Promotion of Non-Oil Export in Nigeria: Empirical Assessment of Agricultural Credit Guarantee Scheme Fund

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Abstract: The Agricultural Credit Guarantee Scheme Fund (ACGSF) was established in 1977 with the aim of enhancing commercial banks' loans to the agricultural sector in Nigeria with focus on agro-allied and agricultural production. Many years down the line, the country has witnessed poor participation in the international market with regards to non-oil export. The above stance was assessed with a view to establishing interaction between ACGSF and non-oil export using the Vector Auto-Regressive (VAR) technique. The study found, among others, that there exist a long-run relationship between the ACGSF and export, but the magnitude is minimal. It was therefore recommended, inter alia, that adequate infrastructural and storage facilities, which increase the shelf-life of agricultural outputs are needed to improve non-oil exports in Nigeria.

Keywords: Agricultural credit, cointegration, financial institutions, loans, non-oil Export, Vector Auto-Regressive

INTRODUCTION

The agricultural sector in Nigeria was a major source of foreign revenue prior to the discovery of oil in commercial quantity. Then Nigeria was reckoned with the production and export of ground-nut, cocoa, rubber and other agricultural crops in Nigeria. The discovery of oil at large scale exploration in the 1970s turned the tide against the agricultural sector in favour of the oil sector. For instance, as at 2000, oil and gas exploration accounted for more than 98% of export earnings and about 83% of federal government revenue (Export Import Bank, 2009). The oil sector also accounted for more than 40% of the Gross Domestic Product (GDP) in Nigeria and about 95% of the foreign exchange earnings. Despite this seemingly high revenue from the oil sector, the paradox of it that over 70% of the Nigerian population is engaged either in the informal sector or in agricultural production (Olaitan, 2006).

The vast employment opportunity and the quest towards diversification of the revenue source by the federal government and development agencies have shifted attention towards the informal and the agricultural sector. For example, to sustain the agricultural production in Nigeria, the World Bank developed a project called Agricultural Development Projects (ADPs) which was designed to enhance the production of agricultural outputs in Nigeria. As at the year 1989, the ADPs were situated in the 19 states in Nigeria as at then. The efforts of the ADPs were geared towards enhancing agricultural productivity (World Bank, 2001). There have been other national programmes established to boost agricultural production in Nigeria. Notable among them was the Agricultural Credit Guarantee Scheme Fund (ACGSF) in 1977.

The ACGSF has lofty aims especially the need to make the agricultural sector lucrative. However, it has not lived up to its bidding, which calls for empirical assessment with a view to understanding the resultant effect from the huge investment from the government into this sector. This is germane given the increase in the capital base of the fund from a start-up capital of ₦100 million to a current capital base of ₦6 billion in 2006. Thus, there is need to investigate if this huge investment put in place to encourage agricultural production has actually had significant impact on export especially non-oil export, which the agricultural constitute a sizeable proportion. This is the main motivation for this study.

In Nigeria, apart from the crude oil production, agricultural products account for the major source of non-oil export revenue. This is especially with cash crop production like rubber, cocoa, cotton, timber, and so on. The study is divided into; the second section discusses brief analysis of the ACGSF; the third section is the theoretical framework and model formulation; the fourth section is the empirical results and analysis; the fifth section concludes the study.

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Table 1 Commercial Bank Loans (1970-2007)

Year	Average to agric. sector (₦ million)	Average total loan (₦ million)	Agric. loan to total loan of commercial banks in Nigeria (%)
1970-1976	28.76	960.73	2.99
1977-1983	496.79	7051.43	7.05
1984-1990	2482.61	17782.37	13.96
1991-1997	18,159.36	125101.06	14.52
1998	27180.7	272895.5	9.96
1999	118518.3	1265984.4	9.36
2000	146504.5	1795768.3	8.16
2001	200856.2	2796112.2	7.18
2002	227617.6	3606229.1	6.31
2003	242185.7	4339443	5.58
2004	261558.6	5686669.4	4.60
2005	262, 005.50	7468655.1	3.51
2006	239, 752.30	9542573.4	2.51
2007	328, 847.80	15285128.8	2.15

Adapted from CBN Bulletin (2007)

Overview of agricultural credit guarantee scheme fund: The Agricultural Credit Guarantee Scheme Fund (ACGSF) was formed under the military government in 1977 with an initial capital base of ₦100 million distributed between the federal government (60% equity) and the Central Bank of Nigeria-CBN (40%). The ACGSF is exclusively managed by a board set up under the supervision of the CBN (management agent). The fund is set up with the sole purpose of providing guarantee in respect of loans granted by any bank for agricultural purposes (CBN, 1990). Nwosu *et al*. (2010) noted that the ACGSF was formed solely with the objective of encouraging financial institutions to lend funds to those engaged in agricultural production as well as agro-processing activities with the aim of enhancing export capacity of the nation as well as for local consumption. This is solely exclusive for large scale farming (Somayina, 1981).

Most often, financial institutions require huge collateral from customers before loans are granted to them. This is detrimental to farmers' efforts that may require such loans to enhance their production. 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 a breach in contract, the fund bears the liability of 75% of the amount in default, net of any amount realized by the banks in the sale of the security pledged by the customer.This has made most financial institutions interested and secured in granting loans to agricultural ventures. An analysis of the direction of commercial bank loans to the agricultural sector of the economy has some interesting observations as reflected in Table 1.

The table reveals that the loan from commercial banks to the agricultural sector had a minute magnitude compared to the total loan of commercial banks. For example, the average % of agricultural loan to total commercial bank loan in 1970-1976 is 2.99%, but rose to 14.52% between 1991 and 1997. This is very low when compared to the average in 1998 (9.96%). The magnitude

began to fall continuously from 1999 (9.36%) to 2.15% in 2007. This leaves the wonder on how impactful the ACGSF guarantee scheme has been in enhancing the disbursement of loans to the agricultural sector by commercial banks in Nigeria.

Taking a look at the ACGSF, the fund has guaranteed several sums for agricultural related outfit. For example from inception, there has been tremendous increase in the number of loans guaranteed by the scheme from 341 loans (₦11.28 million) in the first year of operation in 1978 to 3,571 loans (₦ 218.60 million) as at 2006 (Nwosu *et al*., 2010). Other incentive put forward by the scheme to achieve its objectives 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 ₦5, 000 to ₦20, 000 for individuals without collateral required. With collateral, the limit of the guarantee was increased from ₦100,000 to ₦500,000. For corporate bodies and corporative societies, the guarantee limit was increased from ₦1 million to ₦5 million. The above measures were geared towards the development of the agricultural sector.

Furthermore, the ACGSF enforces the attainment of its objective by mandatingcommercial banks to set aside a fraction (10%) of their profit before tax to farmers as loans and more so have a certain percentage of their branches set up in rural areas. This will enable effective reach to the target audience/beneficiaries. The Central Bank in Nigeria is supposed to ensure and enforce the compliance of the banks to these stipulations. Success story was accounted from these stipulations. These include that as at 2004, 11 out of 25 universal banks in the country are already participating in this scheme, while 669 eligible micro credit institutions have joined the scheme. Despite all these, the loan to the agricultural sector by commercial banks still remains minute as evidenced in Table 1.

The question that comes to mind is whether the declining share of agricultural loan from commercial banks can be traceable to the challengesthat encumbered
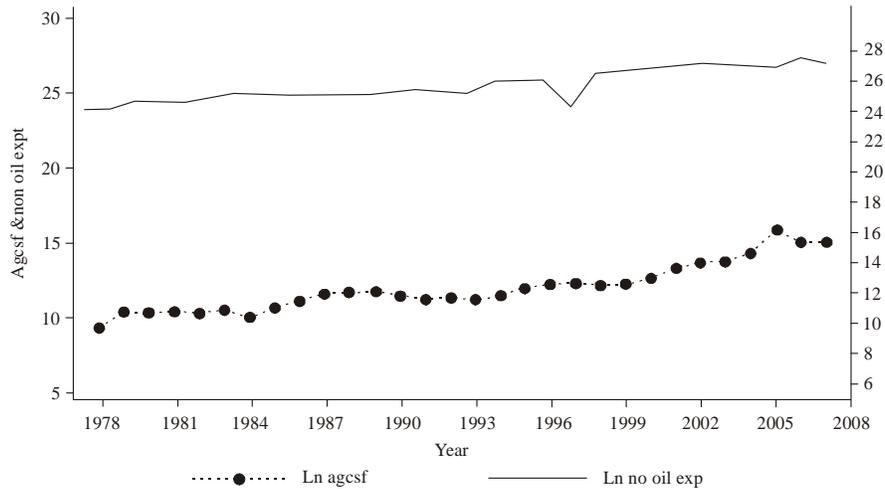
Fig. 1: Trend AGCSF and non-oil export (1978-2007), Author's computation

ACGSF. For example, Nwosu *et al.* (2010) identified three major problems associated with the ACGSF scheme, which includes increasing incidence of loan defaulters, bank related problems and the inclusion of the term "personal guarantee". Nwosu et al iterates that the term is subjective in interpretation especially as the decree forming ACGSF was not able to explain this. Therefore, banks utilize personal judgment and circumstantial framework to interpret this. This will hinder the achievement of the objective of the scheme.

The ACGSF is aimed at guaranteeing agricultural outfit that specializes in the following;

- Agricultural outfit engaged in the establishment and management of plantation for cash crop produce like rubber production, oil palm extracting, cocoa plantation etc.
- Agricultural outfit engaged in the cultivation and production of food crops like fruit of all kinds, tubers of yam, cereals and all other food crops.
- Agricultural activities involved in the large scale production of animal husbandries.

Non-oil export and AGCSF: One of the sole objectives for the establishment of the ACGSF is to enhance the export capacity of agricultural produce (Somayina, 1981). The need to understand the trend of event for export since the inception of ACGSF becomes pertinent: and hence, Fig. 1 brings out the trend. The figure is a descriptive comparison of the fund allocated to the ACGSF and the value of non-oil export. Nigeria has over time had majority of its non-oil export dominated by agricultural produce most especially is cocoa and rubber (Sasore, 2005).

The value of non-oil export follows a similar trend with the value of ACGSF. From the figure the value of non-oil export between the period 1978 and 1980 experienced an upward trend, which was similar to that of ACGSF. The value of non-oil export increased up until the period 1984-1986, which experienced a downward trend and at the same period, the value of ACGSF kept rising. The period 1984 and 1986 witnessed turbulence in the Nigerian political system especially with the coup that took place in the period. Also, this may be explained by the initial downward shock experienced by ACGSF in the later end and early period of 1984. This may indicate the fact that non-oil export experiences a lag before reacting to change in ACGSF. The value of non-oil export experienced a sharp decline in the period 1996-1998, after a long downward slope of ACGSF between the period 1990 and late 1994.

The period was also 1990-1995 was a politically tensed period especially with the several riots and change of government that took place during the period, which resulted into immense political crisis. This probably would have led to the decline in the ACGSF scheme and the shock experienced in the value of non-oil export in the year 1996. Hence, there is a need to examine the trend relationship between political constraint and non-oil export as well as ACGSF.

It is important to conceptualise political constraint in the light of the focus of this study. Political constraint is the effective veto points with political interaction to derive the extent to which any one political actor or the replacement for any one actor e.g., the executive or a chamber of the legislature is constrained in his or her choice of future policies (Henisz and Zelner, 2007). During the period of military government, the level of political constraint is zero because of the absolute veto power the military government has in influencing policy as when needed. From the figure, two significant trends of the value of non-oil export and ACGSF can be categorised: during the later years of the military regime-1992-1999 (political constraint was very minimal) and the

early years of democratic regime-1999-2008. Political constraint was fairer than the former. The trend of non-oil export had a lower trend movement during the periods of military regime, while the period of democratic government experienced a higher trend of non-oil export. Non-oil export experienced a sharp decline during the military government era (late 1995-1996), which is the period after the national crisis that led to a coup as well as massacre of many political figures.

Interestingly, the figure also exhibits the fact that the ACGSF value was on a higher trend in thedemocratic government era than in the military government era. This probably will be to the fact that the democratic era was more concerned in development than in power 'cannibalism'. Hence, the government is focused on increasing the capital base of the scheme so as to meet the needs of the recipient. Although this is not a claim of the debate for preference Nigerian democratic government to military government, but it is an argument to support the trend ACGSF exhibited over time. The decline in the value of ACGSF during 2005-2006 can be traced to the bank recapitalization exercise which was mandated in 2004 but was effected in December 2005. Most banks during this period were most importantly concerned about meeting up with the ₦25 billion minimum capital base.

CONCEPTUAL FRAMEWORK AND MODEL FORMULATION

The conceptual framework employed in this study was adapted from the argument of Mahadevan (2003), where it was argued that the production frontier traces out the maximum output obtainable from the use of available inputs. In the light of this study, the maximum export especially with regards to trade and international commerce is a function of the available input effectively converted into finished product as well as the political well-being of the nation. Mahadevan further iterated that a production curve will only shift from its axis into a higher one as a result of technical efficiency, input growth and technological progress-effectively, the role of the political atmosphere in achieving this is so vital to be left out. For example, the production curve may not be able to behave maximally, even when other things (e.g., technical efficiency, input growth, and technological progress) are equal, in the presence of political turmoil. This is evident in most African countries that have witnessed slow growth, Nigeria inclusive, which had experienced periods of fatal coups and civil unrest and so on.

Mahadevan (2003) argument is taken further by introducing the value of political constraint, which is depicted in Fig. 2.

The movement from axis A to B is traced to technical efficiency, caused by effective utilization of technology and inputs in the production process. Relating this to the
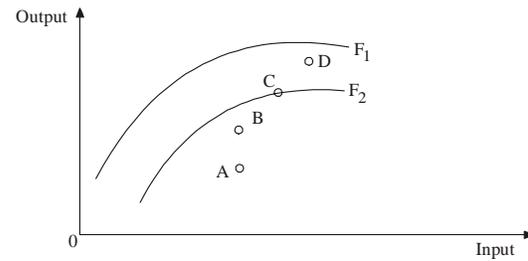

Fig. 2: Total factor productivity gains from globalization and economic reforms, Mahadevan (2003)

context of the study, an increase in the loan granted to farmers, would invariably affect their further utilisation of technology in the farming process. This is based on the fact that anyone who seeks for loan, should be enlightened enough to utilise appropriate technology in farming process. However, many farmers in Nigeria may not have the required skills to utilise technology in their farming process, but majority of those who benefits from this scheme are enlightened enough to involve technology in their farming process. This will boost production of agricultural product, which will further enhance the country's export base.

The availability of adequate capital to finance the purchase of inputs in terms of labour, material, land and etc, will further enhance the movement of the production axis from B to C. This will further enhance input and greatly affect the output from agricultural produce. Also enhance capital availability will result to a shift from the production axis C to D due to technological progress engendered by adequate financial dase. The movement from axis A to B, B to C and C to D will only become effective in a political serene environment. This is the crux of this discuss. For the ACSGF to achieve its aim effectively-enhancing the commercial banks loans granted for agricultural activities so as to boost export-the political atmosphere is germane.

Investigating into the relationship between the ACGSF and export in the light of political constraint, the model below is formulated:

$$NOILEXP_t = f(ACGFCC_t, ACGFO_t, ACGFL_t, ACGFFC_t, POL_t, U) \qquad (1)$$

where,

$NOILEXP_t$: non-oil export
ACGFCC : agricultural credit guarantee fund granted for cash crops
ACGFO : agricultural credit guarantee fund granted for other categories of agricultural production
ACGFL : agricultural credit guarantee fund granted for livestock production
ACGFFC : agricultural credit guarantee fund granted for the production of food crops

POL   : political Constraint. This was included with the understanding that most policies and strategies put forward by government rarely have a smooth implementation especially with the occurrence of government transition. The data used for the study was gotten from Henisz and Zelner (2007) measures of political risk. This measures individual countries yearly political constraint/risk and checks and balances in the system. It is such that the higher the value the better the political environment and vice versa.

The Eq. (1) above can be expressed explicitly as:

$$\text{NOILEXP} = \beta_0 + \beta_1 \text{ACGFCC}_t + \beta_2 \text{ACGFO}_t + \beta_3 \text{ACGFL}_t + \beta_4 \text{ACGFFC}_t + \beta_5 \text{POL}_t + \mu_t \qquad (2)$$

μ_t is the error term, which captures all other variables not explicitly captured in the model. The error term is expected to be independently distributed.

The *apriori* expectations with respect to the signs of the estimated coefficients are such that they are all expected to be >0. This is with the understanding that the agricultural credit guarantee scheme is expected to exert positive influence on the export of the nation. The increase in the private sector loan is expected to boost production capacity which could be exported to other countries.

A transformation of the above equation into a Vector Auto-Regressive (VAR) model with the variables stated in their lagged values and logarithmic form can be stated in matrix representation as follows:

$$lnY_t = \beta + \Phi_1 lnY_{t-1} + \dots \Phi_p lnY_{t-1} + \mu_t; = 1, \dots, N \qquad (3)$$

$$\text{where, } lnY_t = \begin{bmatrix} lnEXP_t \\ lnACGFCC_t \\ lnACGFO_t \\ lnACGFL_t \\ \ln ACGFFC_t \\ POL_t \end{bmatrix} \quad \beta = \begin{bmatrix} \beta_1 \\ \beta_2 \\ \beta_3 \\ \beta_4 \\ \beta_5 \\ \beta_6 \end{bmatrix}$$

$$\Phi 1 = \begin{pmatrix} \Phi_{11_t} & \Phi_{15_t} \\ \Phi_{21_t} & \Phi_{25_t} \\ \Phi_{31_t} & \Phi_{35_t} \\ \Phi_{41_t} & \Phi_{45_t} \\ \Phi_{51_t} & \Phi_{55_t} \\ \Phi_{61_t} & \Phi_{65_t} \end{pmatrix} \quad \mu_t = \begin{bmatrix} \mu_{1,t} \\ \mu_{2,t} \\ \mu_{3,t} \\ \mu_{4,t} \\ \mu_{5,t} \\ \mu_{6,t} \end{bmatrix}$$

From the equation $\beta + \Phi_1$ (i = 1… p) are VAR parameters to be estimated and the μ_t is the error term with zero mean and a finite variance.

The study is aimed at understanding the long-run relationship between the variables as well as establishing the reaction of each variable to a policy shock on themselves. The variance decomposition approach is utilized due to the fact it provides information on the short-run dynamic relationship between non-oil export, ACGSF and political constraint. The variance decomposition also helps making inferences about the movements in each variable resulting from its own shock as well as those from other variables. The ordering of the variable is vital in the result of variance decomposition and it becomes important to report the ordering of the variables used for the estimation. Olayiwola and Okodua (2009) submit that in dealing with this, it is pertinent to generate the orthogonalised impulse response and while considering the sensitivity of results at every stage. This may be cumbersome as well as the criteria for establishing the best result is not known. Therefore the submission to report the Cholesky ordering is very vital.

Prior to the cointegration test, there is the need to test for the order of stationarity of the series. The study will employ the Augmented Dickey Fuller (ADF) test as well as the Phillip-Perron (PP) test for robustness in the test for unit root because the takes into cognizance the possibility of structural change by the variables.

The mathematical expression of the ADF test for trend amongst the series is thus:

$$\Delta Y_t = a + \phi T + (1 - \beta)Y_{t-1} + \sum_{i=1}^{n} \lambda \Delta Y_{p-j} + \,_t \qquad (4)$$

where,

Y_t is the variable tested for unit root and Δ is the first difference operator; β is the constant term; T is the time trend and n is the lag number. The null hypothesis H_0: (1- β) = 0, when β = 1, the Y_t is non-stationary and does not contain unit root. Hence the null hypothesis is rejected implying that the test value is greater than the critical value at the various rate of significance.

ADF without trend is:

$$\Delta Y_t = a + (1 - \beta)Y_{t-1} + \sum_{i=1}^{n} \lambda \Delta Yp - j + \,_t \qquad (5)$$

The mathematical expression of the PP test is:

$$\Delta Y_t = aY_{t-1} + X_t \phi + \,_t \qquad (6)$$

where Y_t is also the variable tested for unit root. X_t are optional exogenous regressors that could either be trended or none trended. are the parameters to be estimated and

Table 2: Summary Statistics of the Variables (1978-2008)

	Mean	Maximum	Minimum	Obs
CSHCP (₦ Million)	16474.02	154830	697.8	30
FDCRP (₦ Million)	731819.3	8167102	2868.2	30
LIVSTK (₦ Million)	79013.32	844882.8	4446.9	30
NOILEXP (₦ Billion)	2.91E+11	9.85E+11	3.20E+10	30
OTHR (₦ Million)	27156	204465	2375.7	30
POL	0.149667	0.5	0	30

POL: A measure of political instability; LIVSTK: ACGSF to livestock; OTHR: ACGSF to other agricultural activities; FDCRP: ACGSF to food crops outfit; NOILEXPT: value of non-oil export; CSHCP: ACGSF to cash crops

e_t are the error terms. The null and alternative hypothesis of this test is: H_0: $\alpha = 0$ and H_1: α 0. The decision rule is similar to the ADF test discussed above. When the series is non-stationary at levels, a higher order of integration will be taken so as to eliminate the presence of unit root. Once the long-run relationship amongst the variables is identified, then the VAR model can be applied into the equation and the inverse into a moving average response, which translates into the variance decomposition.

There are basically two methods in cointegration test, which are the Engle and Granger (1987) test based on a single equation and the Johansen (1988) test, which is based on systems of equation. The former test the stationarity of residuals based on a single equation regression, while the former uses the maximum likelihood of a full system that provides for maximum Eigen value and the trace statistics to determine the number of cointegration equation (Aktar and Ozturk, 2009). This study adopts the Johansen (1988) test. The data for this study were sourced from the various issues of Central Bank of Nigeria (CBN) statistical bulletin and the Henisz and Zelner (2007) data on political constraint. The period of study was 1978-2007. The study original intention was to use 1977-2008 due to the fact that the ACGSF was formed in 1977 but data on ACGSF in 1977 and 2008 were not available.

Empirical results and analysis: It is expedient to mention that the estimation process started by utilizing the value of total export as well as non-oil export in Nigeria. The later was dropped because the results were not consistent, which may not be unconnected with the fact that the bulk of the total export in Nigeria is contributed by crude oil and gas sector. As a matter of fact, the value of total export consists of about 98% of the revenue from export of crude oil and gas in 2007 (Export Import Bank, 2009). Hence, the impact on this ACGSF may not be efficient. Therefore, the study resolved to non-oil export because the exports of agricultural products constitute a major component in non-oil exports.

Descriptive statistics: Table 2 describes the variables used in the study. The average political constraint for the 30 year period of study was 0.1497. The political constraint which is a measure of checks and balances was very low. This means that the political risk during the study period was really high especially as it is closer to

zero implying low political constraint. Most especially, the turbulence is due to the diverse military coup and downtrodden of the democratic move, which caused a lot of riots, national and international agitation against the nation.

The four measures of the ACGSF, which includes the guarantee for livestock farming, guarantee for others, food crops and cash crops, had average values of about ₦79 billion, ₦27 billion, ₦732 billion and ₦16 billion respectively. The food crops was the most guaranteed agricultural output for the period studied. This may be associated with the Operation Feed the Nation (OFN) federal government program put in place by the Military government in 1979. The value for non-oil export for the period is ₦291 billion.

RESULTS AND DISCUSSION

Test for stationarity: Table 3 shows the results of stationarity test for each of the variables modelled in the equation. As can be observed from Table 3, the null hypothesis of the presence of a unit root cannot be sustained at first difference since the absolute values of ADF and PP statistics are greater than the critical values (C.V) at 1%. The ADF and PP test were tested with both intercept and trend. The result shows that all the variables are stationary at first difference.

Test for cointegration: To establish the existence of a long-run relationship amongst the series, a cointegration test was performed using Johansen's multivariate approach as reported in Table 4. This approach is preferred to the Engle-Grander test, because the later first estimates the regression equation and stationarity of the residual from the test. This may be cumbersome as well as bias since it assumes one cointegration vector in a system that might have more than two variables (Osabuohien, 2007).

The cointegration equation was performed with the assumption of linear deterministic trend and estimated by selecting the Lag (1, 1). The result from the cointegration test shows that there is a long-run relationship between the non-oil export and the ACGSF schemes as well as political constraint in the nation. The trace statistics as well as the maximum Eigen value indicates that there exists one cointegration equation amongst the variables.

Table 3: Results of Augmented Dickey Fuller (ADF) test and Philip Perron (PP) test

Variables	ADF Stat.	C.V. 1%	PP Stat.	C.V. 1%
Levels with trends				
POLCON	- 2.3413	- 4.3098	- 2.3758	- 4.3098
LOTHR-3.9273	- 4.3240	- 3.1289	- 4.3098	
LNOILEXP	- 4.0956	- 4.3098	- 4.0962	- 4.3098
LLIVSTK	- 1.2350	- 4.3098	- 1.4071	- 4.3098
LFDCRP	- 2.5373	- 4.3098	- 2.5795	- 4.3098
LCSHCP	- 3.0000	- 4.3098	- 3.0498	- 4.3098
First difference with trends				
POLCON	- 6.6888	- 4.3240	- 6.7118	- 4.3240
LOTHR-6.2338	- 4.3393	- 10.4414	- 4.3240	
LNOILEXP	- 8.1089	- 4.3240	- 22.6219	- 4.3240
LLIVSTK	- 5.1347	- 4.3240	- 9.5367	- 4.3240
LFDCRP	- 6.0304	- 4.3240	- 6.1327	- 4.3240
LCSHCP	- 6.0887	- 4.3240	- 8.0535	- 4.3240

Authors' computation

Table 4: Johansen's multivariate cointegration test results

Hypothesized No. of CE(s)	Eigen-value	Trace statistic	C.V.	p-value	Max-eigen statistic	C.V.	P-value
None *	0.8650	121.4004	95.7537	0.0003	54.0736	40.0776	0.0007
At most 1	0.7043	67.3268	69.8189	0.0778	32.8987	33.8769	0.0651
At most 2	0.4404	34.4282	47.8561	0.4786	15.6728	27.5843	0.6934
At most 3	0.3431	18.7554	29.7971	0.5106	11.3463	21.1316	0.6128
At most 4	0.2241	7.4091	15.4947	0.5306	6.8501	14.2646	0.5070
At most 5	0.0205	0.5590	3.8415	0.4546	0.5590	3.8415	0.4546

Log likelihood   -50.8342

lnnonoilexp = 29.0656dothr - 36.6749dlcshcp + 22.1858dlfdcrp + 8.4370dlnlivstk – 51.0333dpolcon
              (3.6476)   (3.9833)   (3.5899)   (2.5747)   (9.7848)

*: Reject H0 at 5% significant level, i.e., when Likelihood Ratio is greater than C.V as Tabulated in E-views 5.0. The values in parenthesis are the standard error

Furthermore, the value of non-oil export was normalized on, so as to derive the long-run effect of ACGSF and political constraint. The result reveals that in the long-run, ACGSF on others. Food crop as well as livestock exhibits a positive impact on the non-oil export value of Nigeria. The result indicates that a single increase by one of ACGSF on other agricultural outfit, food crop as well as livestock will result in about 29.07, 22.19 and 8.44 increase in the non-oil export value of the country.

Given the fact that logarithmic transformed data were used, the coefficients represent elasticity. Thus, long-run equation indicates that the explanatory variables are all elastic indicating that their variations will bring about more than proportionate change in the level of non-oil exports. The important implication that can be inferred is that: to significantly boost non-oil export in Nigeria, provision of credit facilities especially the revamping of the ACGSF through its various sub-components will yield satisfactory outcome on non-oil exports. This finding is very germane given the need to diversify the export base of the nation especially as the current global economic crisis is taking its toll in the price of oil and gas products.

The ACGSF on cash crop and political constraint have a long-run negative impact on non-oil export. A single increase in ACGSF on cash crop as well as in political constraint will result into 36.67, 51.03 decrease in the value of non-oil export. The value of ACGSF on

'other agricultural' outfit exhibit the highest positive influence on export compared to others that exhibits lower positive influence on export in the long-run. Most categories of agricultural outfit represented in 'others' includes fishery and mixed farming and can be better of diversifying than the rest of the guarantee. Mixed farming involves using a single farm for multiple purposes and investing/guaranteeing this has a better positive effect on the value of non-oil export in Nigeria.

Variance decomposition: Since the long-run relationship has been established amongst the variables, the restricted VAR can now be estimated. The first difference of the series can be estimated by inverting the VAR into a moving average representation after which the impulse response as well as the variance decomposition can be estimated.

The variance decomposition was estimated, so as to see the forecast error components of each of the variable originating from shocks in the system. The ordering of the variables in the variance decomposition is vital and this is stated in Table A (in the Appendix) over the same forecasting horizon for a period of ten years (10). Shocks in non-oil export is able to account for a 100% variation in its value in the first year and dwindled to about 98% variations in the 3rd, 7th and 10th year. Cash crop and political constraint has greater impact from shocks on

non-oil export than the other variables (ACGSF guarantee on food crop and livestock). Interestingly, they all reacted minimally to a shock from non-oil export.

A policy shock on ACGSF on 'other' agricultural outfit will result into a minimal value of about 0% and 1% variation of the non-oil export in the 1st, 3rd, 7th and 10th year. This minimal variation is also applicable to shocks on ACGSF guarantee on cash crop and food crop. The shock in ACGSF on food crop had more impact on non-oil export compared to cash crop in the 10 forecasting period. A shock in the ACGSF guarantee on livestock will result into an ascending variation from 1.15% variation in the first year to 12.35% in the 10th year. Also, a policy shock on political constraint will result into a minimal variation in non-oil export from .02% in the first year to a 0.72% in the tenth year. In the first year, a policy shock on political constraint, will also result into a 3.43, 2.08, 0.08 and 1.60% variation in the value of ACGSF guarantee on others, cash crop, food crop as well as livestock farming during the first year period.

CONCLUSION

The study, which was aimed at establishing the interactions between Agricultural Credit Guarantee Scheme Fund (ACGSF) and non-oil export in Nigeria, engaged secondary data sourced from Central Bank of Nigeria bulletin, among others. The study was deemed essential based on the fact that Nigeria has witnessed poor participation in the international market with regards to non-oil export, irrespective of the intervening policies of the government to enhance this, like the ACGSF. The analyses were carried out using the Vector Auto-Regressive (VAR) technique.
The main findings of this study are as follows:

- There exists a long-run relationship between the non-oil export and the ACGSF schemes as well as political constraint in Nigeria.
- Empathetically, the result reveals that in the long-run, ACGSF on others, food crop as well as livestock exhibits a positive impact on the non-oil export value of Nigeria.

- ACGSF on cash crop and political constraints have a long-run negative impact on non-oil export.

These findings have important policy implications. First, the result of the study indicates that there is a long-run relationship between government involvement in the agricultural sector through the ACGSF has a long-run relationship with the level of non-oil export. Secondly, policy makers should take proper cognizance of the fact that putting fund in place cannot on its own enhance non-oil export in Nigeria. This is based on the fact that infrastructural facility to enhance the production and final supply of the product to final consumer cannot be left out. This is evidenced in the poor performance of these schemes in relationship with the non-oil export. Thirdly, massive industrialization in the country to process these agricultural products from their raw form to a form suitable for manufacturers both within and outside the country will go a long way in enhancing the effectiveness of the scheme for agricultural producers. This would adequately enhance impact of this scheme on the agricultural sector. If this is left out, the huge products of this sector as a result of the influence of ACGSF will only bring about huge volume of perishable goods.

In discussing the implications of the study, it is worthyof note a few limitations. First of all only the value of non-oil export was used. Having in mind that agricultural export has a high proportion in this. Secondly, the study is based on secondary data.Therefore, the limitations of this study points out to new directions of research. Future research in this area should use the value of agricultural export. Secondly, survey research should be carried out to find out the impact of this scheme on the beneficiaries in terms of accessibility to the scheme.

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Appendix

Table A: Decomposition of variance

Period	S.E	LNOILEXP	DLOTHR	DLCSHCP	DLFDCRP	DLNLIVSTK	DPOLCON
Variance decomposition of LNOILEXP:							
1	0.6463	100	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.9483	98.8300	0.1423	0.5077	0.0115	0.0113	0.4973
7	1.1006	98.7862	0.1197	0.5288	0.0123	0.0249	0.5282
10	1.1254	98.7742	0.1173	0.5376	0.0120	0.0262	0.5327
Variance decomposition of DLOTHR:							
1	0.6276	0.2405	99.7595	0.0000	0.0000	0.0000	0.0000
3	0.6764	1.1354	87.8616	4.1983	0.9903	5.3673	0.4470
7	0.6824	1.2639	86.7871	4.7126	1.3881	5.3091	0.5392
10	0.6826	1.2921	86.7548	4.7164	1.3900	5.3066	0.5402

Table A: Continued

Variance decomposition of DLCSHCP:						
1	0.6617	0.2881	48.8892	50.8226	0.0000	0.0000	0.0000
3	0.8723	2.2045	43.5735	49.1204	0.8170	4.0223	0.2621
7	0.8826	2.7765	43.0803	48.3263	1.1675	3.9877	0.6617
10	0.8833	2.9097	43.0212	48.2552	1.1675	3.9819	0.6646
Variance decomposition of DLFDCRP:						
1	0.4707	0.7852	19.4912	20.2195	59.5042	0.0000	0.0000
3	0.5666	4.0990	24.4092	25.9253	43.1471	0.0866	2.3327
7	0.5828	5.2062	24.5584	25.7928	41.4230	0.1058	2.9138
10	0.5837	5.4551	24.5037	25.7212	41.3032	0.1058	2.9110
Variance decomposition of DLNLIVSTK:						
1	0.5115	1.1506	16.5103	8.9327	19.9118	53.4946	0.0000
3	0.6029	8.4601	16.7525	18.3617	15.0141	41.1082	0.3035
7	0.6176	11.7375	16.3645	17.7035	14.4606	39.2430	0.4910
10	0.6198	12.3487	16.2524	17.5829	14.3592	38.9652	0.4915
Variance decomposition of DPOLCON:						
1	0.1205	0.0219	3.4317	2.0759	0.0791	1.6049	92.7866
3	0.1634	0.5425	7.9488	27.1772	10.0956	1.7154	52.5205
7	0.1671	0.6815	10.1357	26.7491	9.8825	1.7800	50.8412
10	0.1672	0.7163	10.1446	26.7373	9.8802	1.7090	50.8127

Cholesky Ordering: LNOILEXP DLOTHR DLCSHCP DLFDCRP DLNLIVSTK DPOLCON

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