with sharing of wealth between the various regions of the country with the objective of reducing poverty by half by the year 2015, in alignment with the MDGs.

49- The second relates to the development of human resources. Both the quantity and the quality of the human capital need to be given a special priority. Vertical and horizontal inequalities in educational opportunities translate into persisting inequalities in wealth and income, and can become a constraint on long-term growth and even political stability. Moreover, high quality human capital is known to contribute to the technological capabilities of production structures.

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