

## **Agriculture as Catalyst for Niger State Economic Development**

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### **Abstract**

*Nigeria is an agricultural based country and significant part of its citizen derives their livelihood from it. There is thus the need for strong agricultural development along with related industries as an engine of higher economic growth and the reduction of mass poverty. This study however viewed agriculture as sources of surpluses to support industrialization, dynamic growth, employment, and better income distribution. It highlights on the potentials and challenges of agriculture in Niger State and proposed strategies that can lead to agricultural growth and economic development of the state. Niger state being a major producer of food crops, fisheries, livestock and tree crops; the agricultural activities are characterised by low productivity and inefficiencies due to small and scattered farms, poor use of technology and institutional support. This study proposes different strategies to kick-start agricultural growth and economic development of Niger state, mainly includes agricultural commodity and land development strategy, creation of agricultural land development agency to develop and manage small holding farm settlement schemes across the state to create employment for youth as full time farmers, and technology driven agricultural production strategy among others. The study therefore recommends 4 percent of State Budget for Agriculture and other funding options for the proposed agricultural transformation strategies.*

**Keywords:** Fadama, Land, Peasants, Soil

**JEL Classification:** Q15

### **1. Introduction**

#### *1.1 Agriculture, Food Security and Economic Development*

Agriculture involves the cultivation of crops, rearing of animals, fishes and exploitation of natural resources in the forest and water bodies. Economic development is the policies and processes by which a nation improves the economic, political and social wellbeing of its people. It is related to increase in output coupled with improvement in social and political welfare of the people within a nation. Therefore economic development encompasses both growth and welfare values.

(OSullivan &Sheffin, 2003). Food security as defined by the United Nations' Committee on World Food Security, is the condition in which all people, at all times, have physical, social and economic access to sufficient safe and nutritious food that meet their dietary needs and food preferences for and active and healthy life.

Agricultural growth is a catalyst for broad based economic growth and development in most low-income countries. Agricultural linkages to the non-farm economy generate employment, income and growth in the remaining part of the economy. Very few countries have experienced rapid economic growth without strong agricultural growth (Lawal, 2008). In Nigeria today, the oil sector provides bulk of the public finance. However, the huge revenue from the sector has not stimulates real economic development, has created very few jobs and its wealth has been distributed among a small elite. Nigeria has the ambition of diversifying its economy from crude oil dependency. Agriculture has been identified as the most important sector to diversify the economy and lead the development of the county through activation of the value chain of major agricultural products. Nigeria's economy is agrarian in nature: agriculture contributes more than 40% of the Gross Domestic Product (GDP) while between 60 - 70% of Nigerians are employed in agricultural related employment though with large regional differences (Nwajiuba, 2012). Since the days of David Ricardo, importance of agriculture in an economy's development has being recognised. Taking the "natural limits"—the problem of diminishing returns—in agriculture into account, Ricardo concluded that such 'limits' in agricultural production would set the upper limit to the growth of the non-agricultural sector and to capital formation for economic development. There are four ways through which agriculture contributes towards the process of economic development as described by Simon Kuznets. These are product contribution, market contribution, factor contribution, and foreign exchange contribution.

#### *1.1.1 Product Contribution:*

The product contribution of agriculture refers to its contribution of wage-goods, that is, foodstuffs over the subsistence level to feed the labour force of urban non-agricultural sector. A growing population must be supported with increased food supply. Raising food supply through different ways has thus great importance for economic growth of a country. The annual rate of increase in demand for food in an economy is determined by

$$D = p + \eta g$$

where  $p$  and  $g$  stand for the rates of growth of population and per capita income, and  $\eta$  stands for income elasticity of demand for agricultural goods. Poor nations experience high population growth rate and a high income elasticity of demand for food. Under this circumstance, an increase in per capita income strongly increases the demand for foodstuffs/agricultural goods. In Britain, agricultural revolution brought in the wake of Industrial Revolution (1760 onwards) raised agricultural productivity, provided surplus labour to the non-farm sectors, and wage-goods to support industrial expansion.

To this end, what is needed is the generation of ‘marketable surplus’—a surplus of agricultural output over the subsistence needs. Marketable surplus from agriculture also tends to widen the home market for the industrial products. Of course, the demand for industrial products largely depends on farm income. Increased agricultural productivity, a growing marketable surplus, and a rising income of the farmers are necessary to trigger an expansion in the demands for industrial products by the agricultural sector.

#### *1.1.2 Market Contribution:*

The market contribution of agriculture to economic growth refers to the fact that the demand from agriculture acts as the source of autonomous demand for industrial goods. As a result of agricultural progress there occurs a market extension for industrial goods. Agriculture thus has linkages with the industrial sector—there is a complementary between the two sectors.

A precondition for rapid industrial growth is a rapidly expanding agricultural sector. Thus, it is evident that if agriculture itself grows, there occurs a product contribution and when agriculture trades with other sectors, there occurs a market contribution.

#### *1.1.3 Factor Contribution:*

The factor contribution, comprising both labour contribution and capital contribution, occurs when there is a transfer of productive factors/resources to other sectors from the given sector. An overpopulated developing economy is characterised by the existence of surplus labour or disguised unemployment. Thus, transferring its labour resources to the modern industrial sector where they create a surplus can contribute to growth and development. In addition, agricultural sector provides funds for capital formation through (i) transfer of labour and capital from farm sector to the non-farm sectors, (ii) export of surplus agricultural products, (iii) turning the terms of trade against agriculture by imposing price controls on agricultural goods by taxation or by using multiple exchange rates against agriculture, etc.

#### *1.1.4 Foreign Exchange Contribution*

Agriculture may be a great source of foreign exchange of a country. Foreign exchange is an important source, just like savings. Primary products producing countries earn foreign exchange by exporting these products. Exports earnings increase the capacity to import capital goods and machinery required for industrial development. However, as terms of trade deteriorate against primary products in the international market, the prospect of higher export earnings is rather limited.

Finally, agricultural growth tends to improve income distribution more in favour of small peasants-. Agricultural development thus helps in improving social welfare, particularly in the rural areas. In the process, the rural masses enjoy a better way of living. While emphasizing the importance of agriculture, World Bank pleads for the development of agriculture in the 21st century as a fundamental instrument for both

sustainable development and poverty reduction. Three-quarters of poor people of developing countries derive their livelihoods from agriculture.

In this connection, the Bank considers that for the agriculture-based countries of most of sub-Saharan Africa, it recommends strong agricultural development along with related industries as an engine of higher economic growth and the reduction of mass poverty. What thus emerges from the above is that agriculture must play a great role in the transformation of a developing economy like Nigeria and Niger state. Agriculture must be viewed as sources of (i) surpluses to support industrialization, (ii) dynamic growth, employment, and better income distribution.

## **2. Scope of Agricultural Production in Niger State**

Niger State lies between longitude 8° 11' and 11° 20' north of the equator and between 4° 30' east of the equator. It covers an estimated land area of 4240 km sq. The vegetation of the state is mainly Guinea Savanna.. A total of 2.3million Hectares is under cultivation for the production of various food and cash crops annually. It is estimated that there are over 550,000 farming families in the state (Vision 20-3-3 report, 2010). Agriculture is a major sector in the economy of Niger State; it provides means of economic livelihood to majority of the population of the state. The sector has great potentials which if developed can help in the achievement of the vision of the state. Niger state as a major producer of food crops especially – rice, maize, millet, guinea corn and yam. The state has enormous potentials in fisheries, livestock and tree crops - cashew, mango, and Shea-butter nut processing. National Food Security Programme Plan (NFSPP) identified the state as having comparative advantage in import substitution for the production of rice, sugarcane, tomatoes and fisheries. Niger state is centrally located in Nigeria with easy access to major large markets in the northern and southern parts by road and rail services.

There are 3 Farm Institutes located at Tegna, Kuta an Nasko for training of interested youths in various aspect of crop production. High extension agent farm family ratio (1 extension Agent to 1,600 farmer). There exists only 1 state veterinary referral hospital in the state located in Minna in addition to 19 Zonal Livestock clinics and 6 Area Veterinary clinics all of which require rehabilitation. There are 2 modern Abattoirs in Minna & Suleja. Other major towns and cities are served with slaughter houses and slabs. There are 23 designated Grazing Reserves in the state with only 2 at Bobi and Iri gazetted. Over 2000 natural Fish ponds/lakes (Oxbow lakes) are in the state. An uncompleted Fish Hatchery with the capacity of producing 1.5million Fish fingerlings annually is located at Tagwai (Minna). The overreaching goal of Niger state vision 20- 3- 3 is “to take advantage of the diverse agricultural resources of the state to develop an agricultural sector that guarantees food security, reduction of rural poverty, facilitate agro Industrial growth towards accelerated economic development of the state”.

### *2.1 Challenges of Agricultural Production in Niger State*

The state has not been able to realise her full potentials in agricultural production and economic development due to some challenges among which the following are crucial. Most of the farms are scattered and small scale (<2.5 Ha), managed by farmers aged more than 40 years who utilize hoe and cutlass technology and depended on rain-fed agriculture. Access to mechanization and agro chemicals and other farm inputs are poor. Credit facilities are inadequate, inaccessible and with high interest rate. All agricultural activities are characterised by low productivity and inefficiencies. The average yield per hectare in all crops and livestock is lower than in most developing economy Actual yield for Rice, Maize, Yam, Cassava, G/nut and Cowpea are 2.5, 1.4, 11.00, 10.0, 1.5 and 0.4 metric tonnes (MT) against potential yield of 4-6, 4.0, 20.0, 20.0, 3.0 and 3.0 MT respectively. The level of mechanisation of farming activities is low where it is estimated that there are only 350 Tractors to serve about 3.3million farmers. There is inadequate capital investment due to low profitability. Prices paid for agricultural product is low and fluctuates throughout the season. There is high rural-urban migration due to absence of basic social infrastructure in rural areas resulting in depletion of labour for agricultural activity. There is also high level of deforestation as a result of unsustainable farming practices, timber and fuel wood collection and in recent part charcoal production.

### **3. Policies to Fully Exploit and Develop the Agricultural Potential of Niger State**

Sustained and accelerated development of agriculture is the key to economic development and poverty reduction in Niger State. The preceding sections shown that the state has considerable agricultural potential, but that it has not been realized for a number of reasons, including structural and technological constraints, inappropriate domestic policies and an unfavourable external economic environment. As a result, poverty has prevailed, undernourishment has been increasing and the poor state of the economy has continued. The challenges facing the state are numerous and there are competing needs to strain its capacity to design and implement effective policies and institutions for agriculture. However, development is a cumulative process, with success in one area opening up opportunities in others. The focus of this section is on the identification of measures to alleviate the supply-side constraints, and to improve agricultural productivity and competitiveness in the framework of a strategy that is poverty-alleviating, sustainable and based on the state comparative advantage. These measures include the following:

#### *3.1 Agricultural Commodity and Land Development Strategy*

This strategy aims at promoting the cultivation of set of crops of comparative advantage to the state and providing land resources and infrastructures to support the value chain of these crops. These would create employment, increase farm productivity and reduce poverty. The implementation of the strategy should include:-

##### *3.1.1 Massive Production and Processing of Rice and Maize (Vitamin A fortified):*

Although National Food Security Production Plan (NFSPP) recognised that Niger

state has comparative advantage in import substitution for the production of rice, sugarcane, tomatoes and fisheries. This paper recommends that the state adopts and encourages intensive production of rice and maize (vitamin A fortified) make Niger State the major supplier of quality rice and maize for Nigeria. The decision of Malaysia to make agriculture the centre of the country development effort and selection of oil palm as the main commodity to develop is a model that has led to general economic development of that country. According to Daramola (2005) Nigeria per capital consumption of rice is 24.5kg per year with demand that is increasing than in most part of Africa due to urbanization, population growth, and increased income level. Rice market monitor (2016) reported that there is about 1-1.5 million Metric Tonne demand - supply gap for rice production in Nigeria market (rice market monitor, 2016). The fadama land of the state is adequate to meet the challenges and the farmers if properly mobilised, motivated with economic returns from rice production will key into the programme and participate fully to make the state achieve its vision. What is required is adequate investment in production, modern processing infrastructure and market access. The state should take full advantage of the National Rice Development Strategy (NRDS) by having a complementary programme to mobilise the farmers for rice production for Nigeria. To achieve this vision there is need to among others articulate deliberate policies and strategies to address the following: formation of farmers' group/cooperative for efficient production of rice in all local governments of the state. Each cooperative should have 10 members that cultivate 1 hectares of land each; each local government should have 25 groups on a yearly basis for five years. This gives 50,000 hectares under cultivation of NFDS recommended varieties after five years of intervention. To support and encourage farmers, the state should provide additional 25% subsidy for fertilizer and agrochemicals in addition to those provided by the National Rice Development Strategy. Thus inputs subsidy to the participating groups is expected to be half ( $\frac{1}{2}$ ) of cost of seed, fertilizer and agrochemicals. Benefiting groups should provide half ( $\frac{1}{2}$ ) of their counterpart fund to show goodwill before input is supplied and a guarantee to supply paddy for processing at competitive market price to reduce incidence of highjack by unintended beneficiaries of subsidy. Public – private partnership should be encouraged in the critical investment needed for processing and storage infrastructure for rice paddy. The current federal government policy is 25% subsidy on rice processing equipment. The infrastructure can also be obtained by the state government but to be operated as a commercial venture.

*3.1.2 Creation of Agricultural Land Development Agency:* The agency should develop a centrally managed small holding farm settlement schemes across the state. Settlers are to have farm of “economic size”, ( 5-10 hectare per settlers), title to the land holdings and operate as mixed farmers having crop and livestock enterprises. It is expected that the settlers will be young men between 21- 45 years who are ready to take farming as a business. They are to be fully supported by government in land development, extension services, input supply, credit facilities and market access. The

agency should also support creation of private commercial farm estate with support by government in form of access and guarantees for loan; and concessions on taxes in the first few years of operation.

*3.1.3 Technology Driven Agricultural Production Strategy:* The three principal means of increasing output are (i) area expansion (ii) changes in output mix, (iii) technical change vary in importance and are a function of the stage reached in growth. Possibilities of area expansion are limited: as more land is cultivated area expansion becomes of declining importance. However, changes in both output mix and technology preserve their importance throughout the development process. It should be noted that neither is effective on its own, but requires a dynamic and flexible sector; – It is necessary to provide appropriate incentives to farmers and to ensure conditions that permit them to respond to the incentives. This involves technical support to correct the defects in farming methods adopted by farmers and institutional support to enhance the capacity of farmers to adopt new methods being propagated.

There is therefore the need to strengthen the capacity of the ministry of agriculture and agricultural development project in provision of technical support to farmers and bring about structural changes in the agricultural sector. Adoption of complementary technology like high yielding varieties, planting at right time, proper spacing, use of adequate quantity of fertilizer and other agro chemicals for all crops planted by farmers should be pursued. Institutional support is critical to the success of technological driven production strategy. It is therefore expected that there will be adequate budgetary provision for the programme to function effectively.

*3.1.4 Creation of Niger State Commodity Board as Produce Aggregator:* Commodity prices have strong influence on supply response of agricultural products. It is in response to fluctuating prices and its effects on agricultural production and economic livelihood of farmers that federal government of Nigeria introduced the policy of Guarantee Minimum Prices (GMP). The policy is a marketing strategy in national food security programme. It is an intervention in the marketing component of agricultural value chain aimed at assisting farmers sell their produce at guarantee price at harvest. The guarantee prices ensure reasonable returns on investment using recommended technology at current prices. These prices are significantly higher than prices paid at harvest and compare favourably with prices at peak period in the preceding season. It is normally determined by a committee headed by the minister of agriculture. The prices and the varieties of crop to be purchased are determined and announced at the beginning of each season.

The commodity board should serve as aggregator for major grains especially rice and maize (Vitamin A fortified). Most food processing industries do not buy grains from suppliers in the open markets because of contaminations of aflatoxin due to poor handling. The board should key into National Food Security Plan as licensed commodity buyers that coordinates guarantee minimum prices for grains and as major suppliers of good grains.. Vision 20-3-3 report stated that the state currently has 5

silos located at Pandogari, Salka, Badeggi, Wushishi and Kutigi (uncompleted) with a combined storage capacity of 12,000 metric tonnes. There is also a 10,000Mt capacity Federal Government Strategic Grain Reserve silo in Minna. These storage infrastructures currently underutilized will be put to good use by the commodity board. Expert opinion suggest that funding for the project can be obtained from the development finance unit of central bank of Nigeria and that these ventures can generate revenue of up to N500Million per month to government.

*3.1.5 Development of Grazing Reserve:* The state should develop the grazing reserves already gazetted which are located in Bobi and Iri. Fund for its development can be obtained as a grant from the N76 Billion grazing reserve fund. These will create a new community with schools, clinic, roads and other infrastructures in addition to creation of employment and other multiplier effects. It will also reduce the farmers- herder's clashes as well as improve the productivity of the livestock in addition to revenue generation for government.

### *3.2 Institutional Support and Development Strategy*

The strategy is to intensify the state institutional support for the farmers through technical, financial and structural support that improves farm productivity and income of farmers. This support services should include research and training, extension services, credits facilities, subsidies on inputs and machineries, and market access.

*3.2.1 Research and Training:* The state has three institutions for training of different cadre of staff in the agricultural sector. These are farm institutes at Nasko, Tegna and Kuta; College of Agriculture, Mokwa and Faculty of Agriculture at Ibrahim Babangida University, Lapai. The graduates of this training institution should form the core of the settlers at proposed centrally managed small farm holdings. The agricultural institutions need to be adequately funded to meet the challenges of research and development needs of modern day agriculture. These institutions should be equipped with adequate training infrastructures to enhance training of graduates with adequate practical exposure.

*3.2.2 Extension Services:* There is a wide extension – farmers ratio in the state. This gap should be bridged with recruitment of more personnel. Existing extension agents should be trained on a continuous basis, monitored to ensure they execute their duties as expected and motivated by payment of good remuneration and provision of facilities that aid effective service delivery. In addition, training and visit, fortnights training, technology review meetings, farmers field school, farmers business school and all other training components of extension services should be adequately financed and monitored for effectiveness to adequately support the technological driven agricultural production strategy.

*3.2.3 Agricultural Credit:* Availability of credit facilities increases likelihood of adoption of new innovation by farmers. The state anchor borrower scheme should be reviewed for effectiveness; current strategy is not working as expected. Private anchor

borrower is been encouraged by development finance agencies. The success of Babangona agricultural services limited in Kano and Kaduna state is a testimony to impact of anchor borrower scheme where carefully handled.

*3.2.4 Subsidies:* Subsidy is an important part of agricultural policy in every part of the world; it should be continued as part of the state policy on agriculture. It should however be carefully implemented to reduce unintended beneficiary of the policy to a minimum. To achieve this aim, fertilizer and other inputs subsidized should be distributed to small holder farmers only with active participation of the extension agent at the village/settlers level. To encourage fish production fingerlings should be distributed to small scale fish farmers at 50% subsidy while large scale farmers should get fingerlings at 25% subsidized rate. Provision of fishing inputs comprising nets, hooks, twine, outboard engines (OBE), ropes, floats should also be at 25% subsidy rate.

#### **4. Funding Options for the Suggested Strategies**

The major source of funding for agricultural production in Nigeria is budgetary allocation. Four percent (4%) of national budget is recommended for agricultural sector and 2% of GDP for agricultural research based on Maputo declaration on comprehensive agricultural development plan for Africa( Ochigbo 2012). Other funding options available for financing the suggested strategies are (i) Youth entrepreneurial scheme (ii) Strategic commodity financing (iv) Small medium enterprise development funds of Central Bank of Nigeria and development finance window of Bank of Agriculture, and Bank of Industry. Interaction with these agencies while preparing of this paper show that less than 20% of funding allotted to the state is subscribed. Other sources include donor agencies such as World Bank, International Fund for Agricultural Development, Africa Development Bank, community-based organisations, non-profit and non-governmental organisations, direct foreign investments, private financial initiative and public- private partnership.

#### **5. Conclusion**

Repositioning agriculture in Niger state to attract youth and run as a business with requisite support and access to market would change the landscape of the agricultural sector. The sector would produce food, enhance income and economic livelihood of farmers, reduce poverty, attract and retain young men and stimulate general economic growth of the state. To achieve this goals, the programme need strong support by government and private sector. The budgetary requirements will be huge but the potential benefit to Niger State in particular and Nigeria in general is enormous.

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