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Title

**THE CURRENT SITUATION, FUTURE PROSPECT OF
POVERTY AND INEQUALITY IN SUDAN**

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ABSTRACT:

This research paper aims to address income poverty and inequality in Sudan. Poverty and inequality indicators were computed using both primary and secondary data sources. P-alpha equation, Povstat and Simsip models were used for poverty assessment and simulation. Results showed that more than 65 percent of the population in Sudan living with poverty. Inequality Gini index was 75 percent. The future prospect of poverty in Sudan showed declining trend, growth would slightly reduce poverty and inequality. The combined effect of growth and food prices increase would also reduce poverty and inequality. However, the decomposition of this effect into income and distribution effects, income effect would reduce poverty while the distributional effect would increase extreme poverty indicators.

Keywords: poverty, inequality, growth, food prices, Sudan

1. INTRODUCTION:

Sudan has achieved high and sustainable growth during 1990-2008 with average growth rate of 7.7 percent. Yet, poverty indicators have shown increasing trends, all rural and urban poverty trends were increased. Almost three quarters of the population were estimated to be poor with great disparities (Mohamed, 2006). Poverty in Sudan was 70-80 percent of the population in rural areas and all statistics indicate that poverty is still on the rise and in some regions it become constant state famine and minimum cost of living has doubled 34 folds between 1988-1999 (Hussein, 2003) and the growth rate of the number of poor families was estimated to be more than 4 percent annually (Ibrahim, 2002, Ibrahim, 2003)).

With the turn of 2000 and the announcement of Millennium Development Goals (MDGs), Sudan has been committed to realize its components and began address poverty reduction as main component of its development programs. The government has established a poverty unit and prepares poverty reduction strategy paper and allocated specific budget for poverty reduction through provision of budgetary support to resource poor states in addition to other development factors such as agricultural Revitalization Program, signing and implementation of the Comprehensive Peace Agreement (CPA) and sustainability of peace, the exploration and

growing oil exports and increases in international food prices. All these factors are expected to provide a good chance for poverty reduction at the national level. Despite that, poverty incidence is exceeding 90 percent in the whole country with regional and sub-regional disparities with poorest found in rural area among displaced people, mobile pastoralist and among children and women (Abdelgadir 2000, Wannye 2006 and UNDP, 2006). The problem is further aggravated with poor inadequate delivery of social services and cut off development expenditure which further worsening the poverty situation (UNDP, 2006). The result, Sudan was ranked 147th out of 175 poor countries (UNDP, 2008).

However there is no data or research that links the country recent growth with incidence of poverty and inequality. Thus conducting research on this issue and link current and future economic growth and increases in food prices are seem essential for future monitoring, evaluation, planning and policymaking for poverty reduction. Thus, this paper aims to assess the current situation poverty and inequality, project and simulate future poverty in Sudan.

2. THE RESEARCH OBJECTIVES:

The main objective of the study is to assess the extent of poverty incidence and to simulate its occurrence in the four coming years considering the future growth and increases in food prices.

The specific objectives are to:

1. Assess income poverty incidence, depth and severity at national level..
2. Assess income inequalities at national level.
3. Project poverty and economic growth between 2008 and 2012.
4. Simulate poverty with respect to economic growth and food prices increases.

3. THE RESEARCH QUESTIONS:

To realize the research objectives the study was designed to answer the following questions:

1. What are current situation of poverty and inequality?
2. What are the impacts of future growth and increase in food prices on poverty and inequality?

4. RESEARCH METHODOLOGY:

The study used both primary and secondary data sources. Secondary data sources include Bank of Sudan, Central Bureau of Statistics, Ministry of Finance and National Economy, International Monetary Fund, World Bank and other ministerial and NGOs reports and previous studies. Primary data was collected through direct interviews with household heads using structured questionnaire. Two stage stratified simple random sampling techniques was applied base on sector of employment and occupational type in the sectors with total sample size of 2714 household heads.

To establish the poverty line the study used the calories intake and the cost of basic need approaches. To measure poverty indicators the study used the P-alpha equation of Foster-Greer and Thorbecke (FGT). For inequality Lorenz curve and Gini index were used. Povstat program and the simulator for Poverty and social indicators (Simsip) were used to forecast and simulate poverty and inequality indicators based on estimation of regression and parameterization of the Lorenz curve using General Quadratic method (GQ) .

5. RESULTS AND DISCUSSION:

The overall poverty indicators as presented in table (1) showed that poverty incidence was 65.5 percent and poverty gap was 43 percent and poverty severity of 33.3 percent. This implies that more than two third of population is living under poverty not maintaining their basic needs. This is in line with what mentioned by (Maharn, 2002, IFAD, 2008 and chandulal, 1999). Poverty incidence in a country is either due to low income or to unequal distribution of that income among the population or both. Given the recent economic growth (on average 7.7 percent), the present situation of poverty was due to inequality in income with Gini index of 75 percent (table .1 and Figure 1.A). The high income inequality was initially due to poor distribution policies adopted by the government in the recent past years, by giving priority to certain sector that employ small segment of the population like oil and mining which led to disparities among economic sectors and social groups, instead of giving priorities to agriculture which employ 80 percent of the population and has more backward and forward linkages with other sectors such as manufacturing. As stated by Badiane, (2008) a significant reduction of poverty in Africa needs to

sustain, broaden, and accelerate its recent growth performance and boost its investments in agriculture. Also the miss allocation of oil revenues by putting them away from development or invest them on agriculture to produce multiple impacts on different economic sectors. This inline with World Bank report (2009) when mentioned that the country has not taken the opportunity to redirect oil resources to broaden its productive capacity and diversify exports and the productive base to internalize growth and make it depend on broad-based agri-business, manufacturing and services sectors.

Future prospect of poverty (table.2) the results showed that poverty indicators showed mild (1-2 percent) declining trends in the coming four years. This is basically, due to the improvement in the level of average per capita consumption raised from 375 SDG to 417 SDG. Inequality (table.2) has also showed a declining trend during the first three years and become constant in the last year.

Also the future growth (table.3 and Fig.1.B) would slightly reduce both moderate and extreme poverty indicators. The decomposition of growth impact into income and distributional effect, the growth effect would reduced all moderate and extreme poverty, while the distribution effect(Fig.1.C) would reduce all moderate poverty measures and raised extreme poverty. This implies that, the expected growth rates impact would slightly reduce poverty through increases in income, yet the distribution of that growth would increase extreme poverty. This is mainly to unbalance growth which will deepen the already existing high inequality among the population segments. Further, the situation was aggravated with increases in food prices, since 2002 the food prices started to increase and in 2007 it rose by about 42 percent. The prices of major food items also expected to increase by 20 percent by the year 2015 from their levels in 2006 (Elnasikh, 2008). These strong upward trends and increased in overall food prices during the past two years have led to a concern that hunger and poverty will increase. The effects of higher food prices are expected to have radical different effects across population groups. However, these rising food prices would provide an incentive and opportunity for many developing countries (Abd Ellateef, 2008, and Elnasikh, 2008). The test of impact of growth and increase in food on future poverty (table.4 and Fig.1.D) showed the combined effects of growth and prices would also slightly reduce poverty. However, while income effect reduced the all poverty the distribution effect (Fig.1.F) would increase extreme poverty.

CONCLUSIONS:

1. In spite of progressive economic performance in the recent years poverty is still high, more than two third of the population were living under poverty line. The problem of poverty was due to inequality rather than growth poverty.
2. The future prospect of poverty measures in Sudan is declining under the ongoing circumstances at least in short run (1-4) years.
3. future growth would reduce poverty in whole economy; nevertheless it raised the national inequality.
4. The combined effect of growth and food prices increase would reduce poverty. While inequality impact would raise poverty at national level.

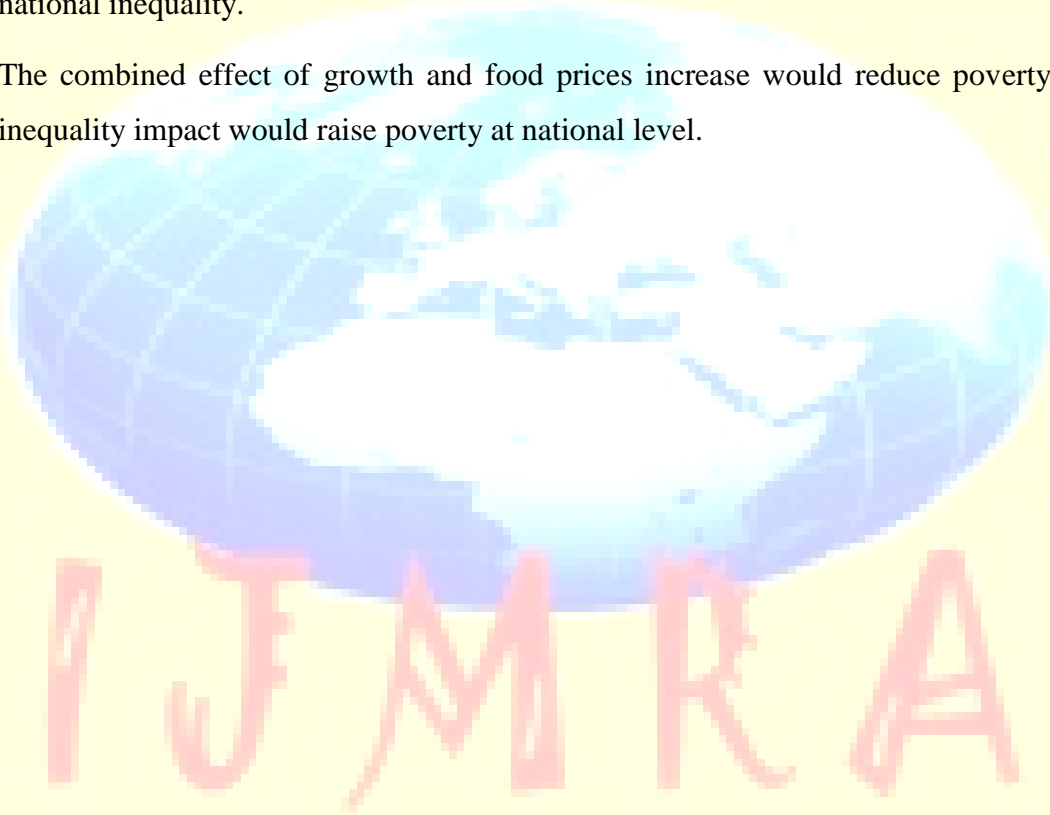


Table (1) the current situation of Poverty and inequality in Sudan in 2008

Sector	Poverty line	Poverty incidence	Poverty gap	Poverty severity	Inequality Gini Index
Sudan	2636.4	65.5	43	33.3	0.75

Table (2) Poverty Projection in Sudan during 2009-2012

Poverty and inequality measures	2009	2010	2011`	2012
Headcount index	58.3	57	55.2	52.9
Poverty gap index	27.5	26.1	24.9	23.8
Squared poverty gap index	16.7	15.7	14.9	14.2
Mean consumption	397	405	410	417
Gini coefficient	0.63	0.62	0.62	0.62

Table (3) simulation poverty and growth impact

	Forecast horizon	
Poverty indicators	2008	Average 2009-2012
Mod. Poverty		
Headcount	59.47%	57.99%
Poverty gap	32.94%	31.78%
Squared Gap	22.23%	21.32%
Ext. Poverty		
Headcount	38.37%	38.26%
Poverty gap	18.24%	18.24%
Squared Gap	11.00%	11.05%
Growth Impact Mod Ext		
Headcount	-0.62%	-0.59%
Poverty gap	-0.48%	-0.37%
Squared Gap	-0.39%	-0.26%
Inequality Impact		
Headcount	-0.85%	0.48%
Poverty gap	-0.68%	0.37%
Squared Gap	-0.53%	0.32%
Residual		
Headcount	0.01%	0.00%
Poverty gap	0.00%	0.00%
Squared Gap	-0.01%	0.00%

Table (4) combined effect growth and food price on future poverty

Poverty indicators	2008	Average 2009-2012
Moderate poverty		
Headcount	59.47%	57.99%
Poverty gap	32.94%	31.78%
Squared Gap	22.23%	21.32%
Extreme poverty		
Headcount	38.37%	38.26%
Poverty gap	18.24%	18.24%
Squared Gap	11.00%	11.05%
Growth Impact	Mod	Ext
Headcount	-0.62%	-0.59%
Poverty gap	-0.48%	-0.37%
Squared Gap	-0.39%	-0.26%
Inequality impact		
Headcount	-0.85%	0.48%
Poverty gap	-0.68%	0.37%
Squared Gap	-0.53%	0.32%
Residual		
Headcount	0.01%	0.00%
Poverty gap	0.00%	0.00%
Squared Gap	-0.01%	0.00%

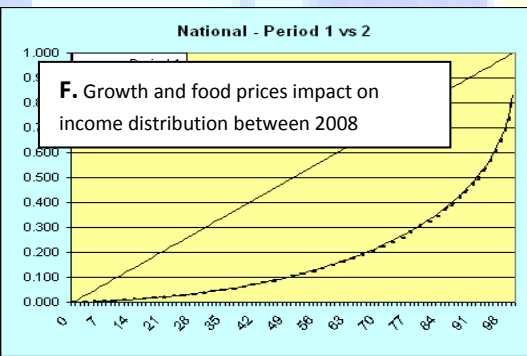
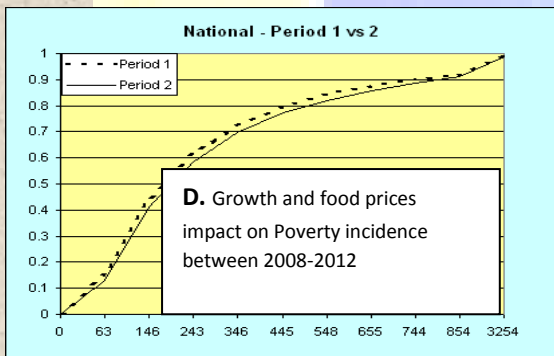
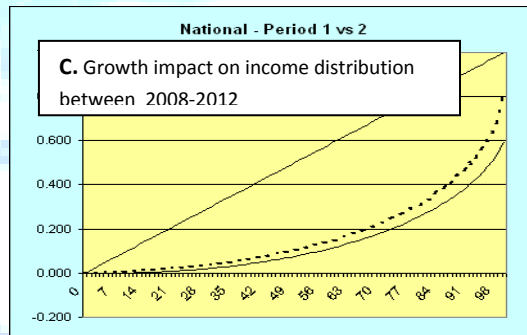
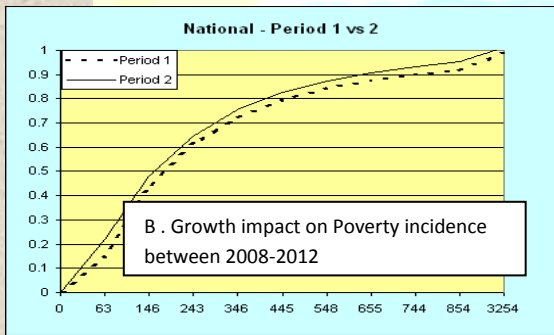
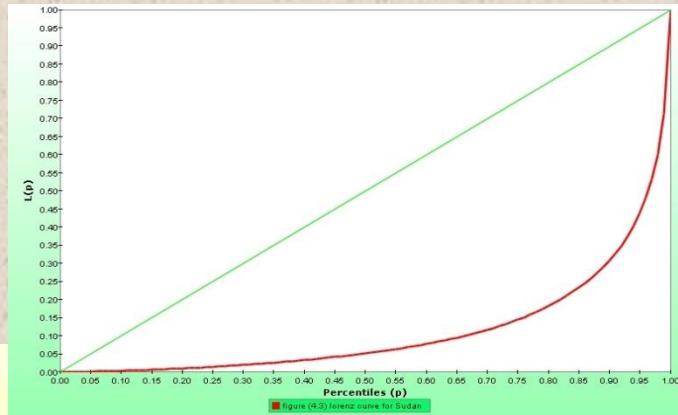


Figure.1 current and future incidence of poverty and inequality in Sudan

REFERENCES

- **Abdelgadir, Ali (2002)**. Human Capital in Post-Conflict Sudan: Some Exploratory Results. API/WPS 0602, the Arab Planning Institute, Kuwait.
- **Abd ellatheef, Abd Alal (2008)**. Increase in food prices: challenges and future prospects, Ministry of Science and Technology, Economic and Social Department, Khartoum, Sudan.
- **Badiane, Ousmane (2008)**. Sustaining And Accelerating Africa's Agricultural Growth Recovery In The Context Of Changing Global Food Prices, International Food Policy Research Institute, IFPRI Policy Brief 9 November 2008
- **Chandulal (1999)** the Sudanese strategic report 1997: some questions to real progress, Sudan economy research group, group discussion papers. Discussion paper No.30 Univeritat Breman, institute for world economics and international management, federal Republic of Germany.
- **Elnasikh, Sara (2008)**. The high global food prices: Causes, Challenges, Opportunities and Policy Options, Ministry of Science and Technology, Economic and Social Department, Khartoum, Sudan.
- **Hussein ,Fatima Shoeib (2003)**. Struggling from survivability to sustainability: a case study of Um Jawaseer desert farm irrigated project in Northern state,Sudan. A Thesis Submitted to (IES) In partial Fulfillment Of Requirements Of M.Sc Degree In environmental studies the field of agricultural extension and rural development
- **Ibrahim, Badr-El-Din, (2002)** .The Role of Home Based Entherprises (HBE's) in Alleviating Sudanese Urban Poverty and the Effectiveness of Policies and Programs, Sudan Economy Research Group, University of Bremen. Institute for World Economics and International Management, Discussion Paper No. 34
- **Ibrahim, Badr-El-Din A. (2003)**. Poverty Alleviation via Islamic Banking Finance to Micro-Enterprises (MEs) in Sudan: Some lessons for poor countries. , Sudan Economy Research Group, University of Bremen, Germany
- **IFAD,(2008)**. Enabling poor rural people to overcome poverty, Document: EB 2008/93/INF.5 Executive Board — Ninety-third Session Rome, 24-25 April 2008Nothe to Executive Board Directors

- **Mahran ,Hatim Ameer (2002)** . Public Policy and Poverty Reduction in Sudan, 1971-2002. Department of Economics, University of Gezira, Box 20, Medani, Sudan
- **Mohamed, Islah hassan Elawad (2006)**. The Impact of Micro-Finance In
- **UNDP, (2006)** Macroeconomic policies for poverty reduction: the case of Sudan, Published for the United Nations Development Program in Sudan. House 7, Block 5, Avenue P.O. Box: 913 Khartoum, Sudan.
- **UNDP, (2008)**. **Report** country fact sheet .The Human Development Index - going beyond income UNDP Country Program Document for Sudan (2009-2012).
- **Wayne, E. Nafziger (2006)** .Development, inequality, and war in Africa, The Economics of Peace and Security Journal, ISSN 1749-852X E.W.

