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STIMULATING GROWTH AND MINIMIZING RISK IN
AGRICULTURAL LENDING UNDER THE AGRICULTURAL
CREDIT GUARANTEE SCHEME FUND (ACGSF) IN BAUCHI
STATE, NIGERIA

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STIMULATING GROWTH AND MINIMIZING RISK IN AGRICULTURAL LENDING UNDER THE AGRICULTURAL CREDIT GUARANTEE SCHEME FUND (ACGSF) IN BAUCHI STATE, NIGERIA

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ABSTRACT

This study examined the impact of ACGSF in stimulating growth and minimizing of risk in Agricultural lending in Bauchi State. Forty three (43) farmers were randomly sampled and data collected through the use of structured questionnaire. Data were analyzed using descriptive statistics, correlation and multiple regression analysis. The results showed that farmers farm size increased considerably ($P > 0.001$) after taking the loan and the farm income also increased ($P < 0.001$) after taking the loan for an average of two seasons. The results also showed that the educational level of the farmers does not affect loan amount directly even though there is strong positive correlation between the level of farmers' education and their ability to meaningfully utilize the credit facility. It further showed that 37.21% of the respondents were given between $\text{₦}25,000.00$ and $\text{₦}50,000.00$ as loan. The major constraints identified with the scheme include cumbersome procedures in processing the loan insufficient loan amount and late approval of the loan. Based on these findings, it was suggested that the scheme should do more to ease the constraints farmers faced, so as to achieve the objective of the scheme.

Key words: Growth, risk, agriculture, credit

INTRODUCTION

In developing economies where farming is more of life than an industry, it requires massive injection of capital especially at the initial stage. Thus, huge capital requirement cannot be made fully by the farmers out of their own savings. This has therefore necessitated the need for financial assistance to accelerate the desired technology change. Francois and Baker (1986) contended that capital shortage impedes the economic development of small farmers in developing countries. Jekayinka, (1981) identified lack of capital as the major constraint not only in expanding agricultural production, but also in modernizing agriculture. He argued strongly that to expand the scope of farm operations and adoption of new technology requires the use of some new inputs which are not available on the farm and must be purchased. He therefore asserted that providing agricultural credit to farmers is universal and that even in the highly development countries of the world, agricultural credit has been an important instrument not only for improving efficiency but also for expanding production.

It is the general belief that the provision of cheap credit is a pre-condition of agricultural growth, (Ojineba, 1994). As such, government of most developing countries has often fostered the growth of institutional financial markets mainly to provide credit facilities to farmers on concessionary terms. Despite this effort, there is evidence that the performance of agricultural sector in Nigeria is relatively poor while agricultural loan portfolios remain weak (Ike, 1984). This is due largely to the extra expenses of administering a multiplicity of small loans to farmers, who are generally illiterates, of low productivity and uncertain yield all of which tend to discourage the ordinary banks from extending the needed loan to farmers.

This attitude of banks which are the cheap agents of credit mobilization and saving has necessitated the Federal and State governments in formulating policy measures aimed at cherishing commercial banks to lend a minimum percentage of loanable funds for agriculture, while the Federal government through the Central Bank of Nigeria (CBN) guarantee the funds and provide Banks with some incentive to promote agricultural productivity. Among these agricultural development policies, is the Agricultural Credit Guarantee Scheme Fund (ACGSF). The scheme was established by decree 20 of 1977 and was launched in April, 1978 with ownership and shareholding capital of 60 percent and 40 percent in favour of the Federal Ministry of Finance and Central Bank of Nigeria (CBN) respectively. The scheme was designed to facilitate farmers' access to bank credit and thus help to stimulate agricultural growth. It is under the joint management of the Agricultural Credit Guarantee Scheme Fund Board (ACGSFB) and the Central Bank of Nigeria (CBN).

OBJECTIVES

The broad objective of the study is to evaluate the importance of the ACGSF loan scheme on farmers' growth and the rate at which the risk in agricultural lending is minimized in Bauchi State.

The specific objectives include:

- a) To determine the socio-economic characteristics of the respondents
- b) To determine the effects of some socio-economic variables on loan amount
- c) To establish the relationship between the farm income and the farmers farm size to stimulate the growth in agricultural lending, and
- d) To identify problems that hinders the effective performance of the scheme.

METHODOLOGY

The study area of the research is Bauchi State, which occupies a land area of about 49,259.01 square kilometres representing about 5.3% of the total land area of Nigeria. It lies between latitude $9^{\circ}30'$ and $12^{\circ}30'$ North of the equator and longitude $8^{\circ}42'$ and $11^{\circ}50'$ East of the green wick meridian. The State share common boundaries with Jigawa and Yobe States to the South and Kano State to the West. The climate of the area is characterized by two well-defined seasons the wet (rainy) season (May- September) and the dry (harmattan) season (October- April). The State has an average rainfall of 1095 mm per annum (BSADP, 1992). Data were collected from forty-three (43) randomly selected farmers using structures questionnaire. Data were analyzed using descriptive statistics, correlation and regression analysis.

In the regression analysis, three functional forms of the multiple regression models were used for this study these were:

- a) Liner production function
- b) Double – logarithm production function and
- c) Semi- logarithm of production function

The double logarithm production function was however selected with best fit, based on magnitude of the coefficient of multiple determinations, R^2 , significance of t-value, the overall significant of F- value, the correct signs and economic reasonableness (a priori) of the parameters. This was used to analyze objective two (2)

The double logarithm production function is the logarithm from Cobb Douglas production function and can be written as

$$\log Y = \log a + b_1 \log x_1 + b_2 \log x_2 + b_3 \log x_3 + b_4 \log x_4 + U \dots \dots (1)$$

Where, Y= total output

X_1 = Farm size (ha)

X_2 = Income (N)

X_3 = Educational Level

X_4 = Security / collateral of the farmer

b_1 - b_4 = Regression coefficients

a = Constance term or intercept

u = Error term (Statistic or random disturbance term)

RESULT AND DISCUSSION

Socio-economic characteristics of the respondents

The socio-economic characteristics of respondents considered include, age, household size, level of education, marital status, farming experience and sex (Table 1). The age distribution of the respondents is presented in Table 1. This table showed that all the respondents were within the age bracket defined as economically productive in a population (i.e. 15-64 years). The results revealed that 9.30% of the respondents fell within the age group 21-30, 20.93% each fell within the group 31-40 and 51-60 years. While the majority 46.51% fell within the age group 41-50 years. The respondents above 60 years constitute only 2.33%. It can be deduced that 67.44% of the respondents were between the ages of 31-50 years. This implies that over half of the respondents in the study area were in their middle ages, thus they are innovative. This tallies with the findings of Mshelia *at al* (1998).

The household size of the respondents is also shown in Table 1. The results revealed that 18.60% had household sizes ranging from 1-5 persons, 53.49% had 6-10 persons, while 23.26% and 4.65% had household sizes ranging from 11-15 and 16-20 persons respectively. Majority of the respondents had large household sizes ranging from 6-15 persons; this implies that family labour may be employed to some extent in the farming business in order to reduce cost of production resulting from the use of hired labour.

Table 1 likewise showed the level of education of the respondents. The educational level of a farmer does not only raise his productivity but also increases his ability to understand and evaluate the information on new techniques and the processes of farming better. The results revealed that 6.98% of the respondents had Qur'anic education and adult education each, 9.30% had primary education while 25.58% and 51.16% had secondary and tertiary education respectively. The results further showed that 86.04% of the respondents in the study area had formal education (primary, secondary and Tertiary education); this implies that literacy level amongst the respondents was very high. The findings showed that a strong positive correlation existed between the level of farmers' education and their ability to meaningfully utilize credit facility.

The marital status of the respondents is also in table 1. The study revealed that 95.35% of the respondents in the study area were married while only 2.33% were divorced and widowed each. This shows that most of the respondents were family men and women who require family income to cater for their families. The implication is that, with increase in family income there will be improvement in their standard of living.

The farming experience of the respondents is also presented in Table 1. Experience is the first determinant of profitability because it allows farmers to adjust to changing economic condition and adopt the most efficient cultural practice (Yusuf, 2000). The result revealed that 11.63% of the respondents had 10 years or less of farming experience 32.56% had between 11 and 20 years, 32.23% had between 21-30 years. This implies that most of the farmers are well experienced.

Table 1 also showed the sex distribution of respondents. The results revealed that 74.42% of the respondents were male while 25.58% were female. This shows that there were more male than female farmers in the study area. Similar findings were reported by Nura, (2000) and Olarewaju, (1994)

Table 2 shows the distribution of the respondents according to amount of loan guaranteed. The results revealed that 16.28% collected less than N25,000.00 and N75,001.00- N100,000 respectively, 37.21% of the respondents collected loan ranging between N25,000.00 and N50,000.00 which constituted the majority, 18.60% collected between N50,001.00- N75,000.00 while only 2.33% collected amount above N150,000.00.

The effects of some socio-economic variables in loan amount are expressed in the regression analysis (table 3). The socio-economic variables examined include: farm size, farm income, educational level and collateral of the respondents. The coefficient of determination (R^2) is 0.798, this implies that 79.8% of variation in the dependent variable (loan amount) is explained by variation in the explanatory variables included in the model. The R^2 - coefficient of determination of average loan amount is 79.8%. This means also that for every unit increase in farm size while keeping other variables at constant level, the loan amount would increase by 0.681%. This finding agrees with CBN Survey (2001) which obtained similar results. Farm income had a significant effect on loan amount ($P < 0.001$). This means that for every one naira increase in farm income, while keeping other variables at a constant level, the loan amount will increase by 0.49%. This finding is also in agreement with CBN Survey,(2001). Education level on the other hand was found not to have significant effect on loan amount. Consequently, what can be inferred from this finding is that education did not necessarily influence loan amount directly. This is because education is not a pre-requisite for granting loan but the ability to present tangible collateral or securities which appeared to have more significant effect on loan amount ($P < 0.001$).

The implication of the overall findings is that socio-economic variables (farm size, farm, income and collateral) of the farmers play a vital role in obtaining loan from financial institution. It also increased farmers' standard of living. Correlation analysis was performed to establish the relationship existing among the explanatory variables. Farm size (X_1), farm income (X_2), educational level (X_3) and collateral (X_4). This is presented in Table 4. The results showed that there was a positive relationship between farm size and

farm income and collateral. A weak positive relationship between farm size and education and a very weak relationship between farm income, collateral and education. The implication is that farm income affects farm size and collateral but education does not really influence farm income.

The problems associated with the loan scheme are presented in Table 5. From the results, 32.56% of the respondents encountered the problem of vigorous screening and insufficient amount, 23.26% late approval while 48.84% complained of cumbersome procedure in processing the loans. The implication is that as these problems continue to exist the number of farmers that borrow from the commercial banks would greatly decrease and as result, lending to agriculture and productivity would equally decrease. On the other hand, the banks were using the above measures to minimize the risk of default.

Conclusion

Assessing the impact of ACGSF in stimulating and minimizing risk in agricultural lending is quite a difficult task as most farmers do not keep adequate record of their farming operations. Based on the findings, the ACGSF loan amount significantly affects the farm size, farm income and collateral/ security of the farmers. The scheme also helped farmers gain access to credit, which hitherto was a major constraint to farmers in study area, Bauchi State. Based on these findings we can say the scheme has succeeded in improving the farm size and farm income of the beneficiaries, but a lot could be achieved provided the constraining factors indicated are effectively and adequately tackled.

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Table 1: Socio- economic characteristics of the respondents

Class	Frequency	Percentage
Age (years)		
21-30	4	9.30
31-40	9	20.93
41-50	20	46.57
51-60	9	20.93
Above 60	1	2.33
Total	43	100.00
Household size		
1-5	8	18.60
6-10	23	53.49
11-15	10	23.26
16-20	2	4.65
Total	43	100.00
Education Level		
Qur'anic education	3	6.98
Adult education	3	6.98
Primary education	4	9.30
Secondary education	11	25.58
Tertiary education	22	51.16
Total	43	100.00
Material Status		
Married	41	95.34
Divorced	1	2.33
Widowed	1	2.33
Total	43	100.00
Farming experience (years)		
1-10	5	11.63
11-20	14	32.56
21-30	13	30.23
31-40	7	16.28
Above 40	4	9.30
Total	43	100.00
Sex		
Male	32	74.42
Female	11	25.58
Total	43	100.00

Table 2: Distribution of respondents according to amount of loan guaranteed

Loan amount (N)	No. farmers	Percentage
< 25,000.00	7	16.28
25,000.00-50,000.00	16	37.21
50,001.00-75,000.00	8	18.60
75,001.00 – 100,000.00	7	16.28
100,001 – 125,000.00	2	4.65
125,001 – 150,000.00	2	4.65
Above 150,000.00	1	2.33
Total	43	100.00

Table 3 : Regression coefficients and F-ratio for double logarithm function

Functional form	Constant	Farm size	Farm income	Educational level	Collateral	R2	F-ratio
Double log	2.13 (6.05)***	X ₁ ***0.6815 (7.17)	X ₂ ***0.4972(6.40)	X ₃ ***- 0.0671(0.81) Ns	X ₄ 0.3462(5.16) ***	0.798	57.27

Key *** 0.001%

Ns – Not significant

NB- Values in parenthesis are standard error values

R² – Coefficient of multiple determination

Table4 : Correlation Matrix of the coefficients

	X ₁	X ₂	X ₃	X ₄
X ₁	- 1-	--	--	--
X ₂	0.55	---	---	---
X ₃	0.31	0.12	---	---
X ₄	0.49	0.61	0.52	---

Table 5: Distribution of respondents according to problem encountered in the scheme

*Problems	Frequency	Percentage (%)
Late approval	10	23.26
Late disbursement	7	16.28
Vigorous Screening	14	32.56
Cutting down of amount	14	32.56
Applied (insufficient amount)	5	11.63
Understanding the guideliners	21	48.84
Cumbersome procedures in processing the loans	5	11.63
None of the above	5	11.63
Total	76	176.76

*Multiple respondents were recorded