

AN ANALYSIS OF GOVERNMENT SPENDING ON AGRICULTURAL SECTOR AND ITS CONTRIBUTION TO GDP IN NIGERIA

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Abstract

The Federal Government of Nigeria allocates huge resources yearly to the various sectors of the national economy for the overall development of the country. Using trend analysis and a simple linear regression, this paper aims therefore to examine the level of government spending on the agricultural sector and the consequential effect on the GDP. The result obtained shows that such spending does not follow a regular pattern and that the contribution of the agricultural sector to the GDP is in direct relationship with government funding to the sector. Based on these findings, the study recommends that Government should increase her budget allocation to the sector because of the important role of the sector to the nation's economic growth and development

1.0 Introduction

The importance of agriculture in the economy of any nation cannot be over emphasized. Agriculture plays a major role in virtually all social and economic activities of countries. This is why Rostow (1960) in his Stages of Economic Growth, explained that agriculture is crucial for the "take-off stage" of a nation's economic growth and development. The pervasive influence of agriculture on Nigeria's economic and social development has also been articulated by Oluwasami (1966). A strong and 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 (Ogen 2007). Agriculture has been defined as the production of food and livestock and the purposeful tending of plants and animals, (Ahmed, 1993). He stated further that agriculture is the mainstay of many economies and it is fundamental to the socio-economic development of a nation because it is a major element and factor in national development. In the same view, Okolo (2004) described agricultural sector as the most important sector of the Nigeria economy which holds a lot of potentials for the future economic development of the nation as it had done in the past.

The aim of this paper therefore is to analyze the contribution of the agricultural sector to the development of Nigeria economy between year 1979 and year 2007 using a simple regression analysis.

2.0 Literature Review

Before the discovery of oil in Nigeria, agriculture accounted for over 60% of its Gross Domestic Product (GDP) as well as being a major source of foreign exchange earnings. It provided food and employment for the teeming population and raw materials for the growing industries. Ogen (2007) stated that from the standpoint of occupational distribution and contribution to the GDP, agriculture was the leading sector in the 1960s. Also, the Nigerian economy, like that of Brazil, could reasonably be described as an agricultural economy during the first decade after independence. This is because agriculture served as the engine of growth of the overall economy of the two countries. During that period, Nigeria was the world's second largest producer of cocoa, the largest exporter of palm kernel and the largest producer and exporter of palm oil. It was also a leading exporter of other major commodities such as cotton, groundnut, rubber, as well as hides and skins (Alkali, 1997). Lawal, (1997) also affirmed the positive contribution of agriculture to the Nigerian economy before the discovery of oil. 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.

The agricultural sector however suffered neglect during the hey-days of the oil boom in the 1970s. Ogen (2007) stated that agricultural sector accounted for less than 5% of Nigeria's GDP in 2004. Ever since then, Nigeria has been facing serious poverty challenges and the insufficiency of basic food needs (NEEDS, 2004).

It is further revealed by NEEDS Policy Paper, 2004 that two-thirds of Nigerians live below the poverty line of US\$1 per day, most of them in the rural areas. The root of this crisis lies in the neglect of agriculture and the increased dependency on monocultural economy based on oil. In an attempt to address this drift and as a realization of the important roles which the agricultural sector can play in the development of the nation, a number of policies and programmes have been put in place by the government. Some of the prominent ones include:

The setting up of the Nigerian Agricultural and Cooperative Bank (NACB) in 1973 was a project set up by the Government to boost food production for our growing population. Its main objective was to enhance the level and quality of agricultural production including horticulture, poultry farming, pig feeding, fisheries, forestry and timber production, animal husbandry and other types of farming as well as storage, distribution and marketing connected with such production in the country. The bank was restructured in 2000. It was merged with the Peoples Bank of Nigeria and the Family Economic Advancement Programme (FEAP) and renamed the Nigerian Agricultural, Cooperative and Rural Development Bank (NACRDB) (Manyong et al, 2003). The capital base was increased from ₦2.0 million to ₦10.0 million to reposition the bank to effectively meet the increasing demand for agricultural credit (Evbuomwan et al 2003).

The Operation Feed the Nation, (OFN) was a programme which was in the form of creating awareness in the general populace of the need to be self-sufficient in food production. It was a special food production drive launched in 1976 by the then Federal Military Government. The programme was launched to involve a much wider section of the Nigerian populace in food production and as such increase local food supply. The programme was backed by massive publicity and a sizeable injection of funds to procure and distribute agricultural inputs (Akande, 2003). The Agricultural Development Projects launched in 1975 were to be used to increase food production in the states where they operated. The programme initiated the introduction of hybrid maize seeds to Nigerian Farmers by making funds available to International Institute for Tropical Agriculture, (Ibadan), to develop hybrids suitable for various ecologies in Nigeria. The programme also made the supply of farm inputs such as seeds, fertilizers, agro-chemicals and even farm tractors to farmers a top priority (Evbuomwan et al, 2003).

The establishment of Agricultural Credit Guarantee Scheme (ACGS) Fund Act in 1977 was an attempt by the Government to encourage Banks to channel more of their funds to agricultural production. The Scheme was set up as a result of Commercial and Merchant Banks' lack of interest in agricultural financing. The Scheme commenced operation in 1988 by the approval of an authorised share capital of ₦100 million subscribed to by the Federal Government and the Central Bank of Nigeria in the ratio of 60% and 40% respectively. The share capital was increased to ₦1.0 billion and ₦3.0 billion in 1999 and 2001 respectively (Evbuomwan et al, 2003). The aim of the scheme is to minimise the risks banks are exposed to, as a result of their lending activities to the agricultural sector. The scheme guarantees 75% of the amount of default on non-collateralized loan to an individual to a maximum of ₦5000, collateralized loans to individual of ₦50,000; and in the case of Cooperative Society and Limited Liability Company up to a limit of ₦1 million and ₦5 million respectively. The figures were subsequently raised to ₦20,000, ₦1 million, ₦5 million and ₦10 million respectively in 1999. The fund is managed by the Agricultural Credit Guarantee Fund Board and has the Central Bank of Nigeria as the managing agent (ACGSF, Annual Reports- 1977 - 1988).

Before 1986 when Structural Adjustment Programme (SAP) came into being, concessional interest rates were charged on agricultural facilities as incentives to boost agricultural production. Government attached so much importance to agriculture then that the agricultural loans used to attract concessional rates. The lending rate under Agricultural Credit Guarantee Scheme (ACGS) was pegged at 5-6%. The rate was maintained till 1992. Apart from concessional interest rates, various monetary guidelines accorded agriculture sector a priority by placing the sector under the preferred sector. Banks were obliged to lend a certain percentage of their total deposits to this sector failing which penalties were paid in the form of compelling the banks to deposit the amount of shortfall with the Central Bank of Nigeria. The shortfall so collected was on-lent to the Nigerian Agricultural and Co-operative Bank (NACB) for agricultural lending (Central Bank of Nigeria- 1986 - 1992 Reports). The Rural Banking Programme launched in 1977 was also aimed at boosting agriculture production in the country. The Monetary Authority in the various credit guidelines stipulated the percentage of deposits mobilised in the rural communities that should be lent to farmers in the rural areas.

In the 1994 monetary and credit policy guideline, the ratio of commercial banks' rural lending to deposits mobilised in the rural communities was 50% (CBN Reports). Various River Basin Development Authorities were also established in 1977 for the same purpose of boosting agricultural development in the country. The objectives of the River Basing Development Authorities were among others the followings: to

- (i) undertake a comprehensive development of both underground and surface water resources for multi-purpose use;
- (ii) undertake schemes for the control of erosion or floods and for water-shed management including afforestation;
- (iii) control and maintain dams, boreholes, irrigation and drainage systems and other works necessary for food production and human water need; and
- (iv) provide water resources and lakes for irrigation purposes to farmers and other groups of people as well as for urban water supply scheme, (Perspective Plan for Agric Development- 1990-2005).

The Green Revolution Programme which was launched by the Civilian Administration between 1980 and 1983 was yet another scheme to boost agricultural production in the country. The aim of the programme was to take Nigeria to self-sufficiency in the basic food needs within five years which led the Government to prepare a "Food Production Plan for Nigeria" (Perspective Plan for Agric. Development- 1990- 2005).

The Directorate for Foods, Roads, and Rural Infrastructure (DFRRI) scheme launched in 1986 was a programme set up for the acceleration of rural development to aid agricultural production. Good road networks are needed for the evacuation of food items to the markets. The need for good road networks for the evacuation of food items from the point of production to the markets in the urban areas cannot be over-emphasised. The existing rural roads are not enough to rapidly transport farm produce. It is in response to this realisation that the Directorate for Foods, Roads and Rural Infrastructure was set up (Perspective Plan for Agricultural Development- 1990-2005).

The establishment of the Federal Universities of Agriculture in 1988 in Abeokuta, Umuahia and Makurdi to offer degree programmes in all disciplines of agriculture was part of the effort to build human capacity to boost agriculture production and solve the problem of inadequate human resources at all levels of the agricultural sector (Egbuomwan et al, 2003).

Another Scheme which was set up to promote Agricultural production is the Nigerian Agricultural Insurance Scheme. The aim of the scheme was to provide financial support to farmers in the event of losses arising from natural disasters. Agriculture is exposed to a number of risks and uncertainties. It is in an attempt to reduce these risks and uncertainties to the barest minimum and to boost agricultural production that the National Agricultural Insurance Company (NAIC) was established by the then Federal Military Government on 15th December 1987 to operate and administer the Nigerian Agricultural Insurance Scheme (Manyong et al, 2003). The scheme has been designed to benefit the small, medium and large farmers. The objective of the scheme is to offer protection to farmers from the effects of natural disasters and to ensure payment of compensation to farmers who suffer loss to enable them remain in business. The scheme also aims to encourage the flow of agricultural credit from lending institutions to farmers (Nigerian Agricultural Insurance Scheme Guideline, 1987).

The Nigerian Agricultural Land Development Authority (NALDA) which was announced in the 1991 Budget is a project set-up by the Federal Government in conjunction with the State and Local Governments aimed at giving a boost to food production in the country. The project is said to be patterned after the Malaysians example. The poor state of rural infrastructure has over the years affected the development of agriculture in the country. As stated in the Federal Ministry of Agriculture and Rural Development report (2000) and cited by Okolo (2004), Nigeria is an agrarian country with 80% of its land mass in the rural areas and as such the rural areas have to be developed to favourably impact on agriculture. Lack of good infrastructure has hindered the prompt evacuation and distribution of farm produce after harvest and the supply of needed inputs for agricultural production. This has resulted into high food prices. The high cost of land development is another serious problem. The high cost of land development has contributed largely to inability for large food cultivation. Large hectares of land are uncultivated in most parts of the country because of the high cost and these represent a huge waste of natural resources. The opening up of such large areas will no doubt provide farmers with sufficient land to bring about an increase in food production.

The aim of Nigerian Agricultural Land Development Authority is to open up large areas of land in each state of the Federation in realisation of the important role land development is likely to play in contributing to increased food output and thus reducing the cost of food items (Perspective Plan for Agricultural Development- 1990-2005). The procurement of fertilizer and the distribution of same at subsidized prices to farmers is yet another attempt by the Government to boost agricultural development in the country. However, in spite of the various programmes and policies put in place as enumerated above and the priority accorded the sector by the Federal Government, none of these can be described as wholly successful (Okolo, 2004). Okolo (2004) reported that over the last decade, Nigeria's domestic food production has consistently lagged behind the national food demand; and this annual shortfall could lead the nation to the threshold of food insecurity.

Some of the key issues responsible for the poor performance of many Government support programmes include the followings:

Policy instability and inconsistency in policies are said to be one of the major constraints to the effectiveness of past agricultural policies in Nigeria (Manyong et al, 2003). They reported that over the years, the rate of turnover of agricultural policies had been high with many policies formulated and scrapped in rapid succession. This problem they stated could be partly ascribed to political instability as every successive military government tended to jettison most of its predecessor's policies and programmes. They stated further that some agricultural policies and programmes of government tended to be mutually antagonistic rather than being mutually complementary and reinforcing. They cited as an example the conflict which existed between government's domestic food production policy and its cheap food import policy. Ogen (2007) in his own contribution stated that the lofty objectives of good projects turned out to be a mirage because of official corruption and lack of commitment on the part of those saddled with the responsibility of implementing the policies. On the issue of policy implementation, Manyong et al (2003) are of the view that there was tendency on the part of government policy makers to regard formulation of policies as ends in themselves rather than being means to desired ends and as such, little attention was paid to the efficient implementation of the policies. They stated further that poor managerial capacity, bureaucratic bottleneck, corruption and high rates of policy turnover tended to complicate the problem of policy implementation.

The Technical Assistance to the House of Representatives Committee on Agriculture in their Policy Brief Paper No 2, (2005) stated that past public spending in agriculture has not produced the desired results. They saw the major weakness of agriculture sector spending as the large incidence of unintended beneficiaries. Citing the issue of procurement of fertiliser as an example, they stated that "while fertiliser subsidies are intended to benefit small-scale farmers and achieve increased crop productivity, the unintended but real beneficiaries have been rent-seeking government officials, fertiliser merchants and agents" (p.8). They further cited the Central Bank of Nigeria Reports to show that in 2001, fertiliser prices ranged from ₦1500-2500 as against the official subsidised rate of ₦1000 per a 50kg bag. Fertilisers which should have been sold directly to the farmers were used to seek political favours and diverted to middlemen and got to the end-users at prohibitive cost. Fertiliser's prices thus remained out of reach of farmers and fertiliser was not available at the right time (Technical Assistance to the House of Representatives Committee on Agriculture Policy Brief Paper No 2, 2005).

Okolo (2004) catalogued the key issues responsible for the poor outcome of the agricultural sector as under investment in the sector and multiple political considerations in otherwise technical agricultural issues. The Technical Assistance to the House of Representatives Committee on Agriculture reported in their Policy Brief Paper No 2 of August 2005 that as at then, agricultural share of federal capital budget (1.5%) fell short of the target of 4% set by the National Economic Empowerment and Development Strategy (NEEDS). Evbuomwan et al (2003) attributed the low performance of agricultural sector to the use of crude implements, a low level of inputs and limited areas under cultivation. They attributed the specific constraints to increased agricultural production in Nigeria to the absence of an enabling environment for the private sector to effectively engage in agricultural production by the Government.

3.0 Methodology

3.1 Data and Data Source:

Secondary source of data was used in the study because of the nature of the study which was an analysis of the performance of the agricultural sector of the national economy, taking GDP as proxy. Data that had been generated are required for this type of study.

Time series data for the period 1979 – 2007 (table 3) on the amount of Federal Government expenditure on Agriculture were used. The data was obtained from the Central Bank of Nigeria (CBN) statistical bulletin for various years.

3.2 The Model

The approach was to collate data for the agricultural sector of the Nigerian Economy from the Central Bank of Nigerian Statistical Bulletin Volume 16 of December 2005 and Volume 18 of December, 2007. The data were subjected to inferential statistics. The vector auto regression (VAR) was used and is commonly used for forecasting systems of interrelated time series and for analyzing the dynamic impact of random disturbances on the system variables.

The model is formulated thus:

$$GDP = f (Ag)$$

With a linear relationship such as:

$$GDP = \beta_0 + \beta_1 Ag + U$$

Where: GDP = Gross Domestic Product

β_0 = Intercept

β_1 = estimation coefficient

Ag = agricultural sector expenditure

U = error term

4.0 Empirical Results and Discussions

4.1 Trends of Government Spending on Agricultural Sector of the Economy.

The table 1 below shows the Federal Government Budget estimates to the Agricultural sector of the Nigerian Economy covering period 1999 to 2007.

Table 1: Federal Government Budget Estimates (Recurrent) and Percentage Share of the Selected Sector of the Economy between 1999 and 2007

	1999	2000	2001	2002	2003	2004	2005	2006	2007
Agriculture	31,347.2	4,834.7	7,064.9	12,439.2	7,534.3	11,725.6	10,858.8	18,739.8	15,781.42
% of total expenditure	14	1.1	1.2	1.3	0.71	1.2	1.5	1.4	1.5

Source: CBN Statistical Bulletin Vol. 16 Dec. 2005 and Vol. 18 Dec. 2007

It could be seen from the table that the estimates are not consistent and do not show either an increasing or decreasing trend over the period. This pattern shows that funding to the sector was being done in an inconsistent manner depending on the interest of the Government ruling at any particular period. It shows that there was no consistency and continuity of programmes of action by the successive Governments. The expectation is to see a pattern that will show an increasing trend over the period as an indication of a growing economy.

The inconsistency and lack of continuity of various Government programmes in most cases according to Okolo (2004) accounted for the poor outcome of the programmes.

Table 2: Regression Results of Government Spending on Agricultural Sector of the Nigerian Economy

Variables	Coefficient and t-values
Intercept	281,050.20
(t)	(2.14)
Ag	-79.62
(t)	(-4.83)
R ²	0.95
F	86.56

Source: Researcher’s Computation

In table 2, F-statistics shows that the model is useful in determining the contribution of the sector to GDP as the computed F-statistics which is 85.56 is greater than the tabulated F-statistics valued at 4.17 with R-square value of 0.95. At 5% level of significance for the individual variables, the t-values show that there are positive relationship between GDP and the selected sector analyzed. VAR Predictive model of this research is $GDP = 281,050.20 - 79.62Ag$

5.0 Conclusion/Recommendations

The performance of the agricultural sector of the Nigerian economy was analyzed. It was discovered that the contribution of the sector to the GDP is in direct relationship with Government's funding of the sector. There is no gainsaying that transport, health, agriculture and education are the core sectors of the Nigerian economy which can contribute significantly to the development of the economy if adequately funded. From the analysis of data under study, agricultural sector has not contributed to the national economy given the low t- value (-4.83). The agricultural sector has a high propensity to contribute to GDP. This is the bedrock of every economy, the sector that provides food for the nation and the basic raw materials for the industries.

It is recommended that Government should increase her budgetary allocation to this sector in a consistent manner because of its importance to the national economy, hoping that with proper monitoring of fund, it would contribute more significantly to the economy of the country. An effective utilization of such funds is also advocated and all areas of wastage blocked. All organs of the Government should exhibit good corporate governance and transparency. Lack of corporate governance and transparency have been the problems of successive Governments and attempts to curb incidences of fraud by the establishment of bodies such as the Economic and Financial Crimes Commission (EFCC) and the Independent Corrupt Practices and other related Offences Commission (ICPC) seem not to have made the desired impacts judging from the number of reported cases and the concluded ones. These institutions should be strengthened and given more powers to dispense with cases speedily. The peasant farmers who live in the rural areas and who are the major providers of food for the nation should be adequately catered for by making the rural areas more conducive and habitable by the provision of adequate infrastructural facilities such as good roads, pipe borne water and electricity. The provision of these facilities will no doubt impact positively on the rural farmers' productivity.

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APPENDIX

Table 3: Gross Domestic Product (GDP) and Government Expenditure on Agriculture

Year	GDP	Government Expenditure recurrent in ₦ Million	Government Expenditure Capital	Total Government Expenditure
1979	NA	34	320	354
1980	NA	33	436	469
1981	47620	34	775	809
1982	49069	34	1035	1069
1983	53107	29	1185	1214
1984	59623	33	253	286
1985	67909	33	984	1017
1986	69147	33	893	926
1987	105223	29	365	394
1988	139085	54	596	650
1989	216798	81	982	1063
1990	267550	208	1759	1967
1991	312140	121	551	672
1992	532614	162	783	945
1993	683870	1015	1820	2835
1994	899863	919	2800	3719
1995	1933211	2236	4692	6928
1996	270219	1681	3893	5574
1997	2801973	1682	8247	9929
1998	2708431	2964	8877	11841
1999	3194024	31347	6913	38260
2000	4537640	4835	5762	10597
2001	4685912	7065	57879	64944
2002	5403007	12439	32364	44803
2003	6947820	7534	8511	16045
2004	11411066	11736	48048	59774
2005	14553296	10859	79939	90798
2006	18564595	18740	15177	33917
2007	23280715	15781	22519	38300

Source: CBN Statistical Bulletin Vol. 16 Dec. 2005 and Vol. 18 Dec. 2007