Moving Beyond Subsistence Farming and Investing In Modern Agriculture to Enhance Rural Development In South Sudan

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Abstract: **This paper was produced for public consumption. The material produced can be used by national, state and local governments in South Sudan. The paper can also be used by NGOs, agriculture experts, the private sector and the general agriculture community in South Sudan. The paper is concerned with the slow progress of the agriculture sector in South Sudan and why it is necessary to prioritize the move beyond subsistence farming and investing in modern agriculture to enhance rural development in South Sudan is necessary. The paper argues that South Sudan's future is possible by creating a competitive, profitable and sustainable agricultural sector. This can be done by transforming agriculture at irreversible proportions, thereby creating wealth and benefits that will be felt by farmers.**

Keyword: Beyond Subsistence Farming and Modern Agriculture to Enhance Rural Development in South Sudan

Introduction

This paper attempts to discuss why moving beyond subsistence farming and investing in modern agriculture to enhance rural development in South Sudan should be prioritized. The paper argues that South Sudan's future pathway is possible by creating a competitive, profitable and sustainable agricultural sector. This can be done by transforming agriculture at high proportions, thereby creating wealth and benefits that will be felt by farmers. The paper sets out to deconstruct the modernization strategy by exploring the conceptual understanding of modernization of agriculture through review of modern agriculture literatures. The paper then offers some key recommendations on how investing in modern Agriculture to enhance Rural Development should be undertaken.

South Sudan's estimated 640,000 square kilometers of land has vast potential for agricultural production. The country has abundant fertile land and water resources (Government of Southern Sudan, 2007). About 90% of the total land is considered suitable for agriculture of which 50% is prime agricultural land. Although 90% of the land is suitable for agriculture, only around 4.5%is currently cultivated. Over 80% of the population derives their livelihood from subsistence agriculture and livestock keeping. Most households are food insecure (WFP 2014). The oil sector currently contributes 95% of the national budget. South Sudan has a young population with 28% aged between 15 to 29 years. This population gives a potential for immense labour market for modern agriculture. A key feature of the rural economy is the high prevalence of malnutrition and food insecurity despite the existence of abundant natural resources for sustainable livelihoods available to increase agricultural production (WFP, 2011a). There remains much that can be done at national, state, county and local levels to address the 'modernization question' and rural transformation. Though there is a strong consensus in the Government that agriculture should be a vehicle for broad-based non-oil growth and economic diversification, the consensus has not been put to test yet (GoSS, 2011a).The agricultural sector has the potential to be an additional engine of growth to the oil sector that would allow South Sudan to diversify its economy to achieve transformational development and reduce poverty and food insecurity.

The exportation of oil as a boost to the economy has driven away government effort to revamp the agriculture sector. As such, since 2005, agricultural production in many rural parts of South Sudan has declined. Agriculture development is facing many challenges ranging from lack

of investment, low productivity, lack of value addition, insecure land tenure system, low funding, inadequate support services, infrastructure as well as lack of extension services and absence of research for disease resistant crops and inadequate training opportunities (Understanding Land Investment Deals in Africa, 2011). Mainly insecurity, but also natural hazards have contributed to underdevelopment of the sector and food insecurity in the country. These challenges have hindered farmers from moving beyond subsistence forming and contributing to rural development. Further, those farmers at the South Sudan rural areas find it hard to deliver their agriculture products especially the perishable ones to the markets in time due to poor roads and the poor marketing systems. Government has not made efforts in rectifying the market problem and maintaining the current dust roads. Focussing on these issues will move agriculture beyond subsistence farming and enhance rural development in South Sudan.

South Sudan relies heavily on food imports from neighboring countries, such as Uganda, Kenya and Sudan due to its own low production. These come at a high transportation cost that, coupled with inflation that has caused food prices to rise dramatically in South Sudan (Understanding Land Investment Deals in Africa, 2011). The declining agricultural production and the reliance on expensive foreign food supplies have contributed to a severe food shortage. The situation continues to affect around 2.7 million South Sudanese almost yearly where now they rely on food aid according to the United Nations' food programme. (S.Sudan seeks food and farmland investments, 2011). Agricultural productivity growth requires the development, dissemination and adoption of relevant technology by farmers and easy access to the market.

The Ministry of Agriculture in South Sudan has announced its goal of boosting food production to two million metric tons per year by 2013 but the goal of food production has not been met. The government hopes to attract agricultural investors from Gulf Arab states, Israel, China, the Netherlands and fellow African countries in order to increase production of basic food items such as sugar, rice, cereals and oilseeds, cotton as well as livestock (Land Deals 'Threaten Country's Development 2012).

Literature Review and Discussion on the 'Modernization Question' and Rural Transformation:

The paper indicates that investing in modern Agriculture to enhance Rural Development in South Sudan is of paramount importance. Investing in the sector may means the extent to which 'small farmers' can satisfy their food needs from their own production is shaped by the ways they are integrated in commodity relation (Henry Bernstein, 2010). Since almost all rural households depend directly or indirectly on agriculture, and given the large contribution of the sector to the overall economy, one might expect agriculture to be a key component of growth and development. Literature suggest modernizing agriculture has worked in other countries and that agriculture-led growth played an important role in slashing poverty and transforming the economies of Asian and Latin American countries (Adelman 2001).

South Sudan's participation in modernizing agriculture may try to address the concern that most African countries have not yet met the criteria for a successful agricultural revolution (Adelman 2001). Subsequently agriculture constitutes a large share of national output and employs a majority of the labor force in most developing countries; the sector has been integral to any thinking about development (World Bank 2003a). The 1980s marked a turning point for agricultural policy in most developing countries; the conventional state-run agricultural policies were undergoing structural transformations and experiencing serious reversals (Chang, 2009: 480). The government of South Sudan appears to have been informed about the need to employ a policy that could improve agriculture. This is due to its Development Plan 2011-2013 which identifies agriculture as having the potential and the most feasible option for broad-based economic growth and food security. South Sudan needs to actualize this and consider implementing the agriculture policy from short, medium, and long term actions focusing on the rural sector. The government should consider activities to increase investments, and combat the challenge related to farming information, improved storage, transport, and market and finance access is heavily considered. Improving the capacity of the training Centre's such as the Crop Training Centre (CTC) and the Yei Agriculture Training Center (YATC) supported by Norwegian People's Aid (NPA) can be a necessary step towards agriculture modernization.

This paper notes that moving beyond subsistence farming and investing in modern agriculture to enhance Rural Development in South Sudan could help the sector realize high

returns in the near future. Experience from other countries has shown that GDP growth from agriculture has been twice as effective at reducing poverty compared to GDP growth originating from other sectors (World Bank, 2007). Greater agricultural production increases demand for related sectors, such as; infrastructure; agro- business; trade, and transportation increase the current limited employment opportunities.

The potential agricultural value addition that would accrue from expanding cropland area and increasing crop productivity only, assuming the value of other subsectors, e.g., livestock and fisheries, remains constant, is immense (The World Bank 2012). The World Bank estimates that increasing cropland from the current 4 % of total land area (2.7 million ha) to 10 % of total land area (6.3 million ha) under a modest cropland expansion scenario would lead to a 2.4- fold increase in the value of total agricultural output relative to the current level (i.e., to approximately US$2 billion versus the current US$808 million). If coupled with a 50% increase in per capita yields, this cropland expansion would lead to a 3.5-fold increase in the value of total agriculture output (i.e., to US$2.8 billion) and would also increase the value of crop production per hector from US$227 to US$340. If per capita yields double, the value of total agriculture production under a modest cropland expansion scenario would increase significantly (The World Bank 2012).Expanding agriculture also requires obtaining greater access to credit and strengthening cooperatives.

Currently, there is high interest from the international community to invest in agriculture. This can be an opportunity that South Sudan needs to take advantage of the initiative in 2011 by the donor countries to promote the idea that industrial farming is the key to improved food security in South Sudan. The United States Agency for International Development (USAID), for example, is working with Citibank, the IFC, the Corporate Council on Africa, and others to help the country market its resources and attract private capital in key sectors, including agriculture. Linking up with donor countries will provide the government institutions with new and sustainable sources of revenue, and help to diversify the economy. (Understanding Land Investment Deals in Africa: South Sudan, 2011).

Further a number of scholars have come to conclude that most state-led market-oriented agriculture modernization programmes often result in the emergence of an entrepreneurial farming system, which involves industrial food processing, high technology inputs (seeds, fertilizers) and

involvement of global commodity trading corporations in local agro-markets (Kay, 1997: 12; Ploeg, 2008: 1-4). With that in mind, there is empirical evidence that governments do have a responsibility to address state-led market-oriented agriculture as in South Sudan Smallholder farming which accounts for 80%of the country's agriculture production. The government of South Sudan and its institutions should make intervention in improving agriculture question. The intervention could be in addressing the challenges such as transport costs, unavailability of agricultural inputs, and underdeveloped agricultural extension services and plan for modernization of the sector. Investing resources into developing the kind of agricultural extension services that could help smallholder production to move beyond subsistence farming is noted as important (Understanding Land Investment Deals in Africa 2011).Promoting Public-Private Partnership (PPP) to ensure the participation of the private sector in agriculture production is beneficial. The government's effort in choosing to focus on large-scale, private sector-led agricultural schemes can be an opportunity to boost food production and moving beyond subsistence farming and investing in modern agriculture to enhance Rural Development.

Provision of extension services is negligible in South Sudan and the majority of farmers have no education on better farming methods. This is exacerbated by inadequate marketing and transport services. Because of transport bottlenecks that stem from poor state of roads as well as short and expensive supply of motorized transport services, farmers cannot market their goods or access basic supplies from the main cities. Constraints on access to land and unclear property rights, including inequalities between men and women over control of resources are key impediment to agriculture production. While agriculture has the potential to provide a feasible option for broad-based economic growth and improve food security that promises to transform rural economy and create wealth, it is important that candid short, medium, and long term actions are taken. Given the size of the agricultural sector in South Sudan, its growth has implications not only for growth in other sectors but also for poverty and inequality. Agricultural growth, as opposed to growth in general, is typically found to be the primary source of poverty reduction. A key relationship between growth in agriculture and poverty is that agricultural growth directly generates demand for rural labor. Increasing agricultural productivity, especially in countries facing land constraints, requires the intensification of farming systems through yield-enhancing technologies. Although such technologies raise labor productivity, they also require additional

labor as well as modern intermediate inputs (Hayamiand Ruttan, 1985). Road networks are necessary to accelerate expansion of cultivated land in areas that are considered to have high agricultural potential. Identifying and providing estimates of the budgetary requirements for road investments in those areas are key government tasks.

South Sudan markets have low volumes of agricultural products. According to one Food Net study, some 55% of farmers in the study sample were more than 6 kilometers from the nearest market (Julius Chokerah, 2012). It is almost exclusively women traders who sell agricultural products in markets; mainly women traders with very few marketing their own produce. South Sudan's imports of agricultural products amounts to around 12% of GDP, while exports are negligible. Therefore, investing in modern agriculture will address this concern. Another factor limiting agriculture growth potential includes partial commercialization of agriculture in the country associated to lack of appropriate storage facilities. Farmers lose a significant amount of harvested crops to pests due to grain decays or infestation by fungi. There are also economic losses from low prices due to lack of access to markets for poor quality grain, or arising from poor quality or contaminated food. Physical grain losses contribute to high food prices by removing part of the food supply from the markets. In the short term, removing bottlenecks to using the available seed varieties in the East Africa region would increase access to improved germplasm, and would help narrow the current yield gap (GoSS, 2011a).Key initiatives include building the capacity of research institutions and the establishment of a positive relationship between the research institutions and farmers through a process where trained technical extension specialists serve the agriculture sector, especially those in the rural area.

Conclusion and Recommendations

Transforming the traditional subsistence agriculture into a productive enterprise that goes beyond meeting household's food needs is a key for making agriculture the engine of economic growth in South Sudan. This could be achieved through the expansion of farmer training opportunities such as Farmer Field Schools (FFS) and demonstration farming to boost small holder farming from subsistence to market production. Developing appropriate mechanisms to support improved access to high quality seeds, tools and credit is crucial. Training Centers such as the Crop Training Centre and the as Yei Agriculture Training Center (YATC) Centre in Yei should be supported to offer full-fledged training packages in various agricultural areas, with a focus on seed technology and integrating it with extension services in order to reach out to farmers in the various parts of South Sudan.

Complementary productivity-enhancing investments and market-supportive regulations are required to improve the competitiveness of South Sudan's agriculture. In the short term, removing bottlenecks to using the available seed varieties in the East Africa region would increase access to improved germplasm, and would help narrow the current yield gap. Support for adaptive agricultural research would allow release of new and superior seed varieties and would also help overcome other constraints (e.g., pests and diseases) to yield increases Investments in mechanization to reduce drudgery and high costs associated with cropping would also allow South Sudanese farmers to increase production at relatively lower costs. Advisory services will be essential to maximize farm returns from the use of improved inputs, including mechanization and the development of irrigation.

To help the rural poor participate in the markets, agricultural output must diversify, quality of produce must improve, and agro-based processing must add value to primary products. Rural agricultural communities must also obtain greater access to credit. The communities can become better organized through cooperatives, which can help provide a range of necessary rural facilities, including those relating to input and output marketing, extension and financial services.

Cooperatives provide a good linking mechanism, allowing farmers to collectively access the marketplace, both to market their crops and to access credit and farm inputs at reasonable rates. Agricultural co-operatives play an important role in supporting small agricultural producers and marginalized groups such as young people and women. Using cooperative models in the country

will ensure empowerment of their members economically and socially and would create sustainable rural employment through business models that are more resilient to economic and environmental shocks.

Most farming activities are carried out in the rural areas where the literacy rate is very low with 76% of people who can neither read nor write. This partly explains why many farmers in South Sudan still use traditional methods and follow the old established pattern of farming. To be efficient and to increase productivity, farmers have to be trained to learn and use improved farming methods to increase yields for their own consumption and for markets. The effective way of reaching out to the farmers is through on-farm field schools and demonstrations on improved farming methods including visible examples of success.

Rehabilitation and building of rural access roads is important to open up vast areas in the country. Countries within the region have reported significant increases in the farm-gate prices of staple food crops such as cassava, maize, and milk in Uganda and maize in Kenya. The positive changes in agricultural prices are due to the significant improvement in the road network to highly productive areas previously unable to access markets for appropriate agricultural outputs.

Promoting Public-Private Partnership (PPP) to ensure the participation of the private sector in agriculture production and value-addition is necessary to support investor's invest large irrigation projects, food processing, hides and skins tanning to boost food security and employment.

Implementing all the above recommendations may mean that South Sudan's future pathway is secured, wealth created through agriculture contributing to increase the economy and the agriculture sector becomes profitable and sustainable.

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