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Impact of Agricultural Credit Guarantee Scheme Fund (ACGSF) on Domestic Food Supply in Nigeria

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Author's contribution

This whole work was carried out by the author SSZ.

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ABSTRACT

Food supply in Nigeria depends on the rural population who are the main producers of food for the entire population. However, due to the continuous movement of people, particularly, the youths, to the cities in search of lucrative jobs, very few people are left to work on farms. Majority of these farmers engage in subsistence agriculture and lack sufficient funds to operate, expand their business, or even practice mechanized farming, with modern equipment like plough, tractors and other labour saving devices. There is insufficient and limited sources from which funds can be obtained by these farmers. In fact, about a third of the credit needs in rural areas are met by formal lending agencies, which has led to the dominance of informal credit associations like the credit and thrift cooperatives, community development associations and moneylenders. As part of the government effort to guarantee adequate food supply in Nigeria, the government has put in place many policies including an agricultural credit guarantee scheme fund (ACGSF).

Aims: The objective of this paper therefore is to examine the effect of Agricultural Credit Guarantee Scheme Fund (ACGSF) on domestic food supply in Nigeria

Place and Duration of Study: The study was carried out in Nigeria, between the period of 1988 and 2011.

Methodology: The study used secondary data which include annual agriculture credits guarantee funds and the total domestic food output obtained from CBN's statistical bulletin; the rural population data, obtained from the NBS's reports; and the average annual rainfall for the country, calculated from the annual rainfall in each state of the

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federation obtained from the Nigerian Meteorological Agency. The data were analysed using Ordinary Least Square approach.

Results: The results show a robust Adjusted R-square of about 86.3 percent. The value of t-Statistics of each of the explanatory variables shows 3.0323 for ACGSF, 6.8480 for RP and 2.5418 for AAR, indicating that the explanatory variables are statistically significant in explaining domestic food supply (DFS) in Nigeria. Meanwhile, the results give a coefficient of 0.14454 for Agricultural Credit Guarantee Scheme funds (ACGSF), 7.17082 for rural population (RP) and -1.4870 for the annual average rainfall (AAR). It implies that a change of one percent in Agricultural credit facility to the farmers in the agricultural sector, will bring about a change of about 0.14 percent, 7.17 percent and 1.48 percent respectively, on domestic food supply in Nigeria.

Conclusion: It is observed that there has been an increase in the trend of agricultural credits guarantee funds to the farmers within the period of observation, with an average growth of 573.8 percent compared to the average growth of 59.25 percent in the domestic food supply in Nigeria, and the changes in the agricultural credit guarantee fund to the farmers has a significant impact on the domestic food supply.

Recommendation: Based on the finding, it is recommended that the government should encourage agri-business, 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 supply; agriculture; credit; rural; poverty.

1. INTRODUCTION

1.1 Background of the Study

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 [1]:

“While agriculture prospers all other arts alike are vigorous and strong, but where the land is forced to remain desert, the spring that feeds the other artis dried up” [1].

Among the people of West Africa, it is believed 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 accounts 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 there is increase in domestic food supply, 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 [2].

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 [3], food security is a complex phenomenon involving multiple factors. In Nigeria, domestic food supply challenge could be linked to a number of trends including: the climatic conditions; growing urbanization and movement of labor away from rural areas; and agricultural credit facility (loan).

Most agricultural activities take place in the rural areas, hence food supply will depend on the rural population who are the main producers of food for the entire population. However, due to the continuous movement of people, particularly, the youths, to the cities in search of lucrative jobs, very few people are left to work on farms.

About 90% of these farmers in the rural areas engage in subsistence agriculture and lack sufficient funds to operate, expand their business, or even practice mechanized farming, with modern equipment like plough, tractors and other labour saving devices. Hence, they would not be able to produce enough food to feed the ever growing population of Nigeria. There is insufficient and limited sources from which funds can be obtained by farmers in the rural areas. A third of the credit needs in rural areas are met by formal lending agencies, which has led to the dominance of informal credit associations like the credit and drift cooperatives, community development associations and moneylenders. The reasons for the inability of the formal institutions to meet the credit needs of the rural farmers in Nigeria, according to [4], include the control of the institutions through their headquarters located in the cities, which put them out of touch with the needs of subsistence farmers. Also, untimely release of funds, cumbersome loan procedures and high interest rates limit farmers' access to loans from this sector. Hence, there is a need to evolve a means of stimulating formal credit availability to rural areas

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, some have been 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 [5]. However, all these objectives cannot be achieved without adequate investment in the agricultural sector.

Apart from the annual government expenditure on agriculture, 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 one hundred million naira (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 sector and hence encourage the Central Bank of Nigeria to continue extending credit to the agricultural sector [6].

Within the period of observation, according to the [6], 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 trend 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.

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 (DFRRI), with the objective 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 an increase 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 under study is the National Economic Empowerment and Development Strategy (NEEDS) with the aim of Improving agriculture through promoting the cultivation of improved, high 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 [7].

The domestic supply of food within the period of observation, however, 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 credit 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 during 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.

Giving the foregoing, the objective of this paper, therefore, is to critically examine the impact of the agricultural credit guarantee scheme funds on 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 literature 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.

1.2 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, [8] investigates 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, [3] 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.

[9] 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 Mapfuno'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, [10] employ Ordinary Least Square regression method and come up with the findings which indicate that a positive cause and effect relationship exists between gross domestic product (GDP) and agricultural output in Nigeria.

[11] 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.

[12], investigates 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.

[13] Narrow their study to a section of the country by examining 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 shows 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 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 [3,9], they however 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 [10,11,12,13]. However, their studies reflect the effect of government expenditure as the only explanatory variable for agricultural output in Nigeria. Though other authors [13] consider other variables like total land cropped, total annual rainfall and total population as explanatory variables for crop output, the studies however, 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.

1.3 Overview of Agricultural Credit Guarantee Scheme Fund

In a bid to address the credit needs of the rural farmers, and improve domestic food supply in Nigeria, the Agricultural Credit Guarantee Funds Scheme (ACGFS) was established by the Federal Military Government under the Agricultural Credit Guarantee Scheme Fund Decree 1977 (Decree No. 20) and as amended in 1988, with an initial capital base of one hundred million Naira (N100, 000,000.00) distributed between the federal government (60 percent) and the Central Bank of Nigeria (40 percent). The scheme was designed to encourage commercial banks to increase lending to the agricultural sector by providing guarantees against inherent risk in agricultural lending. At inception, maximum loan to be guaranteed was one hundred thousand Naira (N100,000.00) for individuals and one million naira for cooperatives and corporate bodies. Such loans would require collateral. Collateral would however be waived for loans below 5000 naira [14].

Most often, financial institutions require huge collateral from customers before loans are granted to them, which is detrimental to farmers' efforts that may require such loans to enhance their production. Hence, the ACGSF is aimed at reducing this dearth by guaranteeing these farmers or other individuals involved in agricultural production when seeking for loans from the banks. In case of default, the lending bank is expected to exhaust all forms of loan recovery, including the realisation of any security pledged for loans, before

the ACGS pays the 75% of guaranteed loans in default [14]. This has made most financial institutions interested and secured in granting loans to agricultural ventures.

The purpose of the fund is to provide guarantee in respect of loans granted by any bank for agricultural purposes. Meanwhile, the Agricultural purposes in respect of which loans can be guaranteed by the fund are those connected with:

- establishment or management of plantation for the production of rubber, oil palm, cocoa, coffee, tea and similar crops;
- The cultivation or production of cereal crops, tubers, fruits of all kinds, cotton, beans, groundnuts, sheanuts, benniseed, vegetables, pine-apples, banantains;
- Animal husbandry, that is to say, poultry, piggery, cattle rearing and the like, fish farming and fish capture;
- Processing in general where it is integrated with a least 50% of farm output e.g. cassava to *garrri*, oil palm fruit to oil and kernel, groundnut to groundnut oil, etc.
- Farm machinery and hire services.

Since inception, there has been a tremendous increase in the number of loans guaranteed by the scheme from 341 loans (N11.28million) in the first year of operation in 1978 to 3,571 loans (N 218.60 million) in 2006, and as at 2010 the loans guaranteed by the scheme has attained N6,567.3 million. Other incentive put forward by the scheme to achieve towards the development of agricultural sector and thus, improve domestic food supply includes the increase in the limit of the guarantee granted to individuals and corporate bodies. For example, the limit granted to individuals was increased from N5, 000 to N20, 000 for individuals without collateral required. With collateral, the limit of the guarantee was increased from N100,000 to N500,000. For corporate bodies and corporative societies, the guarantee limit was increased from N1 million to N5 million [15].

However, 33 years after the establishment of the scheme, problem of adequate domestic food supply in Nigeria remain unsolved. There is thus a need to evaluate the activities and the performance of the scheme in relation to domestic food supply.

2. MATERIALS AND METHODS

2.1 Sources of Data

The main sources of the secondary data used in this study are the Central Bank of Nigeria (CBN) published Annual statistical bulletin, and the National Bureau of Statistics (NBS), Abuja. The data include: annual agriculture credits guarantee funds and the total domestic food output obtained from CBN's statistical bulletin; the rural population data, obtained from the NBS's reports; and the average annual rainfall for the country, calculated from the annual rainfall in each state of the federation obtained from the Nigerian Meteorological Agency.

2.2 Model Specification

Based on the foregoing analytical considerations of the study, literature review and theoretical framework, the study adopts [13] model with modification which is presented below:

$$DFS = f(AGCF, RP, AAR,) \tag{1}$$

In stochastic form equation (1) becomes:

$$DFS = \beta_0 + \beta_1AGCF + \beta_2RP + \beta_3AAR + \epsilon \tag{2}$$

Where:

- DFS = Domestic Food Supply
- AGCF = Agricultural Guarantee Credits Funds
- RP = Rural Population
- AAR = Average Annual Rainfall
- ϵ = Error term

Prior to estimation of the model, standard econometric tests, that is, stationary tests were conducted to test for its stochastic properties through unit root tests in order to avoid estimating spurious regression results, since estimating regressions using non-stationary variables based on ordinary least square lead to spurious and inconsistent results (Aiyedogbon, 2012).

3. RESULTS AND DISCUSSION

3.1 Data Presentation

Table 1. Annual Domestic Food Supply, Agricultural Credit Guaranteed Fund, Rural Population and the Average Rainfall in Nigeria (1988 – 2011)

Year	Domestic Food Supply('000tons)	ACGSF (N'000)	Rural Population	Average Annual Rainfall in Nigeria (millimeters)
1988	57,006.0	126,346.9	61,295,390	1,427.6
1989	64,790.0	134,066.7	62,217,310	1,320.2
1990	68,630.0	103,395.2	63,116,180	1,386.2
1991	74,038.0	80,859.6	63,971,301	1,415.7
1992	79,309.0	93,391.8	64,806,560	1,354.7
1993	85,672.0	81,273.8	65,624,200	1,394.2
1994	95,014.0	106,901.0	66,427,220	1,402.4
1995	97,394.0	166,654.1	67,218,980	1,499.9
1996	102,863.0	227,664.5	67,998,940	1,480.6
1997	105,796.0	242,028.3	68,769,310	1,498.6
1998	109,652.0	220,288.5	69,539,400	1,346
1999	113,510.0	241,839.0	70,320,680	1,571.6
2000	246,382.0	361,449.0	71,120,910	1,267.2
2001	137,176.0	728,545.4	71,917,600	1,296.1
2002	142,286.0	1,050,982.3	72,732,140	1,458.8
2003	151,015.4	1,151,015.0	73,559,490	1,395.6
2004	126,133.2	2,083,744.7	74,392,260	1,338.3
2005	134,568.7	9,493,854.5	75,224,960	1,372.0
2006	144,733.7	4,262,430.3	76,084,310	1,378.6
2007	154,311.1	4,425,461.5	76,943,790	1,443.4
2008	165,294.6	6,497,958.9	77,803,780	1,378.1
2009	175,507.3	8,328,565.8	78,665,330	1,472.5
2010	172,939.7	6,567,356.5	79,528,440	1,443.6
2011	182,778.6	10,193,847.3	NA	NA

Source: Central Bank of Nigeria and the World Bank

As shown in Table 1 above, About N123.6 million agricultural credit facilities were granted to the farmers in the sector in 1988, which decreased by about 18.1 percent to stand at N103.3 million in 1990. It however, increased to N166.6 million or 61.17 percent and N361.4 million or an increase of 11.69 percent in 1995 and 2000 respectively. 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 2010, it decreased slightly N6,567.3 million or a decrease of about 30.82 percent.

In Nigeria, within the period of observation, the Nigerian population as at 1988, in the rural area was 61.2 million. Between 1988 and 1990, the entire population grew by 5.5 percent to attain 94.8 million and the rural area population grew by just 2.9 percent to attain 63.1 million. Further, the entire population grew by 13.6 percent to attain 107.7 million and 13.09 percent to attain 121.8 million in 1995 and 2000 respectively. However, the population growths in the rural area for the same period were 6.5 percent and 5.8 percent to attain 67.2 million and 71.1 million respectively. The entire population of the country stood at 137.5 million or a growth of about 12.9 percent in 2005, while in 2010 the entire population attained 154.5 million or a growth of about 12.3 percent. Meanwhile, the rural population growth, within the same period were 5.8 percent and 5.7 percent respectively (World Bank, and Index Mundi, 2013).

Low and poorly distributed rainfall is another major barrier to agricultural development in large areas of Africa. Average rainfall in the dry semi-arid areas of Sub Sahara Africa is less than 700 millimeters per year, and the duration of the rainy season is very short. However, in Nigeria within the period of observation, according to the Nigerian Meteorological Agency rainfall statistical report, the mean annual rainfall in Nigeria ranges between 1, 200 millimeters and 1, 500 millimeters per year.

3.2 Data Analysis

The stationarity test is employed to investigate the time series properties of the data to be analysed, in order to establish whether the variables are stationary or non-stationary. The use of non-stationarity series may lead to spurious regression where, otherwise, unrelated series may be presented as related.

Table 2. Results of Stationarity (unit root) test

Variables	ADF-Statistic	Critical Values	Order of Integration
LOGDFS	-7.478697	1% = -3.769547 5% = -3.004861 10% = 2.642242	Stationary at first difference
LOGAGCF	-4.11105	1% = 3.788030 5% = 3.012363 10% = 2.646119	Stationary at first difference
LOGRP	-4.624973	1% = -3.769597 5% = -3.004861 10% = 2.646119	Stationary at first difference
LOGAAR	-6.208299	1% = -3.788030 5% = -3.012363 10% = 2.646119	Stationary at first difference

Source: Computed from Eview 4.0

The unit root test result from the Table 2 above indicates that log DFS is stationary at first difference at either 1 or 5 percent confidence levels. More so, stationarity was achieved at first difference for the log of ACGF, the log of RP, and the log AAR at 1 or 5 percent confidence level. The result implies that the joint probability distribution of these variables do not change when shifted in time, as such, the mean and variance, if present, are also expected not to change over time.

3.3 Findings and Discussion

Table 3. Regression Result

Dependent Variable: DFS				
Method: Least Squares				
Date: 10/27/13 Time: 12:16				
Sample: 1988 2011				
Included observations: 24				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
ACGSF	-0.144548	0.047669	-3.032304	0.0066
RP	7.170827	1.047136	6.848035	0.0000
AAR	-1.487072	0.585034	-2.541858	0.0194
C	-55.67417	11.16913	-4.984647	0.0001
R-squared	0.880831	Mean dependent var		11.66833
Adjusted R-squared	0.862956	S.D. dependent var		0.372391
S.E. of regression	0.137857	Akaike info criterion		-0.974183
Sum squared resid	0.380093	Schwarz criterion		-0.777841
Log likelihood	15.69020	Hannan-Quinn criter.		-0.922093
F-statistic	49.27638	Durbin-Watson stat		2.086502
Prob(F-statistic)	0.000000			

$$DFS = \beta_0 + \beta_1 ACGSF + \beta_2 RP + \beta_3 AAR + \varepsilon = 55.67417 - 0.14454 ACGSF + 7.17082 RP - 1.48707 AAR$$

(4.9846) (3.0323) (6.8480) (2.5418)

The results, as shown in Table 3 above, show a robust Adjusted R-square of about 86.3 percent, indicating that about 86.3 percent change independent variable (DFS) is explained by the explanatory variables (ACGSF), RP, and AAR. The value of t-Statistics of each of the explanatory variables shows 3.0323 for ACGSF, 6.8480 for RP and 2.5418 for AAR, while the F-statistic value is high at 42.2764. Meanwhile, with a coefficient of 0.14454 (ACGSF), 7.17082 (RP) and -1.4870 (AAR), it implies that a change of one percent in Agricultural credit facility to the farmers in the agricultural sector, will bring about a change of about 0.14 percent, 7.17 percent and 1.48 percent respectively, in domestic food supply in Nigeria.

Investigation in this study reveals that the Agricultural Credit Guarantee Scheme Fund (ACGSF) has negative and statistically significant impact on the domestic food production. The negative impact can be attributed to a long delay in disbursement of loan to the farmers in the rural areas. Since most of the banks are located in the cities, in some cases where loans are approved, it arrives too late for it to fulfill the purpose for which it was intended.

The findings in this study also show that rural population has a positive and statistically significant impact on the domestic food population. Since most agricultural activities lies in the rural areas, domestic food production will depend on the population of the rural dwellers who work in the farm to produce food for the entire population. An increase in the population of the rural dwellers who engage in farming will lead to increase in domestic food supply.

However, continuous rural-urban migration will reduce rural population, and very few people would be left to work in the farm, which might reduce domestic food supply.

Lastly, the findings reveal that the average annual rainfall within the period of observation shows a statistically significant impact on domestic food supply in Nigeria. Climate change compounds the challenges confronting agriculture. For instance, changing and erratic rainfall patterns make it difficult for farmers to plan their operations, may reduce the cropping season and can lead to low germination, reduced yield and crop failure.

4. CONCLUSION

Based on the analysis carried out on the available data, it is observed that there has been increase in the trend of agricultural credit guarantee funds to the farmers within the period of observation, that is, 1988 -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, and these changes in the agricultural credit guarantee fund to the farmers has a significant 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 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 the 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.

COMPETING INTERESTS

Author has declared that no competing interests exist.

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