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Technical efficiency of smallholder farms in Nigeria

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Cuvillier Verlag Göttingen
Internationaler wissenschaftlicher Fachverlag

CHAPTER ONE

1.0. Introduction

1.1. An Overview of Nigerian Agriculture

Nigeria is a tropical country, characterized by high temperature and humidity as well as intense heat. It is located between Longitude 3^o and 15^o East and Latitude 4^o and 14^o North. The landscape of the country consists of lowlands, plains, highlands and plateaus. There are two major seasons in the country - the wet and dry seasons. The country occupies a total area of 92.4 million hectares which includes 91.1 million hectares of land and 1.3 million hectares of water bodies. The agricultural area is 83.6 million hectares, which comprises arable land (33.8 percent), permanently cropped land (2.9 percent), forest or woods (13.0 percent), pasture (47.9 percent), and irrigated land (2.4 percent) (Adetunji, 2006).

Nigeria has a population of about 144 million people with an annual growth rate of about 2.2 percent (NBS, 2010), of which 65 percent live in the rural areas (Philip *et al.* 2009).
Agriculture, which is the largest component of the rural economy in the country, is the main trust of many Nigerians as is the case in most of the sub-Saharan Africa countries. It is also the principal source of food and livelihood, making it a critical component of programmes that seek to reduce poverty and attain food security in the country.

Over 80 percent of the food needs of Nigerians are provided by the dominated smallholder farms in the country (Fayinka, 2004). NBS (2006) identified agriculture as the single largest employer among sectors (70 percent of labor force) and agricultural labor as the main and often time the only asset for the farm households in the country (Agenor *et al.* 2003).

Peasant farming characterises agricultural practice in Nigeria. Subsistence agriculture mainly takes care of the food needs of the farm households and produces little surplus for sale. This type of peasant agriculture, engages 95 percent of Nigerian farmers while farmers employed on corporate and government supported large-scale farms account for only 5 percent (Manyoung *et al.* 2005).

The farm households in the country engage in subsistence farming in which family needs determine the scale of production and wherein small plots of land are cultivated by individual owners or sub-owners following age-old methods without much control of the yields.

Traditionally, the farm households use family labor complemented with hired labour for farming operations. However, recent development shows that there is a growing increase in the use of hired labour; labor exchanges are also increasing with other farmers at peak seasons. This is because recent development shows that most farming families prefer to send their children to schools leaving only a few children available to participate in the farm operations at home.

Before the discovery of crude oil, agriculture was regarded as the mainstay of the national economy and contributed over 60 percent to the Gross Domestic Products (GDP) as against its recent contribution of approximately 40 percent despite the potential agricultural resources in the country (Tribune, 2010). According to Xinshen *et al.* (2010) relatively impressive economic growth rates were recorded during the 2000-07 period when the annual growth rate of GDP rose to 7.3 percent, compared to the periods of 1990-94 and 1995-99, when the economy grew at 2.6 and 3.0 percent per year respectively. These authors concluded that the agricultural sector has been a key driver of recent growth in the Nigerian economy. Between 1990 and 2006, the agricultural and oil sectors accounted for 47 and 39 percent of national growth, respectively.

Presented in figure 1.1 is the contribution of agriculture, oil & gas and the services industries to the Gross Domestic Products (GDP) at current producer prices, 1981-2006. The figure shows that, the contribution of the oil & gas industry surpasses that of the agriculture and service industry, while agriculture surpasses the services industry.

Figure 1.2 presents the contribution of the key five sub-sectors of Nigerian agricultural economy to the Gross Domestic Products (GDP) at current producer prices, 1981-2006. The figure shows that the crop sub-sector dominates in terms of contribution followed by the livestock, fishery, and forestry sub-sector. In fact, the crop sub-sectors accounts for 80 percent; livestock, 13 percent; forestry, 3 percent and fishery, 4 percent of the agricultural share of the GDP (CBN, 2009). Given the large size of the crop sub-sector, relative to the other three, the growth performance in this sector seems to drive the overall growth performance in the Nigerian agricultural sector.

Agricultural exports contributed to about 86 percent of Nigeria's total export in 1960. However, in 1984 the contribution dropped to 3 percent while in 2004 and 2008, the contribution dropped to as low as 0.81 percent and 0.2 percent respectively (CBN, 2008). This progressive reduction among other factors is partly attributed to the withdrawal of priority hitherto given to agriculture due to the heavy dependence on the oil sector since its discovery in the late sixties (Alabi, 2003).

The bane of agricultural development in Nigeria has always been associated with the following: inadequate supply of agricultural inputs, inadequate provision of reliable supporting services such as credit facilities, market information and extension activities, lack of appropriate package of technology for many farm enterprises or a poor response to technology adoption strategies, poor infrastructure, lack of properly prepared feasibility studies to identify problem areas as a guide to agricultural project execution, and inefficient policy and program implementation (Obeta, 1990; Idachaba 2004; Manyoung *et al.* 2005; Tribune, 2008).

Besides, there is also the argument that low public spending for agriculture is another impediment to agricultural advancement in the country (Manyoung *et al.* 2005). The Nigerian agricultural expenditure is far below international standards even when accounting for its level of income. The share of agriculture in the federal government's annual budget ranges between 1.3 percent and 7 percent from 2000 to 2007 and this has consistently fallen below the Maputo declaration of a 10 percent share of the country's total budget for agriculture (Fan *et al.* 2009). This is an indication of the low priority Nigerian governments have placed on the agricultural sector.

Growth in the agricultural sector has also not kept pace with the needs and expectations of the nation. Over the past 20 years, value added per capita in agriculture has risen by less than 1 percent annually. The average annual growth rate ranged from about 3.3 percent in the 1990s to an average of 6 percent between 2003 and 2007 (CBN, 2008). Most of the current growth rate has been attributed more to an expansion in cultivated land area rather than an increase in productivity (Manyoung *et al.* 2005).

The dismal performance of the agricultural sector in the last four decades prompted the government to initiate several agricultural schemes and programmes or economic programmes with an agricultural reform content to enhance agricultural development in Nigeria. The programmess include: Commodity Marketing Boards (1947-1986), National Accelerated Food Production Project (1970 to date), National Agricultural Cooperative Bank (1973 to date), Agricultural Credit Guarantee Scheme Fund (1973 to date), Agricultural Development Project (1975 to date), Operation Feed the Nation (1976 to date), River Basin Development Authorities (1977 to date), the Green Revolution (1979-1983), Directorate of Food, Roads and Rural Infrastructure (1986-1993), National Directorate of Employment Project (1986 to date), National Agricultural Land Development Authority (1991-1999), Structural Adjustment Program (1986-1994), Root and Tuber Expansion Project (2005 to date), The National Economic Empowerment and Development Strategies (NEEDS I of 2000-2007 and NEEDS II of 2008 to date), National Special Programme for Food Security (2002 to date), and National Fadama I program (2003 to 2007), National Fadama II program (2008 to date), and Presidential initiatives on selected commodities: Cassava, Rice, Cocoa, Vegetable oil, Livestock and Fisheries (1999 - 2007).

Although, these programmes and interventions helped to ensure that the agricultural sector achieved relative progress in some quarters, the majority of the completed programmes left a lot to be accomplished in terms of national food security. Supporting this observation, Idahchaba (2004) posited that empirical records of many of these programmes and projects are not impressive enough to bring about the expected transformation of the agricultural sector in the country. One of the indentified sources of failure for these programmes has been strongly linked to a lack of continuity that characterized their operation and implementation by the successive governments (Tribune, 2010). However this is not surprising because policy discontinuity has become the culture of the Nigerian government.

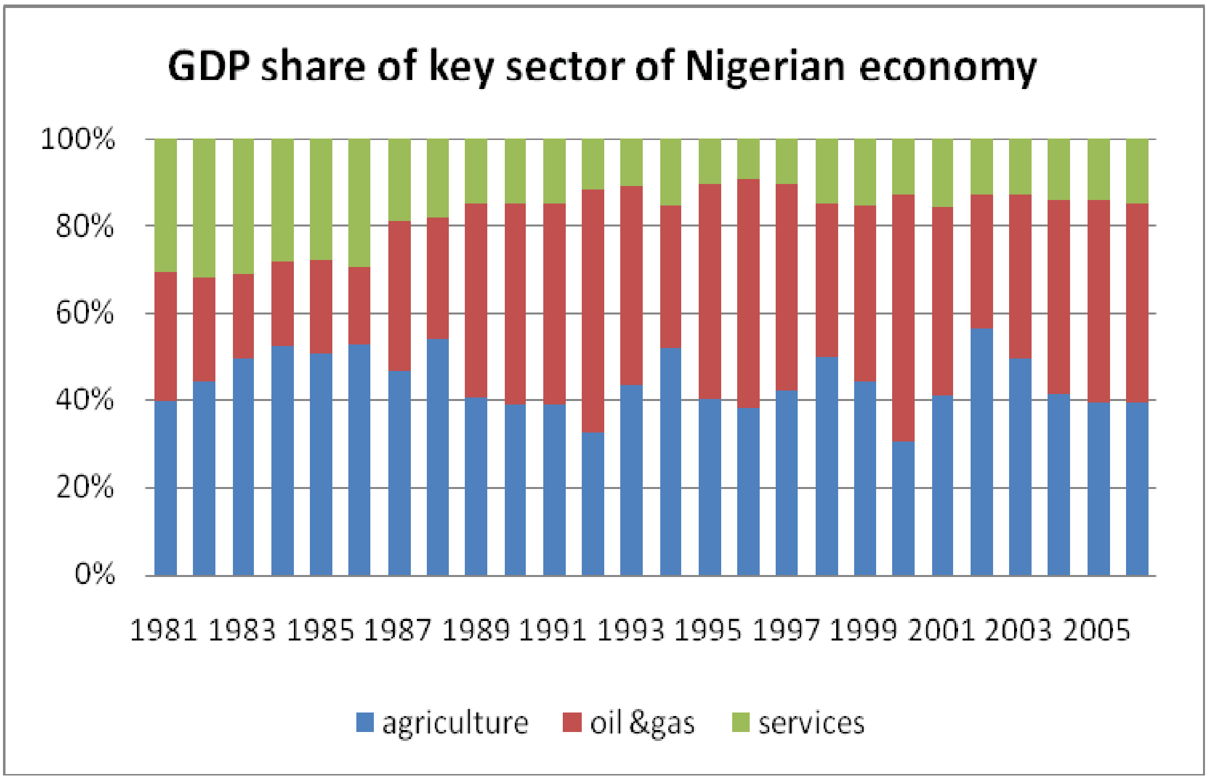

Figure1.1: Share of the key sectors of Nigeria economy to the Gross Domestic Product at current producer price, 1981-2006 (CBN, 2009)

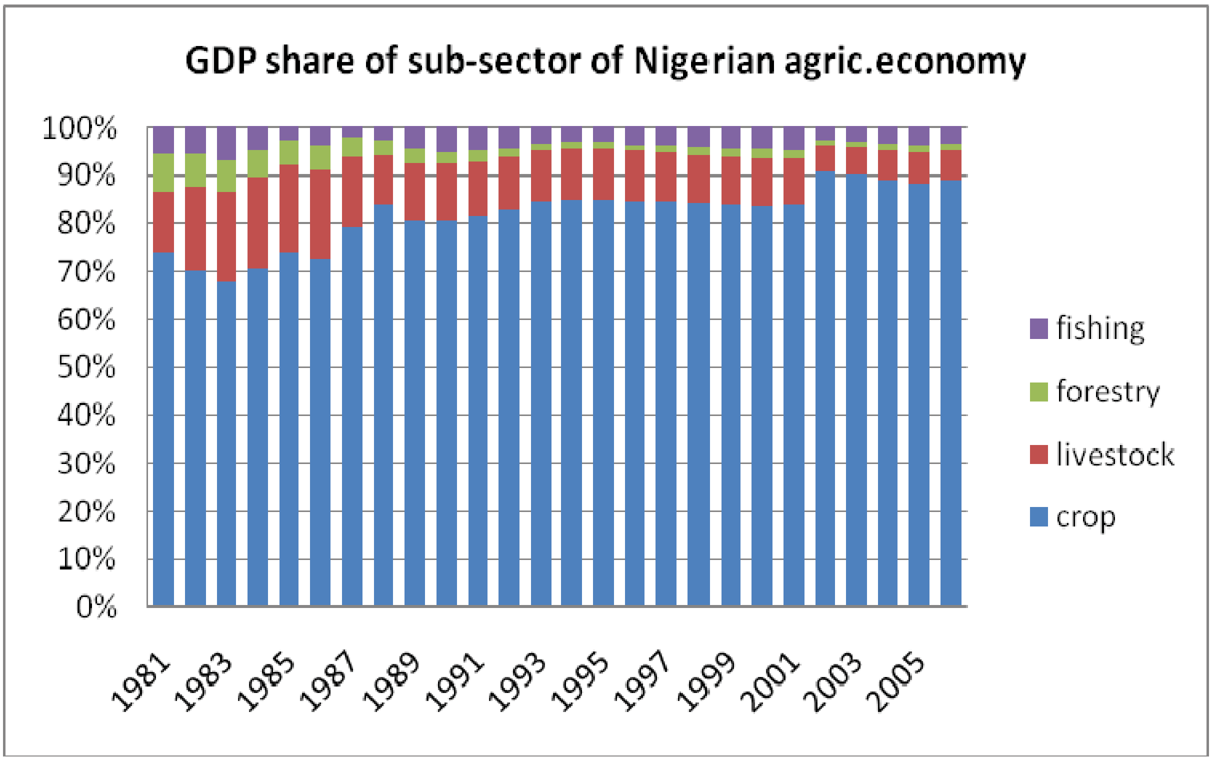

Figure 1.2: Share of sub-sector of Nigerian agricultural economy to the Gross Domestic Product at current producer prices, 1981-2006 (CBN, 2009)