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# **Financial Policies to Enhance Agricultural Production in Sudan<sup>1</sup>**

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## **Abstract:-**

*This paper aims at assessing the current challenges confronting the expansion of agricultural production in Sudan. The paper highlights the importance of agriculture in the country's economy as major sources of livelihood for large segment of the population and main provider of employment opportunity, raw materials for industry, major source of foreign exchange and food supply. It also aims at reviewing the financial policies adopted to enhance agricultural production in the country, starting from the early 1970s when the agricultural sector was classified as top priority and received significant share in total finance ending at the current green campaign initiative which devoted significant resources to rehabilitate agricultural schemes. The paper discusses the role these policies played in the process of agricultural development. In addition the paper stresses the critical role agricultural credit play in developing the agricultural sector and reviews the experience of the Agricultural Bank in financing agricultural production.*

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<sup>1</sup> This paper was prepared for presentation at the research symposium to be organized by SABFS, some Sudanese Universities and University of Reading on December 12-14<sup>th</sup>, 2011.

## 1- Introduction:

**A**griculture has played crucial role in economic development. For countries that want to industrialise, agriculture is commonly the main source of resources that can be captured for investment in emerging activities. Hence successful industrialization requires a solution to the problem associated with the generation, transfer and use of agricultural resources surplus. Generation of agricultural surplus in turn demands rising agricultural production (Paul Winters, et al 1997).

In addition to its contribution to the industrialization process, agriculture contributes significantly to poverty reduction. Given that poor people spend much of their income on food, the increase in agricultural output tend to reduce food prices and therefore benefiting both the urban and rural poor. The importance of the agricultural production is further stressed when the issue of food security is addressed. Agricultural products both agrarian such as wheat, maize, and animal resources products like milk and meat are the main sources of food supply.

Strong evidence has been provided showing that the agricultural growth is highly effective reducing poverty. Moreover, when the conditions are right, increasing agricultural productivity has increased the incomes of both small and large farmers and generated employment opportunities. These increases in income are particularly important because the proportion of people mainly dependent on agriculture for their income remains high (DEFID, 2005).

Due to the above mentioned arguments stressing the importance of agriculture in economic development and poverty reduction, the question of enhancing agricultural production and ensuring food security continued to be one of the hottest issues in economic literature. The world is currently faced with two main food-related challenges: widespread hunger and malnutrition and associated reduced but still significant population growth, and mismanagement of natural resources in food production. The challenge confronting us is to continue the expansion of food production to meet future demand without negative effects on the environment (Pinstrup-Andersen, 2002).

Sudan economy is as an agricultural based economy, the agricultural sector has contributed the highest share in the country's gross domestic product for decades. Its average share is 38% and the sector provides employment opportunities for more than 58% of the countries working population (AOAD, 2008). Moreover, the agricultural products represented around 85% of the county's exports before the exploration of oil. Furthermore, the agricultural products contribute significantly to the manufacturing sector inputs.

However, the trends in agricultural production in Sudan during the recent years have shown that the sector is either stagnant or deteriorating; the average growth rate of the real agricultural production during the past ten years was only 4.7% per annum, the sector's contribution to gross domestic product has declined from 37.6% in 2001 to 31.3% in 2010. Over and above the sector's contribution in the country's exports has declined sharply after the expansion of oil production during the period 1999 to 2011 (CBoS, annual reports).

This research aims at assessing the current challenges confronting the expansion of agricultural production in Sudan and reviewing the financial policies adopted to enhance agricultural production in the country. The research also discusses the role these policies played in the

process of agricultural development and highlights the experience of the country in financing agricultural sector through specialized banks and credit programs.

The rest of this research is divided into four parts; the next part reviews the literature on strategies of agricultural development and how financial policies can be used to enhance agricultural production, the second part assesses the current trends in agricultural production in Sudan and the challenges confronting agricultural development in the country. A third part reviews the financial policies adopted to enhance agricultural production in Sudan and highlights the experience of the Agricultural Bank in financing agricultural production in the country. The final part concludes by drawing some lessons for policy-making.

## **2- Literature Review:-**

Given the vital role agriculture play in the economic development, food security and poverty reduction, and despite of the fact that agro-climate and natural endowment play critical role in agricultural production, enormous body of literature was developed to explain agricultural growth, to assess the challenges facing agriculture and to help in designing policies and strategies to enhancing agricultural production. As a result a set of strategies has been designed and implemented and different outcomes were achieved.

The first set of strategies include household decisions regarding livelihood strategies, participation in organizations and technical assistance programs, crop choices, land management, and labour use. It has been proved that pursuit of certain livelihood strategies, and investment in irrigation can achieve “win-win” outcomes, increasing agricultural productivity while reducing land degradation (John Pender, et. al. 2002).

The second set of strategies includes expansion of investment. Researchers have realised the importance of agricultural investment both public and private in raising output. Government expenditure on physical infrastructure and human resource development influence the private production and investment decisions in agriculture and thus are essential factors of increased agricultural productivity. A relationship has long been recognized between a country's agricultural development and its investment in infrastructure capital, such as transportation and communication facilities, that is not directly related to the agricultural production process (John M. Antle, 1983).

Government investments (both physical and human) can directly increase agricultural output by shifting the production frontier as in the case of irrigation. This is what might be called the direct effect of government infrastructure. Government investment also increases the rate of return to private agricultural investment and thereby leads to greater investment and output. Moreover, by increasing the viability and profitability of financial intermediaries, infrastructure can facilitate the emergence and growth of financial institutions that increase access to working and investment capital or reduce the costs of borrowing for long-term investment. Better credit facilities, by enabling the smoothing of consumption, may also increase the willingness of farmers to take risk (Hans P. Binswanger, et. al, 1989).

A third set of strategies include land ownership systems and legal aspects of land use. If individuals have a more restricted set of rights to use the land, exclude others from it, or transfer rights to it. Any restrictions on land rights may limit farmers' incentives to make land-improving

investments, including conservation measures that only pay off in the longer term. The lack of full ownership rights, and hence the ability to mortgage land, may also constrain the availability of credit for land-improving investments. Therefore land ownership and land use policies are important determinants of agricultural production (Sara J. et. al. 1994).

In addition to the above mentioned strategies, governments can enhance agricultural production through investing in research and development which result in achievements in technological progress. Furthermore, it can alter output prices in order to achieve price stability which is needed for better planning.

The experience of Africa in agricultural development showed that a number of strategies were adopted. A Commercialization via Cash Cropping strategy of agricultural and overall rural development in Africa was started early in the colonial era, and it has been extensively documented by historians writing in both English and French. Starting around 1910 in most areas, export cropping took off in earnest after the end of the Second World War, with the rapid expansion of cropped area per agricultural worker following the expansion of cash cropping for export, then Community development projects in the late 1950s and 1960s were attempts to provide non-revolutionary sources of change in rural areas, and were especially meant to keep rural people occupied in the countryside until economic growth could speed up enough outside agriculture to absorb new entrants to the labour force.

In the 1970s, the Basic Human Needs BHN strategy was adopted by many African countries, as an agricultural development paradigm, BHN gave smallholder agriculture priority, more for distributive reasons than for growth. Then the orientation toward import-substituting industrialization became most significant for agricultural paradigms, when the easy stages of industrial import substitution were largely used up. This was followed by the Structural Adjustment 1 SA-1- Demand Management which focused on export agriculture and emphasis on indirect economic mechanisms.

In the 1980s, Supply-Shifters in Agriculture paradigm was adopted which refers to those non-price factors that shift agricultural production functions upward, leading to more output for the same inputs. The list of strategies continue to include the Regional Integration 2, with Food First, Structural Adjustment 2—Equity with Growth, and the Sustainable Development strategy (Christopher L. 1995).

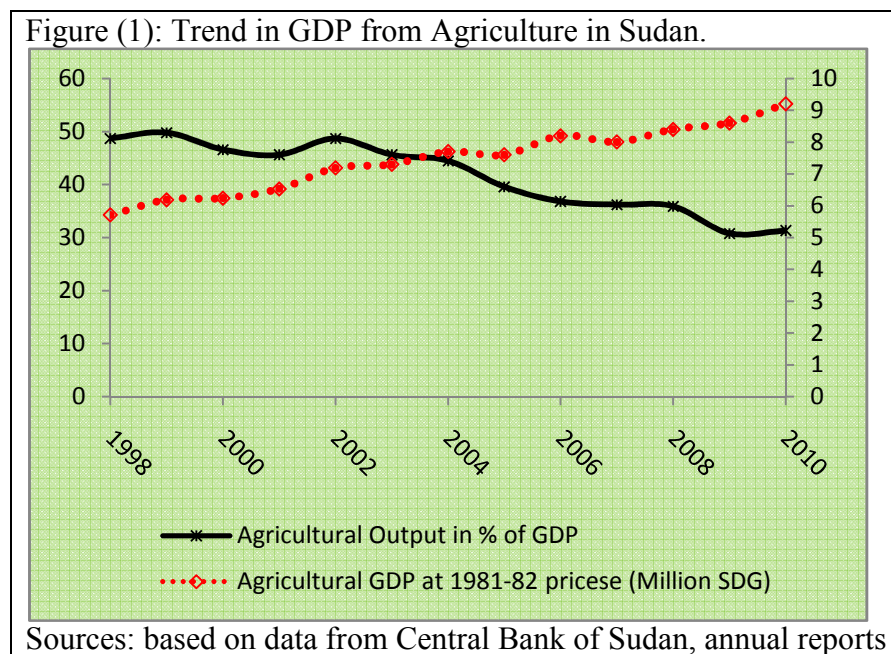
However, the implementation of any of these strategies requires the mobilization of financial resources towards agricultural development either through government expenditure and investment or via regulations and policies that favours agricultural credit expansion. Hence financial policies are crucial to enhance agricultural production.

### **3- Recent Trends in Sudan's Agricultural Production:**

Sudan is one of the richest countries in natural resources in Sub-Saharan Africa; the country is endowed with large cultivable land, water sources, large animal resources and forestry. These resources provide an opportunity for Sudan to be one of the large agricultural producers and exporters. Traditionally Sudan has been known as a producer of many crops like cotton, sorghum, oil seeds, gum Arabic, and livestock.

Sudan has three major agricultural production systems, namely irrigated, rainfed semi-mechanized, and rainfed traditional agriculture. These three production systems classified as central rain lands, flood plains and the equatorial zone and they are used for both crop and livestock production. Other important rural production systems are forestry and fisheries.

This agricultural sector has contributed significantly to the country's economy, during the last three decades the share of agriculture in GDP has been the highest and the share of agricultural exports was the most important source of foreign exchange. However, the performance of agricultural sector has witnessed noticeable deterioration during the 1990s and 2000s, the share of the sector in both GDP and exports has declined and its growth rate has slowed. The trends in agricultural production and its share in GDP and exports are represented in the following figure.



As can be seen in the figure, the share of agriculture in Sudan's GDP has deteriorated dramatically during the period 1998 -2010, and its real output has increased but by very low rate.

Due to this trend, the rate of growth of rural incomes has decreased and poverty in rural areas remains high. The average annual growth

rate of the agricultural sector between 2000 and 2008 was 3.6 percent, substantially lower than the 10.8 percent during the previous decade (World Bank, 2009).

The agricultural sector in Sudan has also been one of the least developed sectors compared to the Arab world; the agricultural development indicators provided by Arab Organisation for Agricultural Development showed that Sudan has low records in agricultural mechanisation, per worker productivity, and irrigation (AOAD, 2008).

The above poor performance of Sudan's agricultural sector was found to be caused by the following problems:

- Agricultural products are subject to the frequent price fluctuations, which in turn lead to fluctuations in farmers' incomes.
- Many farmers still use inefficient traditional methods of production such as land fragmentation, which severely limits increase in productivity in the agricultural sector.

- Many farmers are subsistence farmers and lack the necessary capital and resources to effectively implement modern agricultural development such as the use of mechanized agriculture.
- Marketing channels for agricultural products are inefficient and inadequate; many products are marketed by marketing boards.
- The Agricultural sector in Sudan is particularly vulnerable to natural disasters such as floods, droughts, diseases and pests, and this leads to wide annual fluctuations in output.
- Agricultural production is seasonal by nature and hence the agricultural sector is characterized by seasonal unemployment. The seasonal nature of agricultural employment contributes to the problem of many individuals seeking jobs in alternative sectors that provide relatively stable income.
- High cost of banking finance which directed to the agricultural sector.
- High taxes imposed by the government on agricultural production.

It is clear that the solution for many of these challenges requires mobilisation of financial resources towards agricultural sector development.

#### **4- Financial policies and Agricultural Output in Sudan:**

The agricultural sector in Sudan has been classified as priority sector by the Central Bank of Sudan Since early 1970s and early 1980s during the credit rationing period, CBOS used to allocate substantial amount of the banking credit to the agricultural schemes. Not only significant volume of finance is devoted to agriculture, but the cost of finance has also been reduced by CBOS policies during that period.

In the mid 1990s when financial liberalisation policy was adopted, agricultural credit has declined sharply and the cost of credit increased despite of the fact that CBOS has tried to sustain credit allocation to the agricultural sector through consortiums formed by commercial banks.

The experience of Sudan in financing agriculture has witnessed the establishment of a specialised bank in agricultural finance which is the Agricultural Bank. The bank is now one of the largest agricultural finance providers, with its 91 branches spread in rural areas, its 7.4% share in the total banking assets, and 11.4% of the country's banks paid up capital.

Below are some financial indicators reflecting the performance of the agricultural Bank:

Table (1): Financial indicators for Agricultural Bank (Values in U.S\$ millions)

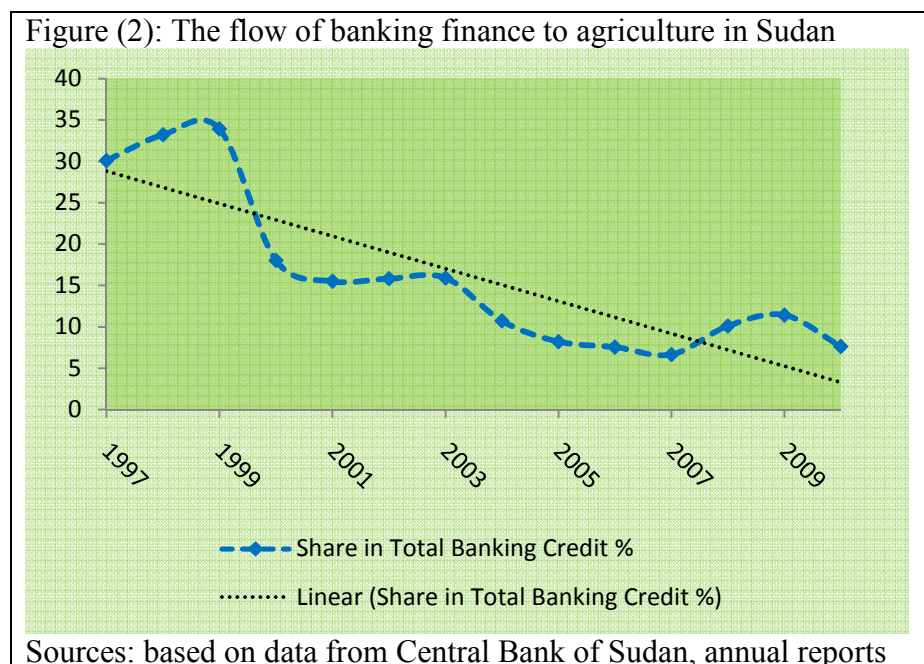
year	Total Assets	Loans Advances	Customers Deposits	Shareholders Equity	Net Profit	Liquidity Ratio %	Capital Adequacy %	Return on Shareholders Equity %	Return on Assets %
2002	98.00	47.00	12.90	8.00	(1.30)	40		130	10.5
2003	123.00	72.00	16.00	20.90	2.30	50	1.5	55	113
2004	176.80	114.50	24.50	38.40	0.90				0.5
2005	296.35	163.90	32.90	57.90	2.32	1.2	25	4.71	0.75
2006	301.76	202.69	38.89	79.26	3.37	2.9	3	4.25	11
2007	627.727	387.246	74.774	147.756	1.910	31.000		1.380	0.300
2008	1012.436	537.542	128.775	204.103	1.975	28.000		0.870	0.120
2009	2185.730	549.520	245.360	407.810	6.820	32.000	13.970	1.670	0.300
2010	2629.000	540.000	461.000	458.000	1.000	20.000	7.060	0.270	0.040

Source: Union of Arab Bank, Data and Information Center.

In order to reduce the risk of agricultural credit, Sudan has started to develop an agricultural insurance system. In 2002, Sheikan Insurance and Reinsurance Company started offering insurance services for both agrarian and livestock production. This insurance service is necessary for encouraging farmers to involve in more investment and to provide suitable collateral needed to expand agricultural credit.

Although the overall financial sector has developed due to the liberalisation and reform program, agricultural credit has been negatively affected; the 60% of the population of Sudan living on agricultural sector are now receiving only 10% of the banking finance.

The deterioration of banking credit to agricultural sector is depicted in the following figure:



As can be seen from the figure, the share of agriculture in banking finance has declined sharply during the period 1997-2010, which is the same period in which Central Bank of Sudan has adopted the financial liberalisation policies.

As a result expansion of agricultural credit and improvement of access to finance for poor people is now one of the great challenges

confronting Sudan's financial sector.



Beside the establishment of specialised banks, and the introduction of agricultural insurance services, Sudan has established the Strategic Reserve Corporation; the objective of the corporation is to build reserves of strategic goods mainly food supply and to insure food security. Also it targets sustaining agricultural production through price stabilisation.

Recently, in response to the agriculture sector's poor performance, the Government of National Unity has launched the Green Mobilization Program (GMP) with a proposed budget of SDG10.1 billion for 2008 to 2011. The GMP has been defined more precisely in the Agricultural Revival Program ARP (2008–2012). This strategic initiative is aimed at diversification of production and markets leading to increased growth of the agricultural sector with the ultimate goal of poverty reduction. The main targets are reflected in eight key success-indicators, namely: (a) the creation of an appropriate atmosphere for sustainable development of agricultural production; (b) capacity building of producers and institutions; (c) reforming agricultural land-tenure system; (d) developing support services and modernizing agricultural systems; (e) protecting and developing natural resources; (f) achieving agricultural industrialization; (g) implementing quality control and safety measures; and (h) establishing international strategic partnerships (World Bank, 2009).

Additional set of policy related issues which directly affect financing agriculture are worth noting such as the Central Bank of Sudan efforts to expand microfinance services targeting poor people, the government investment in building dams, the capacity building efforts in rural development programs and facilities to promote non-oil traditional agricultural exports and strategies to support agro-industries.

## **5- Concluding Remarks:-**

The poor performance of the agricultural sector in Sudan despite of the large endowment in natural resources raises critical question about the factors contributed to this performance, and the required policies to enhance the agricultural output, this in turn increases the need for research efforts.

The set of policies adopted in Sudan to enhance agricultural production needs critical assessment and new set of policies has to be designed given the emerging issues of climate change, technological advances and international trade relations and economic conditions.

The very limited and deteriorating flow of finance to agricultural sector remains one of the obstacles of agricultural growth. The solution to this problem requires raising the banks capacity in identifying opportunities in agricultural sector, managing the risk of agricultural finance and participation in infrastructure development projects in order to increasing access to finance.

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