

POVERTY AND INEQUALITY IN SERVICES SECTOR OF SUDAN

Ali Musa Abaker*

Ali Abd Elaziz Salih**

ABSTRACT:

This research paper aims to address income poverty and inequality in service sector of 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 measurement and simulation. Results showed that more than 82 percent of employees in services sector living with poverty. Employees in health, education, transportation and security and justice were the most poor followed by public sector, communication and commerce respectively. The inequality measured Gini index was 43 percent with large inequality among commerce employees. The future prospect of poverty among employees in services, 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 moderate poverty indicators and reduce food poverty indicators.

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

* Department of Agricultural Economics and Rural Development, Faculty of Natural Resources and Environmental Studies, University of Kordofan, P O Box Elobeid, Sudan.

** Department of Agricultural Economics, Faculty of Agriculture University of Khartoum, P O Box Elobeid, Sudan

Introduction:

Sudan shares its borders with nine countries. Population density varies widely across the country with 67 percent rural and 33 percent urban. More than 90% of the population suffer from poverty and food insecurity (FAO, 2005). With a total land area of 2.5 million km² Sudan is the largest country in Africa.

Natural disasters, predominantly droughts and floods together with inter-tribal conflicts and the continuing civil war continue to have an adverse impact on Sudan. The war has also diverted scarce financial and human resources away from development. Recently, after signing comprehensive peace agreement (CPA) in 2005 and starting of oil production the Sudanese economy appears to be on surer footing than in previous.

Services sector is very important sector in the economy it contribute between 41.9—55.7 percent of country GDP and more than 38% of the population working in this sector. Based on classification of central bureau of statistic of the Sudan, services sector includes (public and private services) health, education, transportation and communication, public sector, Justices and security, commerce, banking, insurance companies and tourism.

Recent data indicate that the deterioration in Sudan's basic social services is due to cutting public expenditure on such basic social services as health, education, and domestic water supplies and sanitation (Federal Research Division, 2004; UNDP, 2003). Since early 1990s, the government has lunched national economics salvation program (NESP) and rapid Structural Adjustment Program (SAP) which includes cut-off government spending on social services and left them to private sector. The programs resulted in enormous increase in prices of consumer goods and inputs without composition on level of wages and salaries to middle income class and small producer, famers, unskilled and seasonal labor and ultimately reduced the entitlement of the poor (UNDP, 2006).

The results of those rigorous policies joint with poor deliver of the social services have contributed in worsening the poverty and human deprivation in spite of the high economic growth.

Research Problem:

Apart of United Nations declaration in 2000 on poverty reduction, provision of effective basic services is considered essential. These services include primary education, health, water sanitation and the prevention, care and treatment of major diseases. Considering that poor are not a homogenous group; different groups face different barriers whereas, many groups face multiple barriers. These barriers include remote location of many poor groups, low capacity of service providers and low quality of service. The inability of the poor to pay for the services is a major financial barrier to access; some who live and work in the informal sector are often excluded from all sorts of entitlements. In Sudan and with recent cut-off government expenditure on social services and large existence of disparities among regions and rural and urban areas access to health, education and safe water and sanitation by poor household has been denied. Furthermore, the government policy favoured the development of medical services in urban areas while the recent cost recovery policy further constrained the access of the rural poor to health facilities.

In summary, access to basic social services for many Sudanese people is severely hindered by the ongoing conflict and government policies including cut-off spending and left the services to be provided by private sector in unaffordable to people. This situation coupled with unaddressed impacts of CPA and increasing in international food prices raise the question: "what is the possible impact on current and future incidence of poverty among employees in services sector"? This paper aims to shed light on poverty and inequality situation and simulates poverty and inequality indicators in respect to future sectoral growth and increases in food prices.

The Research Objectives:

The main objective of the research is to assess the extent of poverty incidence and predict its future occurrence in services sector.

The specific objectives are:

1. Assess poverty incidence, depth and severity in services sectors
2. Assess income inequalities between service sub-sectors.

3. Project poverty and economic growth for 2008-2012.
4. Simulate poverty with respect to sector growth and increases in food prices.

The Research questions:

In order to achieve the research objectives, the study formulated the following questions:

- i. What is the situation of poverty and inequality in services sector?
- ii. What are the future trends of poverty and inequality in services sector?
- iii. What are the expected impacts of growth and food prices on poverty and inequality in services sector?

Research methodology:

The study based on both primary and secondary data sources. Sources of secondary data include reports from relevant institutions and references. Primary data was collected through direct interviews with household heads using questionnaire. Several aspects of household were collected. These aspects include household structure, composition, sector of employment of household head and spouse, household income and expenditure on food and non-food items, taxes and saving.

Tow-stage stratified simple random sampling technique was applied base on sector of employment and occupational type in the sector (worker and professional). Based on the same procedure of Central Bureau of Statistic in classification of economic activities in services, the study randomly interviewed 621 households from the following sectors: communication, transportation, health, education defense and security, public administration, commerce, banking and insurance companies.

To establish the poverty line the study used the calories intake and the cost of basic need approaches. The study used the P-alpha equation of Foster-Greer and Thorbecke (FGT) to assess poverty indicators. Lorenz curve and Gini index were used to show the degree of income inequality at both sectoral and sub-sectoral levels.

For future analysis of poverty Povstat and SimSip poverty were used to forecast and simulate poverty. The per capita consumption was used as a measure of welfare for poverty using data from household survey and some macro variables based on regression and through parameterization of the Lorenz curve using General Quadratic method (GQ) of poverty estimation from group, the simulator computed poverty and inequality measures within sector.

Results:

The results¹ of poverty indicators in services are summarized in table (1). High poverty incidence was shown (82 percent) with moderated gap between poor average income and poverty line (33.7 percent) and poverty severity (22.2 percent) among poor.

Poverty indicators within services subsectors indicated that poverty incidence was high in health (94 percent) followed by transportation (86 percent), education (85 percent), security and justice (82 percent), communication (75 percent) and public sector employees . The commerce subsector showed fewer incidences (41percent) of poverty compared to the other subsectors. The poverty gap indicators has shown large gap between income of the poor and the poverty in health followed by security and justices, transportation, education and communication with public sector and commerce employees faces less gap. The variation among poor income showed a high disparity among employees in health subsector followed by security and justice and education. While transportation, communications, public sector and commerce recorded less poverty severity.

The inequality analysis among services sector employees table (1) and (Fig.1) was 43 percent, except for commerce's subsector which showed high inequality index of 68 percent. Other subsectors has shown almost similar income distribution index of average 37.5 percent with constant future trend of inequality of 50 percent during forecast period between 2008-2012.

The expected future sector growth reduces moderate poverty indicators by 2.6, 2.57 and 2.14 percent for incidence, gap and severity, respectively. It also reduces food poverty indicators by 3.49, 1.94 and 1.12 percent for incidence, gap and severity, respectively. While income effect of

¹ The results are part of PhD Thesis of the first Author.

growth would reduce poverty the distributional effect would raise it. However, both income effect and distributional effect would reduce extreme poverty indicators among sector employees.

The combined impact of growth and food prices increases in the future trend of poverty in services. Table (3) and (Fig.3) showed that the combined impact of growth has minor impact on moderate poverty indicators, it reduces poverty incidence, gap and severity only by 0.92, 1.2 and 1.05 percent, respectively, while it raise extreme poverty indicators slightly 0.16, 0.06 and 0.04 for incidence, gap and severity, respectively.

The decomposition of the combined effect into income and distributional effect indicates that the income effect slightly reduces both moderate and extreme poverty indicators while distributional effect has slightly raise all moderate and extreme poverty indicators.

Discussion:

In spite of recent mild increases both sector share in GDP and annual growth rates during 2001-2008. Poverty was still covering large portion of the employees in services because of cut-off government spending in this sector since the early 1990s. Historically, this sector was supported by the government, however, by the announcement of liberalization policies and introduction of fees system and involvement of private sector there has been many distortions occurred in this sector especially in health and education (Federal Research Division, 2004; UNDP, 2003).

Furthermore, central government has left the provision of basic social services in health and education to poor state which were frequently failed to avail the required resources for provision of such services. The workers in those subsectors suffered a lot from underpayment and delay of salaries. In this respect the UNDP (2006) has stated that cutting-off spending and privatization of provision of services without composition on level of wages and salaries to middle income class, unskilled and seasonal labor has reduced the entitlement of the poor. However, in the subsector such as commerce, transportation and communication where historically the private sector plays a great role the situation of workers is better. The future growth in services is not promising for poverty reduction unless the government introduces policies that boost income growth beside the distribution of that growth. Although the medical insurance has helped the poor, still there are

large segments of people work in services in remote areas receiving no facilities.

Table (1) Poverty and inequality in Services Sector

Sector	Poverty incidence	Poverty gap	Poverty severity	Gini-Index
Services	82	33.7	22.2	0.43
Education	85	35	22.1	0.39
Health	94	53.3	36.1	0.39
Public sector	72	24	14	0.37
Defense	82	45	28	0.34
Commerce	41	13.4	6.9	0.68
Transportation	86	35.4	19.9	0.44
Communication	75	30.2	15.6	0.42

Table (2) growth effect on poverty and inequality in services sector

	Forecast horizon	
	2008	2012
Moderate Poverty		
Headcount	61.86%	59.26%
Poverty Gap	31.88%	29.31%
Squared gap	19.69%	17.55%
Extreme Poverty		
Headcount	33.36%	29.87%
Poverty gap	11.68%	9.74%
Squared gap	5.18%	4.06%
Growth Impact		
	Moderate poverty	Extreme poverty
Headcount	-3.16%	-3.38%
Poverty Gap	-2.65%	-1.87%
Squared Gap	-2.13%	-1.09%
Inequality Impact		
Headcount	0.66%	-0.07%
Poverty Gap	0.13%	-0.07%
Squared Gap	0.01%	-0.04%
Residual		
Headcount	0.10%	0.04%
Poverty Gap	0.05%	0.00%
Squared Gap	0.02%	-0.01%

Table (3) combined effect of growth and food price on poverty

	Forecast horizon	
	2008	2012
Moderate Poverty		
Headcount	61.86%	60.94%
Poverty gap	31.88%	30.68%
Squared Gap	19.69%	18.64%
Ext. Poverty		
Headcount	33.36%	33.52%
Poverty gap	11.68%	11.74%
Squared Gap	5.18%	5.22%
Growth impact		
	Moderate poverty	Extreme poverty
Headcount	-1.53%	-1.65%
Poverty Gap	-1.30%	-0.93%
Squared Gap	-1.05%	-0.55%
Inequality Impact		
Headcount	0.66%	1.85%
Poverty Gap	0.13%	1.03%
Squared Gap	0.01%	0.63%
Residual		
Headcount	0.05%	-0.03%
Poverty Gap	0.02%	-0.04%
Squared Gap	0.01%	-0.03%

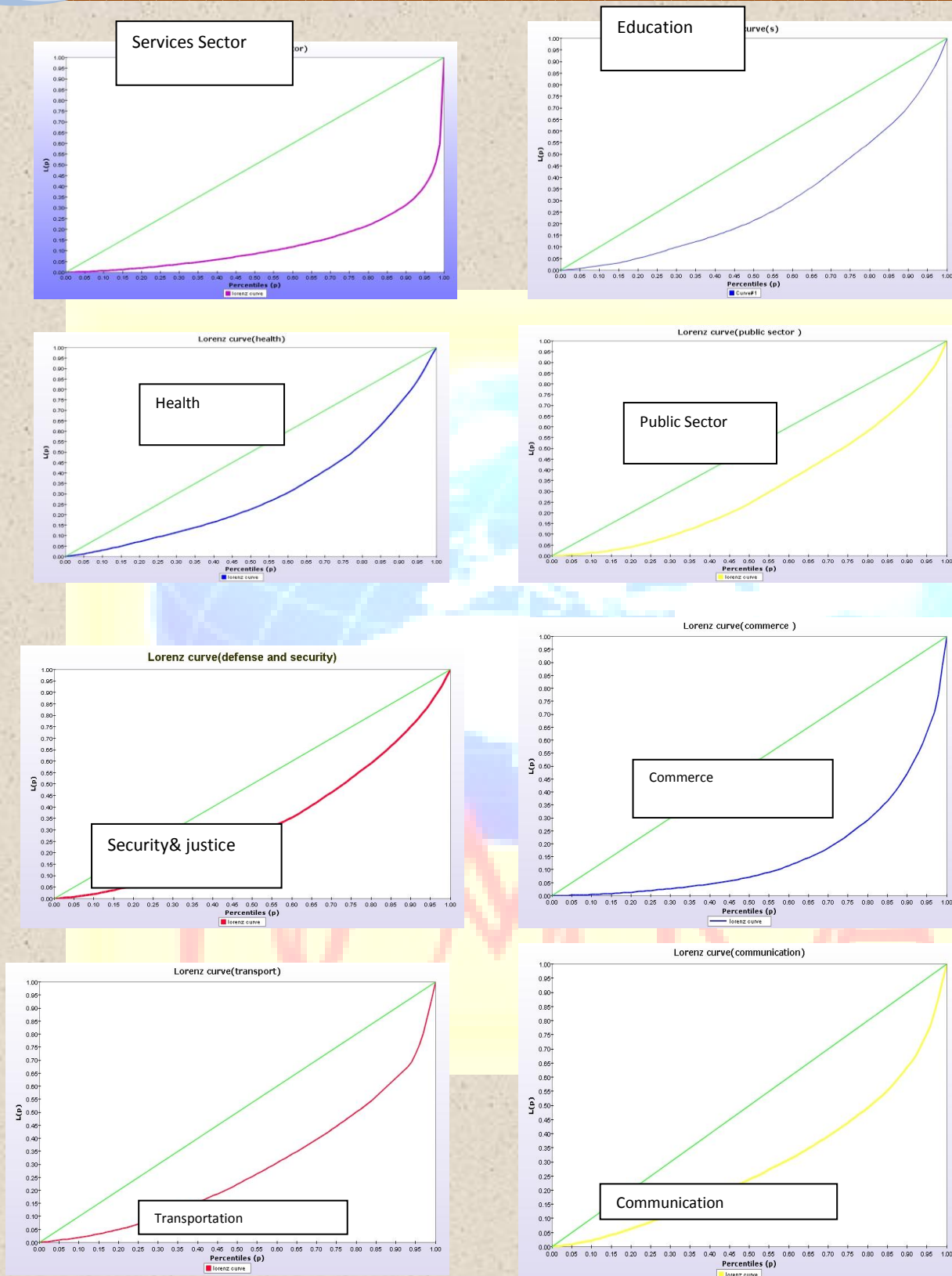


Figure (1) Lorenz curves for income inequality among services sector and subsectors employees

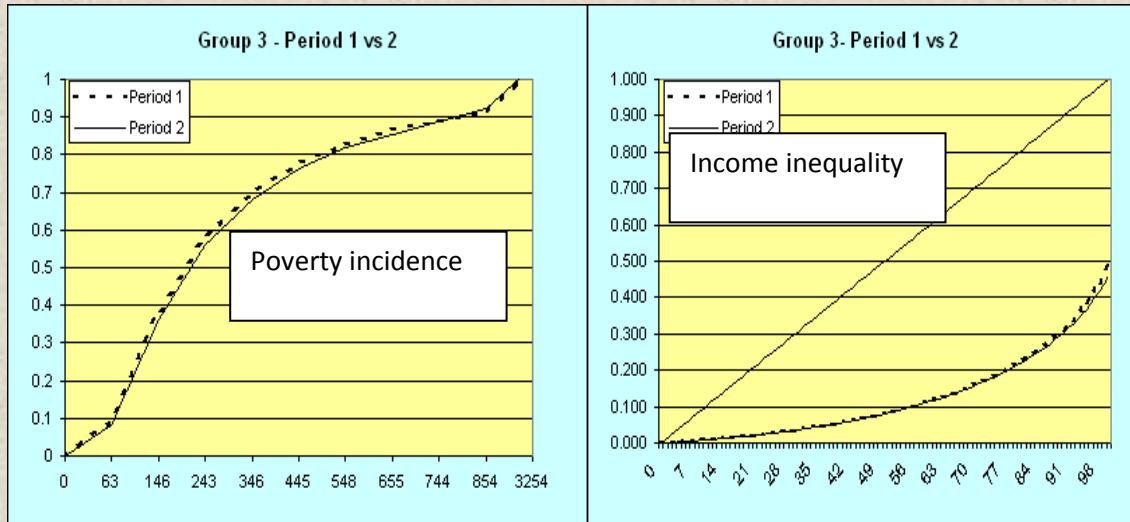


Figure (2) growth impact on poverty and inequality in services sector between period1 (2008) and period2 (2012)

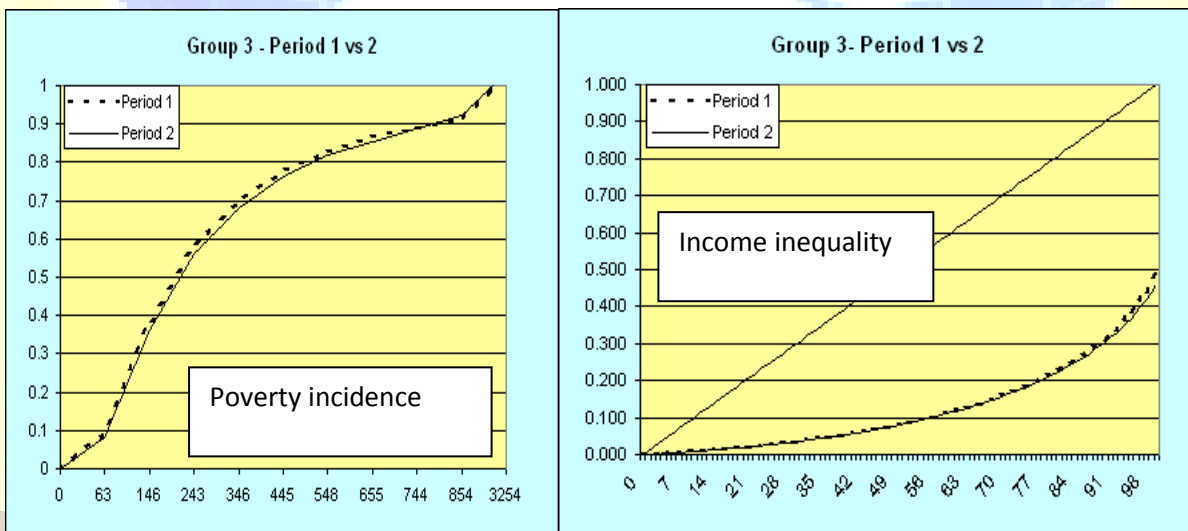


Figure (3) combined impact of growth and food prices on poverty and inequality in services between period1 (2008)and period2 (2012)

References:

- **FAO (2005)** Sudan Nutrition Profile – Food and Nutrition Division, food and agriculture organization of united nation, Rome, Italy.
- **Federal Research Division (2004)** Country Profile: Sudan, Library of Congress.
- **Eissa, Ali Musa Abakar(2009)** Macro and sectoral assessment and simulation of poverty, economic growth and income inequality in Sudan, A thesis submitted to the university of Khartoum in fulfillment of degree of doctoral of philosophy in Agricultural Economics, Department of Agricultural Economics, Faculty of Agriculture, University of Khartoum, Sudan.
- **UNDP (2003)** Macroeconomic policies for poverty reduction. The Case of Sudan, published for the United Nations, Development Program in Sudan.
- **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.
- **WFP Sudan (2006)** Sudan annual needs assessment, Food security report, regional overview and recommendations, Khartoum, Sudan.