

# SUDANREPORT

## External Debts, Growth and Peace in the Sudan Some Serious Challenges Facing the Country in the Post-Conflict Era

Medani Mohmed Ahmed

**SR 2008:1**



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# External Debts, Growth and Peace in the Sudan. Some Serious Challenges Facing the Country in the Post-Conflict Era

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## 1. Introduction<sup>1</sup>

Traditional studies<sup>2</sup> on the external debt problem have focused mainly on the development of the magnitude and trends of the external debt in the low-income countries (LICs) and have then been followed by other studies which have examined the debt burden indicators and severity of the debt problem. However, more recently scholars have concentrated on investigating the impact of the external debt stock and total debt service on growth, investment and public spending as well as service delivery in LICs. The debt overhang and crowding out hypotheses have become increasingly significant research topics. In what follows we will touch briefly on some of these current studies due to their relevance to this work.

Krugman (1988)<sup>3</sup> defined debt overhang as a situation where "the expected present value of future country transfer is less than the current face value of its debt". His debt overhang hypothesis instigated a number of works aiming to test its relevance against the experience of many low-income countries.

Imbs and Ranciere (2005)<sup>4</sup> found that most estimates of their regression models were supportive of the debt Laffer-Curve or at least a negatively sloped relation between debt and growth at high levels of indebtedness. On average, debt overhang occurs when the face value of debt reaches about 55-60% of the GDP or 140% of the exports. In such cases, the initial debt tends to be associated with subsequently low growth. Obstfeld and Rogoff (1996)<sup>5</sup> demonstrated that Krugman's debt overhang problem can be reformulated as a product of a two-period consumption-investment decision. Inherited liabilities have a debt overhang effect on investment. Also, debt forgiveness will increase investment as well as the present value of debt payments.

Piketty (1997)<sup>6</sup> explained that there might be situations where even a debt contract that elicits light effect on the borrower's part can in itself be suboptimal. In the Highly Indebted Poor Countries

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<sup>1</sup> This paper draws on our previous work: Medani M. Ahmed, "Sudan External Debts and the Millennium Development Goals", UNDP, Sudan, 2007. The author is grateful for UNDP's financial support to carry out research for the case of the Sudan within a worldwide project titled "MDG-Based Debt Sustainability" in October 2006.

<sup>2</sup> See Girling, R. (1985), "Multi-national Institutions and the Third World", New York.

See also Mullen, N. (1979) "Historical Perspectives on Developing Nations' Debt", in L.G.Frank and M.J.Seiber (eds.), "Developing Countries' Debt", New York.

See also Gupte, P. (1988), "The debt Bomb keeps Ticking," *The International Newsweek*, April 11, Clairmonte and John Cavangh,(1987), " Third World Debt Crisis Threatens a Collapse of World Trade and Finance Systems," International foundation for development alternatives, May-June, and Ngwenya, M.A.R. (1988), *The African Debt Crisis: "The Case of Limited Alternatives,"* in K.Fanya (ed.), "The Organization of African Unity 25 Years On", London.

<sup>3</sup> See Krugman, P. (1988) "Financing vs. Forgiving Debt Overhang," *Journal of Development Economics*, 29, 253-268.

<sup>4</sup> See Imbs and Ranciere (2005).

<sup>5</sup> Obstfeld, M. and K. Rogoff, (1996) *Foundation of International Economics*, MIT Press.

<sup>6</sup> See Piketty, T., (1997), "The Dynamics of Wealth Distribution and the Interest Rate with Credit Rationing ," *Review of Economic Studies*, 64: 173-189.

(HIPCs) and countries with weak institutions, signing debt contracts that give the borrower the incentives to repay become increasingly difficult. Velasco (1997)<sup>7</sup> showed that fragmentation of the fiscal authorities can create a tragedy which results in overspending and excessive debt accumulation.

Alesina and Tabellini (1989) demonstrated that governments in Low Income Countries with varying distributional goals and objectives often create fiscal uncertainty that generate capital flight, low investment and over-accumulation of external debts. Cohen (1993)<sup>8</sup> found that the level of the debt had no important effect on investments during the debt crisis of the early 1980s. However, the debt repayment correlated negatively with investment, suggesting a crowding out effect.

Warner (1992)<sup>9</sup> showed that some important determinants of investment (a combination of increasing interest rates and falling commodity prices), which were not related to debt, can offer a good explanation of the fall observed in HIPCs in the 1980s. Patillo, Poirson and Ricci (2002)<sup>10</sup> estimated the conditional correlation between debt and growth using the standard panel growth regressions and found evidence that debt became detrimental for growth in the HIPCs. Clements, Bhattacharya and Nguyen (2003)<sup>11</sup> estimated a quadratic relation between debt and growth in some low-income countries. They found that high levels of debt tended to crowd-out public investment.

This paper attempts to examine the impacts of the extent of the external debt problem and its sustainability on the government's efforts to reduce poverty and sustain growth and peace in the Sudan. It starts with defining the concepts of external debt and types of loans and then examines the details of the external debt profile, magnitude, composition and sources by creditors. It also lists the causes (both external and internal) of the debt problem in the Sudan. A major section of this paper is devoted to investigate the relationship between growth, debt and peace in the Sudan in order to generate some policy based recommendations to deal with the issues of poverty and growth in the country. The remaining sections discuss various issues pertaining to debt burden indicators, debt sustainability, the Sudan debt relief strategy for solving the problem of external debt in the 1980s, and the new borrowing and investment policies. The final section gives some conclusions and policy recommendations.

## 1.1 External Debt Definition

External debt is defined as all external obligations of a maturity of one year or more and outstanding at a particular point in time and are payable in terms of reserves currency or goods and services.

All countries have passed through different stages in their financial and economic history. They all started as net borrowers, became mature borrower, and then they occupied the position of new creditors. Finally they qualified as mature creditors. Each stage has been attained through accumulated changes in the size, scope and magnitude, performance and economic structure and institutional development. The performance of certain sectors has been used as indicators of each stage (see box 1).

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<sup>7</sup>See Velasco, (1997), "A Model of Endogenous Fiscal deficit and delayed Fiscal Reform," in *Fiscal Institutions and Fiscal Performance*, James Poterba and Jurgen Von Hagen (eds.), University of Chicago Press.

<sup>8</sup> Cohen, D. (1995), "Large External Debt and Slow Domestic Growth: A Theoretical Analysis," *Journal of Economic Dynamics and Control*, 19: 1141-1163.

<sup>9</sup> Warner, A. (1992), "Did the debt Crisis Cause the Investment Crisis?", *Quarterly Journal of Economics* 1161: 1186.

<sup>10</sup>See Clements, B., R.Bhattacharya and T.Q. Nguyen, (2003), "External debt, Public Investment and Growth in Low Income Countries," IMF Working Paper 03/249.

<sup>11</sup>Ibid.

The external debt is classified according to donors, whether they are official creditors or private donors; the official creditors could be multilateral (the World Bank, IMF, African Development Bank, etc) and/or bilateral (government to government lending). The donors could include private commercial banks and private money suppliers. The external debt could also be defined in terms of who shoulders the responsibility of repayment, whether public or private institutions.

**Box 1:**  
**A Country's Stages of Financial Development**

*1. Stage 1*

■ A Net Borrower

A net borrower Less Developed Country (LDC) needs more investment than can be supported by the low rate of its domestic savings

Domestic Saving < Foreign Saving and Exports of Goods and Services (XGS) < Imports of Goods and Services (MGS)

= Deficit in Trade Balance.

*2. Stage 2*

■ A Mature Borrower

When a country can pay for its imports and debt service with its export earnings, the nation is said to be a mature debtor nation and is in stage 2.

Exports (XGS) finances imports (MGS) + (Total Debt Services (TDS) XGS > MGS.

*3. Stage 3*

■ A New Creditor

When a nation's loans and investments abroad begin to exceed foreign loans and investment in the nation, it moves to stage 3 as a new creditor.

Return on investment abroad > Return on foreign investment at home.

*4. Stage 4*

■ A Mature Creditor

When a nation's XGS < MGS and the difference is covered from the interest and dividends received on its past loans and investments abroad it become a mature creditor.

## 2. Sudan Debt Profile

In the 1970s, the Sudan did not face any serious external indebtedness problems at all. The magnitude of the outstanding external debt was \$ 230.2 million in 1979, and it dropped to \$ 192 million in 1980 (a 16.6% rate of decrease). Then it rose slowly to \$ 212.2 million in 1981, and increased slightly to \$ 215 million in 1982 (still a drop of 6.6% of the 1979 level).

The decline in the external debt volume was caused, as we will argue later, by the rescheduling programs which the Sudan signed with its major creditors in the period 1978-1982. The magnitude of the total external debts and the corresponding debt indicators of the Sudan increased rapidly in the 1980s. According to the annual reports of the Bank of the Sudan, the volume of outstanding external debts amounted to \$10,028 million in 1986.

The majority of the debt came from official sources, namely multilateral and bilateral donors, and amounted to about \$ 7,869 million or 78.5% of the total debts, whereas the private donors accounted for 21.5% or \$ 2,159 million. The official debts belonged to multilateral and bilateral sources. The multilateral institutions (the World Bank, IMF, IDA and the Arab Monetary Fund) accounted for \$ 2,847 million, which constituted about 28.4% of the total debt obligations.

The bilateral debts accounted for \$ 5,022 million (about 50.1% of total), divided into two categories; the non-Paris Club Bilateral and Paris Club Bilateral. The non-Paris group debts were about \$ 2,857 million (28.5% of total), and Paris Club bilateral debt amounted to \$ 2,165 million (about 21.6% of total).

The stock of the external debts also includes private debts. The private debts are those debts which belong to private commercial banks and private credit suppliers). The foreign commercial banks' share of the total debts of the Sudan was \$ 1,915 million (19.1% of total), whereas the foreign suppliers share was \$ 244 million (about 2.4% of total).

Table 1 below shows the development of the stock of external debt for the period 1983-1990. It amounted to \$ 7,500 million in 1983, rose to \$ 9,644 million in 1986 (an increase of 28.6%), and reached a record high of \$ 11,825 million in 1990 (an increase of 22.6% between 1986 and 1990). The increase in the stock of the external debt was caused by an accumulation of the interest arrears as new debts had not been accrued since 1989 following the take over of the military government. Again, it is clear from the table that official long term debt has the biggest share in total debt stock. It amounted to \$ 6,028 million in 1983 (80.4%), dropped to \$ 7,174 million (about 74.4%) in 1986 and maintained the same ratio in 1990 when it amounted to \$ 8,743 million (about 73.9%).

**Table 1: Magnitude of Sudan's External Debts, 1983-1990 (in million US \$)**

Item/Year	1983	1984	1985	1986	1987	1988	1989	1990
Eternal Debt stock (EDT)	7500	8471	8978	9644	11388	11717	11591	11825
Long-Term Debt (DOD)	6028	6401	6812	7174	8429	8258	8710	8743
Short Term Debts	848	1472	1501	1630	2100	2644	2881	3082
Use of IMF Credit	624	598	665	740	859	815	0	0
Gross Disbursement (GD)	671	328	101	210	205	258	371	293
Total Debt Service (TDS)	247	189	172	257	95	216	214	221
Net Transfers (NT)	424	139	-71	-47	110	42	157	72
Net Flows (NF)	566	233	57	49	164	220	327	255
NCF	105	95	44	61	41	38	44	38

Source: World Bank, World Debt Tables, 1989

However, the classification of the external debts according to creditors shows some changes in the period 2001-2005 due to accumulation of principal and arrears of interest rates.

Table 2 illustrates the magnitude of the external debts and shows that the debts of multilateral institutions constituted about 18.7%, 17.4%, 17.1%, 17.3%, declined to 16.5% and then increased slightly to 16.8% for the years 2001, 2002, 2003, 2004, 2005 and 2006 respectively. The decline was caused by an agreement between the IMF and Sudan concerning payment of the outstanding arrears.

The country has yet to reach an agreement with the World Bank to start paying its accumulated obligations. This would pave the way for negotiations benefiting from the HIPC initiative to cancel the debts of the Highly Indebted Poor Countries that was launched by the IMF and the World Bank in 1996<sup>12</sup>. However, there are also other considerable political hurdles fuelled by the Darfur crisis which have handicapped the Sudan from benefiting from the HIPC Initiative.

On the one hand, with respect to the bilateral debt, especially Non-Paris club members constituted on average about 35.2% of total external debt whereas the Paris club members accounted for about 31.3% of the total debt in the same period. The debt of the commercial banks ranked number four in magnitude and amounted to 12.8% of the total, whereas the private suppliers had about an average of 3.3% of the total.

In other words, most of the external debts of the Sudan are owned by official creditors (multilateral and bilateral), constituting on average about 83.9% of the total debt stock. This is most likely going to make it much easier to reach a solution within the broad HIPC initiative, should the political requirements of solving the Darfur problem be successfully met in the near future. Still, the size of the non-Paris Club bilateral debt is very high, but the prospects of reaching a solution are good.

<sup>12</sup> The IMF has published with other institutions a number of reports with regards to the HIPCs, for instance, see International Monetary Fund and International Development Association (2006): "HIPC Initiative Statistical Update", International Monetary Fund and International Development Association (2005): "Operational Framework for Debt Sustainability Assessments in Low Income Countries – Further Considerations", International Monetary Fund and International Development Association (2004): "Debt Sustainability in Low Income Countries – Proposals for an Operational Framework and Policy Implications", and International Monetary Fund (1999): "Debt Relief for Low Income Countries – The HIPC Initiative".

**Table 2: Debt Classification According to Creditors (% Distribution)**

Item/Year	2001	2002	2003	2004	2005	Average 2001-2005	2006
Multilateral Institutions	18.7	17.4	17.1	17.3	16.5	17.4	16.8
Paris Club	29.5	29.9	33.1	32.5	31.6	31.3	31.6
Non-Paris Club	35.9	36.7	33.5	34.1	35.8	35.2	35.7
Commercial Banks	12.2	12.4	13.4	13.1	13.0	12.8	12.9
Foreign Suppliers	3.7	3.6	2.9	3.0	3.1	3.3	3.0
Total	100	100	100	100	100	100	100

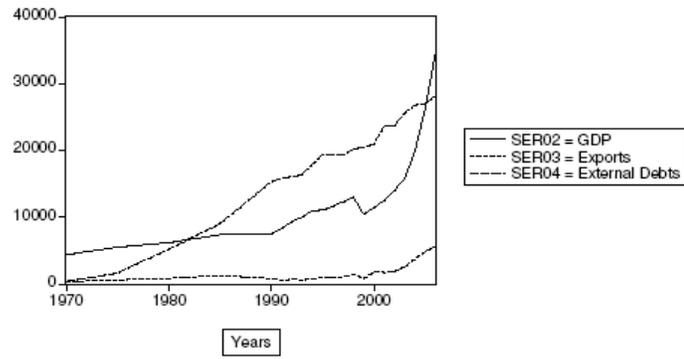
Source: Percentage ratios are calculated from data from the Central Bank of Sudan, External Debt Unit, and Annual Reports, 2006.

On the other hand, table 3 examines the magnitude of the external debts in the period 2001-2006 classified by the type of donor; multi-lateral, bi-lateral (Paris and non-Paris club donors) and private (commercial banks and private suppliers), and also classifies the debts in terms of category of obligation, the principal debts, interest and delayed interest.

For instance, the volume of the external debts increased sharply from \$ 20,798 million to \$ 23,608 million, \$ 25,710 million, \$ 26,823 million, \$ 27,005 million, and \$ 28,197 million in the years 2001, 2002, 2003, 2004, 2005, and 2006 respectively. The break down of the external debts in terms of category shows that the principal debts constituted about 51.5% in 2001, and declined to 45.4% in 2006 with an average of 48.1% in the period 2001-2006. The contracted interest value was 20.9% of the total debt volume in 2001, and this declined slightly to 20.3% in 2006 and maintained an average of 20.3% over the same period. However, the failure to repay interest obligations has continued to magnify the magnitude and size of the external debt for Sudan as the delayed interest constituted about 27.6% of total debt in 2001, and this increased steadily to 34.3% in 2006, with an average of 30.96% in the period 2001-2006. The high percent ratio of the delayed interest rate has become an added proof to the formidable problem the Sudan has concerning meeting its amounting debt obligations. Sudan would not have been able to repay these debt obligations from its own exports returns had it not opted to stop repaying its debt obligations in the early 1990s.

Figure 1 below depicts the development trends of GDP, exports and external debts in the Sudan in the period 1980-2006. It is clear that GDP growth has not been a rising trend (its shape is almost flat) in the period 1970-1990. GDP started to rise slowly between 1990 and 1998, but then dropped slightly but maintained a higher level than was the case before 1990. It then started to steadily increase until 2002, whereupon it increased sharply upwardly until 2006. The exports growth trend has been lower; it grew almost flatly and with no dramatic changes in the period 1970-1990, then it grew slightly at a lower level until 2000, and since then the trend has been a slow upward growth until 2006 because of the oil exports which have increased the value and trend of the Sudanese exports in the period 2000-2006.

Conversely, the external debts have shown a systematic increase and a steady upward trend for the whole period 1980-2006. The 1970s witnessed a slowly increasing trend of the debt stock, while the 1980s experienced a faster growth, and the 1990s maintained an even higher upward (but cyclical) trend until 2006. In sum, the external debt stock growth trend has been growing steadily upwards in comparison with both GDP and exports.



**Figure 1: Sudan's GDP, Exports and Debt Trends, 1980-2006**

**Table 3: Total External Debt 2001-2006 (in US \$ Million)**

<b>2001</b>				
Particular	Principal	Interest	Delay Interest	Total
Multilateral Institutions	2,831	823	241	3,895
Non- Paris Club	3,515	1,129	2,824	7,468
Paris Club	2,165	1,290	2,682	6,137
Commercial Banks	1,415	1,106	0	2,521
Foreign Suppliers	777	0	0	777
Total	10,703	4,348	5,747	20,798
<b>2002</b>				
Particular	Principal	Interest	Delay Interest	Total
Multilateral Institutions	2,926	923	261	4,110
Non- Paris Club	4,222	1,152	3,281	8,655
Paris Club	2,344	1,414	3,308	7,066
Commercial Banks	1,543	1,375	0	2,918
Foreign Suppliers	859	0	0	859
Total	11,894	4,864	6,850	23,608
<b>2003</b>				
Particular	Principal	Interest	Delay Interest	Total
Multilateral Institutions	3,094	1,032	267	4,393
Non-Paris Club	4,067	1,171	3,364	8,602
Paris Club	2,660	1,747	4,115	8,522
Commercial Banks	1,780	1,661	0	3,441
Foreign Suppliers	752	0	0	752
Total	12,353	5,611	7,746	25,710
<b>2004</b>				
Particular	Principal	Interest	Delay Interest	Total
Multilateral Institutions	3,218	1,134	288	4,640
Non-Paris Club	4,141	1,216	3,786	9,143
Paris Club	2,619	1,616	4,489	8,724
Commercial Banks	1,863	1,648	0	3,511
Foreign Suppliers	805	0	0	805
Total	12,646	5,614	8,563	26,823
<b>2005</b>				
Particular	Principal	Interest	Delay Interest	Total
Multilateral Institutions	3,086	1,094	281	4,461
Paris Club	2,525	1,568	4,437	8,530
Non-Paris Club	4,257	1,232	4,175	9,664
Commercial Banks	1,770	1,735	-	3,505
Foreign Suppliers	845	-	-	845
Total	12,483	5,629	8,893	27,005
<b>2006</b>				
Particular	Principal	Interest	Delay Interest	Total
Multilateral Institutions	3313	1127	298	4738
Paris Club	2373	5071	5071	8900
Non-Paris Club	4491	1255	4319	10065
Commercial Banks	1774	1874	000	3648
Foreign Suppliers	846	000	000	846
Total	12797	5712	9688	28197

Source: Annual Reports, Central Bank of Sudan, for respective years.

**Table 4: Composition of Sudan External Debts, 2001-2006 (in US \$ million)**

Year/ Item	Principal Debt	Interest payments	Delayed Interest payments	Total Debt
2001	10,703	4,348	5,747	20,798
2002	11,894	4,864	6,850	23,608
2003	12,353	5,611	7,746	25,710
2004	12,646	5,614	8,563	26,823
2005	12,483	5,629	8,893	27,005
2006	12797	5712	9688	28197
<b>Composition of Sudan External Debts, 2001-2006 (in %)</b>				
2001	51.5%	20.9%	27.6%	100%
2002	50.4%	20.6%	29.0%	100%
2003	48.0 %	21.80%	30.10%	100%
2004	47.2%	20.9%	31.9%	100%
2005	46.2%	20.9%	32.9%	100%
2006	45.4%	20.3%	34.3%	100%

Source: Calculated from table 12 which is based on data from the Central Bank of Sudan: Annual reports and External Debt Unit (EDU).

In the 1980s, the Sudan qualified as a severely indebted country based on the debt burden indicators outlined above in box 2. For example, the liquidity ratio which was about 19.6% in 1973, had increased sharply to 130.4% in 1984 and to 162.6% in 1985.

**Box 2:**  
**Debt Severity Indicators and Sustainability Thresholds.**  
**Severely Indebted Poor Country (SIPC) Indicators**

*Solvency or mortgage indicator*

- Debt/GDPx100 = 50% , (where GDP is Gross Domestic Product
- Dependency on foreign aid and loans indicator)
- Debt/XGSx100 = 275%, (where XGS is Exports of Goods and Services)
- TDS/XGSx100 = 30% (TDS = Total Debt Service)
- Interest/XGSx100 = 20%

HIPC Debt Sustainability Indicators:  
The indicators are used as thresholds for debt sustainability under HIPC

- Debt/GDP = 80%
- Debt/XGS = 150% OR
- NPV of External Debt/XGS = 150%, where NPV is Net Present Value
- Debt/Government Revenues or NPV of Debt/Government Revenues = 250%
- Government Revenues/GDP = 15%
- XGS/GDP = 30%.

The HIPC's debt sustainability thresholds are somewhat different from the debt severity definitions, where debt/GDP for the former equals 50% and for the later equals 80%. The debt/exports ratio was 275% for the SIPC's and 150% for the HIPC's. The HIPC's have also two other burden indicators; one for the debt/revenues which equals 150% and one for government revenues/GDP which equals 15%, and exports/GDP equalled 30% in 1984 and slightly fell to 805% in 1985, qualifying the Sudan as a member of the severely indebted countries according to the World Bank definition.

Likewise, another debt burden indicator, total debt service as a ratio of exported goods and services multiplied by 100 (TDS/XGS 100), showed that in 1973, the Sudan had a ratio of 11.6% (lower than the SIPC requirement) but this rapidly rose to 115% in 1984 and increased further to 202% in 1985. In other words, all the severity requirements of indebtedness for the Sudan were met in the 1980s (see table 5).

**Table 5: Sudan External Debt Indicators (values are in US \$ and indicators are in %)**

Year	GDP in \$m	TDS	XGS	EDT	EDT/XGS	TDS/XGS	EDT/GDP
1970	4,367.45	14.8	343.19	385	112%	4.31%	9.0%
1975	5,501.25	11.76	580.29	1,599	276%	2.03%	29.0%
1980	6,184.15	16.39	805.99	5,177	642%	2.03%	84.0%
1985	7,365.56	18	1,256.96	9,034	719%	1.40%	123%
1990	7,434.44	73.2	790.4	15,303	1936%	9.30%	206%
1991	8,274.44	25.2	506.4	15,834	3127%	5.00%	191%
1992	9,294.44	23.3	707.9	16,085	2272%	3.30%	173%
1993	10,002.22	20	572.3	16,321	2852%	3.50%	163%
1994	10,944.44	23.8	734.9	18,002	2450%	3.20%	164%
1995	11,074.44	57.9	1,053.40	19,355	1837%	5.50%	175%
1996	11,595.56	43.5	913.2	19,451	2130%	4.80%	168%
1997	12,301.11	63.7	1,082.20	19,357	1789%	5.90%	157%
1998	13,033.33	67.18	1,357.10	20,194	1488%	5.00%	155%
1999	10,452.00	68.75	780.1	20,521	1631%	8.80%	196%
2000	11,399.00	135.84	1,806.70	20,994	1162%	7.50%	184%
2001	12,520.00	105.18	1,698.70	23,608	1390%	6.20%	189%
2002	13,987.00	87.77	1,949.10	23,608	1211%	4.50%	169%
2003	15,735.00	185.23	2,542.20	25,704	1244%	7.30%	151%
2004	20,000.00	343.3	3,777.75	26,823	710%	9.10%	134%
2005	26418.4.0		4,824.30	27,005	559.8%		102.2%
2006	34763.30		5656.6	28197	498.5%		81.1%

Source: Ministry of Finance and National Economy and Bank of Sudan: Annual Reports for respective years.

The 1990s witnessed some major changes in the Sudan's debt profile. There were no agreements on debt relief and debt rescheduling programs. The decade has seen a huge accumulation of debt servicing arrears, resulting in substantial amounts of indebtedness.

The amount of total external debt outstanding was \$ 15,303 million in 1990, increasing to \$ 19,355 million in 1995 – an increase rate of 26.5%. It rose further to a record high of \$ 21,194 million in 2000 (an increase rate of 38.5). In 2005, the magnitude of the external debts reached \$ 27,300 million, amounting to an increase rate of 78.4% compared to the 1990 figure (see table 5).

There were a number of factors that caused this debt accumulation. The sharp falls in net resource transfer (new borrowing plus scheduling minus total debt service (principal plus interest)), accumulation of debt, and interest arrears have all led to the rapid build up of the debt stock and the sharp decline in net resource transfers to the country. The main cause of reverse transfers seems to have been the increase in total debt services payments.

Also, the total debt service for the Sudan became heavier because debt obligations due to multilateral institutions are not subject to debt relief operations, and had to be met on schedule. The terms of trade for the Sudan deteriorated further and the country continued to suffer from persistent imbalance of trade, and deficit in the balance of payment resulting in widening external gaps which led to mounting internal deficits.

Thus, the rising debt burden indicators reflect a combination of external and internal factors. The growing volume of debt, the rising interest rates and the accumulation of their arrears as well as the low economic performance of the economy in the 1980s and good part of the 1990s were the most important among these factors. The result of those factors has been widespread poverty and more serious structural weaknesses in the Sudanese economy.

### 3. Domestic Causes of Indebtedness

Sudan has been suffering from economic underdevelopment and an inability to sustain a reasonable rate of economic growth especially in the 1970s and 1980s. Underdevelopment is visible in the structural imbalance between sectors, unevenness of productivity between various sectors of the economy, dominance from outside, and rigidities in the production structures. Dependence on export of a few primary and raw material products between 1956-1998 (namely agricultural products such as cotton, sesame, groundnuts, livestock, sugar, oils seeds, gum Arabic), meant that a small size of revenues would be generated from the exports which in addition have been unstable and vulnerable. In 1999 Sudan started exporting oil products and the situation of revenue generation has improved. The demand for financing of development and services delivery has been substantial and will continue to be so for some time as long as the resource-spending gap persist in the future.

Reliance on foreign aid and finance and the use of such finances in low-yielding projects reflects a serious institutional incapacity to plan and execute development projects. Poor design, planning, execution and supervision of projects financed by foreign loans have all frustrated loans and ended up in wasting resources and in accumulating debts

Mismanagement of debt and lack of coordination between institutions dealing with external debts have complicated debt documentation and effective management. In 2000 the Central Bank of the Sudan (CBS) was able to create an External Debt Unit (EDU) which is now functioning and dealing with information on external debts. Before the EDU there was no single institution specializing in debt documentation, supervision and follow-up, and debt management.

The Sudan has suffered greatly from a low level of domestic resource mobilization due to lack of appropriate incentives to encourage savings. It is dependent on tax-revenues, especially indirect taxes, which have overburdened the poor and accentuated poverty. Lack of domestic resources to finance recurrent and development spending forced the country to resort to foreign borrowing and aid to fill in the resource gap.

Sudan adopted inefficient and inappropriate exchange rate policies (overvalued exchange rate) during the 1970s and 1980s, which led to distorted factor and commodity prices, discouraged exports and led to import-reliance and further retarded domestic production. On the other hand, reliance on deficit financing of recurrent and development spending has produced high inflationary pressures which amounted to 44.6% in 1990 and climbed to a record high of 130.3% in 1996. In 1997, it dropped to 46.5%, and to 16.1% in 1999 before it was reduced to single digit in 2000. The result of these policies was discouraged economic growth, and a deterioration of the economic condition of the fixed income groups and the poor segments of the population. It also led to capital flight, a disincentive to foreign direct investment and a devaluation of scarce assets.

Sudan's capacity to negotiate with donors, international organizations and private investors on issues relating to investment, loans and aid has reduced its economic gains has been inadequate and deprived it of soft borrowings and resulted in accentuation of indebtedness.

The shortage in domestic savings and the inability to attract productive foreign investment due to a hostile investment environment have not encouraged economic growth and have resulted in deteriorating economic conditions and thus exacerbated the pressure to depend on foreign finance and aid.

Budgetary and foreign sector imbalances and deficits in the 1970s have pressured Sudan to seek foreign aid at any cost in order to finance critically needed current expenditures, which were mostly being unproductive.

Reliance on heavy taxation of exported sectors and productive sectors and people have discouraged productiveness and increased cost of production and retarded potential gains from foreign trade. As a result gaining foreign resources has been limited and the need for borrowing has not diminished in magnitude and level.

With the drying out of concessional lending, the country resorted to hard terms of loans (with short maturity and grace periods and higher interest rates), which accentuated further its indebtedness. This has been the norm in many African countries, not just in the Sudan, as soft borrowing has not been available. Debt incurred on non-concessional conditions increased from 55% of the total long-term debt in 1975 to 65% in 1985; as Ngwenya argued it was a sign of hardening of terms of borrowing in the 1970s and 1980s. Concessional loans (credits) from all sources have declined from 44% to 34% between 1975 and 1982 and rose slightly again to 35% in 1985.<sup>13</sup>

Declining productivity in productive sectors due to the use of relatively backward technology and inefficient methods of production and management, and falling price of exports, have deteriorated the balance of trade and the balance of payments and also deteriorated external balance and pressured the Sudan to resort to borrowing and aid from abroad.

The 1980s have seen a continuation of the costly war in the southern region of the Sudan which has continued to drain scarce resources and to handicap development efforts.

The country was also plagued by a series of droughts and desertification waves which affected people and livestock badly in the more ecologically sensitive areas (semi-desert and poor savannah regions). Traditional production and social systems were severely affected and famines and starvation occurred and people were compelled to migrate in massive numbers to the urban cities. The traditional production systems further deteriorated with loss of labor force and because food security systems in the rural areas collapsed and urban centres were overburdened by displaced people who competed with urban residents over limited social services. This also brought about a deterioration of social, economic and security conditions.

The drought and desertification were not restricted to the Sudan but also affected most of the people in the Horn of Africa, leading to massive influxes of refugees into the Sudan. The influx of the refugees from neighbouring countries impacted adversely on the social and economic environment of the country. The increased demand for resources, both local and foreign, forced the country to continue borrowing from abroad, sometimes at very high rates of interest.

The 1970s and 1980s witnessed unstable economic policies, ill-conceived plans, expensive, unviable and poorly executed and managed projects. As a result, scarce resources were wasted, economic opportunities were lost and external debts were accumulated.

The country has been suffering from negligence of maintenance and repairs, something which deteriorated capital stocks and machinery and damaged infrastructure projects and socially essential services and reduced the country's capacity to generate its own resources from productive activities and made it dependent on foreign aid and loans carrying tough terms of borrowing.

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<sup>13</sup> Ngwenya, M.A.R., "The African Debt Crisis: The Case of Limited alternatives," in K. Fanya (ed.) *The Organization of African Unity 25 Years On*. London, 1988.

### 3.1 External Causes of Indebtedness

The period 1973-1982 witnessed two oil price shocks that created huge temporary savings in oil producing countries and petrol-dollar surpluses in many western banks, which recycled it to less-developed countries (LDCs). The real price of oil more than doubled from 1978 to 1981, sometimes amounting to its level in 1973. Both official and private lending grew tremendously, where the medium and long term debt of LDCs rose from about \$ 140 billion in 1974 to about \$ 560 billion in 1983.

The decade of 1972-1982 witnessed substantial increase in capital flows from the big commercial banks to LDCs. The profits of the seven biggest US banks rose from 22% in 1972 to 60% in 1982.<sup>14</sup> The 1980s period was also characterized by higher real interest rates. The decade witnessed an adoption of anti-inflationary policies in the Advanced Developed Countries (ADCs) which led to rapid rise in the nominal interest rates which created substantial debt servicing obligations to the LDCs. The high nominal interest rates were caused by the fear that inflation would come back.

Falling exports earnings for LDCs was caused by lower price of exports due to bad terms of trade and declining demand for imports in Advanced Developed Countries. The lower export prices and higher interest rates led to mounting real costs of old and new debts. Those factors triggered the Mexican debt crisis in August 1982, which eroded confidence in the credit worthiness of many LDCs leading to halting of voluntary lending to LDCs.

The period after 1982 witnessed rapid falling in savings surpluses of the oil rich countries and in surpluses of commercial banks and monetary institutions, coupled with rapid deterioration of the US saving-investment balance followed by a policy to mass up a bigger share of the world's savings. This made official, concessional and soft lending to LDCs to come to a stand-still.

The world economy in the 1980s witnessed sharp a recession, high rates of interest, declining real commodity prices, high volatility of exchange rates and almost collapse of voluntary private lending to LDCs. The US interest rate doubled from the autumn of 1979 and remained high through the 1980s, adding billions of dollars to the stock of external debts of LDCs.

Most indebted countries in the third world have been affected adversely by the sharp rise in the real interest rates and the decline in commercial bank lending which faced formidable challenges in financing their investment to generate growth. According to the World Bank the severely indebted LDCs used to receive about 2% of GNP a year in resources from abroad, and since the debt crisis of 1982, they have transferred about 3% of GNP in the opposite direction. Their domestic savings would have had to rise by 5% of GNP to offset this change in net transfers.<sup>15</sup>

Thus, the debt crisis of the LDCs became a growth crisis from 1982. Many severely indebted countries in Africa have experienced a sharp decline in savings and investment level in the 1980s. The decline in savings was caused by fiscal deficits which persisted in the 1980s. The low rates of savings and investment caused slower growth rates and in the face of growing population pressures, per capita income level deteriorated and made poverty widespread.

The failure to repay total debt service made many indebted countries resort to more external borrowing just to service their accumulated debts. Since 1979, about 70%-80% of the new loans to many bigger debtors have gone into paying interest rates on old loans.<sup>16</sup>

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<sup>14</sup> See Clairmonte and John Cavangh, "Third World debt Crisis Threatens a Collapse of World trade and Finance Systems." International foundation for Development Alternatives, May-June, 1987.

<sup>15</sup> World Bank Report, 1989.

<sup>16</sup> Op.cit. 1987.

The mounting debt problems for LDCs and their corresponding declining economic performance forced them to accept tough economic stability and rehabilitation programs imposed by the IMF and the World Bank in the 1980s and after. Those conditionality programs which were initially designed to make LDCs pay their debts were coupled with policies to boost the volume of their primary goods' exports.

Sharp increase in the prices of energy, capital goods and other imports have increased the imports bill and led to a deficit in the balance of trade and a deficit in the balance of payments, and increased cost of production which has made locally produced products less competitive thus further deteriorating the terms of trade. Import-dependent local produce was affected negatively as the country was not able finance costly imports.

## 4. External Debt, Sustainable Growth and Peace in the Sudan

### 4.1 Introducing the Growth Model

A Per Capita Income-growth model (PCI) is used as a proxy of growth and development in low-income countries, and has been developed by Clements and others and published in a seminal paper by the Working Paper Series of the IMF<sup>17</sup>. The model is adjusted to reflect the data availability and reliability and also to adapt the economic situation in the Sudan. Some variables defined in the original model are not used here, namely terms of trade, and secondary school enrolment ratios.

The adjusted model takes Per Capita Income, measured in constant prices, as a measure of economic development and growth as used by many previous studies in the world. Despite the limitedness of the PCI concept as a reliable measure of development and growth it is still operationally used for international comparison for economic achievement indicators across different countries in the world. We also attempt to use growth rate of GDP as a dependent variable in a number of equations but the regression results are very weak for all explanatory variables and show an enormous problem of serial correlation and illogical values for a number of coefficients. Therefore we have followed the tradition of using PCI as a proxy for development and economic growth.

As we mentioned above, some variables denoting the terms of trade and urbanization used in the original IMF paper were dropped for the case of the Sudan as some previous research has shown their insignificant effect on the growth of the economy, and also due to shortages and unreliability of Sudanese data for these variables.

The original model used a lagged per capita income as an explanatory variable, as in the standard Barro growth model<sup>18</sup>, to test for convergence across countries over time to arrive at a common level of real per capita income. Since we are not comparing the case of the Sudan with other countries we opted to drop it from the equation and we substituted it by using other variables as we will explain below in the description of the model.

### 4.2. Description of the Adjusted Model and its Data

The adjusted model that we have used has more variables than those used in the original model. The new added variables include revenues, expenditures, money supply, and agriculture, population rate of growth, investment and services. Some of these explanatory variables are used in all equations (equations 1, 2, 3, 4, and 5), like expenditures, money supply, and openness, total debt service, external debt volume and population growth rates. Other variables, namely investment and services are only used in the fifth equations with figures expressed in % of GDP and not transformed into log values. The dropping of some few variables from the original model was dictated by lack of data, irrelevance to the Sudanese case and/or that they have proven to be insignificant in determining growth of per capita income in previous studies. The adjusted model for estimation of the factors influencing growth of per capita income is then outlined below.

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<sup>17</sup> See Benedict Clements, Rina Bhattacharya, and Toan Quoc Nguyen, (2003), "External Debt, Public investment and growth in Low-Income countries," IMF working Paper, WP/03/249.

<sup>18</sup> See Barro, R., and X. Sala-I-Martin, (1995), *Economic Growth*, MIT Press.

$$PCI_{it} = \alpha_0 + \alpha_1 RV_{it} + \alpha_2 EXP_{it} + \alpha_3 MS_{it} + \alpha_4 OPN_{it} + \alpha_5 TDS_{it} + \alpha_6 ED_{it} + \alpha_7 AG_{it} + \alpha_8 PGR_{it} + \alpha_9 IV_{it} + \alpha_{10} SV_{it} + \alpha_{11} \mu_{it} \quad (1)$$

Where

**PCI = real per capita income** (GDP per capita, measured in constant Sudanese pounds), this is the dependent variable and used to denote the development of the economy and growth in the per capita income.

The independent variables are defined below.

**RV = revenues as % of GDP.** The original model did not use revenues as a separate independent variable but used the balance between expenditures and revenues to control for the impact of fiscal balances on growth.

Here the government fiscal policy is represented by two variables, the expenditures and revenues as ratios of the GDP.

The revenue variable is very important and reflects the ability of the country to generate resources for service delivery and development. It is in fact greatly dependent on growth per capita income as most direct taxes and indirect taxes are generated from income or indirectly from it through consumption.

**EXP = government expenditure as % of GDP.** The government expenditures item is an important independent variable showing the impact of government spending on service delivery and development.<sup>19</sup>

The governments in Sudan, since the independence in 1956, have been using public spending as a major source of funding economic activity and public investment in the face of declining sources of foreign finance due to political or purely economic factors. For instance, the Sudan was unable to repay its enormous debt obligations by the end of the 1980s and its relations with its major multilateral, bilateral and private creditors deteriorated greatly culminating in the complete halting of foreign lending and aid. It is also important to mention that after the military coup in 1989 the US and major western countries stopped aid and stepped up political and economic pressures on the Sudan. In sum, the bad relations with multilateral institutions and other donors coupled with US economic sanctions have all dried up foreign aid to Sudan and deprived it from benefiting from the IMF-World Bank led HIPC's Initiatives<sup>20</sup>.

As a result, dependency on deficit financing and the use of local resources to finance current and development spending and activities have increasingly become an unavoidable fiscal and economic choice. On the other hand, the use of revenues as an independent variable reflects the need to capture the impact of local finance on development and growth of per capita income in the Sudan.

**MS = money supply as % of GDP.** We have also included the ratio of money supply to GDP (MS/GDP) as a measure of financial depth indicating the extent to which the monetary sectors are contributing to the development and growth of the economy. Ibrahim Al-Badawi used this measure as an independent variable to measure its effect on growth in the economy<sup>21</sup>.

<sup>19</sup> See Medani M Ahmed, R.B, and Michael Bell, "An analysis of Fiscal policy in the Sudan: A Pro-Poor Perspective." Paper submitted to the UNDP and World Bank, 2005.

<sup>20</sup> See Medani M Ahmed, "Sudan External Debts and Millennium Development Goals (MDGs)". Paper submitted to the UNDP, Khartoum 2007.

<sup>21</sup> See Ibrahim Al-Badawi (year?)

**OPN = openness indicator (exports + imports as a share of GDP).** The data for this variable is quite available and reliable and have been obtained from the Central Bank of Sudan's Annual Reports for the period 1980-2006.

The openness indicator takes account of the substantial literature arguing that economies that are more open to trade enjoy higher long-term rates of growth of per capita real income (see Sachs and Warner 1995)<sup>22</sup>.

**TDS = total debt service in percent of GDP.** Data for total debt services in the Sudan is found in the functional classification of government expenditures tables published in the Annual Reports of the Central Bank of the Sudan. The data is not detailed enough to show the reader if it includes both internal and external debts. However, after interviewing some people in the Ministry of Finance and National Economy, it became clear that the data has been assigned to service foreign debt obligations. On the other hand, one must admit that data for the internal debt is very difficult to collect since it is scattered in many departments and not at all very well documented. Conversely, the data for total debt service obligations as well as total external debt stock is organized and well documented by the External Debt Unit (EDU) of the Central Bank of the Sudan.

We used Total Debt Services (TDS) and External Debt stock (ED) as % of GDP to distinguish between debt overhang and the crowding out effect in our adjusted model.

**ED = External Debt as % of GDP.** Data for external debt stock, as shown in the first part of this paper, is quite available and reliable and found at the External Debt Unit of the Central Bank of the Sudan.

**AG = agriculture % share in GDP.**

The adjusted model has unlike the original model attempted to use the % share of agricultural sector in GDP as indicator of the contribution of the productive investment. The agricultural sector is the most important sector in the records of development and growth of the Sudanese economy. The agricultural sector is the backbone of the economy where historically most incomes and livelihood of the majority of the population as well as investment resided. On average not less than 45% of GDP has been derived from agricultural sub-sectors and activities in the last five decades. It is interesting to observe, as the agriculture has declined in the last decade, poverty incidence, depth and severity have become widespread in the Sudan as pointed out recently in a number of studies<sup>23</sup>.

Data on investment in Sudan is scant and unreliable and varying from one source to the other. Therefore, it is safe to use data on one important productive sector like agriculture or services to give us some sense of what is really happening in the economy. Also these sectors are good proxies of rural and urban incomes, employment and investment.

**PGR = Population Growth Rate (%).** The value of PGR is measured in percent. Sudan has been using the data of the last 1993 population census due to failure to conduct a population census in 2003 due to the Southern Sudan conflict. Therefore population data should be used with care and less confidence as its reliability and representativeness of the reality are very low.

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<sup>22</sup> Sachs, Jeffrey, and Andrew Warner,(1995), "Economic reform and the process of Global Integration," Brookings Papers on economic Activity, No.1,pp1-118.

<sup>23</sup> See Ali, A.A.G.(1994),*Structural Adjustment Programs and Poverty in the Sudan*, Arab Research Center, Cairo, Egypt(in Arabic). Also see El Tahir Mohamed Nur, (1997), *Welfare Distribution and Relative Poverty in Sudan 1992*, UNDP/ILO, Khartoum.. See Mahran, H.A.(2006)," Public Policy and Poverty Reduction in the Sudan, 1971-2002." Department of Economics, University of Gezira, Sudan (Unpublished). See Khan, A.U, (2005) "Agricultural Development and Rural Poverty in the Sudan, in UNDP : Macroeconomic Policies for Poverty Reduction in the Sudan, Khartoum, Sudan.

**IV = gross domestic investment in percent of GDP.** Also data for gross investment is quite controversial as official data differs from international institutions' data. The performance of investment as an independent variable in the last equation 5 in this study behaves badly and unexpectedly as it has a negative coefficient and its influence on PCI is negative, contrary to the expectations that investments would have a positive effect on growth rate of PCI. This sheds light on the unreliability of investment data as we mentioned.

**SV = Services (both government and private sector services) % ratio of the GDP.** The service sectors' contribution to the GDP is second to the agriculture sector in the Sudan. Within the service sectors, private services contribute the biggest share of all services in GDP. Finally the model has an error term defined by the letter  $\mu_{it}$  which is the usual error term.

**It is also to be noted that the subscript ( $i$ ),** for the main explanatory variables, refers to country (which in this case refers to the Sudan) and time period, respectively.

### 4.3 Data of the Adjusted Growth Model

We mentioned in the previous section that due to severe shortages of data and irrelevance of some independent variables used in the original model we have adapted and adjusted the model to fit the Sudan. We also have included some other independent variables that we think are directly influencing the growth of per capita income and development in the Sudan. The dependent variable of the regression model is indicated by real per capita income growth measured in constant 1980/81 prices for the period 1980-2006 and denoted by the term PCI. The data for all these variables was obtained from the Central Bureau of Statistics and also from the Annual Reports of the Central Bank of Sudan (see table 6).

**Table 6: Growth Determinants and External Debt Impact (1980-2006)**

<b>PCI (cons)</b>	<b>EXP%GDP</b>	<b>MS%GDP</b>	<b>Openness</b>	<b>TDS%GDP</b>	<b>ED%GDP</b>	<b>Agri%GDP</b>	<b>GRGDP</b>	<b>PGR</b>
331.4	21.70%	29.00%	19.50%	0.87%	84.00%	<b>36.60%</b>	.0.34%	2.57
355	25.80%	29.30%	15.40%	1.96%	69.20%	<b>34%</b>	3.60%	2.57
362	24.70%	33.80%	22.80%	1.59%	114.90%	<b>35%</b>	-4.60%	2.57
331.3	27.90%	33.10%	32.30%	2.18%	200.80%	<b>29.60%</b>	-1%	2.57
289.4	17.50%	42.10%	37.60%	2.40%	138%	<b>28.20%</b>	-1.70%	2.88
292.5	18.40%	41.60%	33.90%	5.97%	102.30%	<b>35.50%</b>	-6%	2.88
418.3	19.70%	43.90%	25.90%	1.49%	77.30%	<b>34.60%</b>	3%	2.88
352.6	18.90%	29.30%	42.90%	0.80%	122.40%	<b>30.80%</b>	-3.90%	2.88
346.7	13.80%	24.40%	48.70%	1.18%	78.50%	<b>36%</b>	5.60%	2.88
268.8	9.50%	26.20%	44.40%	5.20%	63%	<b>30.30%</b>	-2.30%	2.88
207	15.90%	20.90%	113%	3.10%	191%	<b>28.70%</b>	1.20%	2.88
200.7	13.30%	24.20%	12%	1.20%	173%	<b>38.10%</b>	11.30%	2.88
217.9	10.10%	19.20%	11%	9.50%	163%	<b>40%</b>	12.30%	2.7
193.7	13.60%	17.10%	11%	0.57%	164%	<b>41.10%</b>	7.60%	2.7
239.3	9.10%	16.40%	15%	0.30%	175%	<b>43%</b>	9.40%	2.7
268.7	8.90%	17.10%	15%	5.90%	168%	<b>45%</b>	4.70%	2.7
232.2	8.00%	11.40%	18%	5.80%	157%	<b>47.60%</b>	6.10%	2.7
262.3	8.80%	9.90%	18%	7.40%	155%	<b>48.70%</b>	6%	2.7
269.8	9.30%	10.40%	18%	8.30%	196%	<b>49.80%</b>	6%	2.63
303.4	11.90%	10.50%	21%	1.40%	184%	<b>46.40%</b>	8.30%	2.63
339.8	12.40%	11.70%	29%	1.00%	189%	<b>45.50%</b>	6.40%	2.63
355.3	13.40%	12.80%	32%	7.50%	169%	<b>46%</b>	6.50%	2.63
479.9	16.50%	14.5%	31%	1.30%	151%	<b>45.60%</b>	6.10%	2.63
502.5	22.50%	16.5%	34%	3.40%	134%	<b>44.50%</b>	7.20%	2.53
538.1	22.2%	19.6%	44%	4.30%	102.20%	<b>38.60%</b>	8.30%	2.53
469.5	24.20%	23.70%	39.50%	6.20%	81.10%	<b>39.20%</b>	9.30%	2.53

Source: own calculations of data obtained from the Central Bank of the Sudan: Annual reports and from the Central Bureau of Statistics, for respective years.

As is evident from the table and from our description of the model, the independent variables used in our adjusted model are the following ten: Revenues as % of GDP, Expenditures as % ratio of GDP, Money Supply as % ratio of GDP, Openness as % ratio of GDP, TDS as % ratio of GDP, External Debt Stock as % ratio of GDP, Agriculture % share in GDP, Population Growth Rate, Investment as % of GDP and Services as % of GDP. The first eight independent variables are used in equations 1-4, with time series data covering the period 1980-2006 (26 observations), whereas equation 5 has included all ten independent variables for the period 1980-1999 (about 19 observations). The details of the variables used to estimate the model equations are given below.

Equation 1 included eight of the ten independent variables mentioned above, whereas in the second equation 2 we dropped revenues as an independent variable used in equation 1 and we were satisfied with the use of expenditures as % ratio of DGP. The government expenditures variable is a constituent component of GDP and demonstrates the impact of the use of public resources in service delivery and development in the country. Although the ratio has not exceeded more than 23% of GDP in 2006, it has a very significant influence on the private sectors and all other economic sectors and as well on investment (see equations 1 and 2).

### Regression 1

Dependent Variable: SER01=PCI				
Method: Least Squares				
Included observations: 26 (1980-2006).				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
(1) Revenues % GDP	0.083202	0.160795	0.517444	0.6115
(2) Expenditures % GDP	0.192677	0.254799	0.756192	0.4599
(3) Money supply % GDP	0.328815	0.223439	1.471609	0.1594
(4) Openness (XGS+MGS) % GDP	0.309467	0.085833	3.605474	0.0022
(5) TDS % GDP	-0.020371	0.028118	-0.724508	0.4786
(6) External Debt % GDP	-0.205699	0.110580	-1.860188	0.0802
(7) Agriculture 5 GDP	1.468802	0.412506	3.560685	0.0024
(8) Population Growth Rate (%)	-1.662250	1.262481	-1.316654	0.2054
C	1.130042	2.042163	0.553355	0.5872
R-squared	0.824205	Mean dependent var		2.493077
Adjusted R-squared	0.741479	S.D. dependent var		0.124186
S.E. of regression	0.063142	Akaike info criterion		-2.419425
Sum squared residual	0.067778	Schwarz criterion		-1.983930
Log likelihood	40.45253	F-statistic		9.962970
Durbin-Watson stat	2.171392	Prob (F-statistic)		0.000044

Notes: Figures are in log values

Dependent variable= PCI

Independent variables =8 (revenues, expenditures, money supply, openness, TDS, External debts, agricultures, population growth rate).

## Regression 2

Dependent Variable: PCI				
Method: Least Squares				
Included observations: 26 (1980-2006)				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
(1) Expenditures % GDP	0.274942	0.195022	1.409797	0.1756
(2) Money Supply % GDP	0.303120	0.213374	1.420604	0.1725
(3) Openness (exports + imports)/GDP %	0.311048	0.084015	3.702285	0.0016
(4) (TDS) Total Debt Service	-0.019324	0.027468	-0.703518	0.4907
(5) External Debt % GDP	-0.222687	0.103424	-2.153150	0.0451
(6) Agriculture share %GDP	1.492193	0.401595	3.715667	0.0016
(7) Population Growth Rate	-1.737411	1.228324	-1.414457	0.1743
C	0.995893	1.984010	0.501960	0.6218
R-squared	0.821437	Mean dependent var		2.493077
Adjusted R-squared	0.751995	S.D. dependent var		0.124186
S.E. of regression	0.061845	Akaike info criterion		-2.480721
Sum squared residual	0.068846	Schwarz criterion		-2.093614
Log likelihood	40.24937	F-statistic		11.82922
Durbin-Watson stat	2.200570	Prob (F-statistic)		0.000014

Notes: Figures are in log values.

Dependent variable= Per Capita Income (PCI).

Independent variables =7 (expenditures, money supply, openness, TDS, External debts, agricultures, population growth rate).

In equation 3 we further dropped population growth rate as its data is basically projected from 1993 census and does not reflect the actual demographic situation in the country. Since the population growth rates used here have constant values (did not vary over time), their impact on growth has been fairly consistent and stable in all equations. Thus, equation 3 includes all variables except revenues and population growth rate (see equation 3).

### Regression 3

Dependent Variable: PCI				
Method: Least Squares				
Included observations: 26 (1980-2006).				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
(1) Expenditures % GDP	0.507440	0.107682	4.712403	0.0002
(2) Money Supply % GDP	0.119541	0.173765	0.687945	0.4998
(3) Openness = (exports + imports)/GDP	0.252107	0.074849	3.368197	0.0032
(4) TDS % GDP	-0.008943	0.027158	-0.329289	0.7455
(5) External Debt % GDP	-0.251885	0.103977	-2.422503	0.0256
(6) Agriculture % GDP	1.498718	0.412007	3.637600	0.0018
C	3.775356	0.280823	13.44392	0.0000
R-squared	0.801589	Mean dependent var		2.493077
Adjusted R-squared	0.738933	S.D. dependent var		0.124186
S.E. of regression	0.063452	Akaike info criterion		-2.452249
Sum squared residual	0.076498	Schwarz criterion		-2.113531
Log likelihood	38.87924	F-statistic		12.79351
Durbin-Watson stat	2.325813	Prob (F-statistic)		0.000009

Figures are in log values.

Dependent variable = Per Capita Income (PCI).

Independent variables = 6 (Expenditures, Money Supply, Openness, TDS, External Debts, Agricultures).

Equation 4 includes eight of the ten independent variables, excluding investment as % of GDP and services as % of GDP, similar to equation 1. The difference between equation 1 and 4 is that equation 1 data is transformed into natural logs and in equation 4 the figures are calculated in percent values. But generally it is important to mention that equations 1, 2, and 3 and 5 have used figures transformed into natural logs (see equation 4).

Equation 5 has introduced two additional independent variables (investment as a % ratio of GDP and services sectors' % shares in GDP, see equation 5).

**Regression 4**

Dependent Variable: PCI				
Method: Least Squares				
Included observations: 26 (1980-2006).				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
(1) Expenditures	10.4204263068	6.04233584666	1.72456920159	0.102738330955
(2) Money supply	2.24255852083	3.9898452469	0.562066541947	0.58140665326
(3) Openness	2.01551451033	0.99915594245	2.0172171577	0.0597471056126
(4) TDS	-2.96752407685	5.08230493875	0.583893354022	0.56695967217
(5) External debt	-0.898000485194	0.320259983205	2.80397343498	0.0122029158649
(6) Agriculture	12.3549965378	4.20001749324	2.94165359018	0.00911976180943
(7) GR GDP	2.29478619805	3.3617133328	0.682623998799	0.504041027056
(8) PGR	-71.8196762959	245.77392011	0.292218459403	0.773655854837
C	-119.700226883	730.663922898	0.163823918401	0.871801682402
R-squared	0.745080952878	Mean dependent var		324.157692308
Adjusted R-squared	0.62511904835	S.D. dependent var		94.9390422243
S.E. of regression	58.128823478	Akaike info criterion		11.2306248488
Sum squared residual	57442.3220219	Schwarz criterion		11.6661198042
Log likelihood	-136.998123034	F-statistic		6.21097969234
Durbin-Watson statistics	1.67818727805	Prob (F-statistic)		0.000794105986706

Notes: Figures are in % values.

Dependent variable = PCI

Independent variables = 8 (Expenditures, Money Supply, Openness, TDS, External Debts, Agricultures, GR GDP, Population Growth Rate).

**Regression 5**

Dependent Variabl: PCI				
Method: Least Squares				
Included observations: 19 (1980-1999).				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
Expenditures	7.53063047931	6.42724369488	1.17167340104	0.271411045698
Money supply	3.9182303022	4.86424025159	0.805517429145	0.441282813982
Openness	0.538957598754	0.913044817415	0.590286028105	0.569521585829
TDS	0.168255144539	5.16282036795	0.0325897731372	0.974713034163
ED	-0.577086387356	0.30466785604	-1.89414923798	0.0907327164501
Agriculture	7.77254995224	4.82885543632	1.60960502022	0.141944751487
PGR	-88.0281190057	276.461770578	-0.318409734632	0.757438922402
Services	1.5853686572	2.52832929634	0.627041999434	0.546207401608
Investment	-1.23281970058	2.99466098809	-0.411672541727	0.690210679321
C	46.0285716121	674.734883005	0.068217269881	0.947104217021
R-squared	0.737380665293	Mean dependent var		286.294736842
Adjusted R-squared	0.474761330587	S.D. dependent var		63.8985000144
S.E. of regression	46.3093845914	Akaike info criterion		10.8139835066
Sum squared residual	19301.0319111	Schwarz criterion		11.3110566535
Log likelihood	-92.7328433122	F-statistic		2.80779275493
Durbin-Watson stat	1.66616719069	Prob (F-statistic)		0.0700264636397

Notes: Figures are in % values.

Dependent = PCI

Independent Variables: Expenditure, MS, Openness, TDS, ED, Agriculture, PGR, Services, Investment

## 4.4 Results and Conclusions

The findings of the five reported equations of the model show that about 73%-82% of the variation in the growth of the per capita income (the dependent variable is explained by the model independent variables).

The Durban-Watson statistics lie within the range of 2.0-2.35 for the first three equations and 1.6666 for the other two, showing no sign of a problem of serial correlation in the data used in estimation of the model. The F-statistics' probability has zero values in four equations and 0.07 in the last equation (which has the lowest Durban-Watson value of 1, 66).

With respect to individual coefficients (in linear functions they are called coefficients and in log functions they are called elasticities), the results are very good and follow the general expected pattern of the factors determining the growth of per capita income in the Sudan in particular and they are also mostly in conformity with the previous findings reported in many low-income countries.

We will look at each coefficient and study its implication for the potential growth and development in the Sudan. We start with the accumulation of an enormous external debt magnitude in the Sudan coupled with substantial debt burden indicators (as shown in section 1) which in our view would and could depress real per capita income growth and thus frustrate development and welfare of the people. Almost all the best fitting estimation of the regression equations have demonstrated negative relationships between the growth of per capita income in real terms and the stock of the external debt in the Sudan for the period 1980-2006. The negative coefficient of external debt ranges from -0.20 to -0.89 indicating that persistence of this huge amount of external debts would reduce the growth rate of per capita income greatly and a full relief of those debts would likewise enhance growth of per capita income substantially.

Let us relate this to the debt overhang hypothesis<sup>24</sup>. The debt overhang hypothesis argues that debt has uncontrolled effects on the growth only after it reaches certain threshold levels. These levels are estimated at around 50% of GDP for the face value of the external debts and at around 20%-25% of GDP of the Net Present Value (NPV). For the Sudan as we have shown before that these thresholds were reached along time ago (see Tables 2, 3, 4 and 5).

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<sup>24</sup> See Elbadawi, Ibrahim A., Benno J. Ndulu and Njuguna Ndung'u, (1997), "Debt Overhang and Economic Growth in Sub-Saharan Africa," in Zubair Iqbal and Ravi Kanbur (eds.), *External debt finance for Low-income Countries*, pp.49-76(Washington: IMF).

See Benedict Clements, Rina Bhattacharya, and Toan Quoc Nguyen, (2003), "External debt , Public investment and growth in Low-Income countries," IMF working Paper, WP/03/249.

See Jean Imbs and Romain Ranciere, (2005), "The Overhang Hangover", presented at the CEPR conference on *Institutions, Policy and Growth, INSEAD, May 2005 and the World bank macroeconomics seminar*.

See Fosu, Agustin K., (1999), "The External debt Burden and Economic Growth in the 1980s: Evidence fro Sub-Saharan Africa." *Canadian Journal of Development Studies*, Vol. XX, No. 2, pp. 307-318.

See Gupta, Sanjeev, Benedict Clements, Alexander Pivovarsky and Erwin R. Tiongson, (2003), "Foreign Aid and Revenue Response: Does the Composition of Aid matter?", Working Paper no.02/176 (Washington: IMF).

See Wamer, A.M., (1992), "Did the debt Crisis Cause the Investment Crisis," *Quarterly Journal of Economics*, Vol.107, No. 4 (November).

See Tanzi, Vito, and Hamid Davoodi, (1997), "Corruption, Public Investment and Growth," IMF working Paper 97/139 (Washington: IMF).

See Sturm, Jan-Egbert, (2001), "Determinants of Public Capital Spending in Less-Developed Countries,"(Munich: University of Groningen and CESifo working paper).

See Krugman, Paul, (1998), "Financing vs. Forgiving a Debt Overhang, Some Analytical Issues", NBER Working paper No. 2486 (Cambridge, Massachusetts: National Bureau of Economic Research).

The linear formulations of the adjusted model results indicate that 1% point of GDP increase in external debt volume would result in a decline of the growth of per capita income in real terms by around 0.2% to 0.89% of the GDP. This relatively strong negative effect that the external debt has on the growth of per capita income points to the urgency and critical need to solve the debt problem in the Sudan to sustain growth and improvement in the welfare situation of the people. Clements and others in a seminal paper have reached similar results for the low-income countries in the world<sup>25</sup>.

Therefore, the Sudanese case gives further proof to the debt overhang hypothesis. Based on the this debt reality in the Sudan, one would like to say that had the country been given the opportunity to join and benefit from the HIPC's Initiatives, it could have achieved a much higher rate of growth of its per capita income and thus would have improved its people's welfare and attained much better levels of social development.

On another matter, the Sudan's data on foreign aid and investment showed that the country was not able attract foreign resources between the early and late 1990s, when it succeeded in convincing China and Malaysia to invest in the oil sector. Later on Indian and Gulf States' investors joined in and invested in the oil and some other sectors. The Sudan has not been able to attract major European and American investors and creditors and its relations with international institutions, especially the World Bank, has not been fully normalized as its debt arrears on the Sudan have to be agreed upon and solved. US foreign policy towards the Sudan has systematically been unfriendly and economic sanctions and political pressures have been mounting over time frustrating any opportunity to join the HIPC's and to reach any debt relief agreements with its main creditors. Thus Sudan lost the opportunity to benefit from debt relief strategies and was deprived from receiving concessional aid, which affected negatively its chances to sustain economic development, reduce the intensity and depth of poverty, lessened and mitigated the serious effects of wars and sustainable peace.

In other words, the Sudan has not been able to regain the confidence and trust of its traditional western donors and was forced to seek alternative financiers from the Asian continent, namely China and Malaysia and India that were also driven by their need for oil and natural resources. The rift between Sudan and the western powers further widened with the intensification of the Darfur problem and heightened human rights organizations' pressures on the Sudan. In the late 1980s Sudan stopped servicing its accumulated debt obligations and reverted to completely different lending directions and partners which have also enraged its old creditors and donors as they see China exploiting the Sudan case for its own benefit.

Western aid and support for Sudan have dried out except in the humanitarian sectors, whereas development and concessional aid have all slowed considerably if not stopped completely. On the other hand, Chinese direct investment and support in the oil and energy sectors were strengthened and efforts are underway to diversify Chinese investment and to redirect them to infrastructure and productive sectors.

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<sup>25</sup> See Benedict Clements, Rina Bhattacharya, and Toan Quoc Nguyen, (2003), "External Debt, Public investment and growth in Low-Income countries," IMF Working Paper, WP/03/249.

#### 4.4.1 The Crowding-out Effect

The results of the estimation of the regression equations have given support to the crowding-out hypothesis that higher Total Debt Service (TDS) % ratios of GDP “crowd out” public spending and investment and this effect becomes stronger as TDS absorbs a growing share of the GDP<sup>26</sup>.

The Total Debt Service coefficient, an independent variable of the growth of per capita income, has maintained an overall negative value, relatively smaller than the negative value of the external debt in most of the best fitting equations of the model reported in this paper.

The TDS negative coefficient were relatively high when the equations' variables figures were expressed in percent ratios of GDP, ranging from -0.008 to -2.967. However when figures of all variables are transformed into natural log values the TDS coefficient values became smaller and consistent in almost all the best fitting equations of the model, ranging between -0.008 to -0.02. The results indicate that for every one percent (%) point of the GDP increase in TDS, public spending and investment declines within the range of 0.008%-0.02%.

This clearly supports previous studies that the TDS has a non-linear relation and effect on growth through its effect on the government spending. As the share of TDS % ratio of GDP rises over time it crowds out resources to be allocated for basic services delivery and also reduces spending going to development via public investment<sup>27</sup>. In other words, the mounting accumulation of TDS arrears would directly reduce the growth of the per capita income in real terms through its effects on reduced public spending going to service delivery and development and indirectly through its impact on public investment.

In sum, the external debt and TDS independent variables have had negative effects on the growth of per capita income in real terms in the Sudan in the study period. The results of the best fitting equations of the regression model estimated for the Sudan have provided evidence to the debt overhang and crowding out hypotheses.

One policy option for reducing poverty and raising the growth rate of the per capita income in the Sudan, could be achieved if the country allocates substantial resources generated from debt relief strategies to essential social services delivery and public investment in productive sectors (like agriculture, infrastructure and services). Investment in infrastructural activities and sectors (namely roads, electricity, water and sanitation, extension services, marketing services and facilities, financial and banking networks and basic health and education services), becomes critical in order to reduce poverty, improve welfare of the people and to sustain growth of the per capita income and growth of the economy at large in the future.

Thus, substantial debt relief programs, coupled with comprehensive concessional aid and external grants provision and supported by increases in domestic savings are necessary conditions to prevent any increases in the budget deficit. To recap the argument, both a substantial reduction of the external debt stock and the mounting TDS obligations of the Sudan, are essential to induce an effective increase in government spending on essential services and on public investment in

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<sup>26</sup>Clements and others (see below) have reported that the effect of debt relief on public investment and growth is modest. For examples a reduction in TDS as % of GDP from 0.7% (average of 7 HIPCs in 2000) to 3% (average of TDS/GDP of all HIPCs in 2002) of GDP would increase public investment by 0.7-0.8%, of the GDP.

<sup>27</sup> See Benedict Clements, Rina Bhattacharya, and Toan Quoc Nguyen, (2003), “External Debt, Public investment and growth in Low-Income countries,” IMF Working Paper, WP/03/249. Also See Jean Imbs and Romain Ranciere, (2005), “The Overhang Hangover”, presented at the CEPR conference on *Institutions, Policy and Growth*, INSEAD, May 2005 and the World Bank macro-economics seminar.

infrastructure and are also essential for productive sectors to sustain economic growth and peace and to improve people's welfare in the future.

#### 4.4.2 The Openness Factor and Growth

The openness variable, defined by the summation of the values of exports and imports divided by the GDP, is highly significant and positive for the estimation of the equations of the model. The openness coefficient ranges between 0.25 to 2.0 in the five cases we reported, indicating that an increase of 1% of the GDP in the degree of openness of the Sudan economy would induce an increase in the rate of growth of per capita income in the range of 0-25-2.0% of GDP. This confirms Sturm's (2001) findings that the openness coefficient is always highly significant and positive in his model estimation<sup>28</sup>.

#### 4.4.3 Money Supply Variable

The money supply explanatory variable is very important in influencing growth in the Sudan as the Central Bank has been using it effectively to determine the rate of inflation and to control price levels and the size of credit expansion in the country. In 1989/90 Sudan faced economic sanctions from the US and western countries and mounting pressures and cuts in flow of aid and support from multi-lateral institutions. The Sudan adopted a policy of self-dependent financing of current and development activities through sustained deficit financing policy and credit expansion which have caused an unprecedented hike in the rates of inflation, reaching 130.6% in 1996. In 1997, the Central Bank led economic and monetary policies and was given the power to fight inflation using purely monetary policy variables; namely control of money supply, and credit expansion.. These policies were implemented rigorously and supported by comprehensive economic liberalization and privatization programs. As a result, the inflationary pressure was controlled and macroeconomic stability was successfully achieved. The money supply variable is closely associated with financial depth, availability of liquidity and local finance capability and as such it effects growth through availing funding of public investment and spending on service delivery.

The estimation of the model equations has shown that the money supply (financial depth) effect on the growth of per capita income is both significant and positive throughout the results of all of the equations. The coefficient ranges between 0.119 (for equation 3) and to a record high of 3.9 (for equation 5). The coefficient values of the money supply variable are smaller and consistent in the equations where figures used in the estimation were transformed into natural log (as in equations 1, 2, and 3), and higher and magnified when figures were expressed in % ratios of the GDP (as evident in equations 4 and 5). Even the smallest coefficient values, ranging between 0.119-0.33 show a significant and positive effect of the money supply on growth of per capita income in the Sudan. A one % of the GDP increase in the money supply induces an increase from 0.119% to 0.33% of GDP in the rate of growth of the per capita income, which further confirms previous studies' findings that have showed similar positive effects of money supply on the rate of growth in the Sudan<sup>29</sup>.

One policy implication from the above results is that monetary policy variables (especially the money supply), if they are carefully and prudently implemented within a comprehensive package of pro-poor and growth enhancing policies, can play a very effective and vital role in sustaining growth of the per capita income and in reducing poverty in the Sudan.

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<sup>28</sup> See Sturm, Jan-Egbert, (2001), "Determinants of Public Capital Spending in Less-Developed Countries," (Munich: University of Groningen and CESifo working paper).

<sup>29</sup> See Elbadawi, Ibrahim A., Benno J. Ndulu and Njuguna Ndung'u, (1997), "Debt Overhang and Economic Growth in Sub-Saharan Africa," in Zubair Iqbal and Ravi Kanbur (eds.), *External debt finance for Low-income Countries*, pp.49-76 (Washington: IMF).

#### 4.4.4 Agriculture and Services Variables

As we mentioned before, we have used agriculture and services (both public and private services) as examples of the productive sectors of the Sudanese economy. Their shares in the GDP are the highest and consistent over the study period 1980-2006. They have been employing most of the rural and urban people and provided livelihood to almost the majority of the population in the country until 2000. With the discovery of oil, industry started to become important in employing skilled and semi-skilled people and offered them higher wages and benefits. The rising productivity of capital and higher levels of profits in the oil and related services sectors, have induced and attracted enormous amounts of investment, skills and know-how to these dynamic and better paying sectors.

In other words, substantial rates of profits and very high rates of return on investment in the oil sector and related sub-sectors “crowded out” scarce local resources and monopolized foreign resources and rerouted them away from the traditional services sectors and agriculture resulting in a speedy deterioration and fall in their productivity and return of capital. Traditional exports’ earnings have been falling, income per capita in agriculture has been declining steadily, and poverty has proliferated and intensifying over time. However, the traditional sectors, namely agriculture, still hold the future potential in terms of natural resources, employment, income and opportunity for growth in the future if more resources and oil surpluses are invested to provide essential infrastructural facilities, improve technical and human capacities, skills, and market access, and also to provide funding to small farmers and livestock feeders and producers in the rural areas of the country.

Thus, and as one did expect, the agriculture coefficient has systematically been above unity and positive in all estimations of the model. It ranges from 1.4 to 1.498 in equations 1, 2, and 3 where data was transformed into log values. Where % of GDP values were used in the estimation of the model, the level of the coefficient of agriculture has substantially increased from 2.294 to a record high of 77 (in equations 4 and 5). This clearly shows that a one % increase of GDP in agriculture investment or resources would induce an increase in % rate of growth of per capita income by more than the original amount gone into agriculture. In the logic of the fifth equation it will multiply growth of per capita income by 77 times (which is a not quite realistic expectation at present given the reality of the agricultural sector in the Sudan).

The % values of GDP data used in the estimation of the model, as we have time and again observed, are somewhat higher than those obtained from log values. Therefore, we tend to systematically stick to the log values figures in estimating the regression equations 1, 2, and 3. It is clear that most of the explanatory variables of the growth of per capita income tend to depict nonlinear relations.

It is also important to observe that the service sectors coefficient which is only used in the fifth equation, gives a value of more than one (1.58). It says that a 1% of GDP increase in services investment and spending would tend to induce more than 1% of GDP increase in the growth rate of the per capita income.

A policy implication from the agriculture and services coefficient values is that for sustaining growth of per capita income and thus reducing poverty in the Sudan, the government investment, fiscal and monetary as well as credit policies should all be geared to increase the share of resources and finance going to these productive sectors.

#### 4.4.5 Population Variable and Growth

The population growth rate is used as a proxy of labor capital, and the data was obtained from the Central Bureau of Statistics (CBS). These population growth rates were projected from the 1993 population census and fixed rates were used for a number of years. The population variable was used in equations 1, 2 and 4 only. Again, like all other explanatory variables we have mentioned before, the population coefficient values are lower when figures were transformed into log values compared to percent values. However, in all cases in which population was used as an explanatory variable, the coefficient is above one (in the fifth equation it is 71.8) and consistently negative in value. The results are common and quite expected because as the rate of population growth rises higher than the growth rate of GDP, the per capita income growth will shrink and the level of per capita income will tend to fall. The Sudan has been experiencing extremely high rates of growth of population in the 1990s and after due to migration from neighbouring countries because of the oil and the drought in Sub-Saharan Africa.

The coefficient of population variable in equations 1 and 2 is in the range of -1.66 and -1.737 which indicates that an increase of one % point of GDP in the growth rate of population would induce a decline of around 1.66% to 1.737% of GDP in the growth rate of per capita income. One has to caution that the details of the dynamics between growth and population can only be ascertained and revealed after having conducted the 2008 population census. However, one policy implication from the reported results of the model is that reduction of the population growth rate below the growth rate of the GDP and per capita income should be a priority policy issue if we want to sustain growth and development and to reduce poverty in the Sudan.

## 5. Debt Burden Indicators for Severely Indebted Poor Countries

Following the debt crisis in 1982 and after, the IMF and the World Bank developed some debt indicators to measure the severity of external indebtedness for the less developed countries which were classified as Severely Indebted Poor Countries (SIPCs). These indicators are calculated by dividing the outstanding debt disbursed by the GNP and debt outstanding disbursed by exports of goods and services. It also measures debt burden by total debt service divided by exports of goods and services (see box 2 below).

### Box 2

- $DOD/GNP \times 100 = 50\%$  (DOD refers to Debt Outstanding Disbursed).  
In an earlier work I called this term solvency or liquidity or mortgage of national resources ratio
- $DOD/XGS \times 100 = 275\%$  (XGS refers to Exports of Goods and Services)  
This is also termed dependency on foreign aid ratio
- $TDS/XGS \times 100 = 30\%$  (debt burden ratio where TDS refers to Total Debt Service).
- $IR/XGS \times 100 = 20\%$  (debt burden ratio where IR refers to Interest Rate)

Thus, the debt indicators are used to measure a country's degree of vulnerability, given the magnitude of its external debts and a number of economic performance variable.

### 5.1 The HIPC Approach to Debt Sustainability

According to Kitabire and Kabanda “external debt sustainability is achieved when a country is expected to be able to meet its current and future debt service obligation in full without recourse to debt relief, rescheduling of debt or the accumulation of arrears and without unduly comprising growth”<sup>30</sup>.

The World Bank and IMF debt sustainability and debt relief initiatives, designed for the Highly Indebted Poor Countries, have set out some requirements and eligibility criteria to reach both the Decision Point (DP) and Completion Point (CP). There are specific stages that a eligible country should go through and conditions that must be fulfilled before entering the Decision Point and the Completion Point. The initiative has also undergone a series of extensions to the sunset clause (see box 3)<sup>31</sup>.

The HIPC initiative has a range of criteria for evaluating debt sustainability using the NPV of debt and total debt service as ratios of GDP, exports of goods and services and government revenues.

<sup>30</sup> This section on debt sustainability under HIPC Initiative draws on the work of D.Kitabire and M.Kabanda, “MDGs Achievement and Debt Sustainability in HIPC and Other Indebted Developing countries: Thoughts on an Assessment Framework” Paper presented at the joint UNDESA/UNDP. Roundtable on Debt Sustainability and the Millennium Development Goals, New York (October 30, 2006).

<sup>31</sup> Information on the HIPC detailed in box (6) is drawn from the World Bank website: [http://www.worldbank.org/ips/hipc/docs/hipc\\_update\\_evaluation](http://www.worldbank.org/ips/hipc/docs/hipc_update_evaluation).

### Box 3: A Guide to HIPC

#### **An eligibility criterion for HIPC is determined by the following:**

- A country must face an unsustainable debt situation using fully traditional debt relief mechanisms. The thresholds for unsustainability is defined by where debt to exports of goods and services is equal or more than 150% and where debt divided by the government revenues is equal to or more than 250%.
- A country must only be eligible for high concessional assistance from IDA and from the Poverty Reduction and Growth Facility (PGRF) of the IMF.
- A country must establish a track record of economic reform and develop a Poverty Reduction Strategy Paper with the participation of the wider civil society.

#### **Decision and Completion Points requirements**

##### To reach the Decision Point

- A country should have a track record of achieving macroeconomic stability, have prepared a PRSP and cleared any outstanding arrears.
- The World Bank and IMF carry out a loan by loan debt sustainability analysis to determine the country's level of indebtedness and the amount of debt relief it may receive to bring its debt indicators to the thresholds of the HIPC. Then the country starts to receive debt relief on provisional basis.
- The period between the Decision Point (DP) and Completion Point (CP) is dependent on the speed with which a country can implement its PRSP and maintain macroeconomic stability.

##### To reach the Completion Point

- A country must maintain macroeconomic stability within a PRSP supported program and implement structural and social reform programs that are agreed upon at the Decision Point. It must execute the PRSP satisfactorily for one year. When the country reaches the Completion Point it then receives full debt relief. Some additional debt relief or "topping up" could be committed if a country faces some exceptional external factors that cause some fundamental changes in its economic conditions.

#### **Floating Completion Point**

- Reaching to the Completion Point (CP) is conditional to the implementation of policies agreed upon in the decision point.
- In the floating completion point creditors provide assistance or interim debt relief between Decision Point and Completion Point.
- Bilateral creditors under the Paris Club go beyond traditional debt relief to provide concessional debt reduction amounting to 90% of the NPV of eligible debt to achieve debt sustainability for the indebted country.
- Other bilateral and commercial creditors provide similar treatment on the volume of external debt.
- Multilateral institutions take additional steps to bring debt to sustainable levels.

#### **HIPC Extensions**

In 1998 the staff of World Bank and IMF suggested a two-year extension of the sunset clause so that nine countries emerging from conflict became eligible to assistance to benefit from debt relief under the HIPC Initiative. The Board of the World Bank and IMF extended the deadline to 2000 but only six of the nine countries managed to satisfy the entry requirements of the Enhanced HIPC Initiative due to socio-political conflicts.

In 2002, only one of the six countries was able to progress toward entry requirements whereas the other six had become potentially unsustainable.

In July 2004, the Board of WB/IMF debated heatedly a fourth extension scenario and proposals: The first was to affect the sunset clause and leave the HIPC countries with no mechanism to tackle their excess debt burden. The second option was to extend the sunset clause for two years. The third option was to identify countries with unsustainable debt levels and eligible for the IDA assistance and allow them a five-year period to reach the decision point. The fourth option was again to identify IDA countries with unsustainable debt levels and allow them a five year period to reach the Decision Point but only apply debt relief to the end of 2004. The Board rejected options 1 and 4 and delayed the other decisions until September 2004 when it agreed to extend the sunset clause to two additional years.

The HIPC uses a single debt measure to establish the critical threshold for permanent debt sustainability relief required to bring the country to that threshold. Debt relief can be accrued via an export window which targets a threshold level for the NPV of debt divided by exports of goods and services. Under the export window the original HIPC used a NPV of debt divided by exports of goods and services which equals 200%. The Enhanced HIC gave a reduced ratio of 150% and fiscal window gives a comparable threshold of 150%<sup>32</sup>.

Both HIPC initiatives, Original and Enhanced HIPC, have provided eligible countries with sufficient relief to bring their sustainability ratios down to the threshold levels set out under the initiative of the time of the completion point. It is widely believed that the HIPC debt relief initiative has been an important attempt to seriously address the problem of external indebtedness of the developing countries. It is considered the first comprehensive strategy launched by multilateral and bilateral donors to provide debt relief and aid to deal with the issues of debt sustainability and poverty reduction in these poor countries.

Within the HIPC initiative a debt relief amounted to \$ 35 billion, measured in NPV terms, has been allocated to poverty reduction expenditures for 29 countries that have reached the Decision Point. Among concerned people there is a conviction that it is unlikely that the HIPC initiative will achieve its twin goals of poverty reduction and debt sustainability. For 11 out of 18 countries that have reached their completion Point, the debt ratios are above the HIPC thresholds<sup>33</sup>.

## 5.2 Critique of HIPC<sup>34</sup>

Some scholars believed that the HIPC initiative procedures are lengthy, harmful and even at the end of which many poor countries are left with high levels of debts. The main criticism is that the HIPC concentrates mainly on the calculation of debt sustainability (namely debt/exports and debt/government revenue ratios) and forgets completely the poor countries' human development needs. The HIPC initiative has very stringent conditions on provision of debt relief which are considered anathema in many countries. And also it is observed that the sole evaluator for these countries' classification and progress is the IMF<sup>35</sup>.

## 5.3 The New WB/IMF LIC Debt Sustainability Framework

A new World Bank/IMF LIC Debt Sustainability Framework is launched to become a tool on which future lending decisions can be based.<sup>36</sup> It makes debt sustainability thresholds dependent on a country's policy and institutional capacity and development, as measured by the Country Policy Indicators Assessment (CPIA) and particularly by evaluating the sensitivity of debt sustainability to a number of the risks faced by low-income countries. This framework assumes that any measures used to assess a country's ability to use additional sustainable resources effectively will improve the debt sustainability analytical framework.

The new WB/IMF LIC Debt Sustainability Framework is built around the WB's annual Country Policy Institutional results which are used as a measurement of institutional quality (as measured by the country's overall CPIA score), and is associated with higher levels of thresholds for debt sustainability and vice versa. A moderate or medium CPIA score (performer) are generally equal to

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<sup>32</sup> Ibid.

<sup>33</sup> Ibid.

<sup>34</sup> For a critique of the HIPC see Stephen Spratt, "External Debt and the MDGs: A New Sustainable Framework," New York, September, 2006.

<sup>35</sup> Ibid.

<sup>36</sup> For more detailed discussions on this framework see D. Kitabire and M. Kabanda, op.cit. 2006.

the HIPC thresholds, whereas strong CPIA score (for a strong performer) is considered capable of tolerating higher thresholds, and a weak performer (low score) is allowed lower thresholds.

The new framework allows for consideration of two alternative situations, that GDP might grow at a rate of its historical average and that new loans and borrowing might be contracted on less concessional terms. The new framework also allows for testing the impacts of external shocks on a number of variables such as GDP, export growth, the exchange rate and aid flows. The new framework attempts to address a country's ability to carry out debts, its ability to use resources more effectively to enhance development and growth and also to strengthen its ability to absorb and deal with external shocks.

This new framework gives inductions of the ability of the LIC to absorb IDA/IMF resources without suffering from debt distress. Also and more importantly it gives indicators of the volume of new borrowing a LIC can absorb when new resources are committed to meet the MDGs. The new WB/IMF LIC debt sustainability framework mentioned in section 5.3 above has some merits and overcomes some shortcomings associate with HIPC initiative<sup>37</sup>:

- First, it does not use single indicators calculated at a single point in time to determine debt sustainability, it indeed uses a forward looking time period.
- Secondly, it carries out assessment of effects of a range of possible shocks on debt sustainability.
- Thirdly, countries with weak institutions and low policy capacity are more likely to face and suffer from debt distress at low ratios.
- Fourthly, most LICs have very weak institutions and suffer from poor governance and low implementation capacity that have resulted in risks of resource misuse and mismanagement.
- Fifthly, it is argued that benefits from the returns of the long-term investment projects may be diffused and cannot be easily captured in revenues generation through taxes in order to repay the debts.
- Finally, there is a general recognition that LICs have low and narrow production and exportation capacities which make them more vulnerable to external shocks and thus have a reduced ability to tackle their debt problems.

#### 5.4 Critique of WB/IMF LIC Framework

Kitabire argued that the WB/IMF LIC debt sustainability should use a three-year average for exports in calculating debt ratios as did HIPC. For this new framework to be credible, it should be managed by an independent institution, not by anyone that provides support and lending to poor countries. Increasing resource flows to low-income countries is not a sufficient condition to the achievement of MDGs. The new framework should not only worry about building in capacity to assess the absorptive capacity to use additional resources, but equally importantly assess the actual needs for these resources in the first place<sup>38</sup>.

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<sup>37</sup> Ibid.

<sup>38</sup> See Kitabire and Kabanda, op.cit. 2006.

## 6. Debt Sustainability for the Sudan

In the following tables data on debt sustainability is provided using the thresholds defined by the various frameworks mentioned above. Table 7 defines some of these indicators.

**Table 7: Debt Sustainability Analysis (value is in %)**

Year	Standard Thresholds	2001	2002	2003	2004	2005	2006
Debt/XGS	150%	1255%	1211%	1186%	914%	559.8%	498.5%
Debt/ Government Revenues	250%	1465%	1330%	950%	670%	539.7%	406.1%
Government Revenues/GDP	15%	11%	14%	14%	21%	18.9%	19.97%
XGS/GDP	30%	13%	15%	16%	20%	18.3%	16.3%
Debt/GDP	80%	165%	181%	151%	137%	102.2%	81.1%

Source: Figures for the period 2001-2004 are calculated by the External Debt Unit, Bank of the Sudan and the figures for 2005-2006 years are our own calculation.

Notes:

- XGS is exports of goods and services.
- GDP is gross domestic product and the ratio of government revenues to GDP has not been used by the IFIs
- Only the top 2 and bottom indicators are used by the IFIs – not Government Revenues to GDP.
- The third and fourth indicators are not used under the HIPC.
- Figures are our own calculations

The ratio of NPV of external debt to the average of three successive years' exports of goods and services has declined from 1,186% in 2003 to 914% in 2004 and 707% in 2005. These ratios are higher than the threshold for meeting the sustainability criteria (which is at a ratio of 150%). Despite the fact that the ratio has been falling for three years, it is still considerably higher than the threshold. Therefore, debt is unsustainable using this ratio.

The second indicator is given by the ratio of NPV of external debt to government revenue which has declined from 950% in 2003 to 670% in 2004 and 510% in 2005. These ratios are also more than double the threshold in 2005. Again debt is unsustainable using this indicator.

The third indicator (which is not used by the HIPC) is given by the ratio of government revenue to Gross Domestic Product which has increased from 14% in 2003 to 21% in 2004 and has been sustained at 22% in 2005. The standard ratio is 15% and the actual ratios have been increasing, showing some progress in revenues generation by the government on the tax-revenues side, and most importantly on the non-tax-revenues side. The increased revenues from oil have improved the ratio and with more oil drilling and exploration, the ratio will continue to rise.

The fourth indicator (also not used by the HIPC) is defined by the ratio of exports of goods and services to Gross Domestic Product (XGS/GDP) which has increased from 16% in 2003 to 20% and 21% in 2004 and 2005 respectively. However these ratios are still below the threshold of 30% reflecting an inability to generate foreign resources to service the external debts.

It is important to point out that the ratios which have shown remarkable improvements are caused by the high economic growth rates during the 1990s and after, generated mainly by increase in oil exports and revenues and this trend is expected to continue in 2006. However one can safely generalize that burden and sustainability indicators of the Sudan external debt indicate clearly that Sudan external debt position is unsustainable.

## 7. The External Debt Unit at the Central Bank of Sudan<sup>39</sup>

In the last three decades the Sudan government did not have one single unit or department empowered with dealing with all aspects of the external debts. There were small units, not properly staffed and technically equipped to deal efficiently with the complex issues of the details of the external debts in the Sudan.

In 2000, an external debt unit was established at the Central Bank of Sudan, through a ministerial decree. It was intended to be the sole and specialized institution for issues dealing with Sudan's external debt, its magnitude, the burden indicators, debt sustainability, documentation of various debt owners, contractual agreements, principal of the debts, and interests, whether played or delayed. The unit is a technical and advisory institution for the CBS and the ministry of Finance and National Economy. The unit was also intended to enhance national macroeconomic management and economic stability following a strongly implemented economic liberalization policy that contributed to improve the financial credibility of the country. Thus, the unit is created as a part of the economic reform measures to work as a reference institution for information and data on the external debts portfolio.

The unit is now well equipped with a computerized system and uses "the Debt Management and Financial Analysis System (DMFAS 5.3), which is a computerized system, designed for the use of Ministries and/or Central Banks for the management of both public and private debt"<sup>40</sup>.

According to Nagel-Din, "the External Debt Unit (EDU) at the Bank of Sudan is responsible for recording external loans and rescheduling agreements, as well as all transactions (disbarments, debt service, payments) for public and publicly guaranteed debt using the DMFAS. The External Debt database is updated monthly when transactions recorded are received based on information on disbarments obtained directly from the Ministry of Finance and National Economy, (MOFNE) as well as from the foreign exchange department of the Central Bank of Sudan (CBS) for debt service payments".<sup>41</sup>

It also important to point out that the MOFNE has a small unit for external debt, but definitely does not have the official mandate to be solely responsible for documenting debt details and relevant data and also not responsible of handling official issues concerning Sudan debt obligations. However, the two units need to coordinate activities and share information and ideas and policies regarding Sudan's positions on external debts and its relation with creditors and multilateral institutions.

Some of the multilateral institutions, especially the IMF, is having a strong presence on the ground and has offices within the CBS headquarters and does have some technical cooperation and capacity building programs with the MOFNE and working relation with the CBS. The World Bank has opened a country office in Khartoum and has been helping out in technical and research areas on issues concerning Public Expenditure Review, Joint Assessment Missions (JAM) for the CPA and also JAM for Darfur.

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<sup>39</sup> This section draws on the work of Nagel-Din Hassan Ibrahim, "Sudan's external debt problems: A challenge ahead", CBS, External Debt Unit, 2006.

<sup>40</sup> Ibid.

<sup>41</sup> Ibid.

## 8. Global Concern about Debt Sustainability

With the launching of the HIPC initiative and experiences of some Least Developed Countries (LDCs) in dealing with it, the issue of debt sustainability became central in economic, social and political agendas worldwide. The interrelationships between external debts, poverty reduction and internal and national development goals have increasingly become important worldwide issues.

Many LDCs have been overburdened by formidable debt, faced with substantial pressures to achieve national development targets and MDGs and also challenged with widespread poverty and insecurity threats and social strives.

Some countries have been pushed hard to meet the HIPC conditions and stages of completion. Some have succeeded and others are facing the risk of falling back in the debt burden traps, and debt unsustainability. Others are waiting impatiently to enter the deal with the hope to be bailed out from the miserable future prospects of no growth, economic decline and enormous outstanding debt obligations posing an overhang on foreign investment, aid and development.

On the other hand, there are many sceptics of the success of the HIPC and IMF-World Bank initiatives who are ready to label them as failures. However the general consensus is that the broad IMF-World Bank HIPC initiative concerning debt sustainability and economic reforms should be situated more into debt sustainability – based on sustainable development and achievement of the MDGs as well as national development goals.

This broadly defined goal is critical for both solving the debt problem of the LDCs and ensuring that resources freed locally and/or coming in terms of nonessential aid and support from the international community should be used for development and to improve human lives and wellbeing. While it is important that the debt relief is sustainable and that fear to fall back in debt unsustainability is avoided, it is equally important that the LDCs economies are institutionally and economically reformed to sustain economic growth and achieve desired economic and social development.

The heightened concern about the interrelationship between debt sustainability and development and MDGs achievement was reflected in a draft resolution on external debt crisis and development that will be discussed and passed by the UN General Assembly soon. The proposed resolution has emphatically stressed the need for debt sustainability, enhancing development efforts and achievement of the MDGs within a broadly defined HIPC strategy.

...Stressing the importance of addressing the challenges of those heavily indebted poor countries that are facing difficulties in reaching the completion point under the Initiative, and expressing concern that some heavily indebted poor countries continue to face substantial debt burdens and need to avoid rebuilding unsustainable debt burdens after reaching the completion point under the Initiative, Emphasizing that debt sustainability is essential for underpinning growth, and underlining the importance of debt sustainability to the efforts to achieve national development goals, including the Millennium Development Goals, and that countries should direct those resources freed through debt relief, in particular through debt reduction and cancellation, towards activities consistent with poverty eradication, sustained economic growth and sustainable development and the achievement of the internationally agreed development goals, including the Millennium Development Goals...<sup>42</sup>

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<sup>42</sup> See the UN General Assembly draft resolution titled: "Draft Resolution External debt crisis and development", October, 2006.

## 9. Sudan's Debt Relief Strategies

The government of the Sudan under the Paris Club rescheduling agreements have had four rescheduling agreements called round 1 to 4. The debt rescheduling arrangements under the Paris Club for official bilateral and the London club for commercial debts, have provided very limited debt relief in the years 1982, 1983, and 1984<sup>43</sup>. Debt rescheduling agreements have been concluded with bilateral creditors within the Paris club agreements. The government of the Sudan was also requested to have debt relief agreements with non-Paris club creditors on comparable conditions and terms. The government has always been seeking full debt relief and debt rescheduling on a very favourable terms.

### 9.1 Round One

The agreement covered all medium term obligations arising until June 30, 1981 with a total amount of \$ 252 million<sup>44</sup>. The agreement concluded the following:

- Unifying the rescheduling of due instalments and liable interest up to September 30<sup>th</sup>, 1979 was unified and to be paid in 14 instalments (every six month) starting from 1981 for small portions and 1986 for large portions.
- Consolidating and rescheduling of 85% of principal and accumulated interest rates for the period July 1st, 1980-June 30<sup>th</sup>, 1981, to be paid in 14 instalments beginning in June 30<sup>th</sup>, 1984 with a five-year relief period.
- Consolidation and rescheduling of 85% of unpaid instalments and accumulated interest rates arrears for the period July 1st 1980-June 30<sup>th</sup>, 1981, also to be paid in 14 instalments starting in June 30<sup>th</sup>, 1984 with a relief period of five years.

The interest rate for the rescheduled and consolidated debt agreement was to be agreed upon by both parties.

### 9.2 Round Two

This round was signed in March 1982 and covered all medium term obligations arising in the period July, 1981 to December 31<sup>st</sup>, 1982. The total amount of US \$ 166.75 million was included in this agreement. The agreement tackled the instalments and accumulated interest rates arrears for the period July 1<sup>st</sup>, 1981-December 31<sup>st</sup>, 1982. The agreement stated that the rescheduled amounts would be settled according to the following specifications:

- 2.5% on December 31<sup>st</sup> 1982,
- 2.5% on December 31<sup>st</sup>, 1983,
- 5% on December 31<sup>st</sup>, 1984, and
- 90% of the consolidated amount would be paid in 11 instalments beginning on July 1<sup>st</sup>, 1987 with a relief period of 5 years<sup>45</sup>.

Again and like the previous Paris club agreement the interest rate for the rescheduled and consolidated debt agreement was to be agreed upon by both parties.

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<sup>43</sup> For details of these debt relief agreements under Paris Club see the Bank of Sudan, Annual Reports and External Debt Files, for respective years. Now most of the External Debt Data is to be found in the External Debt Unit of the Central Bank of the Sudan.

<sup>44</sup> See Bank of Sudan: Annual reports, and also external debt files, for respective years. See also Sumaya A. Ali, "The Debt Problem of Sudan." (Unpublished MA dissertation, IAAS, University of Khartoum), 1988.

<sup>45</sup> See Bank of Sudan, op.cit.

### 9.3 Round Three

Round three was complete in February 1983 and covered obligations arising in 1983 of exports guaranteed loans (including short term obligations), direct government loans and all unpaid obligations arising until December 13<sup>th</sup>, 1983 from the round I and II rescheduling and 50% of the interest rates.. The agreement tackled principal debts and accumulated interest rates arrears for the period January 1<sup>st</sup>, 1983 – December 31<sup>st</sup>, 1983. In addition it also covered accrued arrears carried over from the first and second agreements. The terms of the agreement stated that the consolidated amount which amounted to US \$ 469.79 million was to be rescheduled and paid in half-yearly equal instalments starting in July 1989 with a 7 year grace period<sup>46</sup>. The new interest rate of the debt relief agreement was to be agreed upon with each country separately and 2 1/2 of the interest accrued in 1983 was to be paid and the rest was to be dismissed.

### 9.4 Round Four

Round four was signed in May 1984 and covered all debts due in the period January 1<sup>st</sup>, 1984 until December 31<sup>st</sup>, 1984, plus any other arrears due in the same period.

It covered the guaranteed commercial loans, government debts and the rest of the principal debts and their accumulated interest arrears arising from Paris agreements II and III in 1984. The consolidated debt amount (including 100% of the original principal and interest from January 1984 until December 1984) was estimated to be US \$ 248.89 million and would be paid in 20 instalments half-yearly starting from January 1991 and ending in July 2000. The agreement stated that the agreement's new interest rate was to be agreed upon bilaterally, and that 2 1/2 of the amounts rescheduled in the round II and III agreements were to be paid and the rest was to be dismissed.

The government of the Sudan in 1987 called for the cancellation of its bilateral external debts (including government loans and commercial guaranteed) and asked for consolidation of maturities of all government loans and commercial credits insured up to December 31<sup>st</sup>, 1987 and the unscheduled loans plus principal and interest rates due to that date from the previous four years' rescheduling agreements in one consolidated amount.<sup>47</sup>

The Sudan government's strategy in dealing with commercial loans amounting to US \$ 1,915 million (of which US \$ 400 million were not subjected to rescheduling), was to unify those loans and undertake one refinancing agreement and also adopt a debt repurchase scheme whereby the banks were invited to sell their debts at a discount rate against cash payment. The hope was to reduce the debt to a sustainable level and to eradicate as much debt as possible at the highest discount rate possible.

On the other hand, the government's strategy in dealing with multilateral debts was that the debts were not amenable to cancellation or rescheduling, and therefore it attempted very hard to meet their obligations on the prescribed schedules. However, the government failed and Sudan was considered to be a non-cooperating member and was about to lose its IMF membership in the late 1980s and early 1990s. In the Addis Ababa debt conference Sudan hoped to convince the IMF to grant more favourable terms on their loans such as longer grace periods and lower interest rates. It did not work out as it was envisioned.

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<sup>46</sup> *ibid.*

<sup>47</sup> See the Government of the Sudan, "Strategy of tackling external debts in the Sudan." A paper presented at the Addis Ababa Conference on External Debts, Ethiopia, 1987.

The government's strategy to tackle the non-Paris club members (especially Arab countries) was to ask for cancellation of all debts, cancellation of overdue interest and rescheduling of principal on concessionary terms (free interest with longer grace and maturity periods) and consolidation of maturities due up to 1987 to be rescheduled on concessionary terms of low interest and lower grace and repayment periods. The government was hoping to use intensive political lobbying with Arab creditor countries. This also failed to achieve the desirable results and the debt problems continued into the 1990s and after.<sup>48</sup>

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<sup>48</sup> Ibid.

## 10. The Present Sudanese External Debt Solution Strategy

Currently, Sudan has an official debt strategy containing the following elements<sup>49</sup>:

- 1) Sudan should be fully committed to paying back its debt and accumulated arrears to all creditors;
- 2) Any settlement of debt and arrears should be negotiated and concluded within the IMF framework under the Staff Monitored Program (SMP);
- 3) Sudan should avoid any preferential treatment of any of its bilateral creditors or any country or company or politically-favoured or inclined institutions;
- 4) Sudan should attempt to find a lasting solution to the debt problem from a political dimension;
- 5) Sudan should not contract any new loans unless there is an urgent need to borrow; and if it enters into new commitments, it is obliged to contract concessional loans and repay the loans on the scheduled dates;
- 6) Sudan should open up negotiations with its multilateral creditors with a view to agree to a repayment program including current maturities.

The Sudan has implemented its debt strategy and made partial debt service payments to almost all multilateral creditors (with IMF in 1997) and some bilateral creditors in an attempt to encourage inflows of funds from existing and new commitments.

### 10.1 Sudan, the HIPC and the US Economic Sanctions

It is clear from our previous analysis of the external debt magnitude, debt burden indicators and debt sustainability analysis that the Sudan is qualified technically to benefit from the Highly Indebted Poor Countries initiative.

However, the Sudan has been deprived from entering into the HIPC initiative for a number of reasons: first because of incompleteness of agreements with multilateral institutions to solve the problem of accumulation of arrears and; secondly, lack of clearance of accumulated arrears due to Paris and non-Paris creditors and; thirdly due to political demands imposed upon it by the international community to solve the southern problem and later on the Darfur problem and US sanctions<sup>50</sup>.

### 10.2 The US Economic Sanctions on the Sudan and the HIPC

The USA economic sanctions and political pressures implemented against the Sudan in 1997 and continued to date have negatively affected the country's relations with the international donor community, especially the IMF, the World Bank and western countries. Together with some other factors, the sanctions have sustained economic and political pressures and frustrated Sudanese efforts to come to agreement with the international donor community on its mounting external debt problem and thus not be admitted into the process leading to HIPC initiatives. The successful

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<sup>49</sup> For a summary of the Sudan debt strategy see Nagel Din Hassan Ibrahim, "Sudan's external debt problems a challenge ahead, CBS, External Debt Unit, 2006.

<sup>50</sup> For a detailed discussion on a comprehensive critique of the US sanctions of the Bill Clinton administration since 1997 and after against the Sudan see: The European Sudanese Public Affairs Council: "The Clinton administration's sanctions against Sudan: How long will the charade continue," November 2000. For the US' present political stance against Sudan see US Department of State: United States Policy on Sudan, Office of the Spokesman, Washington, DC, and May 8, 2006.

completion and signing of a Comprehensive Peace Agreement (CPA) between the Sudanese government and the Sudan Liberation Movement on January 9<sup>th</sup> 2005 has not lessened international political and economic pressures on the country. In fact, enormous pressure has been brought to bear on the Sudan as a result of the Darfur problem. Due to this, the Sudan has not been given the opportunity to reach the HIPC Decision Point and its hopes to settle its debt problems have been frustrated.

In what follows we will show that most of these economic sanctions have been based on false and irrational grounds. The following points track the chronological development of these sanctions:

On November 3<sup>rd</sup>, 1997, President Clinton signed executive order 13067, under the International Emergency Economic Powers Act (50 U.S.C. 1703 *et seq*) and the National Emergencies Act (50 USC 1641 c), which imposed comprehensive trade and economic sanctions against Sudan. The order declared "that the policies of Sudan constitute an extraordinary and unusual threat to the national security and foreign policy of the United States"<sup>51</sup>.

On July 1<sup>st</sup>, 1998, the Department of the Treasury's Office of Foreign Assets Control (OFAC) issued the Sudanese Sanctions Regulations (63 Fed. Reg. 35809, July 1<sup>st</sup>, 1998). The US government claimed that Sudanese government sponsored international terrorism. These economic sanctions blocked all property and interests in property of the Sudanese Government, its agencies, instrumentalities and controlled entities, including the Bank of Sudan, located in the United States. The Clinton Administration also brought enormous pressure to bear on private banks and multilateral lending agencies not to lend to Sudan<sup>52</sup>. The sanctions order has been renewed every year since 1997.

In October 1999, President Clinton once again renewed the sanctions and stated that "the Government of Sudan continues to support international terrorism"<sup>53</sup>. Many experts have argued that the Clinton Administration's claims of Sudan's alleged involvement in sponsoring international terrorism, have been proven to be shay and inaccurate. In March 1993, for example, the United States Government stated that the World Trade Center bombing was carried out by a poorly trained local group of individuals who were not under the auspices of a foreign government or international network.

In June 1993, the US government again restated that there was no foreign involvement in the New York bombing or conspiracies. The US Government reversed its position in August 1993 accusing the Sudan of the involvement in the New York bomb plots. Ambassador Philip C. Wilcox Jr., the Department of State's Coordinator for Counterterrorism, later in 1996 denied any Sudanese involvement whatsoever in the World Trade Center bombings.

Tim Weiner on December 26<sup>th</sup> 1996 wrote an article in the International Herald Tribune in which he found that "U.S. officials have no hard proof that Sudan still provides training centres for terrorists"<sup>54</sup>. Mr. Weiner also interviewed key American officials who said that they did not know of any Sudanese involvement in supporting terrorism. Despite this, Sudan has continued to be listed as a state sponsor of terrorism.

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<sup>51</sup> SEE the European Sudanese Public Affairs Council: "The Clinton administration's sanctions against Sudan: How long will the charade continue," November 2000.

<sup>52</sup> Ibid.

<sup>53</sup> Ibid.

<sup>54</sup> See Tim Weiner, "U.S. officials have no hard proof that Sudan still provides training centres for terrorists" the International Herald Tribune, 26 December 1996.

Furthermore, the Bush administration has continued pressures on the Sudan, kept its name in the list of countries sponsoring terrorism, retained economic sanctions and heightened economic and political pressures. In fact, the US administration “has led UN Security Council actions on Sudan and Darfur, seeking a speedy transition from AMIS to a larger UN peacekeeping operation as called for by the AU and noted in UN Security Council Resolution (UNSCR) 1663. It supports

With United States leadership, the Security Council approved UNSCR 1672 which applies targeted sanctions in the form of a travel ban and asset freeze on four specific individuals responsible for committing heinous crimes on the people of Darfur. The United States supports the on-going deployment of UN peacekeeping troops in Southern Sudan and an early expansion into Darfur”<sup>55</sup>.

### 10.3 Does the Sudan have Positive Points to Join the HIPC?

The Sudan has some positive points that would allow it to benefit from the HIPC. They are summarized in the following:

- The signing of the Comprehensive Peace agreement (CPA) in 2005, the Abuja Peace Agreement (APA) in 2006, and recently the Asmara Peace Agreement (APC) in October, 2006, should pave the way for benefits from the HIPC initiative.
- Sudan has been implementing a self-imposed Structural Adjustment Programs (SAP) almost similar to if not tougher than the IMF led Staff Monitored Programs (SMP) which is considered a prerequisite to implementing debt relief agreement with the IMF and creditors. The implementation of the economic reform and SAP also qualifies the Sudan to benefit from HIPC. The implemented self-imposed SAPs later on were under the supervision of the IMF, and have a good track report.
- Sudan normalized relations with the International Monetary Fund, made regular payments as committed and also normalized the relation with some multilateral institutions such as the Arab Fund for Economic and Social Development and the OPEC Fund who have both given rescheduling and new loans. Sudan reached rescheduling agreement with a number of Arab funds, namely the Kuwait Fund for Economic Development, Abu Dhabi Fund for Development, and Saudi Fund for Development<sup>56</sup>.

On the other hand, the main difficulties technically and economically handicapping Sudan from benefiting from HIPC can be summarized in the following points:

- Sudan has been accumulating substantial amounts of multilateral debts (mainly IMF and World Bank) reaching US \$ 4,461 billion in 2005. The IMF alone had about US \$ 1,506 billion (mostly in arrears) at the end of 2005. These debts are not subject to cancellation and must be paid. Therefore clearance of multilateral debt is a prerequisite to engagement in HIPC initiative.
- On the other hand, the Sudan needs to agree with IMF to implement a Poverty Reduction and Growth Facility (PRFG), as a precondition for rescheduling its bilateral debt through the Paris Club mechanisms and to seek similar comparable terms for non-Paris Club creditors. This is not a difficult precondition as the country has been implementing an even tougher SAP since 1992.

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<sup>55</sup> US, Department of the State, United States Policy on Sudan , Office of the Spokesman, Washington, DC, May 8, 2006.

<sup>56</sup> Kaltoum Satti Ali, “Sudan External Debt What’s going on?”, *Economic Policy Management* Internship Columbia University, August 2004.

- The main challenge to Sudan's debt problem solution is the clearance of the huge accumulation of debt arrears. The arrears have to be cleared with a strategy involving the IMF and Paris Club and non-Paris Club creditors.

The debt clearance may be done via:

- First, the provision of a loan to pay off the arrears or/and
- Second, there is an urgent need for a restructuring of the arrears with pledges from creditors and donors to repay the debt service obligations as they fall due and
- Third, the Paris Club creditors will provide substantial debt relief to make Sudan's debt position sustainable. Therefore the help and support of the international community, in securing a debt relief agreement with the Sudan with the help of the IMF intermediation, to clear the accumulated arrears, is a very critical step towards

The debt clearance will also contribute to restoring Sudan's creditworthiness and will enable it to meet internal economic and political obligations initiated by the Comprehensive Peace Agreement (CPA), Darfur Peace Agreement (DPA) and the Asmara Peace Agreement (APA).

Finally, solving the debt problem would enable the country to meet its obligation to achieve the Millennium Development Goals (MDGs).

#### 10.4 How was the Sudan Able to Attract Foreign Aid Despite its Huge External Indebtedness?

This section attempts to briefly shed some light upon the Sudan's ability to attract foreign investment and foreign borrowing through its new borrowing strategy. It also aims at showing the inflows and outflows of resources and their impacts on future debt sustainability in the Sudan. Subsection one examines foreign investment and subsections two addresses the issue of Sudanese borrowing in the period 2000-2005. Subsection three outlines Sudanese borrowing guidelines. The last subsection is devoted to a revisiting of the concept of debt sustainability by applying the newly developed MDG-consistent debt sustainability for the case of the Sudan.

## 11. Foreign Investment

In the 1970s, the Sudan received, on average about 20% of investment within the Bread-Basket strategy which attempted to make the country a major food producer for the Arab world. The Arab surplus funds were poured into the five-year plan 1977/78- 1982/83 and later changed into the three-year investment programs. The investment programs were mainly rehabilitation programs and some income generating projects within an overall economic stability program. The ratio of investment to GDP fell to 16% by 1979/80<sup>57</sup>.

The period 1990-1996 saw no direct foreign investment in the Sudan. Due to the mounting external debts problem and inability of the Sudan to arrive at any agreement with its major multilateral and bilateral and as well as private creditors on one hand, and the negative political international environment against it on the other hand, the country was deprived of foreign investment and had its financial credit worthiness and reputation lowered considerably.

The problem of external debts has worked as a formidable barrier to foreign investment and caused some serious overhang effects on investment. The amount of foreign investment was zero in the period 1990-1995, and amounted to only US \$ 0.7 million in 1996 before it sharply rose to US \$ 101.2 million in 1997, responding to some good GDP growth rates (as we argued earlier in section three) and also in response to some successful efforts undertaken by the country to improve its economic relations with some Arab and Asian countries which later invested heavily in the oil sectors (see table 8).

**Table 8: Net Capital Inflows, Total debt Services and Official Government Loans**

Item/ year	1991	1992	1993	1994	1995	1996	1997	1998	1999
Total Repayments*	25.2	43.3	37.8	6.7	40.6	36.6	76.8	67.2	118
Drawings on Loans	760.8	472	224.4	236.2	432.1	226.7	259.6	446.3	531.2
Net Govt Loans	524.6	312.1	208.4	32.6	67.8	22.0	18.6	13.0	45.8
All investments**	0	0	0	0	0	0.7	101.2	397	388.6
Net flows	735.6	334.6	186.6	226.0	391.5	90.1	182.7	379.1	413.2
Debt Services	37.9	30.7	20.5	23.8	57.8	43.5	64.3	67.1	68.7
TDS/XGS	n.a	n.a	4.90%	6%	10.40%	7%	10.80%	11.30%	8.90%

Source: Data are obtained from the Bank of Sudan: Annual reports for respective years.

\*Total Repayments = include all repayments on government loans

\*\*All investments = include direct investment + fund investments and other investments.

n.a = data is not available in this year.

<sup>57</sup> See Ibrahim, 2003.

<b>Table 8 continued</b>						
<b>Item/ year</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>
Total Repayments*	153.9	146.8	177.6	185.2	219.2	212
Drawings on Loans	481.5	661.3	1048	84.9	213.2	222.4
Net Government Loans	16.5	21.8	44.8	84.9	-6.01	10.4
All investments**	392.2	576.7	841.5	1389.9	1511.1	2304.6
Net flows	328.1	514.4	869.5	N.A	1353.9	2880.8
Debt Services	135.8	105.2	87.8	185.8	N.A	N.A
TDS/XGS	7.50%	6.20%	1.20%	7.30%	N.A	N.A

Source: Data are obtained from the Bank of Sudan:

Annual reports for respective years.

Total Repayments\*= include all repayments on government loans

All investments\*\*= include direct investment +fund investments and other Investments.

N.A data is not available in this year.

The country also witnessed a robust increase in the magnitude of foreign direct investment in the period 1998-2005. The total investment to GDP ratio reached 32%, a figure which was never achieved before since independence in 1956. Investment amounted to \$ 392 million in 2000, increased to \$ 574 million in 2001 (a rate of growth of 46.4%), sharply climbed to \$ 713 million in 2002, nearly doubled in 2003 scoring \$ 1,349 million (a rate of growth of 89.2% in 2002-2003). It further rose to \$ 1,511 in 2004 and then hit a record high of \$ 2,304 million in 2005 (with an increase of 52.5% in 2004-2005).

Investment has been growing annually, on average, at 82.3% for the period 2000-2005, making the Sudan one of the highest foreign investment receiving countries in the Arab world in the same period. Foreign investment in the Sudan has been going mainly to the oil, agriculture, construction and transportation sectors.

In 2006 more efforts were being made to attract Arab investors, especially from the Gulf States, in the areas of the banking, oil, energy, agriculture, industry, infrastructure and other sectors. In November 2006, an important investment promotion conference for the Gulf investors was held in Khartoum, organized by the ministry of Investment and ministry of Finance and National Economy. The hope was to attract more Arab direct investment and to build a strategic economic partnership based on utilizing Arab financial surpluses and the enormous investment potential in the agriculture, industry, mining, oil, infrastructure, and transportation sectors in the Sudan. Investment was expected to hit a record high of five billion US dollars in the fiscal year 2007.

## 12. Sudanese Borrowing in the Period 2000-2005

The Sudan debt strategy adopted in 2002<sup>58</sup> has set guidelines and directives to deal with the country's formidable external debt problem and to deal with creditors and also to give instructions on how to contract new loans and borrowing from abroad. For instance, the strategy stipulated that Sudan should not contract any new loans unless there was an urgent need to borrow, and if it entered into new commitments, it was obliged to contract concessional loans and repay the loans on the scheduled dates.

Within the context of the strategy, Sudan agreed to make partial debt service payments to almost all multilateral creditors and some bilateral creditors in the hope of attracting some critically needed financial inflows to fund development projects utilizing and revamping old loans commitments and attempt to make new commitments.

Sudan was able to reach agreement with most of its creditors on issues concerning the settlement and repayment of accumulated interest arrears. As a result, it started resuming debt service payments to the IMF in 1997, and also restarted partial repayments to most of its multilateral creditors, as well as to bilateral Arab Funds.

Sudan made partial payments on its obligations to the IMF, World Bank, African Development Bank, Arab Monetary Fund, Islamic Development Bank, Arab Fund for Economic and Social Development, International Fund for Agricultural Development and the OPEC Fund<sup>59</sup>.

**Table 9: Inflows in the Period 2000-2005 (in million US\$)**

Loans Agreements Signed During 2000-2005 (in million US \$)							
Item/ Year	2000	2001	2002	2003	2004	2005	Total
Multilaterals	55.305	34.303	34.413	41.286	95.500	49.700	310.507
OPEC fund for international development	10.000	10.000		12.000		32.000	32.000
International fund for agricultural development	20.655				27.100	25.000	72.755
Islamic development bank	24.650	24.303	34.413	29.286	68.400	24.700	205.752
Arab funds	83.478	68.348	450.113	50.000	181.500	84.300	917.739
Abu Dhabi Fund		14.000	100.000	50.000		164.000	328.000
Kuwait Fund for Arab Economic Development			100.000				100.000
Saudi Fund for Development			150.113		50.000		200.113
Arab Fund for Economic and Social Development	83.478	54.348	100.000		131.500	84.300	453.626
Other Bilateral Countries	21.387	194.359	176.495	147.800	755.500	923.800	2219.341
China	21.387	194.359	55.495	147.800	705.500	902.300	2026.841
Oman Sultanate			106.000				106.000
Qatar			15.000				15.000
Holland						21.500	21.500
Indian Export Import Bank					50.000		0.000
Grand Total	160.170	297.010	661.020	239.086	1032.500	1057.800	7009.173

Source: Ministry of Finance and National Economy, 2006.

<sup>58</sup> See: Sudan Debt Strategy, MFNE, 2002.

<sup>59</sup> Ibid.

**Table 10: New Loans Agreements Signed in 2004**

<b>Project Type</b>	<b>Amount of Loan</b>	<b>Donor</b>	<b>Date of signature</b>
Chinese Loan	3.6	China	Jan-04
Chinese Grant	\$3.60	China	Jan-04
		Export and import	
Indian Loan	\$50	Bank-India	Jan-04
Merawi Dam	\$100	Arab Fund Economic development	Jan-04
Doka-Galabat Road	\$31.50	Arab Fund Economic development	Jan-04
		Intel Fund for Agri	
Sustained livelihood	\$24.90	Development Hariyan	Jan-04
Gari 2 Electricity	\$94.80	Company-China Ushan Company	Mar-04
		-China	
Nyala Water project			Mar-04
Dali and Mazmoum	\$36	CAMC-China Ushan Company	Mar-04
		-China	
Drinking Water Projects' inputs	\$20.50	Ushan Company	Mar-04
		-China	
Irrigation Inputs	\$9	-China	Mar-04
Kosti Grain Storage	\$11.20	National Company- China	Mar-04
Ginneries Rehabilitation	\$15	KAMOCO-China GUANDHOA	Mar-04
		Company-China	
Rail Ways cars, engines and inputs	\$6.80	Development	Mar-04
Finance of agricultural inputs, sacks,etc.	\$35.10	Islamic Bank	Mar-04
Sustained livelihood in Al-Gash Area	\$10	Intel Fund for Agri	Apr-04
		Development	
Administrative Training in agriculture	\$0.10	Intel Fund for Agri	Jun-04
		Development	
Finance of imports fro Merawi Dam	\$0.90	Saudi Fund	Jun-04
Finance of imported agricultural Inputs	\$50	Islamic Bank	Jun-04
Rufaa Bridge	\$12	Poli Company-China	Aug-04
		Development	September
Al-Diweam Bridge	\$9.40	Islamic Bank	2004
		Development	September
Institutional Support to MFNE	\$0.27	Islamic Bank	2004
Institutional Support to Women Union	\$0.15	Arab Monetary Fund	Nov-04
Extended loan to BOPs support	\$45	CMEC-China	Dec-04
Petroleum Coal production project	\$129.40	CMEC-China	Dec-04
		Development	
Roseres Dam Project	\$133.30	Islamic Bank	Dec-04
		Development	
Awgaf Project Support in Khartoum	\$9	Islamic Bank	Dec-04

Source: Ministry of Finance and National Economy, 2004.

**Table 11: New Loans Agreements Signed 2005 (in million US\$)**

Projects	Commitments	Type of Finance	Date signed	Grace Period	Int. Rate %	Repayments Period	
<b>Arab Fund for Economic and Social Development</b>							
White Nile Sugar Factory	73.500	Loan	4/12/2005	7	3.00		1
Marawi Dam	13.200	Loan	4/22/2005	4	3.00		2
<b>INTERNATIONAL FUND FOR AGRICULTURAL DEVELOPMENT</b>							
Resources Development -Western Sudan	25.000	Loan	2/14/2005	10	0.75		3
<b>ISLAMIC DEVELOPMENT BANK</b>							
Irrigation Rehabilitation (Three Irrigated Areas)	6.7 ID	Loan	4/3/2005	7	2.5		1
Khartoum North Power Station	17.74 Euro	Instalment Sale	6/23/2005	2	6 (Mark up)		1
<b>China</b>							
Generation of Electricity- Extended Loan	5.80	Loan	00/01/2005	2	3		
Supply of Complete sets of Cotton Machinery	6.70	Loan	00/04/2005	2	4		
Khartoum North Electricity (CMEC Comp)	175.00	Loan	00/04/2005	3	3.7		
Gedarif Water Supply Proj. (CAMC Comp)	67.20	Loan	00/04/2005	2	4		
Elfashir Water Supply Proj. (CAMC Comp.)	32.50	Loan	00/04/2005	2	4		
Tiangin Comp. 150 Water Well Proj.	9.20	Loan	00/04/2005	2	4		
Supply of Equipments (Bushman Comp.)	9.00	Loan	00/04/2005	1.5	4		
Supply of Construction Machines and Spare parts	10.50	Loan	00/04/2005	2	4		
50 Water wells Proj. (North Kordofan)	3.20	Loan	00/06/2005	1	4		
Port Sudan Water Project (CMIC Comp)	463.00	Loan	00/06/2005	2	4		
For Projects( Agreed upon later)	3.6	Loan	00/07/2005	-	0		1
For Projects( Agreed upon later)	1.2	Grant	00/07/2005	-	-		
<b>Iran</b>							
Atbara Eldamer Water Treatment Plant	14.5	Loan	00/08/2005	3	0		

Source: Ministry of Finance and National Economy, 2006.

**Table 12: New Loans Agreements Signed Jan. - June 2006 in million US\$**

Source of Finance	Commitments	Type of Finance	Date signed	Grace Period	Int. Rate %	Repay-ments Period	Insur-ance	Grant Element
Islamic Development Bank								
Basic School Greater Darfur	4.00	Loan (Concessional)	30.5.2006	7	1.6%	18		41%
Basic School Greater Darfur	8.20	Loan (Concessional)	30.5.2006	8	1.6%	17		44%
<b>China</b>								
<b>Solar Energy in North Kordofan</b>	<b>4.60</b>	<b>Loan (Non concessional)</b>	<b>20.2.2006</b>	<b>1</b>	<b>3.40%</b>	<b>7</b>	<b>3.50%</b>	<b>6%</b>
<b>Dongla Water Supply Project</b>	<b>34.10</b>	<b>Loan (Non concessional)</b>	<b>31.3.2006</b>	<b>3</b>	<b>4%</b>	<b>7</b>	<b>3%</b>	<b>11%</b>
<b>Matama Abu Hamad Eldaba Water Supply</b>	<b>26.50</b>	<b>Loan (Non concessional)</b>	<b>31.3.2006</b>	<b>3</b>	<b>4%</b>	<b>7</b>	<b>3%</b>	<b>11%</b>
<b>Supply of PE Pipes for the National Water Corp.</b>	<b>17.20</b>	<b>Loan (Non concessional)</b>	<b>5.4.2006</b>	<b>2</b>	<b>4%</b>	<b>2</b>	<b>8%</b>	<b>4%</b>
<b>Kosti Rabak Water Supply</b>	<b>29.50</b>	<b>Loan (Non concessional)</b>	<b>17.5.2006</b>	<b>3</b>	<b>4%</b>	<b>7</b>	<b>11%</b>	<b>15%</b>
<b>Medani Water Supply Project</b>	<b>28.90</b>	<b>Loan (Non concessional)</b>	<b>5.4.2006</b>	<b>3</b>	<b>4%</b>	<b>7</b>	<b>11%</b>	<b>15%</b>
<b>India</b>								
Credit Line for Kosti Power Station	350.00	Loan (Non concessional)	23.1.2006	3	4%	9	16%	12%
Credit Line for Singa El Gedarif Transmission Line	41.90	Loan (Non concessional)	23.1.2006	3	4%	10	16%	11%
<b>Turkey</b>								
El Mek Nimir Bridge	14.40	Loan (Non concessional)	2.5.2006	3	Libor +3.5	4		

Source: International Cooperation Directorate- Ministry of Finance and National Economy

## 12.1 Borrowing Guidelines and Amounts

The debt strategy of 2002 was further refined in 1n 2005, when the Minister of Finance and National Economy set some guidelines for new borrowing from external sources or guarantees of foreign loans. It was decided that any new borrowing or guarantees to foreign loans should be done and given only when borrowing is contracted on concessional terms. In case of non-concessional borrowing a ceiling of US \$ 150 million per year was also proposed. It was also stipulated that the borrowing must be used for high priority projects, mainly in the social sector.

The ministry of Finance and National Economy has also continued designing and undertaking policies regulating internal borrowing and dealing with deficit financing and also adopting measures to attract foreign investment in productive sectors. Some of these proposed policies include:

- Attracting foreign investments and taking advantages of options like BOT<sup>60</sup> and debt swap programs.

<sup>60</sup> Build-Operate-Transfer (BOT) is a form of project financing, wherein a private entity receives a franchise from the public sector to finance, design, construct, and operate a facility for a specified period, after which ownership is transferred back to the public sector. During the time that the project proponent operates the facility, it is allowed to

- Devising more instruments for internal borrowing and taking constructive measures for deepening the financial markets in accordance with the Islamic banking lending instruments in Sudan<sup>61</sup>.
- Pursuing of prudent fiscal policies aimed at maintaining fiscal stability and keeping the federal government budget deficit at a level not exceeding 1% of GDP. This is to be done by adopting policies that attempt to augment revenues and especially oil revenues through more increases in oil production (expanding oil exploration and production activities and increasing productivity of existing projects). The government also envisioned a reduction of government expenditures and a resort to external borrowing on concessional terms to finance development projects. The main objective of these measures is to maintain sustained flows of funding to development from both domestic and external sources without risking the economy with an unsustainable debt (both domestic and external) situation in the future.

However, it is not likely that these measures are going to achieve the expected fiscal outcomes as the CPA and INC have given the Government of Southern Sudan (GOSS) the right to borrow from both domestic and external sources, and to pursue its own monetary policy by maintaining its own traditional banking system different from the Islamic one adopted in northern Sudan. In addition, the GOSS has been given the right to impose taxes similar to the ones imposed by the GONU, which creates an overlapping and will undermine macroeconomic fiscal stability and thus will endanger economic growth prospects.

On the other hand, both the MOFNE and the GOSS MOF are in critical need of both technical and human capacity building programs necessary for sustaining economic growth at its current high rates. The situation is much more critical in the south as everything indeed is starting from scratch. In this respect there is a need to assist GOSS in the following areas:

- Formulating relevant borrowing policies and laws as well as establishing of some effective regulating, monitoring and guaranteeing procedures and skills borrowing of foreign loans.
- Building of capacities in development projects preparations and appraisal as well as in evaluation of loan offers, guaranteeing of loans, and negotiation tactics.
- Capacity building in contracting and lending of loans to government entities.

Table 12 above summarizes the total amounts of loans contracted by the government of Sudan with multilateral and bilateral creditors and private credit suppliers during the period 2000-2006. The country was able to contract substantial amounts of loans to finance the Merowe Dam in the northern state which is expected to produce around MGW 1200 (more than what is currently produced of electricity in all of the Sudan). The supply of electricity is planned to expand agricultural production in the northern states and supply cheap energy to the industry in the Sudan. This is hoped to improve the rural people's wellbeing and quality of life and to enhance enabling investment environment, in areas which used to lack the basic amenities of life. Other sectors which did attract foreign borrowing and aid are oil production and related services sectors, and mining in the east and northern Sudan areas.

Infrastructure projects, namely roads as well as industry and agriculture have also attracted investment and foreign funding. In what follows we give some data on the magnitude of the foreign

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charge facility users appropriate tolls, fees, rentals, and charges stated in their contract to enable the project proponent to recover its investment, and operating and maintenance expenses in the project (see Wikipedia, the free encyclopedia website: [en.wikipedia.org/wiki/BOT](http://en.wikipedia.org/wiki/BOT))

<sup>61</sup> Islamic banks' lending instruments are Musharaka, Murabaha and Mudaraba. For more information on these terms see Adam b. Elhiraika and Khalid Abu Ismail, " Issues in Financial sector Policy and Poverty reduction in Sudan," paper presented to the National workshop on: towards Pro-Poor Macroeconomic Policies fro the Sudan, UNDP, Khartoum,, February 15-16, 2005.

borrowing and main credit suppliers for the Sudan. It can generally be argued that Arab funds and Arab bilateral lending have been the main sources of finance to the Sudan's borrowing, followed by China as the single most important trade and aid partner of the Sudan in the 1990s and the period between 2000-2005. China has been the biggest source of foreign aid, especially in the oil and oil-related sectors. Its share in foreign investment and trade is even bigger than the Arab funds and Arab bilateral lending when taken separately.

Multilateral aid has also been a very important source of foreign finance and in fact agreement with IMF on debt arrears repayments have opened avenues to reach out for similar deals with Arab funds and regional financial institutions and has resulted in new borrowing to finance develop projects in the Sudan.

The grand total of loans for the whole period was \$ 7009.2 million, shared by multilateral donors, Arab funds, Arab and non-Arab bilateral creditors. The multilateral loans amounted to \$ 310.5 million (about 4.4% of total), the Arab fund had \$ 917.7 million (13.1%), and the non-Arab bilateral countries provided about \$ 2219.34 million (31.7%). China alone supplied about \$ 2026.84 million (28.9%), followed by the Arab Fund for Economic and Social Development which provided \$453.626 million (6.5%). The Abu Dhabi Fund had \$328.0 million (4.7%), the Islamic Development Bank had \$ 205.752 (2.9%), the Sultanate of Oman gave \$ 106.0 million (1.5%) and the remaining loans were supplied by some Arab funds and other countries (see table 12). Smaller amounts of loans were provided by the Netherlands and the PEC Fund for International Development, \$ 21 million and \$ 32 million respectively in the same period.

On the other hand, if we look at the net transfers of resources in the Sudan (the difference between inflows and outflows) we tend to find that the period 1991-2005 witnessed net increases in resources as the country continued to draw more resources than it repaid. One reason is that in the grace periods Sudan had not been repaying debts obligations.

Secondly, most of the loans incurred are development loans with long maturity and relatively long relief periods, the debt obligation for which will come late in the first and second decades of the new millennium.

Thirdly, the debt service payments are expected to be low on development loans from Arab funds. Finally, the debt service repayment does not include accumulated arrears on old debts which are formidable as we have seen in our discussion in the previous sections. However, table 25 gives some indication as to the possible problem the Sudan is expected to face even with respect to these new debts.

The debt service repayments as percent ratios of the exports for the period 1991-1999 ranged between 4% and more than 11.3%, and between 1.5% and 7.5% in the period 2000-2005, reflecting increases in exports values due to expanded oil revenues, rather than a decline in the nominal values of debt service repayments.

One would expect that very soon the country will be facing a sharp rise in the debt service to exports ratios as more debts obligation becomes outstanding, and in the face of a decline in the oil export revenues resulting from a decline in oil prices or oil production level.

The situation of course is gloomier than we have depicted if we take into account the fact that the Sudan's huge accumulated debts obligations (amounting to more than \$27 billion) should continue to be unresolved in the near future.

In other words, the Sudan will be suffering from debt problems for some time and the debt situation is indeed very unsustainable by financial criteria and the traditional definition of debt sustainability.

If this is the case, then a question emerges as: How could the Sudan be able to attract foreign investment and be able to contract new loans despite its accumulated debt obligations? This is a relevant question. It is both easy and difficult to answer. It is difficult as it challenges the evidence that substantial debt accumulation normally work as a handicap to the inflow of foreign direct investment in many Less Developed Countries (LDCs). It seems that the debt overhang theory is not working in the case of the Sudan.

However the question is easy to answer if we carefully address the political and economic environment in which the country is being situated regionally. The political economy of oil production in the Sudan has attracted China, India and Malaysia to invest heavily to secure oil flows to meet expanding oil demands at home and to expand oil marketable resources and shares as well as to secure investment opportunities at relatively lower opportunity cost had the market been opened to western oil multinationals.

The Sudan, likewise having been isolated and sanctioned by USA<sup>62</sup> and western allies, has found reliable partners in East Asian nations to offset any undesirable economic effects of these sanctions. It also found a chance to play a defiant role against its perceived western enemies. On the other hand, the aftermath of September 11<sup>th</sup> has increased the economic insecurity of Arab investment in western banks and pressured them to find alternative investment outlets in the Arab world. The Sudan being the most rapidly growing country in the region and with an enormous oil potential constitutes a special attraction to Arab financial resources and investments.

In addition, the Sudan has adopted a very generous investment law that provides substantial fiscal and non-fiscal incentives to foreign investors coupled with unlimited access to its huge natural resources and infrastructure projects offerings. All these reasons explain why the Sudan is able to attract foreign investment and secure substantial borrowings even though its debt obligations are formidable and could easily hamper foreign investment in normal circumstances.

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<sup>62</sup> For detailed discussion on the critique and development of the US sanctions on the Sudan since 1997 see: The European Sudanese Public Affairs Council, "The Clinton administration's sanctions against Sudan: How long will the charade continue," November 2000. For the present US political stance against Sudan see US, Department of the State, United States Policy on Sudan, Office of the Spokesman, Washington, DC, May 8, 2006.

## 13. MDG-Consistent Debt Sustainability Revisited

Scholars concerned about achieving human development argued that debt should be restructured so that the payment corresponds to what countries can afford after their vital MDGs expenditures have been met<sup>63</sup>.

The MDGs-debt sustainability directly links debt relief to a country's ability to meet the targets of the MDGs given the constraint of their budget expenditures. This framework makes debt payments directly proportional to their ability to finance their MDGs spending, so that they make no payment on debt obligation until they can afford to do so. It also calls for developing a secondary market in new MDG bonds that would focus market attention to MDGs progress, as the interest payable on traded bonds would be directly linked to this. This mechanism according to Spratt is simple, transparent and potentially much faster and more effective than the HIPC process in terms of both write offs, future interest and amortization costs<sup>64</sup>.

On the other hand and along the same line of thinking Gunter attempted to adopt MDG-consistent debt sustainability that links development strategies with achieving the MDGs. In other words, he tried to develop a formula that incorporates the objective of achieving MDGs as assets that allow a country to remain debt sustainable even though the traditional financial debt sustainability indicators are high.<sup>65</sup>

He proposed an explicit adjustment to the World Bank-IMF financial debt sustainability indicators, whereby the adjustment is to divide the debt indicators by an MDG-index that takes the progress in achieving certain MDG-targets into account.

The new index proposed is a composite of four MDGs targets divided by the 8 MDGs targets. Each target when achieved fully would have a value of 1 (100%) and the four would equal 4 (400%) and when divided by 8 will give a 50% ratio or just 0.5. Conversely, a target not achieved fully would have a value of 0 (0%) and the four targets will have a value of 0 (0%). The formulas for the MDG index is defined below to include 1 plus the achievement of the MDGs target ratios divided by the value of the 8 targets. The first fixed added 1 has been put into the calculation formula to ensure that the MDG-index has a minimum of 1.

When the four targets are achieved fully the MDG index will be equal to  $1+0.5 = 1.5$  and when targets are not achieved at all (0%) the MDG index will equal to 1. These are the extreme cases of target achievement; the real story is that most countries would have index values in the range of 0-1 (or 0%-100%).

The derived MDG index would then be used as a deflator of the traditional debt-sustainability indicators. The idea is to allow for the achievement of MDGs as priority spending areas and then calculate the fiscal debt sustainability indicators. The proposed MDG index is as follows:

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<sup>63</sup> Stephen Spratt, "External Debt and the MDGs: A New Sustainable Framework," New York, September, 2006.

<sup>64</sup> Ibid.

<sup>65</sup> For detailed discussion on MDGs-consistent debt sustainability see *Bernhard G. Gunter*: "MDG-Consistent Debt Sustainability: How to Ease the Tension between Achieving the MDGs and Maintaining Debt Sustainability", UNDP Round Table Discussion on MDG-Consistent debt Sustainability, New York, October 30, 2006.

$$\text{MDG-index} = 1 + \left( \frac{\text{Percentage of Target 1 achieved}}{100} + \frac{\text{Percentage of Target 3 achieved}}{100} + \frac{\text{Percentage of Target 5 achieved}}{100} + \frac{\text{Percentage of Target 6 achieved}}{100} \right) / 8$$

For statistical and data constraints we used the following four targets:

- Target 1: Halve, between 1990 and 2015, the proportion of people whose income is less than one dollar a day (measured by its first indicator: proportion of population below \$ 1 (1993 PPP) per day).
- Target 3: Ensure that, by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary schooling (measured by its first indicator: net enrolment ratio in primary education).
- Target 5: Reduce by two thirds, between 1990 and 2015, the under-five years of age mortality rate (measured by its first indicator: under-five years of age mortality rate).
- Target 6: Reduce by three quarters, between 1990 and 2015, the maternal mortality rate (measured by its first indicator: maternal mortality rate).

Gunter mentioned some of the limitation of his index and cautioned us to watch for them. He argued that "the simple addition of the four indicators might also imply a bias, as the achievement of one target may be correlated to the achievement of another target. Yet, a preliminary review of progress seems to indicate that there are large differences across countries in the correlation of achievements across targets. Hence, the bias resulting from adding up the achievements of the four targets is likely small."<sup>66</sup>

For Gunter the MDG-consistent debt sustainability indicator is identical to that of traditional financial debt sustainability indicators for countries that have made zero progress in achieving the MDGs, while it lowers the value of the newly defined debt sustainability indicator subject to progress made in achieving the MDGs. In cases where a country has fully achieved the MDGs, the newly defined debt sustainability indicators take on two-thirds of the value of the of traditional financial debt sustainability indicators. He shows below how this new concept allows such countries to significantly increase their debt-financing for MDG investments while remaining debt sustainable.

$$\text{MDG-consistent fiscal debt service indicator} = \left( \frac{\text{debt service on all public debt}}{\text{government revenues plus grants}} \right) / \text{MDG index}$$

And for an MDG-consistent overall fiscal debt ratio the concept is defined as follows:

$$\text{MDG-consistent overall fiscal debt indicator} = \left( \frac{\text{NPV of all public debt}}{\text{gross national income (GNI)}} \right) / \text{MDG index}$$

For Gunter the "MDG-consistent debt sustainability concept could also be applied for external debt service and overall external debt indicators. The MDG-consistent debt sustainability concept can

<sup>66</sup> Gunter (2006), *ibid.*

then be applied to determine the upper threshold for fiscal and external debt sustainability as well as for the purpose of keeping post-completion point HIPCs at their current levels of indebtedness while still allowing these countries to continue borrowing as long as they make progress with achieving the MDGs<sup>67</sup>.

### 13.1 The Case of the Sudan

The MDG Index is a very useful concept and can indeed allow the HIPCs an opportunity to achieve MDGs targets, and with help of the international donor community secure concessional aid and lower debt burden indicators. However, for the case of Sudan, attaining long term debt sustainability might be a far-fetched dream given the enormous indebtedness and substantial debt burden indicators of the country.

It is true that this concept will lower considerably the debt sustainability benchmarks for the Sudan compared to the traditional fiscal debt indicators adopted by the World Bank and the IMF. Yet the resulting MDG-consistent debt sustainability indicators would still be very high, above the old debt benchmarks. While the MDG-consistent sustainability indicators would be lower than the old ones, there is no guarantee that Sudan will not fall back again in the debt trap of unsustainability.

In what follows we attempt to test the concept of MDG-consistent debt sustainability to the case of the Sudan. We slightly modified the four-target equation to include all the 8 targets. The MDG index will be calculated by the addition of 1 plus all the achievement ratios (percentage ratios) of the 8 targets divided by 8. When all targets are fully achieved the index would equal 2(1+1), and when nothing is achieved then the index would equal 1(1+0). Then the resulting MDG index would be a deflator to the traditional debt sustainability indicators.

We do not face any problem with data for the seven targets, except the HIV/AIDS target. The data for the HIV/AIDS target does not show progress and also does not quantify deterioration in the situation and as a result we give it a value of zero. All other targets are calculated and achievement ratios for Northern, Southern and the whole of Sudan are given in the table 13 below.

Then MDG indexes are calculated using data for Northern, Southern, and the whole of Sudan (see table 13).

**Table 13: MDGS Achievement Ratios**

Target	Northern Sudan	Southern Sudan	Whole Sudan
Target 1	50%	38.9%	44.5%
Target 2	62%	25%	43.5%
Target 3	85.5%	35%	60.3%
Target 4	33.7%	33.2%	33.5%
Target 5	24.9%	25%	25%
Target 6	0%	0%	0% %
Target 7	70.2%	39.5%	54.9%
Target 8	72.8%	25.9%	49.4%
Average Ratio	50%	27.81%	44.44%
MDG-Index	1.50	1.278	1.44
	1.5	1.3	1.4

Source: Own calculations based on data provided in section 3 and on Gunter's equation above.

<sup>67</sup> *ibid.*

The resulting MDGs-consistent debt sustainability indicators are given in tables 14, 15, and 16. The results generally indicate that MDGs-based debt sustainability indicators are much lower for all categories than the traditional debt sustainability indicators.

The new concept does allow for the achievement of MDGs, and at the same time Sudan will have lower debt sustainability indicators in relation to the old ones. However one striking outcome is that this new concept would not solve the debt problem of the Sudan as the new MDG-based debt sustainability indicators are still very high relative to the actual figures for the period 2003-2005. The only exception where Sudan debt performance is better than the benchmarks is for ratio of exports of goods and services divided by the GDP (all figures are below benchmarks whether old or new for all cases of Northern, Southern and the whole of Sudan).

**Table 14: MDGS–based Debt Sustainability for Northern Sudan (% ratios)**

Indicators	Adjusted Standard Threshold	2003	2004	2005
Net Present Value (NPV) of External Debt/Export of Goods & Services	100.06	791.2	609.7	471.6
Net Present Value (NPV) of External debt/government Revenue	166.8	644.8	446.96	340.2
Government Revenues/Goss Domestic Products	10	9.3	14	14.7
Exports of Goods and Services/gross domestic products	<b>20</b>	<b>10.7</b>	<b>13.3</b>	<b>14</b>
Net Present Value (NPV) of external debt/Gross Domestic Product	53.4	100.7	91.4	75.4

Source: Own calculations based on data provided in Medani M. Ahmed, “Sudan External Debts and the Millennium Development Goals”, UNDP, Sudan, 2007, table 27, and on using Gunter's equation above.

**Table 15: MDGS–based Debt Sustainability for Southern Sudan (% ratios)**

Indicators	Adjusted Standard Threshold	2003	2004	2005
Net Present Value (NPV) of External Debt/Export of Goods & Services	115.4	912.3	703.1	543.8
Net Present Value (NPV) of External Debt/Government Revenue	192.3	730.8	515.4	392.3
Government Revenues/Goss Domestic Products	11.5	10.8	16.2	16.2
Exports of Goods and Services/Gross Domestic Products	<b>23.1</b>	<b>12.3</b>	<b>15.4</b>	<b>16.2</b>
Net Present Value (NPV) of External Debt/Gross Domestic Product	61.5	115.4	105.4	86.9

Source: Own calculations, for details see table 14.

**Table 16: MDGS–based Debt Sustainability for the Whole of Sudan**

Indicators	Adjusted Standard Thresholds for the Sudan	2003	2004	2005
Net Present Value (NPV) of External Debt/Export of Goods & Services	107.1	847.1	652.9	505
Net Present Value (NPV) of External Debt/Government Revenue	178.6	679.6	478.6	364.3
Government Revenues/Gross Domestic Products	10.7	10	15	15.7
Exports of Goods and Services/Gross Domestic Products	<b>21.4</b>	<b>11.4</b>	<b>14.3</b>	<b>15</b>
Net Present Value (NPV) of External Debt/Gross Domestic Product	57.1	107.1	97.9	80.7

Source: Own calculations, for details see table 14.

With reference to the results in table 16 one is inclined to make two points. First, it is to be noted that that Gunter’s modifications are made to the Sudan-specific ratios, and not the Standard Threshold. That means that Sudan’s indicators have come down, but still not nearly enough to reach the world thresholds; namely Debt/XGS=150%, Debt/GDP=80%, and Debt/Government Revenue=250. The performance for the other two indicators has improved and become less than the thresholds; namely XGS/GDP=30%, and revenues/GDP=15%. Second, the fact that even after Gunter’s adjustments Sudan’s indicators are still nowhere near the 150%, which means that we can make the simple assertion that Sudan is so indebted that, (even if it allocates resources for limited MDG progress) it will simply be unable to sustain any more debt.

## 14. Conclusions

Sudan is highly indebted by any indicators or thresholds, and this places a massive constraint on whether achievement of the MDGs can be supported. Sudan will not be able to service its existing debts and meet the MDGs. The magnitudes of total external debts and the corresponding debt indicators of the Sudan have increased rapidly in the 1980s

However, the classification of the external debts according to creditors has shown some changes in the period of 2001-2005 due to accumulation of principal and arrears of interest rates. The debts of multilateral institutions constituted about 18.7%, 17.4%, 17.1%, 17.3% and declined to 16.5% for the years 2001, 2002, 2003, 2004 and 2005 respectively. The decline was caused by IMF and Sudan agreement to start paying its outstanding arrears.

The country has yet to reach an agreement with the World Bank to start paying its accumulated obligations which would pave the way for negotiation aiming to benefit from the HIPC initiative to cancel the debts of the Highly Indebted Poor Countries launched by the IMF and the World Bank in 1996.

On the other hand, concerning the bilateral debt, especially Non-Paris-Club members constituted on average about 35.2% of total external debt whereas the Paris-Club members had about 31.3% of total external debt.

The debt of the commercial banks ranked number four in magnitude, and amounted to 12.8% of total whereas the private suppliers had about an average of 3.3% of total. In other words, most of the external debts of the Sudan are owned by official creditors (multilateral and bilateral), constituting on average about 83.9% of the total debt stock. This is most likely going to make it easier to reach a solution within the broad HIPC Initiative, should the political requirements of solving the Darfur problem be successfully met in the near future.

The US economic sanctions and political pressures implemented against the Sudan from 1997 until today have negatively affected the country's relations with the international donor community, especially the IMF, the World Bank and western countries. Together with some other factors, the sanctions have sustained economic and political pressures and frustrated Sudanese efforts to come to an agreement with the international donor community on its mounting external debt problem and thus barred it from being admitted into the process leading to HIPC initiatives. This precarious situation has the potential of endangering economic growth and frustrating development opportunities and will increase the probability that the country will fall back into wars and instability.

While it could be reasonably argued that Sudan has met many of the programmatic and economic requirements to receive debt relief, donors and creditors still have strong political concerns about the Darfur problem, handicapping them from honouring the commitments they made to provide aid and development support in the post-conflict era after the Sudanese government and the SPLA/SPLM signed the CPA on January 9<sup>th</sup>, 2005.

If Sudan is able to reach an understanding with the international community on a way forward on these political concerns, then creditors should stand ready to bring Sudan into the HIPC-, and later, MDRI-schemes so as to channel the resources the country needs to: (a) meet the MDGs through

investment in service delivery and infrastructure, and (b) meet the financial commitments contained in the various peace agreements.

On the other hand, this work has argued that various debt indicators in the Sudan indicate that debt sustainability is difficult to achieve given the economic and political situation both locally and globally. Most of the debt burden indicators for the Sudan are substantially higher than the internationally defined benchmarks.

For instance, the ratio of NPV of external debt to the average of three successive years' exports of goods and services has declined from 1,186% in 2003 to 914% in 2004 and 707% in 2005. These ratios are higher than the threshold for meeting the sustainability criteria (which is a ratio of 150%). Despite the fact that the ratio has been falling for three years, it is still considerably higher than the threshold. Therefore, the Sudan debt situation is systematically unsustainable using this ratio.

The second indicator is given by the ratio of NPV of external debt to government revenue which has declined from 950% in 2003 to 670% in 2004 and 510% in 2005. These ratios are also more than double the threshold in 2005. Again debt is unsustainable using this indicator.

The third indicator is given by the ratio of government revenue to Gross Domestic Product which has increased from 14% in 2003 to 21 percent in 2004 and sustained at 22% in 2005. The standard ratio is 15% and the actual ratios have been increasing, showing some progress in revenues generation by the government on the tax-revenues side, and most importantly in the non-tax-revenues side. The increased revenues from oil have improved the ratio and with more oil drilling and exploration, the ratio will continue to rise.

It is important to point out that the ratios which have shown remarkable improvements are caused by the high economic growth rates during the 1990s and after, generated mainly by an increase in oil exports and revenues and this trend is expected to continue in 2006. However one can safely generalize that the burden and sustainability indicators of the Sudan external debt indicate clearly that Sudan's external debt position is unsustainable. Inclusion of MDGs-based debt sustainability might improve the outlook of the debt indicators in the Sudan.

This work has also revisited Gunter's new concept of MDG-consistent debt sustainability. The concept links development strategies with achieving MDGs and allows LDCs to incur low debt sustainability ratios. In other words, the formula incorporates the objective of achieving MDGs as assets that allow a country to remain debt sustainable even though the traditional financial debt sustainability indicators are high.

One striking outcome is that this new concept would not solve the indebtedness problem of the Sudan as the new MDG-based debt sustainability indicators are still very high relative to the actual figures for the period 2003-2005. The only exception where Sudan debt performance is better than the benchmarks is for ratio of exports of goods and services divided by the GDP (all figures are below benchmarks whether old or new for all cases, both for Northern, Southern and the whole of Sudan).

The problem of external indebtedness has been working as a formidable barrier to foreign investment and caused some serious overhang effect on investment in the 1980s and the first half of the 1990s. The amount of foreign investment was zero in the period 1990-1995, and amounted to only \$ 0.7 million in 1996 before it sharply rose to \$ 101.2 million in 1997, responding to some good GDP growth rates and also in response to some successful efforts undertaken by the country to improve its economic relations with some Arab and Asian countries (which later invested heavily in the oil sector).

Conversely, the period 2000-2005 witnessed substantial increase in foreign investment in the Sudan, making it one of the highest foreign investment receiving countries in the Arab world. Foreign investment in the Sudan has been going mainly to the oil sector, agriculture, construction and transportation sectors.

It is clear from our previous analysis of the external debt magnitude, debt burden indicators and debt sustainability analysis that the Sudan is qualified technically to benefit from the Highly Indebted Poor Countries initiative. However, the Sudan has been barred from entering into the HIPC initiative, partly because of incompleteness of agreements with multilateral institutions to solve the problem of accumulation of arrears and also clearance of accumulated arrears due to Paris Club and non-Paris Club creditors and partly due to political demands imposed upon it by the international community to solve the South Sudan problem and later on the Darfur problem.

The political economy of oil production in the Sudan has attracted China, India and Malaysia to invest heavily to secure oil flows to meet expanding oil demands at home and to expand oil marketable resources and shares as well as to secure investment opportunities at relatively lower opportunity cost had the market been opened to western oil multinationals. The Sudan, likewise having been isolated and sanctioned by US and western allies, has found reliable partners in East Asian nations to offset any undesirable economic effects of these sanctions. It also has found a chance to play a defiant role against its perceived western enemies.

On the other hand, the aftermath of September 11<sup>th</sup> has increased economic insecurity of Arab investment in western banks and pressured them to seriously find alternative investment outlets in the Arab world. The Sudan being the most rapidly growing country in the region and with enormous oil potential has constituted a special attraction to Arab financial resources and investments.

In addition, the Sudan has adopted a very generous investment law that provides substantial fiscal and non-fiscal incentives to foreign investors coupled with unlimited access to its huge natural resources and infrastructure projects offerings. All these reasons explain why the Sudan is able to attract foreign investment and secure substantial borrowings even though its debt obligations are formidable and could easily hamper foreign investment in normal circumstances.

In testing the relationship between the stock of external debt and growth of per capita income, the Sudanese case gives further proof to the debt overhang hypothesis. Based on the debt reality in the Sudan, one would like to say that had the country been given the opportunity to join and benefit from the HIPC Initiatives, it could have achieved a much higher rate of growth of its per capita income and thus would have improved its people's welfare and attained much better levels of social development.

In other words, the Sudan has not been able to regain the confidence and trust of its traditional western donors and has been forced to seek alternative finances from the Asian continent, namely China and Malaysia and India, which have also been driven by their need for oil and natural resources.

The rift between Sudan and the western powers further widened with the intensification of the Darfur problem and increasing pressure from human rights organizations' on the Sudan. Sudan stopped to service its accumulated debt obligations in the late 1980s and reverted to a completely different lending direction and partners which has also enraged its old creditors and donors as they see China exploiting the Sudan case for its own benefit.

The western aid and support for Sudan have dried out except in the humanitarian sector, whereas development and concessional aid have slowed considerably if not stopped completely. On the other hand, the Chinese direct investment and support in the oil and energy sectors were strengthened and efforts are underway to diversify Chinese investment and to redirect them to the infrastructure and productive sectors.

In sum, the external debt and TDS independent variables have had negative effects on the growth of per capita income in real terms in the Sudan in the study period. The results of the best fitting equations of the regression model estimated for the Sudan have provide evidence to the debt overhang and crowding-out hypotheses.

One policy option for reducing poverty and raising the growth rate of the per capita income in the Sudan , could be achieved if the country allocates substantial resources generated from debt relief strategies to essential social services delivery and public investment in productive sectors (like agriculture, infrastructure and services).

Investment in infrastructural activities and sectors (namely roads, electricity, water and sanitation, extension services, marketing services and facilities, financial and banking networks and basic health and education services), becomes critical in reducing poverty, improving welfare of the people and in sustaining growth of the per capita income and growth of the economy at large in the future. Thus, substantial debt relief programs, coupled with comprehensive concessional aid and external grants provision and supported by increases in domestic savings are necessary conditions to prevent any increases in the budget deficit.

To recap the arguments, both a substantial reduction of the external debt stock and the mounting TDS obligations of the Sudan are essential for inducing an effective increase in government spending on essential services and on public investment in the infrastructure and productive sectors to sustain economic growth and peace and to improve people's welfare and in the future.

One policy implication from the above results, is that the monetary policy variables (especially the money supply), if they are carefully and prudently implemented within a comprehensive package of pro-poor and growth enhancing policies, can play a very effective and vital role in sustaining growth of the per capita income and in reducing poverty in the Sudan.

In other words, substantial rates of profits and very high rates of return on investment in the oil sector and related sub-sectors "crowded out" scarce local resources and monopolized foreign resources and rerouted them away from the traditional service and agricultural sectors resulting in a speedy deterioration and fall in their productivity and return of capital. Traditional exports' earnings have been falling and income per capita in agriculture has been declining steadily and poverty has become widespread and intensifying over time.

However, these traditional sectors, predominantly agriculture, still hold the future potential in terms of natural resources, employment, income and opportunity for growth in the future if more resources and oil surpluses are invested to provide essential infrastructural facilities, improve technical and human capacities, skills, market access and provide funding to small farmers and livestock feeders and producers in the rural areas of the country. A policy implication from the agriculture and services coefficient values is that for sustaining growth of per capita income and thus reduction of poverty in the Sudan, the government investment, fiscal, and monetary as well as credit policies should all be geared to increase the share of resources and finance going to these productive sectors.

One has to caution that the details of the dynamics between growth and population can only be ascertained and revealed after conducting the 2008 population census. However, one policy implication from the reported results of the model is that reduction of the population growth rate below the growth rate of the GDP and per capita income should be a priority policy issue if we want to sustain growth and development and to reduce poverty in the Sudan.

## References

1. Ahmed, Medani, M, R.B, and Michael Bell, (2005), "An analysis of fiscal policy in the Sudan: A pro-poor perspective." Paper submitted to the UNDP and World Bank.
2. Ahmed, Medani M, (2007), "Sudan External Debts and Millennium Development Goals (MDGs)." A paper submitted to the UNDP, Khartoum.
3. Ali, S. A, (1988), "The Debt Problem of Sudan" (Unpublished MA dissertation, IAAS, University of Khartoum).
4. Barro, R., and X. Sala-I-Martin, (1995), *Economic Growth*, IT Press.
5. Central Bank of Sudan: Annual reports, and also external debt files, for respective years.
6. Clairmonte and John Cavanagh, (1987), "Third World Debt Crisis Threatens a Collapse of World Trade and Finance Systems," *International foundation for development alternatives*, May-June.
7. Clements, B., R.Bhattacharya and T.Q. Nguyen, (2003), "External debt, Public Investment and Growth in Low Income Countries," IMF Working Paper 03/249.
8. Cohen, D., (1995), "Large External Debt and Slow Domestic Growth: A Theoretical Analysis," *Journal of Economic Dynamics and Control*, 19: 1141-1163.
9. Elbadawi, Ibrahim A., Benno J. Ndulu and Njuguna Ndung'u, (1997), "Debt Overhang and Economic Growth in Sub-Saharan Africa," in Zubair Iqbal and Ravi Kanbur (eds.), *External debt finance for Low-income Countries*, pp 49-76 (Washington:IMF).
10. Fosu, Agustin K., (1999), "The External debt Burden and Economic Growth in the 1980s: Evidence for Sub-Saharan Africa." *Canadian journal of Development Studies*, Vol. XX, No. 2, pp. 307-318.
11. Girling, R. (1985), *Multi-national Institutions and the Third World*, New York.
12. Gunter, Bernhar, G, (2006), "MDG-Consistent Debt Sustainability: How to Ease the Tension between Achieving the MDGs and Maintaining Debt Sustainability," UNDP Round Table Discussion on MDG-Consistent debt Sustainability, New York.
13. Gupte, P, (1988), "The debt Bomb keeps Ticking," *The International Newsweek*, April 11.
14. Gupta, Sanjeev, Benedict Clements, Alexander Pivovarsky and Erwin R. Tiongson, (2003), "Foreign Aid and Revenue Response: Does the Composition of Aid matter?" Working Paper no.02/176 (Washington:IMF).
15. Ibrahim, Nagel Din Hassan, (2006), "Sudan's external debt problems a challenge ahead," CBS, External Debt Unit.
16. Imbs, Jean and Romain Ranciere, (2005), "The Overhang Hangover", a paper presented at the CEPR conference on *Institutions, Policy and Growth, INSEAD, May 2005 and the World bank macroeconomics seminar*.
17. Kitabire, Damoni and Moses Karbanda (2006), "MDG Achievement and Debt Sustainability in HIPC and Other Critically Indebted Developing Countries: Thoughts on an Assessment Framework." Paper presented at the joint UNDESA/UNDP Roundtable on Debt Sustainability and the Millennium Development Goals, New York (October 30).
18. Krugman, P, (1988), "Financing vs. Forgiving Debt Overhang," *Journal of Development Economics*, 29, 253-268.
19. Krugman, Paul, (1998), "Financing vs. Forgiving a Debt Overhang. Some Analytical Issues," NBER Working paper No. 2486 (Cambridge, Massachusetts: National Bureau of Economic research).
20. Mullen, N. (1979), "Historical Perspectives on Developing Nations Debt," in L. G. Frank and M. J. Seiber (eds.), *Developing Countries' Debt*, New York.
21. Ngwenya, M.A.R., (1988), "The African Debt Crisis: The Case of Limited alternatives," in K. Fanya (ed.) "The Organization of African Unity 25 Years On." London.
22. Obstfeld, M. and K. Rogoff, (1996), *Foundation of International Economics*, MIT Press.

23. Piketty, T., (1997), "The Dynamics of Wealth Distribution and the Interest Rate with Credit Rationing," *Review of Economic Studies*, 64: 173-189.
24. Satti, Kaltoum Ali, (2004), "Sudan External Debt What's going on?" Economic Policy Management Internship Columbia University, (August).
25. Spratt, Stephen, (2006), "External Debt and the MDGs: A New Sustainable Framework," New York.
26. Sturm, Jan-Egbert, (2001), "Determinants of Public Capital Spending in Less-Developed Countries," (Munich: University of Groningen and CESifo working paper).
27. Tanzi, Vito, and Hamid Davoodi, (1997), "Corruption, Public Investment and Growth," IMF working Paper 97/139(Washington: IMF).
28. The Government of the Sudan, (1987), "Strategy of tackling external debts in the Sudan." A paper presented at the Addis Ababa Conference on External Debts, Ethiopia.
29. The European Sudanese Public Affairs Council (2000), "The Clinton Administration's Sanctions Against Sudan: How Long Will the Charade Continue?" (November).
30. UN General Assembly Draft Resolution (2006), "Draft Resolution External Debt Crisis and Development", (October).
31. Velasco, (1997), "A Model of Endogenous Fiscal deficit and delayed Fiscal Reform," in *Fiscal Institutions and Fiscal Performance*, James Poterba and Jurgen Von Hagen( eds.), University of Chicago Press.
32. Warner, A. (1992), "Did the debt Crisis Cause the Investment Crisis?" *Quarterly Journal of Economics* 1161: 1186.
33. World Bank Report, (1989), Washington, 1989.

## Appendix 1 Debt Strategy and Borrowing Guidelines

### ***1. Sudan Debt Strategy:***

In 2002, Sudan formulated a debt strategy based on the following:

- 1- Sudan should be fully committed to paying back its debt and accumulated arrears to all creditors,
- 2- Any settlement of debt and arrears should be negotiated and concluded within the IMF framework.
- 3- Sudan should avoid and preferential treatment to any of its bilateral creditors or any country or company or politically-favoured or inclined institutions.
- 4- The Sudanese political establishment should also endeavour to find a lasting solution to the debt problem from a political dimension.
- 5- Sudan undertook not to contract any new loans unless there was an urgent need to borrow, and if it entered into new commitments, it was obliged to contract concessional loans and repay the loans on the scheduled dates.
- 6- Sudan should open up negotiations with its multilateral creditors with a view to agreeing to a repayment program including current maturities.
- 7-

In the implementation of this strategy, Sudan agreed to make partial debt service payments to almost all multilateral creditors and some bilateral creditors in an attempt to encourage inflows of funds from existing and new commitments. Since the resumption of debt service payments to the IMF in 1997, Sudan has re-established relations with and restarted partial repayments to most of its multilateral creditors, as well as various bilateral Arab Funds. For instance, in 2004, the country made partial payments on its obligations to the IMF, World Bank, African Development Bank, Arab Monetary Fund, Islamic Development Bank, Arab Fund for Economic and Social Development, International Fund for Agricultural Development and the OPEC Fund.

Although debt strategy defined in 2002 resulted in some inflows of disbursements, it appears to have somewhat exacerbated the debt situation. While at the end of 2002 USD 23.6 billion, it shot up to USD 27 at end 2005, as a result of further accumulation of penalty arrears on delayed payments. Although Sudan's external position may have improved- as evidenced by the increase of foreign exchange reserves from 1.5 months of import coverage as at end 2003 compared to 2.9 months at end 2004- the country cannot afford to increase its partial debt service payments to all multilateral creditors due to heavy expenditures associated with the implementation of the Peace Agreement.

### ***2. Borrowing Guidelines:***

In 2005, the Minister for Finance and National Economy approved a recommendation that contracting and guaranteeing of external loans should be confined to concessional terms. A ceiling of US\$ 150 million per year was also proposed for non-concessional borrowing to be used for high priority projects, mainly in the social sector. Other measures that are awaiting approval by the Council of Ministers, proposed for financing development projects, include:

- 1- Attracting foreign investments and taking advantages of options like BOT and debt conversion programme.
- 2- Borrowing from the domestic market: this will entail devising more instruments and taking constructive measures for deepening the financial markets in accordance with Islamic Financial Instruments in Sudan.

In addition to the above policy guidelines, GOS is committed to pursuing prudent fiscal policies aimed at maintaining domestically financed budget deficit of 1% of GDP. This policy envisages increased oil revenues, expenditure restraints and domestic borrowing to finance additional expenditures. There is, however, a need for external finance to fund urgent social and development

programs as defined by UN/World Bank Needs Assessment on poverty reduction issues, reconstruction of infrastructure and rehabilitation of ex-combatants. Therefore these expenditures will put pressure on the budget deficit, if no external financing will be available. However, if the budget deficit is confined to 1%, it provides a cushion for not incurring unsustainable debt.

According to the Peace Agreement, the Government of Southern Sudan (GSS) is allowed to borrow on its own. In this connection, there is a need to assist GSS in:

- Enacting the enabling laws to borrow and guarantee loans.
- Developing and formulating borrowing policies and strategies.
- Preparing detailed guidelines on appraisal of projects, evaluation of loan offers, guaranteeing of loans, negotiations tactics.
- Articulating procedures for contracting and on lending loans to government entities.

The guidelines will be important signposts for maintaining prudent borrowing and avoid the maladies of a debt.

## Appendix 2: Repayment 2001-2009

Creditors	2001	2002	2003	2004	2005	2006 Actual/ Estimation	2007 Estimation	2008	2009
International Monetary Fund	55.0	24.0	27.7	31.5	33.0	45.0	45.0	45.0	45.0
World Bank	1.0	0.5	5.5	4.5	3.0	6.0	6.0	6.0	6.0
African Development Bank	-	-	3.0	6.0	3.5	3.0	6.0	6.0	6.0
OPEC Fund for International Development	9.0	4.0	12.0	12.0	7.7	1.2	2.4	2.7	3.1
Arab Monetary Fund	4.5	-	10.5	12.0	11.4	11.8	12.7	17.9	17.8
International Fund for Agricultural Development	2.2	2.6	3.8	5.2	4.6	4.0	4.3	4.2	4.6
Islamic Development Bank	1.2	4.1	4.6	10.6	8.7	8.9	11.0	12.3	12.6
Abu Dhabi Fund for Development	0.3	1.0	1.5	1.9	1.6	3.5	7.8	13.3	15.1
Arab Fund for Economic and Social Development	7.5	15.0	19.5	18.0	18.0	17.6	27.5	29.2	34.9
Kuwaiti Fund for Arab Economic Development	4.7	2.3	15.4	11.2	9.7	11.1	11.0	11.6	11.8
Saudi Fund for Development	5.3	7.1	7.1	6.9	7.6	7.7	9.1	10.4	10.9
China	-	84.0	117.3	129.8	126.9	157.7	251.4	218.1	371.2
Malaysia	-	16.7	36.9	74.8	58.0	63.4	45.9	35.3	8.7
Turkey	-	-	-	2.8	-	1.4	2.8	2.8	2.8
Oman Sultanate	-	-	-	-	-	0.2	3.2	3.2	13.7
Arab Organization for Investment Guarantee	-	0.7	1.4	-	-	14.7	1.3	1.3	1.3
India	-	-	-	1.6	-	21.0	-	5.2	5.3
Government share in Elagsa Fund	-	-	-	1.5	-	-	72.0	78.6	121.6
African Development Bank's capital share	-	-	-	1.4	-	-	351.0	418.0	76.0
<b>Total Repayments</b>	<b>90.7</b>	<b>162.0</b>	<b>266.2</b>	<b>331.7</b>	<b>293.7</b>	<b>378.1</b>	<b>870.5</b>	<b>921.3</b>	<b>768.3</b>

### Appendix 3: Disbursements 2001-2005 (in Million USD)

	2001	2002	2003	2004	2005
<b>Institutions and Bilateral Financial creditors</b>					
Islamic Development Bank	72.20	13.70	8.90	21.40	25.90
International Fund for Agricultural Development	11.90	4.00	4.60	6.40	6.90
Arab Fund for Economic and Social Development	-	1.20	16.70	49.80	87.30
Saudi Fund for Development	-	0.80	8.40	20.70	53.40
OPEC Fund for International Development	6.40	-	8.10	1.30	1.50
Kuwaiti Fund for Arab Economic Development	-	1.70	4.90	13.80	15.30
Abu Dhabi Fund for Development	0.10	8.80	4.90	17.50	21.70
Oman Sultanate	-	-	29.30	53.90	22.40
Iran	-	-	-	-	-
Turkey	-	-	-	-	-
Export Import Indian Bank	-	-	-	3.50	14.40
China*	-	1.80	1.20	6.60	82.00
<b>TOTAL LOANS</b>	<b>90.60</b>	<b>32.00</b>	<b>87.00</b>	<b>194.90</b>	<b>330.80</b>
<b>Grants</b>					
United Nation Organization	42.90	44.10	62.80	117.70	209.30
European Commission	-	-	-	-	0.50
Humanitarian Aids	155.70	123.90	127.60	839.90	1,038.00
<b>TOTAL GRANTS</b>	<b>198.60</b>	<b>168.00</b>	<b>190.40</b>	<b>957.60</b>	<b>1,247.80</b>
<b>GRAND TOTAL</b>	<b>289.20</b>	<b>200.00</b>	<b>277.40</b>	<b>1,152.50</b>	<b>1,578.60</b>

## Appendix 4: Disbursement by project 2006-2009 (in Million USD)

OPEC Fund for International Development	Actual/Estimates	Estimation		
	2006	2007	2008	2009
Gezira Imitation Rehabilitation	5.60	2.00	-	-
National Grid Rehab.	0.10	-		-
Rosaries Dam	-	5.50	3.50	2.80
Rehabilitation of Elrahad Project	-	2.00	8.00	8.00
Rehabilitation of Elsoki Project	-	-	3.00	8.00
<b>Total</b>	<b>5.70</b>	<b>9.50</b>	<b>14.50</b>	<b>18.80</b>
<b>International Fund for Agricultural Development</b>				
Western Sudan Resources Development	3.14	5.00	3.90	3.40
South Kordofan Rural Dev.	2.10	2.50	2.50	1.50
North Kordofan Rural Dev.	0.80	0.50	0.20	-
Gash Sustainable Livelihoods Regeneration	5.70	6.90	4.40	6.90
Greater Butana Development Project	-	2.00	3.00	3.50
<b>Total</b>	<b>11.74</b>	<b>16.90</b>	<b>14.00</b>	<b>15.30</b>
<b>Islamic Development Bank</b>				
Expansion of the Radiation Center	3.03	-	-	-
Grater Darfur Drought Recovery Project	5.71	10.30	8.70	4.70
Rehabilitation of Irrigation	2.06	7.15	2.00	-
Khartoum North Heat Station	9.00	18.00	18.00	-
Load Dispatch Center	7.80	0.75	-	-
Al Khuwe El Nuhoud Road	5.95	1.27	-	-
Om Ruwaba - Abu Gibaiha Road	0.74	1.40	-	-
Al Maarig Education. Complex	2.35	-	-	-
Technological Literacy Education Center	0.59	-	-	-
Health Center for Malaria & Tuberculosis	4.00	3.10	-	-
Khartoum State Water	6.88	2.05	-	-
Rousers Dam	0.45	-	-	-
Elawgaf Tower	2.84	3.88	8.00	-
Literacy Project	0.49	-	-	-
Basic School in Southern Sudan	0.70	5.74	3.00	-
Basic schools for Greater Darfur	0.70	-	-	-
Capacity Building-Women Association	0.35	-	-	-

Capacity Building- MOFNE	1.02	-	-	-
Avian Influenza Control	0.10	-	-	-
Green Nafra Project		25.00	25.00	-
Expected New loans		50.40	80.20	106.60
<b>Total</b>	<b>54.76</b>	<b>129.04</b>	<b>144.90</b>	<b>111.30</b>
<b>Kuwaiti Fund for Arab Economic Development</b>				
Merawi Dam	33.10	39.00	29.80	-
Elroseres Dam Heightening Project	-	10.00	20.00	20.00
<b>Total</b>	<b>33.10</b>	<b>49.00</b>	<b>49.80</b>	<b>20.00</b>
<b>Saudi Fund for Development</b>				
Merawi Dam	29.50	21.00	7.20	-
Elroseres Dam Heightening Project	-	15.00	25.00	60.00
White Nile Sugar Project	-	25.00	25.00	-
<b>Total</b>	<b>29.50</b>	<b>61.00</b>	<b>57.20</b>	<b>60.00</b>
<b>Arab Fund for Economic and Social Development</b>				
Merawi Dam	49.50	35.00	21.20	-
Attabra - Hya - Port Sudan Road	16.50	30.40	-	-
Doka El Galabat Road	8.70	33.80	-	-
White Nile Sugar Project	18.50	-	-	-
Grants (Drinking Water)	4.70	-	-	-
Elroseres Dam Heightening Project	-	30.00	50.00	120.00
Merawi Dam road	3.00	-	-	-
<b>Total</b>	<b>100.90</b>	<b>129.20</b>	<b>71.20</b>	<b>120.00</b>
<b>Abu Dhabi Fund for Development</b>				
Merawi Dam	33.00	19.20	10.00	-
Elroseres Dam Heightening Project	-	10.00	20.00	20.00
<b>Total</b>	<b>33.00</b>	<b>29.20</b>	<b>30.00</b>	<b>20.00</b>
<b>India</b>				
Credit line Facility	10.40	-	-	-
Credit line for Singa El Gedarif Transmission	5.00	10.00	26.90	-
Credit Line for Kosti Power Station	-	100.00	100.00	150.00
GIAD's Car Project	-	75.00	75.00	-
Elramash Sugar Project	-	20.00	22.00	-
Agricultural and education projects	-	15.00	20.00	23.00
Elgadaref Elgalabat Road	-	10.00	10.00	10.00
Different Projects( Agri. Electricity, Industry)	-	50.00	150.00	220.00

<b>Total</b>	<b>15.40</b>	<b>280.00</b>	<b>403.90</b>	<b>403.00</b>
<b>Turkey</b>				
El Mek Nimer Bridge - Construction Project	-	10.00	4.00	-
New Loans	-	5.00	13.00	15.00
<b>Total</b>	<b>-</b>	<b>15.00</b>	<b>17.00</b>	<b>15.00</b>
<b>Iran</b>				
Atbara Eldamer Water	4.20	7.00	5.00	-
Expected New Loans	-	5.00	10.00	15.00
<b>Total</b>	<b>4.20</b>	<b>12.00</b>	<b>15.00</b>	<b>15.00</b>
<b>China</b>				
Nyala Water Supply - CAMC C.	-	15.00	25.00	10.00
Dali and Mazmoum Water	-	7.50	12.50	5.00
Port Sudan Water Project (CMIC Comp)	-	138.90	115.80	115.80
El Gedarif Water Project	-	20.00	35.00	12.00
El Fashir Water Project (CMIC Comp)	-	-	-	-
Tiangin Comp. 150 Water Well Project	-	2.80	4.60	1.80
Water Equipments 2	-	9.00	-	-
50 Water wells Project (North Kordofan)	-	1.40	1.80	-
Water Equipments 2	-	9.00	-	-
Dongla water Supply Project	-	10.20	17.00	6.80
Matama - Abu Hamed - ElDaba Water Supply	-	8.00	13.30	5.30
Supply of Hdpe Pipes	-	5.20	8.60	3.40
Medani Water Supply Project	-	8.70	14.50	8.50
Kosti -Rabak Water Supply Project	-	8.90	14.80	5.90
Extension of Khartoum North Heat Station	5.70	4.60		
Gari 2 Station	18.20	27.80		
Gari 4 Station	15.30	3.80		
Third Circuit Transmission - Elroseres Khartoum	18.60	-		
Transmission Lines Project	197.00	95.50		
Amri Agricultural Project	12.70	-		
El Mekabrab Project	5.20	-		
Hydro-mechanics Project	16.10	6.70		
Rehabilitation of Weaving Machines	-	2.80	2.90	-
North Kordofan Solar Project	-	3.50	1.50	-
Grain Storage Houses	-	11.10	11.10	-
Rufaa Bridge	-	3.00	7.40	-
El Duim Bridge	-	2.50	9.70	-
Military Equipments - Poly Technology C.	-	-	-	-
Irrigation Equipments	-	3.10	5.30	2.10
Expected New Loans	-	400.00	650.00	900.00

<b>Total</b>	<b>288.80</b>	<b>809.00</b>	<b>950.80</b>	<b>1,076.60</b>
<b>Grand Total</b>	<b><u>577.10</u></b>	<b>1,524.84</b>	<b>1,751.30</b>	<b>1,860.00</b>





## SUMMARY

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The research programme *Peacebuilding in Sudan: Micro-Macro Issues* is a cooperative venture between Chr. Michelsen Institute (CMI), the Institute of Peace Studies at the University of Khartoum and Al Ahfad University for Women. Staff and students from other institutions also take part.

Research addresses main challenges to peacebuilding in Sudan, with a particular focus on (a) the political economy of the transition, including institutional and governance issues, and (b) the role of third party engagement and issues related to the management and coordination of aid. The programme is multidisciplinary and combines macro level studies with research in selected localities and states. It covers basic and policy-oriented research as well as competence building.