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Farm Organization, Ownership and Food Productivity in Nigeria

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Abstract

African food production is in crisis. Today, despite Africa's vast physical and climatic potentials to produce food, most African States depend on food importation. Africa's capacity to deal with its food battles is severely constrained by its political instability, its early stage of scientific and institutional development, and a rapidly changing and complex global environment. In Nigeria and in most developing economies, there is a fundamental lack of political commitment to come grips with poverty, malnutrition and access to food. Because of these barriers, traditional economics is a rather limited tool to understand food production and other related variables. Poverty, hunger, malnutrition, famine and starvation in developing economies are just as much a function of political, macroeconomic, and institutional barriers as lack of technology. Illustrations from the agrarian chaos in Sudan, Ethiopia, Somalia, Chad and others are too numerous to conclude otherwise. The aim of this paper is to determine and analyze economics incentives and strategies, which could stimulate commercial agriculture in Nigeria. The analysis is based on the premise that the form of production organization in Nigerian agriculture is the major constraint to commercialization. The paper concludes that output price subsidy is the over-riding factor in the commercialization of agriculture in Nigeria.

Keywords: Commercialization, Economy, Development, Food, Production, Strategies.

Introduction

Throughout most of sub-Saharan Africa, agriculture is in critical state. Frequent ecological problems, poor incentives to farmers, lack of improved varieties, growing expenditures on food imports and other numerous factors have been cutting into living standards and growth prospects. (Oguzor, 2009). The implications have been pervasive, not only on incomes of food producers, who include most African's poor, but also on supplies of food and raw materials for industry, on employment, savings, and government revenues, and on the demand for goods and services produced outside agriculture. Yet, policy changes and planning for the resumption of growth in agriculture are hampered.

Traditionally, agriculture has been recognized as the Achilles' heel of the economic development of sub-Saharan Africa. Agricultural sector has been a major source of raw materials to growing industrial sector as well as constituting a source of foreign exchange

earning. The output of the agricultural sector springs from forestry, Livestock, production, and major agricultural commodities etc. Agriculture contributes meaningfully to the Gross Domestic Product (GDP) of Nigeria. In view of the fact that agriculture contributes to the GDP and also serves; as a source of foreign exchange earning, there exist a functional relationship between foreign exchange and agricultural export, rainfall, labour force, technological development/progress and government expenditure on agricultural production.

Perspectives on Food Production

From the earliest of times Nigeria has been known as a rural agricultural economy. There are vast areas of arable land which almost all types of tropical crops could grow on account of varied climatic conditions. Cocoa, palm produce, cotton, and the famous groundnut pyramids of Kano provided clear evidence of the agricultural capacity of Nigeria. More than 80 per cent of the population in the 1960s engaged in agriculture and allied activities. A couple of decades ago agricultural sector was the single most important sector in view of its contribution to the GDP and foreign exchange earnings.

Agriculture has been the largest revenue earning source for most Nigerians living in the rural areas and formed more than 80 per cent of the country's population. Even those engaged in small businesses such as pottery, weaving, carving and tool making also still supplement their livelihood from farming (Adebola and Oguzor, 2009). Agriculture accounted for more than 70 per cent of the country's revenue before independence and contributed over 60 per cent of the country's GDP. This was a prominent position due to the fact that farmers were motivated not only to produce for domestic consumption but also for commercial purposes. Thus, over 85 per cent of all foreign exchange earnings in 1960 were derived from agricultural product, principally, cocoa, palm produce, groundnuts, rubber, wood, livestock and forest products. The performance of agriculture up to the 1960s was much attributable mostly to the concentration of control in the regional government, who funded and also shared a greater percentage of the revenue. In 1961 for instance, about 20 per cent of the country's total export estimated at two hundred million pounds sterling was derived from cocoa in the Western region. Groundnuts from the Northern region topped with over one million tones, while palm produce and palm kernel from the Eastern region exceeded 20 per cent of total export.

Discovery of crude oil in 1958 has had auspicious implications on food production. This subsequently increased revenue from crude oil production. By 1962/1963 agriculture contributed 65 per cent of the country's Gross Domestic Product (GDP) as against 13 per cent from the manufacturing. Agriculture thus began its decline in contribution to the economy as oil revenue increases. By mid-1970, its contribution fell to 20 per cent of GDP. And by the end of the 1970's the agricultural sector was contributing a mere 12 per cent of the GDP. Since then, the contribution of the agricultural sector has been rising but at a very slow pace.

A decline of agricultural output was sealed in 1973 during the Arab-Israeli war. At the instance of their Arab members, the Organisation of Petroleum Exporting Countries (OPEC) increased oil price with the view to forcing western oil consuming nations to review their support for Israel in the conflict. The outcome of that price increase was the unprecedented oil revenue that accrued to Nigeria. The oil boom made Nigeria euphoric. This provided the country with huge financial means at its disposal. Food importation became government priority in preference to development in agriculture as all manner of food including the agricultural product previously exported were now imported. Between 1970 and 1982 annual production of major agricultural product; cocoa, groundnut, rubber and cotton fell drastically

between 47 and 65 per cent respectively, while the share of agricultural imports in the total imports of the country increased from 3 per cent in the late 1960s to 7 per cent in the early 90s.

Although the Nigeria agricultural policy has been criticized at the micro economic level for this deficiency in failure to encourage private price setting and marketing channels, failure to a satisfactory credit system to finance farming, support services and processing units, and in its failure to create infrastructure and an economic environment that will support private services in machinery manufacture/maintenance, spares and training, government no doubt showed interest and effort at least in designing various agricultural policy to sustain a viable agricultural economy most especially soon after the nation found itself in food crises. Government among others designed and created.

- The Agricultural Development Project (ADP) with the assistance of the World Bank.
- The River Basin Development Authority and the National Accelerated Food Production Progamme (NAFPP).
- The Directorate of Food, Roads and Rural Infrastructure (DFRRI).

Other agricultural policies and programmes of the government include, Operation Feed the Nation (OFN), established in 1977 and rechristened the Green Revolution in 1980.

In establishing the above programmes, particularly the OFN, government was concerned with the rising import bills of foods. The programme was thus meant to reverse the continuing slide in agricultural production and to revive people's interest in farming. Its more revolutionary objective was rather to encourage former public officers who had either been retired or dismissed from office by government to engage in food production. Green Revolution, another programme of government on agriculture like Operation Feed the Nation deferred only in implementation. The program like others, failed largely due to corruption, bad conception and mal-administration.

Agriculture in Nigeria is largely dependent on human muscles as its primary motive power and the result is the low productivity per man and the large number of men per acre. Similarly, there has been loopsided allocation of foreign exchange resources to this sector in spite of its potential to sustain the economy. Of the total of $2472 million, $2870 million, $26085 million, $3010.2 million and $3720.7 million foreign exchange allocated to the visible sector of the economy; comprising industrial, agricultural, finished and capital goods sector, between 1989 and 1991, agriculture got a mere $12 million, $204 million, $866 million, $96.3 million and $76.7 million respectively. These figures represent 0.49 per cent, 0.71 per cent, 3.32 per cent, 3.2 per cent and 2.06 per cent of total foreign exchange allocation to the sector. It is obvious that such allocation cannot make any appreciable contribution to agricultural development of the country.

Technological development is vital for a country's developmental process. Thus, agricultural output is bound to increase at adequate technological capabilities. Technological innovation in respect of the agricultural sector is a *sine qua non* in order to aid greater productivity. Put simply, the provision of farm tool and or embarking on mechanized farming thereby promoting agricultural production on commercial basis devoid of subsistence contribute greatly to the Gross Domestic Product of Nigeria. It aids agricultural to be a major source of foreign exchange earnings. Thus technology is an independent variable having a functional relationship with agriculture, labour force, rainfall, government expenditure in agriculture and foreign exchange.

Policy makers consider the application of science and technology the panacea for increasing output and productivity and commercializing agriculture. They contend that

agricultural production in Nigeria is constrained by the physical absence of improved inputs and modern production techniques (Abalu and D'silva, 1980). As a result the focus of agricultural development policy and programmes over the years has been on the development and introduction of exotic breeds of livestock, high yielding and disease resistant varieties of crop plants, new grades of chemical fertilizers, pesticides, irrigation equipment and farm machinery. The basic assumption of Nigeria's Green Revolution (GR) programme for instance, was that the constraint to agricultural production was essentially technical in nature (Abalu *et.al*; 1981). Based on this assumption, the programme's emphasis was on farm mechanization. Tractors and allied implements were acquired on a large scale and distribution to agro service centers in various locations across the country. New institutions were also created to implement and administer the mechanization programme (Mabawonku, 1986).

Despite the huge investment in science and technology agricultural production in Nigeria has remained subsistence oriented. This probably indicates that the constraints to commercialization, may not necessarily, be purely technological. Our concern in this paper therefore is to identify and analyze economic incentives and strategies with potentials for stimulating commercialization of agricultural production in Nigeria. The analysis is based on the argument that the form of production organization in Nigerian agriculture is the major constraint to commercialization.

Enterprise Ownership and Organization

Enterprise ownership is referred to as production organization. The family farm is the dominant form of production organization in Nigeria agriculture. The male head of the farm family is usually the proprietor. He provides all the capital, land, and management. Most of the labour required on the farm is provided by the farm family. Farm size is small and access to land is limited by indigenous tenure systems. The prices of farm products are relatively low. Low prices imply low incomes, which adversely affect savings and investment. Agricultural production itself is seasonal due to lack of irrigation infrastructure. The seasonality of production constrains the generation of a continuous flow of income for the farm family.

Generally, the farm family considers agricultural production as a 'way of living'. As a result most family farms are not organized as business enterprises. A business enterprise is an economic unit, which takes decisions on the proper allocation and combination of resources with a view to choosing or selecting production activities, which generate "maximum continuous flow of income". The generation of maximum continuous flow of income presupposes commercialization. Commercialization is considered deliberate production for the market. It is not "merely the production of a surplus crop". On the other hand, the selection one production activity instead of the other is predicated on profitability. The profitability of the farm business implies that the cash receipts on the farm must on the average exceed the cash payments. Profitability is not an indication of the level of efficiency. A profitable farm business need not be the most efficient in its group or area or even be highly efficient (Olayide and Heady, 1982).

Most small holders in Nigeria are neither profitable nor commercially oriented. To induce family farms to become commercially and profit oriented, a number of measures need to be taken. These measures are the subject of the next section.

Towards Improved Food Productivity

Price Subsidies

Price incentive can be used to induce farm families to commercialize production and earn higher incomes and profits. The incomes and profits of farm families depend on the prices at which they sell their products. The prices at which farm families sell their products depend on where and when they sell their products. Two prices can be identified as prevailing in the agricultural product market-the farm gate price and the consumer or market price. From the spatial point of view, farm gate prices are usually low. From a temporal point of view farm gate prices are usually low during season. Since agricultural production in Nigeria is seasonal, farm gate prices are therefore always low. This implies low incomes for farm families.

Consumer prices are always high due to spatial differences. Temporally, consumer prices are low during season (when there is a glut of farm products) but relatively higher than farm gate prices due to the spatial effect (Place utility). Since the spatial effect is brought about by the activities of middlemen, the margin between the farm gate price and the consumer price accrues to the middlemen. For Farm families to earn higher incomes and profits through higher prices, an output price incentive (subsidy) scheme is imperative. To be successful the scheme should specify minimum output levels, which qualify a farm family to benefit from the scheme. This will ensure that only commercially oriented farm families will benefit from the scheme. The prospects for higher incomes and profits through subsidy will predispose farmers to invest more and produce more. The scheme will require an implementing agency. The agency will require adequate storage; preservation and marketing facilities to enable it cope with handling of bulk quantities of farm products from producers. The business of the agency should be to purchase products from family farms at the subsidy price, which should be higher than the market price and resell to consumers at the market price. The agency will need to have collection centers. Agro service centers scattered in very many rural areas across the country can be used as collection centers and retail outlets.

Technical and Managerial Incentives

To ensure proper selection and combination of production activities, proper allocation and adequate utilization of resources and the adoption and use of modern farm management techniques and practices with a view to generating a continuous flow of income, over and above production costs, family farms require full time technical and management expertise. Most family farms cannot afford the cost of hiring skilled manpower (technical and managerial) except through the intervention of government. Graduates of agriculture on call to national service under the National Youths' Service Corps Scheme (NYSC) can be seconded to farmers on a fulltime basis on primary assignment.

Human Capacity Incentives

The personal characteristics of family farm proprietors also play a major role in commercialization. Personal characteristics relate to attitudes, motivations and behavioural patterns (Hinderink and Starkenberg, 1987). Attitudes, motivations and behavioural patterns are likely to influence innovation adoption, sensitivity to risk (investment behaviour) and the managerial approach of family farm proprietors. Vocational education and training schemes will likely, significantly and positively influence attitudes and motivations and predispose farmers to commercialization.

To compliment these incentives, the following strategies are suggested:

a. **Diversification**

Agricultural production deals with plant and animal life processes. As a result the production process involves a waiting time or gestation period. During this period when the family farm is not yielding any income, the proprietor has to provide for the living expenses of the farm family. In the absence of alternative sources of income, the farm family may be exposed to hunger and starvation. Diversification of production activities on the family farm will ensure a continuous stream of income for the farm family, throughout the year. Mixed farming and forward linkages are forms of diversification, which lend themselves to activity or enterprise combinations that ensure regular income for the farm family. Higher product prices, the availability of skilled manpower, adequate investment capital, and economic concessions for forward linkages can predispose family farms to diversification and commercialization.

b. **Exchange and Mergers**

Large-scale production is highly desirable in commercial agriculture because of the scale economies, which it confers. The evolution of large-scale commercial agriculture especially in the eastern part of the country is constrained by indigenous land tenure systems, despite the 1978 land reform. The chances that large-scale family farms will evolve through land reform are limited given the people's traditional attachment to the land. However it is possible for emerging commercial family farms to increase size and scale by exchanging and merging fragmented and scattered family plots. This will enhance commercialization and the profitability of the family farm by ensuring that farm size and scale of production are economically adequate to support the farm family and to provide surplus cash for the purpose of expanding production.

Conclusion

The importance of commercial agriculture in Nigeria cannot be over emphasized. The commercialization of agricultural production will depend on economic incentives such as the introduction of output price subsidy, the provision of skilled manpower and the introduction of vocational education and training schemes for family farm proprietor coupled with strategies such as diversification of production activities and exchange and mergers of family plots. Output price subsidy however appears to be the over-riding factor in commercializing Nigeria agriculture. Higher prices for farm products will reduce the price disparity between agriculture and industry and attract investment resources and entrepreneurship to agriculture and consequently stimulate commercialization. Output price subsidy will resolve the policy conflict between the objectives of stimulation commercialization through higher product prices and making food available to the people at cheaper prices.

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