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**GROWTH AND INSTABILITY IN LIVESTOCK LOAN GUARANTEED
UNDER ACGSF IN NIGERIA**

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INTRODUCTION

Suffice to say that Nigerian agricultural sector performance over the past two and a half decades has fallen short of its expectations. Evidently, during the period, productivity grew slowly and the proportion of agricultural output in GDP fell steadily (Palmar and Ojo, 1981). Specifically, in 1985, Agricultural Contribution to GDP was 37.30 percent, but in 1995 and 1997, it fell to 31.61 percent and 31.01 percent respectively. Out of this, livestock subsector contribution to GDP was 6.78 percent in 1985 but in 1995 and 1997, it also fell to 3.34 percent and 3.20 percent respectively (CBN, 1997). Several factors like non-availability of productive resources, state of technology in the sector, poor marketing and distribution facilities and inadequate infrastructures in rural areas explain the backward state of the country's agriculture. Of these problems, the most critical are factors associated with credit and finance.

The small-scale farmers who dominate the agricultural sector are poor in resource and credit and this situation of lack is often reflected in the use of primitive and low quality inputs leading to low returns on investment. (Olayemi, 1980). The recognition of the inherent problem of agriculture resulted in formulating policies and planning programmes over time with some credit components attached to them by successive administrations. Notably among these programmes/schemes are the Nigerian Agricultural Co-operative Bank (NACB), Agricultural Credit Guarantee Scheme Fund (ACGSF), Peoples Bank of Nigeria (PBN) and Community Banks (CBs) etc. These programmes/schemes were set up for assured supply of credits in the required terms (short-medium-or long-term credits to small-scale farmers. It is pertinent to note that agricultural credits are both insufficient and inefficiently administered to the small-scale farmers. Only small proportion of the institutional credits are made available to the farmers, especially, for the livestock farmers. Basically, the potential requirements for credits by the farmers are yet to be met. The farmer who need credit are often looked upon by lenders of credit as high default risk customers which must be avoided or for which investors must demand high risk premium or collateral in order to give loans and credits. To circumvent the situation, the ACGSF was established to guarantee loans give to small farmers.

Specifically Agricultural Credit Guarantee Scheme fund ACGSF started operation in April 1978 to induce banks to increase lending to agriculture and to ensure that loans granted to farmers are guaranteed up to 75 percent against default in repayment. In case of loan default, repayment is made from a fund set up by Federal Government and CBN with an authorised share capital of N100m. As at the end of 1997 the paid-up capital was N85.5m which was eventually increased to N377.0 million due to interest from investment of funds in Government Securities (CBN, 1998). The maximum loans which can be guaranteed under the scheme are N100,000 for individual farmers and N1million for Cooperative Society/Corporate agencies. However, the total number of loans guaranteed under the scheme declined to 14,637 with a value of N215.7 million in 1998 compared with 17,840 loans valued at N242 million in 1997 (CBN, 1998). Agricultural production for which loans can be granted include crops, livestock, fishery, storage, processing, etc.

Since inception, the distribution of loans by size has changed. The scheme guaranteed different project sizes and for different purposes. According to CBN, 1998, the food crop sub-sector with the loan size N25001-N20,000 category carried the highest. In all the various purposes of the loans guaranteed, food crops carried the highest with 13,119 (89.6 percent) with livestock sub-sector having a total of 458 loans (3.1 percent) as of 1998. Over the past years, the scenario has been the same where crop sub sector takes the target lion shares of the total loan guaranteed. Therefore, there exists a yearning gap for credit in the livestock sub-sector. The interest of this study therefore is to statistically determine the degree of instability and growth rate of loans guaranteed. Under ACGSF in livestock sub-sector. This is necessary so as to evaluate the level of credit delivery and development in the sub-sectors.

In pursuance of this objective, section two of this paper focuses in the sources of data and analytical techniques. Section three presents the results of the analysis while section four contains the summary and conclusion.

The scope of the study covers the activity of ACGSF in terms of number of loans guaranteed and their values to livestock sub-sector between the period, 1978 and 1998. Secondary data collected from FOS, CBN Annual Reports are used.

The time series data collected were analysed with a combination of analytical techniques. These include descriptive, exponential growth function, coefficient of variation, (Cv) index of instability (II) and instability coefficient (I.C).

(i) The exponential growth function is expressed as

$$Y_i = AB^t \quad \dots\dots\dots (1)$$

i - (1, 2, 3,4)

where Y_i = number or value of loans guaranteed to *i*th purpose under livestock sub-sector; *t* = time trend in years and A and B are the parameters to be estimated.

Equation 1 is linearised into

$$\ln Y_i = \ln A + t \ln B \quad \dots\dots\dots (2)$$

If $\ln Y = y$, $\ln A = a$ and $\ln B = b$, The Equation becomes $y = a + bt$ (3)

Therefore, growth rate $r = \text{Antilog } b - 1$

(ii) Coefficient of variation (cv) This is given as

$$Cv = \left[\frac{\sqrt{\frac{Y_i - \bar{Y}^2}{n-1}}}{\bar{Y}} \right] \quad \dots\dots\dots (4)$$

(iii) Index of instability (II), this is given as

$$I.I = \left[\frac{\frac{1}{n} \sum |Y - \hat{Y}|}{\bar{Y}} \right] \quad \dots\dots\dots (5)$$

where Y_i = Actual number or value of loan guaranteed for the *i*th purpose.

\hat{Y} = predicted number or value of loan

\bar{Y} = Mean number or value of loan

(iv) Instability Coefficient (I.C). This is given as

$$I.C. = \left[\frac{\frac{1}{n} \sum (Y - \hat{Y})^2}{\bar{Y}} \right] \quad \dots\dots\dots (6)$$

The results of the analysis of growth and instability in loans guaranteed are summarised and discussed in this section.

3.1 Growth Rate and Instability in Numbers of Loans Guaranteed Under A.G.C.S.F

Table 1 presents the measures of growth rate and variability in number of loans guaranteed under the AGCSF to livestock sub-sector.

Table 1: Indices of Growth Rate and Instability in Number of Loans

Purposes	Growth Rate	C.V.	I.I.	I.C
Poultry	-0.066	0.558	0.0295	0.4948
Cattle	2.34	0.712	0.4541	0.6502
Goat/Sheep	6.18	1.333	3.4771	1.5634
Other Livestocks	0.84	0.987	18.8715	4.3731
Total	0.65	0.441	0.1843	0.2457

Source: Computed from CBN Data, 1998.

The table shows that the growth rates range from -0.066 for poultry to 6.18 for Goat/Sheep while it is 0.65 for the whole sub-sector. This reveals that during the period under review (1978-1998), number of loans guaranteed for poultry and Goat/Sheep Production recorded a decline of 6.6 per cent per year and increase of 618 percent per year respectively while the whole sub-sector had a compound growth rate of 65 percent per year.

In term of instability (variability), the three measures, coefficient of variation, instability index and instability coefficient show that the highest variability is in Goat/Sheep and other livestock purposes, while the least variability is in the poultry. Therefore, on this basis, the number of loans guaranteed for Goat/Sheep and other livestock appear to be the most unstable while poultry have the least.

3.2 Growth Rate and Instability in Values of Loans Guaranteed

Table 2 presents the compound growth rate and level of instability in the amount of loan guaranteed under the AGCSF in livestock sub-sector.

Table 2: Indices of Growth Rate and Instability in Value of Loans

Purposes	Growth Rate	C.V.	I.I.	I.C
Poultry	-0.36	0.587	0.1100	0.3887
Cattle	1.98	0.865	0.3282	0.4102
Goat/Sheep	33.20	1.335	3.1478	1.3035
Other Livestocks	-0.42	0.900	7.7458	1.9746
Total	0.044	0.497	0.0101	0.2809

Source: Computed derived from data, 1998.

The table shows that the compound growth rates range from -0.42 for other livestock to 33.20 for Goat/Sheep while it is 0.044 for the whole sub-sector. This reveals that for the period, 1978-1998 there were decline of 36 percent and 42 percent in volume of loans guaranteed to poultry and other livestock production respectively while Goat/Sheep purpose recorded an impressive increase of 3320 percent per year. However for the whole sub-sector the growth rate stood at 4.4 percent per year.

In the case of instability indices, the table reveals that Goat/Sheep and other livestock purposes were the most unstable while the poultry purpose had the least. Therefore, despite the fact that poultry purpose had negative growth rate, but the amount of loan guaranteed each year did not vary much unlike the case of goat/sheep purpose. However, in the whole sub-sector, the level of instability for the period was low.

4.0

SUMMARY AND CONCLUSION

This study attempted to estimate the magnitude of growth rate and instability in loan guaranteed to livestock sub-sector under ACGSF in term of total number and value for the period, 1978 to 1998. This was done using exponential growth function as a measure of growth rate and coefficient of variation, instability index and instability coefficient as measures of instability.

Basically, the growth rate in ACGSF for the period have been very wide across the different purposes. Specifically, poultry purpose had negative growth rate for the period while Goat/Sheep had the highest magnitude of growth rate. But on the contrary, poultry purpose had the least unstable situation. Generally, the observed measures of growth and instability may be expected to deter investment in the livestock sub-sector on several grounds.

A situation of fluctuation in the number and amount of loans made available to livestock sub-sector is inimical to the progress and development of the sub-sector. Therefore, there is need to consciously increase and stabilise the number and amount of loans guaranteed to the livestock sub-sector. This could be done by increasing the maximum loan which can be guaranteed under the scheme for livestock purposes.

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Purposes	Growth Rate	Instability Index	Instability Coefficient
Goat/Sheep	33.20	1.35	0.82
Other Livestock	-0.42	0.90	0.74
Total	0.044	0.97	0.80