

ECONOMIC AND
SOCIAL STUDIES

Volume 43, No. 3

November 2001

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[PUBLISHED BY THE NIGERIAN ECONOMIC SOCIETY]

GOVERNANCE, POLICIES AND THE GROWTH OF
NIGERIA'S AGRICULTURE

Gabriel S. Umoh

Department of Agricultural Economics/Extension

University of Uyo, Uyo, Nigeria

Email: gsumoh@hotmail.com

ABSTRACT

This paper examines the performance of the agricultural sector under the various regimes in Nigeria since independence. Regimes that lasted longer were found to have had more agricultural policies/programmes. Higher growth in the agricultural sector was also observed under those regimes. Results show instability in the growth of agricultural production arising from political and policy instability. OLS estimation indicates that average fertilizer price and the exchange rate significantly influence agricultural growth ($P \leq 0.05$, $P \leq 0.01$, respectively). Findings suggest the need for political and policy stability in order to achieve sustainable growth/development of agriculture in Nigeria.

JEL classification: O13, Q14, Q18

1. Introduction

THE growth and development of any nation depend, to a large extent, on the development of agriculture. This is so because even industrial enterprises rely on agricultural undertakings to produce the raw materials that are transformed, using human resources, into capital goods. Specific development goals can be achieved through policies which support relevant aspects of the economy and this is where the State has a role to play in economic development.

The State is an important institution in a country. So long as the state machinery is a synthesis of the political forces of the country, the state policies influence the development of the different sectors of the economy and can either help or hinder the process of sectoral balance. Success hinges on good governance. Governance, described as the manner in which power is exercised in the management of a country's economic and social resources (World Bank, 1999; Wai, 1995), is closely interlinked to growth and development. State policies can sometimes discriminate against certain sectors of the economy. For instance, Nandi and Basu (1993) report

that the inequality in the allocation of investible resources and the unfavourable terms of trade faced by the agricultural sector of East Pakistan resulted in a transfer of real resources from East to West Pakistan.

The State is a creation of the polity. While political compulsion is an important determinant of a state's action, Datta-Chaudhuri (1990) argues that government actions are never solely dictated by economic considerations, although economic arguments are employed to legitimize actions which have different intents. Sowa's (1996) study of governance and economic performance in Ghana reveals that whereas there did not seem to be any justification for most of the coups and attempted coups on the basis of economic performance in Ghana, evidence points to the fact that frequent interruptions is government led to the poor performance of the economy. The study confirms that most coups took place when the incumbent government was making efforts to stabilize the economy. Frequent changes in government and policy thrust have also been the feature of most other African countries in recent times. Nigeria, for instance, has been characterized by such frequent changes since independence. Starting from the Tafawa Balewa administration in 1960, by 1999, the country had had no less than 12 heads of state!

Nigeria is endowed with immense natural and human resources. It has about one percent of the world's proven petroleum reserves. Before petroleum became an important component of Nigeria's export trade, agricultural exports provided virtually all the foreign exchange earnings, and the country was virtually self-sufficient in domestic food production (Olayemi and Olayide, 1976). Since the advent of crude oil, the crisis in the agricultural sector has deepened (Olayemi and Dittoh, 1995). This has also affected the economy of the country. In fact, Ejiawoko (1991) posits that any possible solution to Nigeria's economic problems must necessarily have to do with the transformation of a society predominantly based on subsistence agriculture. Although agriculture remains essential for the industrial take-off of a country, it however needs to grow beyond the subsistence level to support industrial transformation. The achievement of such a change also requires fundamental transformation of the political, economic and social structure of the country.

Over the years, the various governments of the country have enunciated and implemented a myriad of agricultural policies and programmes in an attempt to stimulate the sustainable growth and development of the agricultural sector. The achievement of this aim remains a matter for empirical investigation. The broad objective of this paper, therefore, is to examine the performance of the agricultural sector against the policies enacted by various regimes in the country. Within this broad objective, the following specific objectives are pursued.

- i. to identify the various regimes in Nigeria since independence and the agricultural policies and programmes adopted to improve the performance of the agricultural sector.
- ii. To assess the effectiveness of the policies and programmes in terms of the growth of the agricultural sector.

2. Theoretical Framework

Growth theory has evolved over the years as a major feature of development economics. Starting from the concept of incremental output ratio as the basis of growth, several models/theories of growth have emerged. Conventional neo-classical growth theory, as modeled by Robert Solow, holds that economic growth is a result of the accumulation of physical capital and an expansion of the labour force, in conjunction with an 'exogenous' factor, technological progress which makes physical capital and labour more productive. Solow's model of economic growth is based on the premise that output in an economy is produced by a combination of labour (L) and capital (K), under constant returns, so that doubling inputs results in the doubling of output. Contemporary versions of the theory distinguish between physical and human capital. Thus, the quantity of output (Y) is also determined by the efficiency (A) with which capital and labour are used, or mathematically:

$$Y = Af(L, K) \quad (1)$$

If competitive markets are assumed, the growth rate of the economy can be seen as a weighted sum of the growth rates of efficiency parameter gA (this is sometimes referred to as technical progress), of the labour force gL , and of the capital stock gK . The weights on labour and capital are the shares of payment to labour and capital in gross domestic product.

$$gY = gA + al gL + ak gK \quad (2)$$

The Solow model assumes that the marginal product of capital decreases with the amount of capital in the economy. In the long run, as the economy accumulates more and more capital, gK approaches zero, and the growth rate is determined by technical progress and growth in the labour force. In the short run, however, an economy that accumulates capital faster will enjoy a higher level of output. The above argument pertains to the whole economy, but can also be extended to sub-sectors of the economy such as agriculture. For instance, if we assume that labour and capital are the inputs employed in agricultural production, then agricultural output (Q) can be considered to be determined by the two inputs

– labour (L) and capital (K). Mathematically, this can be presented in the spirit of equation (2) as:

$$gQ = gA + \alpha gL + \alpha gK \quad (3)$$

All other arguments as in equation (2) apply to equation (3).

The above conceptualization refers to the use of physical inputs in the production, and indeed, growth process. The question is: How does governance impact on the growth and development of the economy and indeed, on a sector such as agriculture. This, to some extent, can be discerned from how economic growth is affected by institutional framework. Aron (2000) asserts that the structure of both formal and informal rules and the character of their enforcement are what define the incentives and wealth-maximizing opportunities of individuals and organizations. North (1990) seems to have confirmed this when he reported that 'Third World countries are poor because the institutional constraints defined a set of pay-offs of political/economic activity that do not encourage production activity. Such rules affect both individuals and organizations. Institutional framework affects growth because it is integral to the amount spent on both the cost of transactions and the costs of transformation in the production process'.

Several factors influence the behaviour of economic agents, e.g., farmers. One of these is the business environment in which they operate. The business environment is itself a product of the type of government or governance. Stiglitz (2000), in tracing development thinking from the past to the present submits that 'production processes take inputs and translate them to into outputs'. That process typically involves more than one individual and requires individuals to relate to one another. How they relate affects the efficiency with which inputs are transformed into outputs, and depends on the norms and institutions that govern their 'public behaviour'. In modern societies, these norms are the policies which guide business operations. Since they are formulated by government, the type of government and its policies affect the growth process.

It must be emphasized that the nature of governance counts in the growth and development process. Good governance and societal peace are *sine qua non* for the pursuit of sustainable socioeconomic development. The pivotal role of good governance in economic development is recognized by development institutions/agencies, e.g., the African Development Bank (ADB) and the World Bank. In pursuing their mandates, they incorporate good governance as a cardinal issue. The opposite of good governance – bad governance – is known to impact severely on all facets of the economy/society and ultimately on the economy as a whole. The destructive manifestations of bad governance include poverty, corruption, conflict, and changes in government, e.g., military coups (ADB, 2001), but these

can be reversed by good governance. The level of poverty, corruption and conflicts are some of the barometers for measuring the development of a country.

Empirically, several scholars have modelled the impact of governance on growth. So far, findings from these studies have not been able to put to rest the controversy surrounding the impact of governance on growth. Studies that use objective measures of democracy (attributes) tend to find inconclusive results in growth regressions. Alesina and Rodrik (1994), Heliwell (1994), and Alesina et al. (1994) posit that since democracy acts through various channels, it may have both positive and negative implications for growth. On the negative side, Aron (2000) is of the opinion that the consensus required by democratic institutions, or the lobbying by interest groups may delay responses to shocks and implementation of legislation. Alesina and Perotti (1994) submit that growth performance may be poor during periods of democratic transition because the government may have to confront the economic legacy of a collapsed regime and the attendant political instability.

Alesina et al. (1996) have gone further to model the effects of executive instability on growth in per capita income. Their findings indicate that high executive turnover has negative impact on growth. They defined three types of changes in government: (a) every change in government; (b) major changes in government; and (3) coup d'états. The probability of a change in government was then included as one of the explanatory variables in estimating the relationship between growth in per capita income and a range of variables. This led to the conclusion that a high executive turnover has a negative effect on development. A study by Claque et al. (1996) highlights the trade-off between credibility and executive flexibility as a possible explanation why some democratic regimes do not deliver the goods, while some longer-lived autocratic regimes do. Nigeria has experienced various changes in government including changes from civilian to military, civilian to civilian, and military to military: the civilian administrations being democratic and the military being autocratic. We agree that the actions of government are transmitted to the economy through many channels, including the policies that are formulated and implemented. This paper identifies some of the macroeconomic policies (price, exchange rate, interest rate policies) and the types of government that determine the growth of agriculture.

3. Data Estimation

Solow's production function framework has been used extensively to analyse the determinants of growth in developing countries. Such analysis, generally involves the estimation of a function which relates the growth of aggregate output to the growth of factor inputs and to the variable representing growth of total factor productivity. The equation estimated is usually derived from the basic neoclassical growth equation, which can be extended to any number of inputs

Onwioduokit, 1998). In this study, we estimate the growth equation for the agricultural sector. We however deviate from the neoclassical growth equation by not considering the basic production inputs of labour and capital but use policy variables which are capable of influencing the basic production inputs.

The impact of policy on the growth of agriculture in Nigeria was estimated through the standard production function. The Cobb-Douglass functional form was used because of its popularity in growth estimation. For instance, Easterly and Levine (2001) state that the organizing principle of growth accounting is the Cobb-Douglass aggregate function. Output is assumed to be dependent on input or several inputs. In our own case, output is the growth index of agriculture while the inputs are the policy variables. We identify four policy variables for our estimation. These are exchange rate, price variable, credit variable and type of government. Two types of government are identified, namely civilian democracy, and military. The linearized form of the Cobb-Douglass function used is:

$$\ln IAP_t = b_0 + b_1 \ln AFP_t + b_2 \ln ER_t + b_3 \ln TOG_t + b_4 \ln IR_t + U_t \quad (4)$$

where:

- IAP_t = index of agricultural production in period t . This is a proxy for the growth of agriculture over time.
- AFP_t = average fertilizer price in period t . Fertilizer is one agricultural input used by most farmers and on most crops. This is therefore, a proxy for input price. It is expected to be inversely related to agricultural growth, i.e., b_1 should be negative.
- ER_t = exchange rate in period t . The coefficient of exchange rate (b_2) should be positive.
- TOG_t = type of government in period t . This was represented by a dummy; 1 = civilian government, 0 = military government. The impact of government on agricultural growth is indeterminate as it depends on the types of agricultural policies pursued by the government in question.
- IR_t = interest rate in period t . The interest rate charged on agricultural loan by lending institution(s) can affect the volume of funds available for agricultural production. The growth of agriculture could be inversely related to the interest rate. Thus, b_4 is expected to be negatively signed.
- U_t = stochastic error term to be estimated
- L_n = natural logarithm
- b_0 = intercept
- b_1-b_4 = the coefficients of the respective variables

The execution of the data estimation was done through the use of the Special Package for Social Science (SPSS) version 9.0. Note that the analysis is in the short run. The data used in the estimation were obtained from Central Bank of Nigeria's *Annual Report and Statements of Accounts* (various issues). The data collected included exchange rate, interest rate, agricultural output and fertilizer price.

4. Results and Discussion

4.1 Regime, agricultural policies and programmes

Table 1 shows that in the 39 years of political independence (October 1960 to 1999), the government of Nigeria changed hands twelve times, some regimes lasting less than one year. The instability in the political structure or leadership of the country has also resulted in frequent changes in the thrust of agricultural policy. Some policies were introduced without any genuine political or economic reasons, but merely because they sounded different from previous ones. The immediate post-independence administration under Tafawa Balewa (1960-1965) was characterized by very limited policies as far as agricultural development was concerned; the plethora of agricultural policies and programmes came later. The regional administrations simply continued with the colonial policies of plantation agriculture. There was a gradual and steady growth performance of the Nigerian economy during this period. This was accounted for by a healthy balance of payments position achieved through the export of cash crops. Marketing Boards were used to extract surpluses from the agricultural sector. Records also show that during this period, the country was virtually self-sufficient in food. Ogbe (1984) reports that it was hoped that adequate food would continue to be provided through private initiatives, with little government intervention.

The period 1966-70, marked the 30 months of civil war that climaxed the turbulence in the Nigerian political scene. This hardly provided an enabling environment for reasonable policy formulation. The Aguiyi-Ironsi-led administration, which lasted for only 6 months, could not formulate or implement policies. The period succeeding the war years, however, saw a number of agriculture-related decrees promulgated by the Gowon regime. These included the Agricultural Research Council of Nigeria Decree of 1971 and the Agricultural Research Institutes Decree of 1973. These decrees were intended to boost agricultural production. This era also witnessed the introduction of the National Accelerated Food Production Project (NAFPP) in 1973, the establishment of the Nigerian Agricultural and Co-operative Bank (NACB) in 1973, the introduction of the Integrated Agricultural Development Projects (ADPs) in 1975 and the National Grains Reserve Programme (NGRP) in 1975. The NAFPP was designed to accelerate the production of major staple crops; the ADPs were extension-

oriented integrated rural development projects focused on small farmers, while the NACB was designed as a specialized credit institution for agricultural and rural development. There were also the National Grains and Root Crops Cultivation Programmes which were aimed at increasing the production of its mandate crops.

The Murtala Muhammed regime was short-lived (lasted only 6 months) and did not introduce any important agricultural policies but rather continued with Gowon's programmes. After the assassination of Muhammed came the Obasanjo¹ regime, which lasted for three years (February 1976 - October 1979). This administration introduced quite a number of policies and programmes. In 1976, Operation Feed the Nation (OFN) was launched to mobilize the public to take active part in agricultural production. Under the programme, agricultural inputs such as seeds, fertilizers, credit and bush clearing activities were highly subsidized. The River Basin Development Authorities, Agricultural Credit Guarantee Scheme and Rural Banking Scheme were introduced in 1977. The River Basin Development Authorities were aimed at developing the various river basin areas in the country while the Agricultural Credit Scheme was meant to reduce the risk borne by commercial banks by extending credit to farmers and the rural banking scheme to encourage the rural banking habit. Specialized Marketing Boards were also established by the Obasanjo administration to fix commodity prices.

The only agricultural programme of note introduced during the civilian regime of Shehu Shagari (October 1979 - December 1983) was the Green Revolution. In reality, it was a mere rechristening of the Operation Feed the Nation of the Obasanjo military administration. The Green Revolution Programme (GRP) only further articulated the Agricultural Development Project, extending it to cover the whole country. The programme involved the provision of improved seeds, fertilizers, pesticides, herbicides, irrigation, water, credit, appropriate mechanization, agroservice centres, improved marketing system and pricing policy as well as other incentives necessary for farming. The target was to make the country self-sufficient in basic food production within five years and to rehabilitate and restore the production of export produce in seven years. The Shagari administration did not last long as the military returned in December 1983 with Muhammadu Buhari at the head. The Buhari regime did not introduce any reasonable agricultural programme or policy. The only effort of the administration worthy of note was the proliferation of the River Basin Authorities, which were increased from eleven to eighteen in 1984.

¹This was a military regime and Obasanjo's first tenure as Head of State and Commander-in-Chief of the Armed Forces of Nigeria.

Table 1. Administration and Agricultural Policies/Programmes in Nigeria since Independence (1960-1999)

| No | Period | Duration (Years) | Head of Government | Type | Programme/Policies | Date | Aim |
|----|------------------------|------------------|--------------------|----------|---|--|--|
| 1 | Oct. 1960 to Jan. 1966 | 6 | Tafawa Balewa | Civilian | Nigerian Research Institute Acts | 1964 | To promote researches in agricultural and other areas |
| 2 | Jan. 1966 to July 1966 | ½ | Aguiyi-Ironsi | Military | - | - | - |
| 3 | July 1966 to July 1975 | 9 | Yakubu Gowon | Military | (i) Agricultural Research Council of Nigeria Decree (ii) Agricultural Research Institute Decree (iii) National Accelerated Food Production Project (NAFPP) (iv) Integrated Agric. Development Projects (v) Nigerian Agric. and Cooperative Bank (vi) Specialized Marketing Boards (vii) National Grains and Roots Cultivation Programme | 1971 1973 1973 1973 1973 1975 1975 | To coordinate all Agricultural Researches To establish institute to conduct research in any field of Agriculture To accelerate Production of major staples To enhance adoption of new agric. Technology by farmers To make credit available to farmers To fix commodity prices. To accelerate production of grains and root crops. |
| 4 | July 1975 to Feb. 1976 | ½ | Murtala Muhammed | Military | - | - | - |

Table 1. cont'd

| No | Period | Duration (Years) | Head of Government | Type | Programme/Policies | Date | Aim |
|----|------------------------|------------------|--------------------|----------|--|--|---|
| 5 | Feb. 1976 to Oct. 1979 | 3 | Olusegun Obasanjo | Military | (i) Operation Feed the Nation (ii) River Basin Development Authorities (iii) Agricultural Credit Guarantee Scheme (iv) Rural Banking Scheme (v) Land Use Act | 1976 1977 1977 1977 1978 | To mobilize the public participate in agricultural production To develop the country's land and water resources To reduce the risk borne by commercial banks and make credit available to farmers. To encourage rural banking habit. To make land available for agricultural purposes, etc. |
| 6 | Oct. 1979 to Dec. 1983 | 4 | Shehu Shagari | Civilian | Green Revolution Programme | 1980 | To increase agricultural production. |
| 7 | Dec. 1983 to Aug. 1985 | 1½ | Muhamadu Buhari | Military | Increase in the number of River Basin Authorities from 11 to 18. | 1984 | - |
| 8 | Aug. 1985 to Aug. 1993 | 8 | Ibrahim Babangida | Military | (i) Directorate for Foods Road and Rural Infrastructure. (ii) Reorganization of the River Basin Authorities (iii) Abolition of the Marketing Board (iv) Trade Liberalization Policy (v) National Directorate for Employment. (vi) National Agric. Insurance Scheme (vii) National Land Development Authority | 1986 1986 1986 1986 1986 1987 1991 | To promote rural development. To enhance the earnings of farmers To encourage export employment To reduce the risk burden on farmers To develop agricultural land in the country. |

Table 1 cont'd

| No | Period | Duration (years) | Head of Government | Type | Programme/Policies | Date | Aim |
|----|------------------------|------------------|----------------------|----------|--|------|-----|
| 9 | Aug. 1993 to Nov. 1993 | ¼ | Ernest Shonekan | Civilian | Merger of the Directorate for Food, Road and Rural Infrastructure with Federal Ministry of Water Resources | 1993 | - |
| 10 | Nov. 1993 to June 1998 | 4½ | Sani Abacha | Military | Continuation of Babangida programmes | - | - |
| 11 | June 1998 to May 1999 | - | Abdulsalami Abubakar | Military | - do - | - | - |
| 12 | May 1999 to Date | - | Olusegun Obasanjo | Civilian | Subsidization of fertilizer | - | - |

From August 1985 to August 1993, Nigeria passed through another military administration headed by Ibrahim Babangida. This regime, after Gowon's administration, lasted longer than any previous post-independence administration, military or civilian. This period witnessed a lot of fundamental changes in macroeconomic and sector specific policies, most of which were part of the Structural Adjustment Programme (SAP) adopted in 1986. The adoption of SAP was a fall-out of the crisis in the Nigerian economy which arose from the collapse of oil prices in the world market. The crisis resulted in distortions in the economy which virtually depended on oil for its income. There was, therefore, the need to diversify the nation's economy by diversifying its product base; expanding the non-oil exports, etc. Notable among the programmes and policies of this period were the Directorate for Food, Road and Rural Infrastructure (DFRRI) and the National Directorate of Employment (NDE), which were both established in 1986. The marketing boards were abolished, the river basin authorities were reorganized and trade liberalization policies were adopted in 1986. In 1987, the National Agricultural Insurance Scheme was launched to enhance farmers' access to loans from banks and to mobilize funds for agricultural investment. In order to promote and support optimum utilization of the nation's land resources for accelerated production of food and fibre, the National Agricultural Land Development Authority (NALDA) was established in 1991. The reorganization of the RBDAs restricted their functions to land development and water resources management and development, including irrigation. DFRRI has been involved in the construction of rural feeder roads, rural water supply schemes, rural electrification projects and in some agricultural support services.

Another change occurred in Nigeria's administration, when in August 1993, Ibrahim Babangida 'stepped aside' and Ernest Shonekan took over the mantle of leadership. Shonekan lasted only four months in office and only succeeded in merging the Directorate for Food, Roads and Rural Infrastructure with the Federal Ministry of Water Resources. Shonekan's administration was replaced by a military administration headed by Sani Abacha. The Abacha regime which has been described as a continuation of the Babangida administration pursued most of the policies and programmes of the former with some modifications, including the 'guided deregulation' policies. This involved government intervention in some economic activities while allowing market forces to determine what happened in others. For example, there were two exchange rates during this period: the official exchange rate of ₦22.00 to US \$1 and the parallel exchange rate which was determined by the forces of demand and supply in the open market. The demise of Sani Abacha in June 1998, saw the coming into power of Abdulsalam Abubakar. General Abubakar handed over power to President Olusegun Obasanjo on May 29, 1999.

This chronicle of successive administrations in Nigeria and their agricultural policies and programmes reveals several features of the country's politico-agricultural interface. Very importantly, it reveals instability in the Nigerian political structure, which has also resulted in instability in agricultural policies and programmes. Generally, the military rulers have dominated the leadership of the country since independence. They, thus, have more agricultural policies and programmes to their credit. This could lead to the conclusion that they perform better in this regard. Such a conclusion could be misleading as it is clear that the civilians have not had adequate opportunity to prove their worth. For meaningful comparison, the duration of each administration should be taken into consideration.

4.2 Agricultural production under selected regimes in Nigeria

One indicator of the performance of a sector is its output. In crop cultivation and livestock rearing, the ultimate and visible outcome is the quantity of crops and the number of animals produced. To measure the performance of agriculture under the various administrations and policies, therefore, we employ the index of agricultural production. The development of the sector is measured by its average annual growth rate.

4.2.1 Agricultural production under the Obasanjo regime (1976-1979)

From the Balewa administration up to 1976, the Obasanjo regime, which lasted from 1976 to 1979, remains the administration with an unprecedented number of agricultural policies, programmes and schemes. These renewed efforts are not unexpected as this was the oil boom era when the crisis in the agricultural sector started to manifest. It was, therefore, natural for the incumbent administration to adopt measures to check the problem. The growth rate of most of the agricultural subsectors were not encouraging (table 2). In fact, the crops subsector as a whole and staples recorded negative growth rates. The aggregate average growth rate of the entire agricultural sector was also negative (-1.8). The only subsector that performed well during this period was 'other crops' which consists of non-staple crops such as cocoa, rubber and oil palm. This was a continuation of the outcome of the colonial policy which favoured the production of export crops such as cocoa, groundnut, rubber and palm produce. Given the many decrees and programmes of the Obasanjo administration, one would expect improvement in the performance of agriculture during the succeeding era. Such expectation is informed by the time lag between policy formulation and implementation and the manifestation of their impact. The following section throws more light on the situation.

Table 2. Performance of the Agricultural Sector by Index of Production and Average Growth Rate under the Obasanjo Regime

| Regime | | | Index of Agricultural Production | | | | Average Growth Rate |
|----------|-------------------|-----------------|----------------------------------|-----------------|----------------|----------------|---------------------|
| Type | Ruler | | 1976 | 1977 | 1978 | 1979 | 1976-1979 |
| Military | Olusegun Obasanjo | Crops | 100.6 | 98.3 (-2.3) | 92.8 (-5.6) | 89.9 (-3.1) | (-3.7) |
| | | (a) Staples | 105.0 | 93.3 (-11.1) | 89.0 (-4.6) | 84.2 (-5.4) | (-7.0) |
| | | (b) Other Crops | 90.6 | 96.0 (6.0) | 101.6 (5.8) | 102.9 (1.3) | (4.4) |
| | | Livestock | 77.1 | 79.3 (2.9) | 81.7 (3.0) | 84.7 (3.7) | (3.2) |
| | | Fish | 134.9 | 137.3 (1.8) | 141.4 (3.0) | 145.8 (3.1) | (2.6) |
| | | Forestry | 96.8 | 99.6 (2.9) | 102.4 (2.8) | 105.1 (2.6) | (2.8) |
| | | Aggregate | 97.6 | 96.7 (-0.9) | 93.5 (-3.3) | 92.4 (-1.2) | (-1.8) |

Figures in parenthesis are annual percentage change.

Source: Central Bank of Nigeria. (2000) *The Changing Structure of the Nigerian Economy and Implications for Development*.

4.2.2. Agricultural production under the Shagari regime (1979-1983)

Table 3 presents the performance of the agricultural sector during the Shagari administration. This was a civilian regime which lasted for 4 years. The index of aggregate agricultural production during the period ranged between 93.9 (lowest) in 1980 and 98.3 (highest) in 1982. Sectoral performance reveals that the livestock subsector did better, this was followed by staples. Livestock had the highest growth rate of 7.3 during the period while "other crops" had the lowest growth rate of -3.9. Aggregate growth rate in agricultural production was negative (0.6).

As earlier stated, given the many agricultural policies and programmes of the Obasanjo administration, the agricultural sector would be expected to perform better in the years after such policies/programmes were put in place. However, agricultural production during Shagari's regime did not seem to have responded very well to the Obasanjo policies. This may not be unconnected with the lack of continuity in programmes in Nigeria. In fact, in cases where programmes are not renamed or abandoned completely, the vigour in implementation is often far less than when the initiator of such programme was in power.

Table 3. Agricultural Production Under the Shagari Regime (1980-1983)

| Regime | | | Index of Agricultural Production | | | | | Average Growth Rate |
|----------|---------------|-------------|----------------------------------|------------------|-----------------|-----------------|------|---------------------|
| Type | Ruler | | 1980 | 1981 | 1982 | 1983 | 1984 | 1980-1983 |
| | | Crops | 92.0 | 93.6 (1.7) | 95.7 (2.2) | 90.5 (-5.4) | 100 | (-0.5) |
| Civilian | Shehu Shagari | Staples | 85.9 | 87.4 (1.7) | 91.4 (4.6) | 89 (-2.6) | 100 | (1.2) |
| | | Other crops | 106.2 | 107.7 (1.4) | 105.5 (-2.2) | 93.9 (-11.0) | 100 | (-3.9) |
| | | Livestock | 75.1 | 88.4 (17.7) | 96.1 (8.7) | 91.9 (-4.4) | 100 | (7.3) |
| | | Fish | 153.4 | 132.7 (-13.5) | 136.8 (3.1) | 146.9 (7.4) | 100 | (-1.0) |
| | | Forestry | 106.5 | 106.5 (0.0) | 105.7 (-0.8) | 99.0 (-6.3) | 100 | -2.4 |
| | | Aggregate | 92.5 | 95.2 (2.9) | 98.3 (3.3) | 93.9 (-4.5) | 100 | (0.6) |

Figures in parenthesis are annual percentage change.

Source: Central Bank of Nigeria's Statistical Bulletin and Statement of Accounts (various issues).

4.2.3 Agricultural production under the Ibrahim Babangida regime (1985-1993)

This was a military regime that, after Gowon's tenure, lasted longer than any other administration – military or civilian – during the study period. This administration brought about radical changes in the structure of the Nigerian economy through the adoption of the Structural Adjustment Programme (SAP). In the area of agriculture, SAP was designed to reverse the agricultural development philosophy of the earlier regimes which advocated maximum government intervention. The SAP philosophy was that agriculture should essentially be a private sector affair, with government playing the role of facilitator and supporter and market forces should be allowed to play the dominant role in directing the economy. One of the objectives of SAP was to restructure the Nigerian economy by restructuring and diversifying the economy's production base, rationalizing consumption patterns and reducing the economy's dependence on petroleum exports. The discussions that follow give an insight into the performance of agriculture within the SAP-induced macroeconomic environment.

The results in table 4 show high production indices for the crops, livestock and forestry subsectors. All crops, staples and the fishery subsectors recorded high annual percentage changes in 1988. Generally, this period recorded an impressive rate of growth in all subsectors, with staples having the highest growth rate of 12.8 per cent.

Table 4. Agricultural Production Under the Babangida Regime (1985-1993)

| Regime | | Index of Agricultural Production | | | | | | | | | | Average Growth Rate |
|----------|-------------------|----------------------------------|-------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------------|
| Type | Ruler | Agricultural Subsector | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1985-1993 |
| Military | Ibrahim Babangida | Crops | 103.5 | 111.2 (7.4) | 123.4 (11.0) | 151.7 (22.9) | 169.6 (11.8) | 180.0 (6.1) | 194.5 (8.1) | 233.3 (19.9) | 241.1 (3.3) | (11.3) |
| | | (a) Staples | 103.2 | 110.0 (6.5) | 125.6 (14.2) | 159.1 (26.7) | 178.6 (12.3) | 189.4 (6.0) | 205.9 (8.7) | 254.2 (23.5) | 266.3 (4.8) | (12.8) |
| | | (b) Other Crops | 103.8 | 115.7 (11.5) | 115.1 (-0.5) | 123.7 (7.5) | 137.1 (10.8) | 144.9 (5.7) | 151.6 (4.6) | 154.6 (2.0) | 146.1 (-5.5) | (4.5) |
| | | Livestock | 104.3 | 108.1 (3.6) | 103.9 (-3.9) | 110.4 (6.3) | 117.8 (6.7) | 157.1 (33.4) | 160.7 (2.3) | 159.3 (-0.9) | 161.6 (1.4) | (6.1) |
| | | Fishery | 62.3 | 69.5 (11.6) | 66.8 (-3.9) | 85.7 (28.3) | 89.2 (4.1) | 77.4 (-13.2) | 84.3 (8.9) | 84.3 (0.0) | 62.9 (-25.4) | (1.3) |
| | | Forestry | 102.9 | 106.1 (3.1) | 106.3 (0.2) | 109.1 (2.6) | 112.7 (3.3) | 117.1 (3.9) | 119.5 (2.0) | 122.2 (2.3) | 124.7 (2.0) | (2.4) |
| | | Aggregate | 104.6 | 108.3 (3.5) | 116.1 (7.2) | 138.5 (19.3) | 153.0 (10.5) | 167.5 (9.5) | 178.9 (14.4) | 200.0 (7.7) | 203.7 (2.4) | (9.3) |

Figures in parenthesis are annual percentage change.
Source: Central Bank of Nigeria. (2000) *The Changing Structure of the Nigerian Economy and Implications for Development*.

These results could lead to the conclusion that the SAP policies promoted the development of agriculture in the country. However, the sustainability of the response of agriculture to these policies is of greater relevance. Okunmadewa (1993) has described the seeming improved performance of agriculture in the early days of SAP in Nigeria as a 'fallacy of composition' arising partly from farmers being faced with low pre-SAP input costs while reaping SAP benefits of increased output prices. Whether this assertion is correct or not can be gleaned from the situation in the succeeding years under the Sani Abacha administration.

4.2.4 Agricultural Production under the Abacha Regime (1994-1998)

The Abacha administration witnessed continued increases in the index of agricultural production across all the subsectors in the five years (1994-1998) assessed. Equally, the annual percentage change in the index of agricultural production also increased in all subsectors except livestock and forestry. All the subsectors recorded positive growth rates.

The fishery subsector had the highest growth rate. Given the fact that the Nigerian fishery subsector consists mainly of harvesting natural stock (artisanal/industrial), this may indicate more fishing activities and not necessarily making more fish available through rearing (as in fish) culture.

Table 5. Agricultural Production Under the Abacha Regime (1993-1996)

| Regime | | | Index of Agricultural Production | | | Average Growth Rate |
|----------|-------------|------------------------|----------------------------------|--------------|--------------|---------------------|
| Type | Ruler | Agricultural Subsector | 1994 | 1995 | 1996 | 1994-1996 |
| Military | Sani Abacha | Crops | 249.4 | 255.5 (2.4) | 270.0 (5.7) | (4.1) |
| | | a) Staples | 276.8 | 285.2 (3.0) | 298.1 (4.5) | (3.8) |
| | | b) Other Crops | 146.0 | 143.7 (-1.6) | 164.4 (14.4) | (12.8) |
| | | Livestock | 164.1 | 171.0 (4.2) | 176.0 (2.9) | (3.6) |
| | | Fish | 67.0 | 77.6 (15.8) | 89.4 (15.2) | (15.5) |
| | | Forestry | 128.0 | 128.0 (0.0) | 131.4 (2.7) | (1.4) |
| | | Aggregate | 209.7 | 206.8 (-1.4) | 224.8 (8.7) | (3.7) |

Figures in parenthesis are annual percentage change.

Source: Central Bank of Nigeria. (2000) *The Changing Structure of the Nigerian Economy and Implications for Development*.

As earlier noted, the Abacha regime did not have any markedly different policies or programmes but simply continued with most of the policies and programmes of its predecessor with modifications in certain cases.

4.3 Growth of agricultural production under various regimes in Nigeria (1976-1996)

Table 6 contains the average growth rate of agricultural production under various regimes in Nigeria, starting from the Obasanjo administration in 1976 to the Abacha regime (1996).² The Obasanjo administration recorded the poorest performance in terms of growth in agricultural production. Only 'other crops', i.e., non-staples, had a high growth rate of 5.3. 'Other crops' comprises cash crops, mostly export crops such as cocoa, rubber and oil palm. The impressive performance of this category of crops may be a result of the colonial administration's thrust in developing the production of export crops. The intention was to support the home industries in Britain (successive Nigerian administrations continued to pursue this export-led macroeconomic policy).

Table 6. Average Growth of Agricultural Production Under Various Regimes in Nigeria (1976 - 1996)

| REGIMES | | | | | |
|---------|-------------------------|--|--|--|---|
| | Agricultural Sub Sector | 1976-1979 (Military: Olusegun Obasanjo) | 1980 - 1983 (Civilian: Shehu Shagari) | 1985 - 1993 (Military: Ibrahim Babangida) | 1994 - 1996* Military: Sani Abacha |
| 1 | Crops | -3.7 | -0.5 | 11.3 | 4.1 |
| | (a) Staples | -7.0 | 1.2 | 12.8 | 3.8 |
| | (b) Other crops | 5.3 | -3.9 | 4.5 | 12.8 |
| 2 | Livestock | 3.2 | 7.3 | 6.1 | 3.6 |
| 3 | Fishery | 2.6 | -1.0 | 1.3 | 15.5 |
| 4 | Forestry | 2.8 | -2.4 | 2.4 | 1.4 |
| | Aggregate | -1.8 | 0.6 | 9.3 | 3.7 |

Notes: * Does not imply the end of the regime but the period of data used.

¹ This was Obasanjo tenure as military head of state.

Source: Extracted from tables 2,3,4, and 5.

The poor performance of most agricultural subsectors may have led to the promulgation of decrees and the establishment of programmes to promote agricultural production. These included the famous Operation Feed the Nation, the River Basin Development Authorities, Agricultural Credit Guarantee Scheme, the Rural Banking Scheme and the Land Use Act of 1978. These efforts did have some success as evidenced in the improvement in the growth index of staples and livestock during the civilian regime of Shehu Shagari.

The Babangida administration seems to have performed better than any other regime as it recorded the highest growth rate in all the agricultural subsectors except fishery. The growth of the various subsectors during the Abacha regime tends to show that the tempo of the Babangida administration was not maintained as all subsectors, except fishery, recorded lower rates of growth. This in itself points to the adverse effects of instability in governance and policies. It may also be a confirmation of the 'fallacy of composition' referred to earlier.

5. Regression Results

The results of the estimated impact of policies, represented by price policy (average fertilizer price), exchange rate policy (exchange rate), interest rate policy (interest rate) and governance, on the growth of agriculture are presented in table 7. The average fertilizer price and the exchange rate were significant determinants of the growth of agriculture during the period under investigation. While the exchange rate exerted a positive impact on agriculture, the price of fertilizer impacted negatively. The other variables – governance and interest rate – were not significant and thus do not deserve further discussion. Nonetheless, the sign of the coefficient of governance (DUM) should be noted. The negative sign may indicate the possibility of a negative effect of regime change on the growth of agriculture.

The coefficient of fertilizer price is negative. This means that high fertilizer prices retarded the growth of agriculture. Reports from the Central Bank of Nigeria indicate that between 1970 and 1995, there was more than 100 per cent increase in the price of fertilizer (from an average of ₦3.25 to ₦1087.5 per 50kg bag). Such a high fertilizer price is capable of discouraging its use by resource-poor farmers. The adverse impact of fertilizer price on agriculture may have informed the re-introduction of the subsidy on fertilizer by the Olusegun Obasanjo civilian administration of 1999-2003. Subsidization of fertilizer (an important input which determines crop yield and consequently, output) has remained a thorny policy issue for various regimes in Nigeria. While the pre-1986 administration subsidized fertilizer, the Babangida administration, in the spirit of SAP, removed the fertilizer subsidy thus allowing market forces to determine its price. It is currently partially subsidized. All these policy swings, to some extent, point to an absence of focus in policy implementation.

² Does not imply the end of the regime but the period of the data used.

Table 7. Estimation Results

| Policy Variable | Coefficient | Standard Error | t-statistics |
|--------------------------------|-------------|----------------|--------------|
| Constant term | 4.627 | 0.211 | 21.900*** |
| $\ln AFP_t$ | -0.04089 | 0.02 | -2.072** |
| $\ln ER_t$ | 0.207 | 0.021 | 9.819*** |
| DUM | -0.003999 | 0.046 | -0.087 |
| $\ln IR$ | 0.08697 | 0.098 | 0.888 |
| R-Square | 0.94 | | |
| Adjusted R-Square | 0.93 | | |
| Standard Error of the Estimate | 0.09085 | | |
| F-value (df 4,22) | 80.897*** | | |
| Durbin-Watson | 1.32 | | |

*** Significant at 1% level

** Significant at 5% level

The exchange rate has a positive impact on the growth of agriculture. Its coefficient of 0.207 implies that if exchange rate rises by 10 per cent, agriculture will grow by a factor of 2.07. This is a disproportionate but positive impact. The positive impact of the exchange rate on the growth of agriculture could arise from improved agricultural export income earnings (see World Bank, 1994), part of which would have been reinvested in agriculture to boost production. Even producers of locally-consumed agricultural products are expected to benefit from an improvement in the economy arising from exchange rate liberalization. This result is in line with other studies on Nigerian agriculture which have found a positive relationship between exchange rate and output (Ayichi, 1997; Umoh forthcoming).

The adjusted R-square value reveals that 93 per cent of the change in the growth rate of agriculture is accounted for by independent variables. This indicates that important policy variables explaining agricultural growth were included. This is also confirmed by the high and significant *F*-statistic value. However, the non-significance of interest rate (*IR*) deserves some comment. A priori, interest rate should have an inverse relationship with the growth of agriculture. This is because a high interest rate should discourage farmers from seeking and obtaining loans for the expansion of their operations. That the interest rate is found to be insignificant may suggest little use of credit, particularly credit from formal

sources. This is instructive for agricultural loan/credit schemes in Nigeria. It may suggest that agricultural credit policies need to be re-engineered to make their impact to be felt.

6. Conclusion

We have examined the performance of the agricultural sector under different administrations in Nigeria, against the background of various agricultural policies/programmes formulated and implemented. The results show that political regimes and duration impact on the growth of the agricultural sector. Stylized facts reveal that frequent changes in administration/government have adverse effects on policies and their impact on the economy. The results suggest that there must be political stability and policy stability for sustainable agricultural development to take place in the country.

Political instability leads to high degrees of institutional and infrastructural instability. The institutional infrastructure for governance changes with political regimes. Our analysis of governance, policies and the growth of the agricultural sector in Nigeria has shown that the fortunes of the agriculture sector changed with the various changes in administration. Oftentimes, a new regime comes with new philosophies, concepts, policies and strategies for implementing such policies. For instance, the Gowon regime introduced the National Accelerated Food Production Project (NAFPP) in 1973, but this was changed soon after he left office. The records show that this was a well-planned programme for introducing new varieties of rice, maize, cowpea, cassava, etc. to different agro-ecological zones in the country. The Obasanjo regime quickly saw to the end of this programme by introducing Operation Feed the Nation (OFN) that was different in philosophy and, according to Idachaba (1995), had a sloganeering appeal. Following the footsteps of his predecessor, the Shagari administration promptly replaced the OFN in 1978 with the Green Revolution Programme. The main feature of the programme was planning for the national coverage of the Agricultural Development Project (ADPs). The Buhari regime created seven more River Basin Development Authorities (RBDAs), while the Babangida administration reversed the Buhari proliferation of RBDAs, introduced the Directorate for Food, Roads and Rural Infrastructures (DFRRI) and consolidated on the achievements of the ADPs. The Shonekan administration, on its part, merged DFRRI with the Federal Ministry of Water Resources in 1993. The consequences of political instability and the policy instability that follows are enormous. Some of these consequences include waste of public funds, and the ultimate loss in benefits intended for the general public or a given target population.

It must be noted, however, that a people can only have the leadership they deserve. Nigerians, if they so desire can insist on good leadership which will usher

in political and policy stability. The results from this study has clearly shown the gains of stability in governance and policy – reasonable growth in the agricultural sector during the eight years of Babangida's reign – and also the negative impact of reserves in policies and frequent changes in administration. What is required is a vision for longer-term development of the agriculture sector and a consensus among the leaders to ensure commitment to development. Such commitment will guarantee clean and effective government which will result in sustainable development of all sectors of the economy, including the agricultural sector.

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