

IMPACT OF AGRICULTURAL CREDIT GUARANTEE SCHEME FUND (ACGSF) ON DOMESTIC FOOD SUPPLY IN NIGERIA

ABSTRACT

Among the people of West Africa, it is believe that when the problem of hunger is solved, a major part of poverty would have been eradicated. Thus is because, the inability to attain minimal standards of consumption to satisfy basic physiological needs is often termed as absolute poverty or deprivation. Hence, the most effective way towards alleviating poverty is adequate food supply to the citizens since when food security is increase, nutrition and health will also improve, and this will in turn promote productivity. The Food and Agriculture Organization of the United Nations, estimated that of the 925 million hungry people in the world, 239 million of them were in Sub-Saharan Africa. This is inspiteof its abundant land, and vast opportunities to provide solutions to global food insecurity. However, food security is a complex phenomenon involving multiple factors, which may vary from one country to the other. In Nigeria, as part of the government effort to guarantee food security, the government has put in place many policies including agricultural credit fund, that isagricultural credit guarantee scheme fund (ACGSF). Hence the objective of this paper is to examine the effect of this scheme on food security in Nigeria, using the Ordinary Least Square approach. Empirical finding indicates that most of the ACGSF has impact on food production in Nigeria. Based on the finding, policy recommendations were proffer that among other things, government should encourage agribusiness, and the youths, especially fresh graduates be equipped to practice scientific farming. This would greatly improve agricultural production and hence increase food supply in Nigeria.

KEYWORDS: Food Security, Credit, Agriculture, Poverty

1.0 Background Information

The position of agriculture as the bedrock for the development of other sectors can never be overemphasized. This is also supported by the World Bank assertion that consumption based poverty lines are directed to physical measures of relative wellbeing. The inability to attain minimal standards of consumption to satisfy basic physiological needs is often termed as absolute poverty or deprivation. It is most directly expressed in not having enough to eat. These statements also re-confirmed the assertion by Xenopho, 440-355 BC in Stuart, 2003:

*“While agriculture prospers all other arts alike are vigorous and strong,
butwhere the land is forced to remain desert, the spring that feeds the*

other artis dried up” (Xenopho: 440-355 BC. in Stuart, 2003).

Among the people of West Africa, it is believe that when the problem of hunger is resolved, a major part of poverty has been eliminated, hence any effort towards eradicating hunger is a target towards alleviation of poverty.

In many parts of the world’s poorest countries, food account for more than half of household expenditures, and any increase in food prices seriously reduce both access to food and the ability to purchase other necessities. When food security is increase, nutrition and health improve, which in turn promotes productivity. At the same time, it decreases a country’s dependence on imported food, which often cannot be obtained without sufficient and stable levels of foreign exchange (Jemaneh and Okyere, 2012).

According to estimates of the Food and Agriculture Organization of the United Nations, in 2010 there were 925 million hungry people in the world, of which 239 million of them were in Sub-Saharan Africa. As a cause of poor health, low levels of energy, and even mental impairment, hunger can lead to even greater poverty by reducing people’s ability to work and learn, in turn leading to even greater hunger.

Today, Africa has the unfortunate reputation of being the only continent that cannot produce enough food to feed its own citizens, yet it remains the continent with the greatest opportunities to provide solutions to global food insecurity. The continent is blessed with abundant land, including almost 60 percent of the world’s uncultivated arable land. Even within existing cultivated land, doubling of cereal yields on the millions of hectares cultivated by smallholder farmers would turn Africa into a major food surplus region.

According to Cuesta, Edmeades and Madrigal, (2011), food security is a complex phenomenon involving multiple factors. In Nigeria, food security could be the result of a number of trends, of which availability of capital to the farmers is an important factor.

In order to revamp the agricultural sector, the federal government of Nigeria had embarked on and implemented several agricultural policies and programmes some of which are defunct or abandoned, and some restructured while others are still in place. In a broad sense, the objectives of the new agricultural policy include: The achievement of self-sufficiency in basic food supply and the attainment of food security; Increased production of agricultural raw materials for industries; Increased production and processing of export crops, using improved

production and processing technologies; Generating gainful employment; Rational utilization of agricultural resources, improved protection of agricultural land resources from drought, desert encroachment, soil erosion and flood, and the general preservation of the environment for the sustainability of agricultural production; Promotion of the increased application of modern technology to agricultural production; and, Improvement in the quality of life of rural dwellers (FGN, 2001). However, all these objectives cannot be achieved without adequate investment in agricultural sector.

In Nigeria, apart from the government expenditure, several policies were also put in place to improve the agricultural sector so as to increase food production in the country. Among these policies is the agricultural credit guarantee scheme fund (ACGSF) put in place to assist farmers. The scheme started operation in 1978 with an initial capital base of N100 million, which has now been raised to N3 billion, shared in the ratio of 60:40 between the Federal Government of Nigeria and Central Bank of Nigeria. The aim is to share the risks of banks in the agricultural lending and hence encourage the Central Bank of Nigeria to continue extending credit to the agricultural sector (CBN, 2011).

Within the period of observation, according to the Central Bank of Nigeria statistical bulletin (2011), about N36.7 million agricultural credit facility was granted to the farmers in the sector in 1981, which decreased slightly by about 13.3 percent to N31.9 million, and before rising by about 25.1 percent to attain N39.9 million in 1983. This trends in credit facilities to farmer within the period followed the government's green revolution programme introduced in 1980 with the aim of ensuring self-sufficiency in food production and to introduce modern technology into Nigerian agricultural sector through introduction of modern inputs such as high yielding variety seeds, fertilizer and tractors (Nigeria wiki, 2008).

The agricultural funds to the farmers attained N48.2 million in 1985, and rose sharply by about 114.5 percent in 1990 to attained N103.3 million, and further increased to N166.6 million or 61.17 percent in 1995. The sharp increase in the credit facility to farmers within this period could be linked to two government agricultural policies within the period, that is, the Directorate of Food, Roads and Rural Infrastructures, with the objectives among others, to identify areas of high production potential for the country's priority food and fibre requirement and to support production of such commodities along agro-ecological zones within the context of one national market with unimpeded inter-State trade in farm produce. By 2000, the agricultural credit

guarantee fund for the farmers has attained N361.4 million or an increase of 116.9 percent. There was a rocket shot in the agricultural credit guarantee fund for the agricultural sector as it attained N9,493.8 million or an increase of 2,567 percent in 2005, while in 2011, it increase slightly to attain N10,193.8million or anincrease of about 7.4 percent. One of the government agricultural policies that could be attributed to the upward shift in the agricultural credit facilities to the farmers within the period is the National Economic Empowerment andDevelopment Strategy (NEEDS) with the aim of Improving agriculture through promoting the cultivation of improved, higher yielding crop varieties and provide extra support to agricultural research and training. It aims to encourage business interests to provide credit and supply and distribute agricultural inputs, such as seeds, fertilizers, and machinery. Silo complexes will be refurbished to increase the capacity of the food reserve programme and move closer to food security(National Planning Commission, 2004).

However, the domestic supply of food within the period of observation cannot be said to follow the same trend as the credit facilities extended to agricultural sector by the Central Bank of Nigeria. For instance, total food supplied domestically was 57.06 million tons as at 1988 and rose by 20.26 percent, to attain 68.79 million tons in 1990. There was a further increase of about 41.9 percent in domestic food supply in 1995, and attained its peak in 2000 with an increase of about 152.97 percent. The domestic food supply decrease sharply by about 45.38 percent in 2005, and then slightly rose by about 35.82 percent in 2011.

Comparing the trend of agricultural credits guarantee funds extended to the agricultural sector with the domestic food supply within the period of observation, the highest rise in the fund was in 2005 with an increase of 2,567 percent, the same period there was a decrease of about 45.38 percent in domestic food supply. However, the domestic food supply attained its peak in 2000 with an increase of about 152.9 percent, when the increase in agricultural credit facility to the agricultural sector was about 116.7 percent.

Given the foregoing, the objective of this paper, therefore, is to critically examine the effectiveness of the agricultural credit guarantee scheme funds in improving domestic food supply in Nigeria.

To this end, the paper is organized into five sections. Following this introduction is section II, which focuses on the reviews of relevant literatures and theoretical framework. Section III

discusses the methodology. Section IV analyses and interprets the data, while section V summarises the findings and offer some policy recommendations.

2.0 Literature Review

This section discusses relevant literature and theoretical framework on the linkage between government expenditure and food supply. There have been many studies on government expenditure and food supply, and many researchers have directed the focus of their studies on government expenditure as well as food supply both within and outside Nigeria. For instance, Mapfumo (2012) investigate how government expenditure on agriculture affects economic growth and poverty reduction in Zimbabwe from 1980-2009, using a log linear growth regression model. The results from this study suggest that spending more on agricultural research and development can improve economic growth and ultimately reduce poverty. However, the major defect of this study is that it focused only on Zimbabwe economy, which may not be applicable to Nigeria. More so, the study considers the effect of agricultural spending on economic growth as well as poverty alleviation, and not on food supply, as a dependent variable.

In Bolivia, Cuesta, Edmeades and Madrigals (2011), explores the reduction of food insecurity in Bolivia by adopting a supply side approach to analyze the role of agricultural spending on vulnerability to food security. The vulnerability to food here is captured by welfare outcomes, weather conditions and agricultural potential for all 327 municipalities. An econometric result from this study indicates that levels of public agricultural spending are positively associated with high vulnerability.

Armas, Osorio, and Blanca (2010) analyzes the trends and evolution of public spending in the agriculture sector in Indonesia, as well as its impact on the growth of agriculture during the period 1976–2006. The result of the analysis shows that public spending on agriculture and irrigation has a positive impact on agriculture growth, whereas public spending on fertilizer subsidies had an opposite effect. Like Mapfumo's, this study focused only on Indonesia's situation, hence may not be relevant to the Nigerian economy. The study's use of disaggregate approach on the public agriculture spending with focus on irrigation and fertilizer subsidies as the main explanatory variables for agricultural growth may not be appropriate enough considering the fact that irrigation and fertilizer subsidies are only few of the many variables that can explain agricultural output

In analysing the relationship between Agricultural resource and economic growth in Nigeria, Olajide, Akinlabi and Tijani (2012), employs Ordinary Least Square regression method and come up with the findings which indicate that a positive cause and effect relationship exist between gross domestic product (GDP) and agricultural output in Nigeria.

Adofu, Abula and Agama (2012) employ the OLS regression technique to examine the effects of government budgetary allocation on agricultural output in Nigeria. Their results revealed that the government budgetary allocation to agricultural sector has a strong, positive and significant impact on agricultural production in Nigeria. However, this study considered only government budgetary allocation and commercial bank credit as explanatory variables to agricultural output.

Udoh (2011), in his study, investigate the relationship between public expenditure, private investment and agricultural output growth in Nigeria over the period 1970-2008. The error correction model adopted reveals that increase in public expenditure has a positive influence on the growth of the agricultural output.

The likes of Igwe and Esonwume (2011) narrow their study to a section of the country by examine the factors affecting agricultural output, with a particular focus on the state government expenditure on agriculture. The Ordinary Least Squares (OLS) regression analysis employed in the analysis show that total land area cropped, total annual rainfall and total population were strong factors that significantly determined total crop output in the state. Whereas the total land area and total annual rainfall were positive in their signs, the total population was negative. However, since the study only focused on only one out of thirty six (36) states in Nigeria, hence it may not accurately represent the true situation of the country.

This study identifies some gaps in the literature reviewed, which it proposes to address. For instance, though some of the earlier researchers study the effect of government spending on agricultural output (Cuesta, Edmeades and Madrigals, 2011; and Armas, Osorio, and Blanca, 2010), however, they focus on government spending as the only explanatory variable for agricultural output. More so, they did not consider Nigeria in their study. Some authors in Nigeria have also written on expenditure and agricultural output in Nigeria (Olajide, Akinlabi and Tijani, 2012; Adofu, Abula and Agama, 2012; Udoh, 2011; and Igwe and Esonwume, 2011). However, their studies reflect the effect of government expenditure as the only explanatory variable for agricultural output in Nigeria. Though other authors (Igwe and Esonwume, 2011)

consider other variables like total land cropped, total annual rainfall and total population as explanatory variables for crop output, however, the study was limited to only a section of the country, and did not capture bank loans. Hence, this study proposes to address these gaps. Using aggregated approach, this paper considers agricultural credit guarantee scheme funds as an important variable that affects food supply in Nigeria.

3.0 Methodology

3.1 Sources of Data

Data used in this study are mainly from secondary source which include agriculture credits guarantee funds and the total domestic food output is the sum of crops, livestock and fishery products obtained from the Central Bank of Nigeria Statistical Bulletin and the National Bureau of Statistics (NBS), Abuja.

3.2 Model Specification

Based on the foregoing analytical considerations of the study, literature review and theoretical framework, the study adopts a model as follows:

$$DFS = f(ACF) \dots \dots \dots (1)$$

In stochastic form equation (1) becomes:

$$DFS = \beta_0 + \beta_1 ACF + \epsilon \dots \dots \dots (2)$$

Where:

DFS = Domestic Food Supply

ACF = Agriculture Credits

ϵ = Error term

4.0 Data Analysis and Interpretation

4.1 Data Analysis

Table 1: Regression Result

213 Dependent Variable: DFS
 214 Method: Least Squares
 215 Date: 08/01/13 Time: 17:19
 216 Sample: 1988 2011
 217 Included observations: 24

218					
219	Variable	Coefficient	Std. Error	t-statistic	Prob
220	LOGACGSF	0.161921	0.0287745	5.627415	0.0004
221	C	9.502711	0.388038	24.48911	0.0000
222	R-squared	0.590071	Mean dependent var	11.66833	
223	Adjusted R-squared	0.571438	S.D. dependent var	0.372391	
224	S.E. of regression	0.243785	Akaike info criterion	0.094594	
225	Log likelihood	-0.864874	F-statistic	31.66780	
226	Schwarz Criterion	0.192765	Prob(F-statistic)	0.000012	

227 Source: Computed from Eview 7.0

228 $DFS = \beta_0 + \beta_1 ACGSF + \epsilon$

229 $= 9.5027 + 0.1619 ACGSF$

230 $(24.4891) (5.6274)$

231 232 4.2 Discussion

233 The results show an Adjusted R-square of about 57.1 percent, indicating that about 57.1 percent
 234 change independent variable (DFS) is explained by the explanatory variables (ACGSF); The
 235 Standard error of 0.028774 shows that the relationship is significant.

236 The result indicates that Agricultural Credit Guarantee Scheme (ACGSF) is statistically
 237 significant in explaining domestic food supply (DFS) in Nigeria. Meanwhile, with a coefficient
 238 of 0.161921, it implies that a change of one percent in Agricultural credit facility to the farmers in
 239 the agricultural sector, will bring about a positive change of about 0.16 percent in domestic food
 240 supply in Nigeria. The interception of 9.5027 shows the estimation of the domestic food supply
 241 in Nigeria when the agricultural credit guarantee fund is unchanged or nil.

242

5.0 Conclusion and Recommendation

Based on the analysis carried out on the available data, it is observed that there has been increase in the trend of agricultural credits guarantee funds to the farmers within the period of observation, that is 1981 -2011, with an average growth of 573.8 percent compared to the average growth of 59.25 percent in the domestic food supply in Nigeria. Changes in the agricultural credit guarantee fund to the farmers has a significant positive impact on the domestic food supply.

Based on this finding, it is recommended that government should not only increase the credit facility made available to the farmers, but the utilisation of the fund by the farmers should also be monitored so that fund is not diverted away from the target. More so, government and the private sectors should invest more in agribusiness to improve domestic supply of food in Nigeria. Nigerian farmers should also be encouraged to adopt modern mechanized farming by providing them with modern farm implements. Ploughs, ridgers and other farm implements should be made available to them at a minimum cost possible. This should not necessarily be done by the government alone, but individuals and private organizations should also get involved in order to achieve more in the area of agricultural production and to attain food sufficiency in Nigeria. Schools and organisations should take a lead in collectivization agriculture where sciences are applied to farming.

Reference

- Adofu I., Abula M., and Agama J. E., (2012). The Effects of Government Budgetary Allocation to Agricultural Output in Nigeria. *Sky Journal of Agricultural Research*, Vol.1(1), pp. 1 – 5.
- Armas, E.B., Osorio, C.G. and Blanca, M.D., (2010). Agriculture Public Spending and Growth: The Example of Indonesia. *Economic Premise*, No.9
- Central Bank of Nigeria, (2011). *Statistical Bulletin*, Vol. 22
- Cuesta, J., Edmeades, S. and Madrigal, L., (2011). Food Insecurity and Public Agricultural Spending in Bolivia: Putting Money Where Your Mouth Is? The World Bank Poverty Reduction and Economic Management Network Poverty Reduction and Equity Unit & Latin America and the Caribbean Region Sustainable Development Department
- FGN, (2004). The New Nigerian Agricultural Policy. www.nipc.gov.ng

- 280 Igwe, K. and Esonwume, C., (2011).Determinants of Agricultural Output: Implication on
281 Government Funding of Agricultural Sector in Abia State, Nigeria.*Journal of*
282 *Economics and Sustainable Development*, Vol. 2, No. 4, p. 86-91.
283
- 284 Jemaneh, S. and Okyere, K.A.,(2012).Productivity & Enhancing Food Security in Africa: *New*
285 *Challenges & Opportunities*.Synopsis of an International Conference.
286 International Food Policy Research Institute, Washington, Dc
287
- 288 Mapfumo, A., (2012).Agricultural Expenditure for Economic Growth and Poverty Reduction in
289 Zimbabwe. *Unpublished Thesis of University of Fort Hare*.
290
- 291 National Planning Commission, (2004).National Economic Empowerment andDevelopment
292 Strategy. Abuja: Communications Development Incorporated
293
- 294 Nigeriawiki, (2008).Green Revolution Programme.
295
- 296 Olajide,O.T,Akinlabi, B.H. and Tijani, A.A., (2012).Agriculture Resource and Economic Growth
297 in Nigeria. *European Scientific Journal*, Vol. 8, No. 22, p. 103-155
298
- 299 Stuart, L. (2003).*Economic Development*. New Jersey: Prentice Hall, Upper Saddle River.
300
- 301 Udoh, E., (2011).An examination of Public Expenditure, Private investment and Agricultural
302 Sector Growth in Nigeria: Bounds Testing Approach. *International Journal of*
303 *Business and Social Sciences*, Vol.2 No.13, p.285-292.