The Agricultural Sector and Nigeria's Development: Comparative Perspectives from the Brazilian Agro-Industrial Economy, 1960-1995.

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Abstract

A strong and an efficient agricultural sector would enable a country to feed its growing population, generate employment, earn foreign exchange and provide raw materials for industries. The agricultural sector has a multiplier effect on any nation's socio-economic and industrial fabric because of the multifunctional nature of agriculture.

This paper, therefore, emphasizes the fact that the agricultural sector is the engine of growth in virtually all developed economies. Specifically, the work limits itself to the important role of the agricultural sector in engendering sustainable development and a significant level of poverty reduction in Brazil. Of course the scenario in Brazil is in contradistinction to that of Nigeria where it would seem that successive Nigerian governments have only been paying lip service to agricultural development. Thus, the essence of this comparison is to reiterate the fact that Nigeria and other Third World countries need to urgently develop their monumental agricultural potentials if they are to achieve rapid industrial and economic development.

Introduction

The study of economic history provides us with ample evidence that an agricultural revolution is a fundamental pre-condition for economic development (Eicher and Witt, 1964: 239; Oluwasanmi, 1966:7-15; Jones and Woolf, 1969:123). The agricultural sector has the potential to be the industrial and economic springboard from which a country's development can take off. Indeed, more often than not, agricultural activities are usually concentrated in the less-developed rural areas where there is a critical need for rural transformation, redistribution, poverty alleviation and socio-economic development (Stewart, 2000:1). The central hypothesis of this work, therefore, is that a productive agricultural sector lies at the root of the stupendous economic advancement of Brazil.

The Brazilian experience is, of course, a striking example of how agriculture can advance beyond its primary function of supplying food and fibre. The agricultural sector has the potential to shape the landscape, provide environmental benefits such as land conservation, guarantee the sustainable management of renewable natural resources, preserve biodiversity and contribute to the viability of many rural areas (Humbert, 2000:1-3). In fact, through its different spheres of activities at both the macro and micro levels, the agricultural sector is strategically positioned to have a high multiplier effect on any nation's quests for socio-economic and industrial development. It is indubitable that a sustained agricultural growth has been highly instrumental to Brazil's rapid rural transformation, the empowerment of Brazilian peasants and the alleviation of abject poverty.

Interestingly, the Nigerian economy, like that of Brazil, during the first decade after independence could reasonably be described as an agricultural economy because agriculture served as the engine of growth of the overall economy (Ogen, 2003:231-234). From the standpoint of occupational distribution and contribution to the GDP, agriculture was the leading sector. During this period Nigeria was the world's second largest producer of cocoa, largest exporter of palm kernel and largest producer and exporter of palm oil. Nigeria was also a leading exporter of other major commodities such as cotton, groundnut, rubber and hides and skins (Alkali, 197:15-16). The agricultural sector contributed over 60% of the GDP in the 1960s and despite the reliance of Nigerian peasant farmers on traditional tools and indigenous farming methods, these farmers produced 70% of Nigeria's exports and 95% of its food needs (Lawal, 1997:195).

However, the agricultural sector suffered neglect during the hey-days of the oil boom in the 1970s. Ever since then Nigeria has been witnessing extreme poverty and the insufficiency of basic food items. Historically, the roots of the crisis in the Nigerian economy lie in the neglect of agriculture and the increased dependence on a mono-cultural economy based on oil. The agricultural sector now accounts for less than 5% of Nigeria's GDP (Olagbaju and Falola, 1996:263).

It is against this backdrop that this paper sets out to draw comparative lessons from the Brazilian experience for possible replication in Nigeria. Such an approach is particularly feasible given the fact that Nigeria shares so much in common with Brazil in terms of a highly conducive agricultural climate, huge and diverse population as well as the availability of immense natural resources.

For the purpose of analysis, the paper is divided into five major sub-divisions, the first part introduces the discussion by stating the rationale, objectives and significance of the study. Part two examines the historical origins of the Brazilian agricultural sector while the third part focuses on the contributions of the agricultural sector to the Brazilian economy in terms of its income and employment generating capacities among other micro/macro-economic indices. This part also analyses the socio-economic impact of agricultural growth on poverty eradication and sustainable social development in Brazil. The fourth part concentrates on the present state of Nigerian agriculture and recommends possible policies that could be adopted by Nigerian policy makers from the Brazilian agricultural policy environment. The last part concludes the essay.

The Historical Origins of the Brazilian Agricultural Sector

Brazil is South America's largest nation, in fact, it borders every nation on the continent except Chile and Ecuador, and covers about 4,772 km from the north-south, and 4,331 km from east-west. Brazil may also be divided into the Brazilian Highlands or Plateau, in the south, and the Amazon River Basin in the north. More than a third of Brazil is drained by the Amazon and its more than 200 tributaries (Hudson, 1977). Brazil's current population figure is estimated at 188,078,227 (CIA's World Fact Book, 2007). This figure makes Brazil the world's sixth most populous country. Understandably, Brazil's fertile agricultural lands and its enormous population were decisive in its momentous agricultural growth.

From the earliest years of the colonial era, agriculture has held centre stage in Brazil's economy. Plantation agriculture was the country's link to the world economy. The agrarian economy was based on large holdings dedicated to a single export crop and dependent on slave labour for its production. Beginning with sugar cultivation in the 16th century, the country's economic trends have been susceptible to a series of "boom-bust" agricultural cycles. Cotton, cocoa, rubber, and coffee followed sugar (Brown, 2000:159-172).

The key primary food crops produced are bananas, barley, cocoa beans, coconuts, coffee, maize, potatoes, rice, soybeans, sugar cane and wheat. The primary meat products are, beef, chicken, duck, goat, horsemeat, mutton, pork, rabbit and turkey (Graham, Gauthier and de Barros, 1987). Starting from the 1940s, Brazil vigorously pursued an aggressive agricultural development policy and the resultant effects which will be analysed shortly were quite phenomenal.

Brazilian Agricultural Policy Environment

A notable feature of Brazilian agriculture is the state interventionist and protectionist policies on the one hand, and private sector participation on the other. From the purview of political economy, it could be observed that even military intervention in Brazilian politics had its imprint not only on the agricultural sector but also on the overall economy. The policy of 'Import Substitution Industrialization' (ISI) which was introduced in the 1980s articulated the development of a domestic productive capacity for several initially imported products including processed agricultural products (Akinbobola, 2001:10).

Thus, the 1980s saw a general rise in the number of agricultural products exported. Soybeans outpaced Brazil's traditional agricultural earners – coffee, cocoa and sugar. The volume, value and variety of semi-processed and manufactured agricultural products increased substantially, largely as a result of government incentives favouring processed goods over raw crops (Akinbobola, 2001:11). Agriculture in the 1980s continued to play a significant role in the country's economy. Through fiscal incentives and special credit facilities, the Federal Government strongly promoted greater efficiency in rural areas. Furthermore, efforts were made to alter the movement of people from rural communities to urban areas by extending equal social benefits, establishing rational schemes for agrarian reforms, stimulating hitherto uneconomical small holdings and, in general, improving the quality of life in areas that are quite remote from the main centres. The policies highlighted above, if implemented by Nigeria, will go a long way in assisting Nigeria to stem its worsening rural-urban migration and all its attendant adverse socio-economic consequences for overall national development.

It is important to mention that the trauma of the first and second petroleum crises of the 1970s and 1980s made Brazil look inward to the effective diversification of its agricultural sector. For instance, Brazil discovered that ethyl alcohol (ethanol) which comes from molasses (a by-product of sugarcane) could be mixed with petroleum derivatives to produce a brand of fuel known as gasohol / alcogas or green petrol for motor vehicles (Brown, 1997:172). This kind of automobile fuel is economically attractive given the fact that sugar, unlike petroleum, is a renewable source of energy and it is environment friendly. Consequently, Brazil pioneered this new field and established the largest gasohol production plant in the world. In fact, by the late 1980s gasohol accounted for about half of the fuel consumption of Brazilian motorists (Ogen, 2002:31-43). This further reduced Brazil's reliance on imported fuel, and it saved her much-needed foreign exchange and consolidated the sugar industry's role in the energy sector. For a nation plagued with endemic fuel scarcity and chaotic fuel queues in spite of its oil producing status, this is another area where Nigeria stands to benefit from the Brazilian experience.

Agriculture and Economic Development in Brazil

Brazil's phenomenal agricultural growth has been the backbone of the nation's economy throughout much of its history. This important factor coupled with its rich mineral deposits, have also helped Brazil to become one of the world's leading manufacturing nations. Today Brazil possesses large and well-developed agricultural, mining, manufacturing, and service sectors. Brazil's economy outweighs that of all other South American countries and is expanding its presence in world markets (Brown, 2000:172).

In 1977, for the first time, manufactured products accounted for more than 50% of the value of Brazil's exports. Manufacturing now accounts for about 27% of Brazil's Gross National Product (GNP) and employs about 17% of the nation's workers. Today, Brazil ranks among the world's major automobile producers, manufacturing more than 900,000 cars a year. It also has Latin America's largest iron and steel plant (Brown, 2000:172). These impressive records could not have been set without the development of a vibrant and well-diversified agricultural sector. Indeed, there is no gainsaying the fact that sustained agricultural development played a pivotal role in the rapid industrialisation of the Brazilian economy.

Interestingly, massive industrial development has also been going on alongside increased agricultural productivity, This suggests that Brazil's continues to develop her agricultural sector in spite of its current status as a Newly Industrialised Country (NIC). Indeed, Brazil is one of the world's top producers of no fewer than twenty-eight different agricultural commodities. It has been the biggest producer of coffee for more than a century and also leads in oranges, orange juice concentrates, alcohol, sisal, cassava and bananas. It has the planet's largest commercial cattle herd, and comes second only to the United States in soybean production and to India in sugarcane output. Brazil is the world's largest exporter of soybean oil, second in the exports of whole soybean and a major exporter of poultry. Brazil offers considerable competition to the United States in soybean, tobacco, poultry, and beef product exports, this is despite the fact that the United States is a major exporter of these agricultural products (Graham, Gauthier and de Barros, 1987; FAO, 2003).

Furthermore, agriculture and agro-business account for about 27 per cent of GDP, with 19.4% corresponding to inputs, processing and distribution, 4.0% to livestock and 3.6% to agriculture. There is no such thing as a typical Brazilian farm. Sizes, land prices and sophistication vary hugely around the country. According to Carneiro as cited by Akinbobola (2001:37):

> Foreign visitors to most farms in the south, south-east and centre-west expecting to see "Third World" technology and practices will be taken aback by the degree of efficiency and mechanization in these farms. Soya yields per hectare in the centre-west for example are unsurpassed anywhere in the world.

Brazilian agriculture responded positively to the opening of the domestic economy in the 1990s, which sparked a race to introduce modern technology and mechanisation. Cutting production costs remains a priority and there are plentiful opportunities for foreign companies interested in technology transfer projects and joint ventures. Several important foreign companies are presently prospering in Brazil. Amongst them are, Parmalat (Italy) in dairy products, Monsanto (USA) in seeds and biotechnology, R&D and Doux (France) in the poultry sector. The British presence includes the Vestey Group which owns a number of farms in the south-east and centre-west and Unilever with a strong presence in the processed food sector ((CIA's World Fact Book, 2007).

Current State of Nigerian Agriculture and Policy Recommendations

As noted earlier, the neglect of the agricultural sector and the dependence of Nigeria on a mono-cultural, crude oil-based economy have not augured well for the well-being of the Nigerian economy. In a bid to address this drift, the Nigerian government as from 1975 became directly involved in the commercial production of food crops. Several large scale agricultural projects specialising in the production of grains, livestock, dairies and animal feeds, to mention but a few were established (Fasipe, 1990: 129-130). Sugar factories were also established at Numan, Lafiagi and Sunti (Lawal, 1997: 196). The Nigerian Agricultural and Co-operative Bank (NACB) was established in 1973 as part of government's effort to inject oil wealth into the agricultural sector through the provision of credit facilities to support agriculture and agro-allied businesses (Olagunju, 2000: 98).

In spite of these efforts, it is heartrending to note that as from the mid 70s, Nigeria became a net importer of various agricultural products. In 1982 alone, Nigeria imported 153,000mt tons of palm oil at the cost of 92 million USD and 55,000mt tons of cotton valued at 92 million USD (Alkali, 1997:10). Between 1973 and 1980, a total of 7.07 million tons of wheat, 1.62 million tons of rice and 431,000 tons of maize were imported. Thus, from N47.8 million in the 60s, the cost of food imports in Nigeria rose to N88.2 million in 1970 and N1, 027.0 million in 1988 (Alkali, 1997:19-21). Since the 1990s and until the recent ban on rice importation, Nigeria has been spending an average of 60 million USD on the importation of rice annually. Indeed, in 1994, the agricultural sector performed below the projected 7.2 per cent of budgetary output (Lawal, 1997: 197-198).

Between 1995 and 1998 the government further embarked on the reformation of the lending policies of the Agricultural Credit Guarantee Scheme (ACGS) for easier access to agricultural credit schemes. It also established the Calabar Export Processing Zone (EPZ) and initiated the Enugu, Kaduna, Jos, and Lagos EPZs with each specialising in specific food and export crops. In fact, the National Rolling Plan for 1996-1998 assumed that by year 2000, Nigeria would have been able to feed its population, develop the capacity to process agricultural raw materials both for local industries and for export and significantly increase the contributions of the agricultural sector to the GDP (Lawal, 1997:198). These lofty objectives have turned out to be a mirage mainly because of official corruption and lack of commitment on the part of those saddled with the responsibility of implementing the government's agricultural policies. In order to get out of this doldrums, Nigerian policy makers need to be wary of development economists who assign a relatively minor role to agriculture in economic development and fervently believe that industrialisation is synonymous with economic development (Ogen, 2002:27 and 40 n4; Ogundipe, 1998: 135-138).

The Brazilian experience is a pointer to the important role of the agricultural sector in ensuring sustainable social development. Indeed, there are some comparative lessons that could be drawn by Nigeria from the structure of Brazilian agriculture. For instance, the

Nigerian government needs to actively promote the establishment of the kind of agro-based industries that are capable of processing Nigeria's agricultural raw-materials in a most efficient manner. Thus, the emphasis should be on the local processing of raw crops for local industries as well as for export. This will create more employment opportunities and additional income will be generated.

The provision of agricultural subsidies for fertilizer, farm implements and equipment would also boost agricultural production. In addition, there is the need to put in place an agricultural tariff regime that would protect Nigeria's agricultural produce from unbridled foreign imports and competition.

There is also the need for the provision of replanting grants to cash crop farmers so that they can replace their old trees with newer varieties. It has been observed that in spite of the fact that these newer varieties are high-yielding and relatively easy to maintain with a shorter maturation period, most farmers are reluctant to do away with their old plantations because of the high cost of replanting new ones (Ogen, 2004:135).

It is equally important to provide special welfare schemes for farmers that will form part of a social policy to alleviate rural poverty and the redistribution of income in favour of the rural poor. Government should also strive to promote greater efficiency in the rural areas by extending equal social benefits; establishing rational schemes for agrarian reforms and improving the quality of life in areas that are quite remote from the main centres so as to alter the movement of people from rural communities to urban areas.

Furthermore, the resuscitation and development of the critically ailing Nigerian sugar industry and its bye-product especially ethyl alcohol (ethanol) which comes from molasses (a by-product of sugarcane) is of an urgent and critical necessity. Given the intractable and embarrassing problem of fuel queues in Nigeria, ethanol could be used to produce a brand of automobile fuel known as alcogas or green petrol. Apart from being a renewable source of energy, and unlike fossil fuels, alcogas has little or no adverse effect on the environment. In fact, with alcogas Nigeria will be able to reduce her dependence on imported fuel and save additional foreign exchange for capital projects (Ogen, 2004:133-135).

The above policies as well as the other steps taken by Brazil - which have been analysed in this paper - to achieve its enviable status must be carefully studied by Nigerian agricultural policy makers for possible implementation.

Conclusion

This paper underscores the historical primacy of the agricultural sector in the economy of Brazil. The study further reiterates the fundamental role of agriculture in any nation's quest for economic development and argues that an efficient agricultural system paved the way for the remarkable economic advancement of Brazil. The paper is of the view that the bitter and frustrating experiences of Nigeria since the early 1960s in its fervent attempts to develop, underline the need to redirect attention to the agricultural sector to ensure sustainable development and food security. The role of agriculture deserves prominence since agricultural development provides the foundation for economic development. A strong and an efficient agricultural sector would enable a country to feed its growing population, generate employment and foreign exchange, and provide raw materials for industries and a market for industrial products. It has been shown in this piece that Brazil towed this line and was able to change its hitherto under-developed status to that of a Newly Industrialised Country (NIC).

It is hoped that with time, a country like Nigeria which is also blessed with immense natural and human resources will take a cue from the Brazilian experience and exploit the immense benefits accruable from a well-developed agricultural sector. The need for an urgent diversification of the Nigerian economy, coupled with the quest for rural development and poverty eradication make this move a critical necessity.

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