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The Impact of Supervised Agricultural Credit Scheme in Ezeagu Local Government Area of Enugu State, Nigeria

[1]Miriam Mgbakor, [2]Ugwu Jennifer Nkechi and [2]G.N. Nenna

[1]Department of Agricultural Economics,
Extension Enugu State University of Science and Technology (ESUT) Enugu, Nigeria
[2]Department of Agricultural Economics and Extension. Anambra State University, Igbariam Campus

Abstract: This study investigated the impact of the Supervised Agricultural Credit Scheme on Small-scale farmers in Ezeagu Local Government Area of Enugu State of Nigeria. Three hundred and fifty farmers were randomly selected from the study area and interviewed by means of structured questionnaires. 300 questionnaires were later found to be analyzable. The findings indicate that the scheme had performed relatively well in the area of study and the repayment rates were high. Four innovations that had reached a high degree of adoption include: improved cassava; the supervised agricultural credit scheme (SACS); fertilizer and improved maize. Appropriate recommendations aimed at improving upon the functionality of the scheme in the study area have been made.

Key words: Ezeagu · Agricultural credit · Small scale farming and Enugu

INTRODUCTION

The Problem: Agriculture plays a major role in the economic development of many countries. Over 70 percent of Nigeria's adult population is engaged in the agricultural sector and other related industries. The agricultural sector must necessarily strive hard to meet the demands of rapidly growing population for more, better and cheaper food. According to [1], the agricultural sector performs a number of other important functions notably: supplying adequate and cheap raw materials for many agro-based industries; producing export crops which earn foreign exchange for the country; releasing farm labour which can be retrained and made to fit into the non-agricultural sector; providing markets for industrial products as well as gainful employment for our numerous young school leavers.

From the above, it is evident that Nigeria, as a country, must strive to improve upon her agriculture generally with particular reference to improving productivity and the overall socio-economic conditions of the rural poor.

Hitherto, shifting cultivation had been rife in some parts of the country. Traditional farming is plagued by several constraints such as low capacity tools, very low levels of production inputs, inadequate storage, traditional land tenure system and heavy losses from pests and diseases.

According to [1]

These facts have long been recognized in Nigeria, hence the extension service branch of the Ministry of Agriculture, Enugu State was established in 1954 primarily to educate the Enugu State farmers and to improve traditional agriculture.

For the past three decades, many developing nations, including Nigeria, have exhibited some concern about improving their farm credit systems. During this period, the Nigerian Agricultural and Cooperative Bank and the Farmers Cooperative Societies were organized and some older ones reorganized. Farm credit seminars and conferences were organized in various parts of the developing world [2] writing extensively on the vexed issue of farm credit stated interalia:

Corresponding Authors: Miriam Mgbakor, Department of Agricultural Economics,
Extension Enugu State University of Science and Technology (ESUT) Enugu, Nigeria.
Tel: +2347032361922. +2348020858137.

However, in spite of all this activity institutional farm credit systems did not gain must of an operational foothold in most countries, for as late as 1965 private lenders were still providing about 85 percent of all short-term agricultural credit in the developing countries. The conclusion must therefore, be reached that institutional farm credit was a subject more talked about than acted upon. It is apparent that it did not represent, in the minds of national planners and administrators, one of the more pressing agricultural needs during this period.

It is now evident that the situation appears to have changed since the late 1960s because commercial agriculture has been the objective of many governments. Fertilizers and other purchased production input uses have risen considerably. Again, larger amounts of farmers' products are being sold on the commercial market. Consequently, cash is needed in larger amounts to finance purchases and to market farm products. It is now well known that credit to farmers in agricultural development exerts positive effects on the adoption of modern technologies and the non-availability of it is a constraint on output.

Need for the Study: Abundant research evidence exists to show that capital is crucial in our attempts to drag the Nigerian farmer out of the vicious cycle of poverty. Farmers are today being advised to adopt agricultural innovations with a view to increasing their productivity. It would appear that the capital which is mobilized to finance agriculture arises mainly from government domestic revenues and borrowings, bilateral and multilateral loans and grants to governments; savings of non-institutional private lenders and investors; private savings of farm operators for their own operations; transfer of private foreign capital to direct investment in the private domestic agricultural sector; and savings of individuals and groups in the institutional banking and credit system [2].

It is apparent that the aforementioned credit sources have not really benefited the rural farmers. The supervised Agricultural Credit Scheme is a scheme designed to remedy some of the inherent weaknesses of the present credit sources available to the Nigerian farmer. The extension staff must be close to the farmer to monitor their activities with a view to assisting the farmers to increasing productivity. It is only when the farmer is aided to increase productivity and successfully market that their produce can conveniently pay off loan. There is need to evaluate the performance of the supervised Agricultural Credit Scheme in the study area with a view to determining its effectiveness or otherwise.

The result of this study will be useful to the State Ministry of Agriculture and Natural Resources and to the Government to enable them reappraise this apparently noteworthy credit source.

Purpose and Objective of the Study: The overall purpose of this study was to determine the impact of the Supervised Agricultural Credit Scheme (SACS) on small-scale farmers in Ezeagu Local Government Area of Enugu State. The specific objectives of the study were as follows:

- To determine the adequacy of loans granted to small-scale farmers in the study area;
- To examine how loans are administered to the small-scale farmers;
- To determine the impact of the scheme on farmers'; agricultural activities.
- To determine adequacy of loan supervision and timeliness of loan disbursement;
- To identify the problems of the scheme and to make recommendations for improvement.

Methodology: The study area was Ezeagu Local Government Area of Enugu State, Nigeria. Ezeagu is made up of 7 major constituent towns namely Owa, Oghe, Iwollo, Okpogho, Umumba, Umana and Olo, out of which 21 autonomous communities were created and they are as follows; Amagu Umulopka, Iwollo, Oghe,Opkpgho, Ihuonyia,Akama Imezi-Owa, Aguobu-Owa, Mgbagbo-Owa,Awha-Ndiagu, Awha-Imezi, Umana-Ndiagu, Umana-Ndiuno, Obeleagu-Umana, Obinuofia-Ndiuno, Obinuofia-Ndiagu, Umumba-Ndiuno, Aguobu-Umumba, Isingwu-Umana and Umualor. Each of this autonomous communities, has a chief. The paramount chief of the community presides over the meeting of all the communities. The traditional headquarters of Ezeagu Local Government Area is Aguobu-Owa.

Population: Ezeagu has an estimated population of about 92,000 households with an average of 8 members per household. Thus the estimated total population is 736,000 citizens.

Towns: The seven towns in Ezeagu as follows: Owa, Oghe, Iwollo, Okpogho, Umumba, Umana and Olo, out of which Twenty one autonomous communities were created

Agriculture: Agriculture is the major occupation of the people. Arable and tree crop farming as well as livestock and first farming comprise the various aspects of agriculture engaged in by the people. The major arable crops produced in the area include-yam, cassava, rice, maize, cocoyam and melon. Others are pepper, okoro, green, fluted pumpkin, groundnuts, beans.

Tree crops in the area include-citrus, raffia palm, kolanut, oil palm, plantain, cashew, oil bean. Others are coconut, African bread fruit, African pear, avocado pear, *Iringia sp*. Ogbono and mango.

The arable crops are produced under varied crop mixture. The crop mixture practices common in the area are

- Yam/maize/plantain/cocoyam/cassava.
- Cassava/maize/plantain.
- Cassava/groundnuts/pepper/plantain.
- Groundnuts/maize/yam/cassava.
- Yam/maize/melon/cassava
- Yam/maize/cocoyam/cassava.
- Yam/maize/melon/cocoyam.
- Yam/maize/vegetable/melon/beans.

Most of the tree crops are however planted sole or as a mono-crop. The reasons underlying the mixed crop practice include scarcity of land/maximization of available land and continuous harvest of crop.

Various type of fallow system is practiced and include bush fallow. Length of fallow is between 1-7 years. Farms are cultivated in compounds and outlaying fields usually. Common cultural farm practice includes cleaning, tillage, planting, weeding, nursery making, harvesting and burning. Farm implements commonly used are machete, hoe, shovel, rake and peak. Fish farming involve chiefly capture fisheries. Fishing equipment includes fishing nets and traps made from local sources, as well as canoes and boats.

Crop population in farmland are fairly dense and ranges from 25,000 to 35,000/ha. Planting period of some major crops are yam: January-March; cocoyam and maize: February-April; cassava: March-August; and vegetables: all year round. Harvesting for yam is July-September; cocoyam: October-January; maize: May-July; cassava and vegetables: all year round.

Table 1: Number of registered farmers

Towns	Farmers
Owa	500
Oghe	520
Iwollo	480
Okpogho	510
Umumba	500
Umana	490
Olo	500
Total	3,500 farmers

Table 2: Number of registered farmers and 10% sample

Towns	Farmers	10% Sample
Owa	500	50
Oghe	520	52
Iwollo	480	48
Okpogho	510	51
Umumba	500	50
Umana	490	49
Olo	500	50
Total	3,500 farmers	350

Crop yields are in the range: yam 3.5-8.5 tones/ha; cassava 7.12 tons/ha; cocoyam 3.5-6 tons/ha; and maize 2-4 tons/ha.

Climate: The annual rainfall is over 2500mm. The dry periods are characterized by low temperature and high relative humidity. The dry season is from November-early April. The rainy season is from late April to October.

Sampling Plan: The study or sampling plan was focused primarily on those farmers who were registered with the Ministry of Agriculture, Enugu State. The number of registered farmers stood as follows:

Ten percent (10%) of the total number of farmers were listed from sampling and interview-using the random sample method. Based on the foregoing finding sampling as shown:

A structured questionnaire was developed. This contravened sections designed to elicit information about the farmers' personal characteristics, their adoption behaviour, as well as constraints and measures to enhance agricultural production.

The draft questionnaires were reviewed by extension specialists and statisticians to assess their suitability.

Pre-Testing and Validation: The instrument was pre-tested with a sample of farmers from the study area. A panel of three judges (jury opinion technique) elected and the members critically examined and evaluated the instruments. The results of the pre-test and the views of the panel of judges resulted in the considerable restructuring of the instruments and the modification of inappropriate questions.

Collection of Data: The data and information from the farmers were collected by means of field interviews using the structured questionnaire. The researcher administered the questionnaire by herself assisted by two agriculturists who had completed the Ordinary National Diploma in Agriculture. They were hired on part-time basis for three months (May-July 2003) and were deployed to the field after receiving a four-day intensive training in interview techniques.

Analysis of Data: All the data used in the analysis were taken from the questionnaires administered to the farmers. The study was essentially descriptive and for such a descriptive study, the most meaningful numerical comparisons were in the form of percentage distributions, rank orders and mean scores according to [3]. Frequency distributions by numbers and percentages have been used in summarizing data on personal characteristics of the respondents. Appropriate computations have been used to determine the mean age of the respondents. Finally, the chi-square statistics was calculated as well as the contingency coefficient, C, as elucidated by [4].

A composite adoption index was calculated for each farmer to measure the adoption rate of the agricultural programmes under study. To do this, values were assigned for each stage reported in the adoption process. There values were: 0 for Unawareness; 1 for Awareness; 2 for Interest; 3 for Evaluation; 4 for Trial; 5 for Adoption; 0 for Rejection; and 4 for discontinuance. The minimum score for respondents unaware of any of the innovations was zero while the maximum score for complete adoption of all 10 innovations was 50.

Analysis of Results: The findings in this research were presented in tabular form.

Table 3 shows that 13.30% of the respondents were less than 30 years old, a large percentage (55.00) were middle aged (30-49 years), while a reasonable percentage (31.70) were fifty years and over. A system where a large percentage of the farming population is aged 50 years and over is not very encouraging because; it is known from previous research that age is correlated with adoption. In other words, it is known that younger farmers are more predisposed to adoption than older ones.

Table 3: Distribution of Respondents Age

Age (years)	Number	Percentage
Less than 30	40	13.30
30-49	165	55.00
50 and over	95	31.70
Total	300	100.00

Source: Field Survey

Table 4: Distribution of Respondents by Level of Formal Education

Level of Formal Education	Number	Percentage
No schooling	155	51.70
Primary (incomplete and complete)	105	35.00
Secondary, TTC and above	40	13.30
Total	300	100.00

Source: Field Survey

Table 5: Distribution of Respondents by Main Occupation

Main Occupation	Number	Percentage
Farming	225	75.00
Trading	55	18.34
Teaching	15	5.00
Others	5	1.66
Total	300	100.00

Source: Field Survey

Table 6: Distribution of Respondents by Membership of Organizations

Organization	Number	Percentage
MOA Registered Farmer	300	100.00
Farmers' Cooperatives	30	10.00
Farmers' Council	10	3.33
Age Grade	155	51.67
Total	300	100.00

Source: Field Survey

Also, everything possible should be done to get rural youths interested in farming since the older generation of farmers will soon die off.

The levels of formal education attained by the respondents are shown in Table 4. The bulk of the farmers (51.70%) were illiterates, 35.00% either completed or did not complete their primary school education, while 13.30 percent attained post-primary or post-secondary schools. A system where the bulk of the farming populations are illiterates is not to be encouraged. There is research evidence to show that at least 8 years of primary school education are required for successful adoption of agricultural innovations.

Table 5 shows the distribution of respondents by main occupation. It is interesting to note that 75 percent of the respondents had farming as their main occupation. Other occupations listed were trading (18.34%), teaching (5.00%) and other occupations-tailoring and blacksmithing (1.66%).

Table 7: Distribution of Respondents by Stages of Adoption

	Not Aware		Awareness		Interest		Evaluation		Trial		Adoption		Rejection		Discont-inuance		Total	
Stages of adoption	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Improved cassava	5	1.67	60	20.0	25	8.33	45	15.00	50	16.67	100	33.33	25	8.33	-	-	300	100.00
Upland Rice	50	16.67	150	50.0	-	-	10	3.33	60	20.00	30	10.00	-	-	-	-	300	100.00
Rabbitory	160	53.33	40	13.33	50	16.67	40	13.33	10	3.33	-	-	-	-	-	-	300	100.00
MOA Credit Scheme (SACS)	-	-	-	-	-	-	4	1.67	5	1.67	250	83.33	10	3.33	30	10.00	300	100.00
Agric Poultry	5	1.67	15	5.00	12	4.00	100	33.33	33	11.00	30	10.00	65	21.67	60	20.00	300	100.00
Spacing/Plant Population	165	55.00	75	25.00	20	6.67	20	6.67	10	3.33	10	3.33	-	-	-	-	300	100.00
Oil Pam Rehabilitation Scheme	5	1.67	150	50.0	45	15.00	50	16.67	40	13.33	10	3.33	-	-	-	-	300	100.00
Agric Citrus	5	1.67	50	16.67	100	33.33	35	11.67	50	16.67	60	20.00	-	-	-	-	300	100.00
Fertilizer	-	-	-	-	-	-	10	3.33	30	10.00	240	80.00	20	6.67	-	-	300	100.00
Improved Maize	-	-	-	-	-	-	25	8.33	20	6.67	200	66.67	30	10.00	25	8.33	300	100.00

Source: Field Survey

Table 8: Distribution of Respondents by Participation in the SACS

Participation	Number	Percentage
Participants	300	100.00
Non-participant	0	0.00
Total	300	100.00

Source: Field Survey

Table 9: Distribution of Respondents by Reported Opinion on the Effectiveness or otherwise of SACS

Opinions	Number	Percentage
Program effective	250	83.33
Program is ineffective	50	16.67
Total	300	100.00

Source: Field Survey

Table 10: Distribution of Respondents by Frequency of Receipt of Loan

Frequency	Number	Percentage
Once	200	66.67
Twice	50	16.67
Thrice	50	16.67
Total	300	100.00

Source: Field Survey

Table 11: Distribution of Subjects on Profitability of Loan

Farming Condition	Number	Percentage
Profitable	285	95.00
Unprofitable	15	5.00
Total	300	100.00

Source: Field Survey

Table 7 shows the distribution subjects by stages of adoption. Ten innovations proposed to farmers for adoption in the state over the past 10 years were listed for study. The seven-step adoption model was used as a framework. There were improved cassava, upland rice, rabbitory, MOA supervised credit scheme, agricultural poultry, spacing/plant population, oil palm rehabilitation scheme, agriculture citrus, fertilizer and improved maize. In the study area, the table shows that four innovations had reached a high degree of adoption-these were: improved cassava (33.33%), Ministry of Agriculture Credit Scheme (83.33%), fertilizer (80.00%) and improved maize (66.67%).

Many respondents, 53.33% were unaware of the existence of rabbitory as an innovation. 55.00 percent were also not aware of spacing/plant population as an innovation. It is evident from the table that extension has to do more to ensure adoption of agricultural innovations in the study area.

It is interesting to note that all the respondents had at one time or another participated in the supervised agricultural credit scheme of the Ministry of Agriculture and Natural Resources, Enugu State. By its nature, this scheme is supposed to be the most flexible and reliable source of agricultural credit after self-finance.

Table 9 shows that 83.33% of the respondents rated the program as effective while 16.67% rated the program as ineffective.

Table 10 shows the distribution of farmer respondents by reported frequency of the receipt of loans. 16.67% received loans once within a five-year period; 16.67% received loans twice and thrice respectively. For effective adoption of agricultural innovations, with a view to boosting agricultural productivity, farmers should receive loans on a regular basis. On the average, it was discovered that a farmer received loans once every three years.

From Table 11 above, it is evident that 95% of the farmers reported the loan was profitable while 5 percent (a negligible minority) felt that they did not make profit by using the loan. It is evident that farm operators would receive basic training in farm management techniques to enable them maximize profits.

Table 12: Distribution of Subjects by Mode of Agricultural Credit

Mode of Credit	Number	Percentage
Cash only	200	66.67
Planting materials only	55	18.33
50% cash, 50% planting materials	45	15.00
Total	300	100.00

Source: Field Survey

Table 13: Distribution of Respondents on Status of Repayment

Status of Repayment	Number	Percentage
Still owing	72	24.00
Not owing	228	76.00
Total	300	100.00

Source: Field Survey

Table 14: Suggested Ways to Improve Performance of SACS

Suggested Ways to Improve Performance	Number	Percentage
Adequate Extension Supervision	250	83.33
Should finance all aspects of agriculture	300	100.00
Timely disbursement of loan	300	100.00
Adequate loans to be provided	300	100.00
Credit to go to genuine farmers	280	93.33
Should teach farmers basic farm management techniques	240	80.00

Source: Field Survey

Table 12 shows the distribution of subjects by mode of agricultural credit. 66.67% would want cash only to be given to them. 18.33% would want planting materials only to be given to them while 15.00% would prefer 50% cash and 50% planting materials. By its very nature, it is preferable for recipients of SACS to receive both cash and planting materials as a safety check against diversion of the loan to non-agricultural purposes.

Table 13 above shows that 24.00% of the farmers had completely repaid the loan they received while 76.00% others were still to completely repay their loans. The situation is not encouraging when we realize the high degree of default rate in agricultural lending.

Table 14 is a tabulation of the suggested ways to improve performance of SACS in the study area. 83.33% of the farmers interviewed recommended adequate extension supervision; 100% recommended that the supervised agricultural credit scheme should finance all aspects of agriculture; 100% recommended timely disbursement of loan; 100% recommended that adequate loan should be provided; 93.33% of the respondents insisted that agricultural loans should be given primarily to genuine farmers, while 80 percent opined that extension should teach farmers basic farm management techniques.

Table 15: Test of Hypotheses (Ho)

0	E	0-E	$(0-E)^2$
250	150	100	10,000
50	150	-100	10,000
Total	300	100.00	

Adapted from Table 9 above)

Table 16: Adoption Level as Influenced by SACS

Frequency of Loan	Low	Medium	High	Total
Once	60	36	40	156
twice	10	20	29	59
Thrice	15	20	50	85
Total	85	96	119	300

Table 17: The farmer respondents

Score (Max = 50)	Category
0-16	Low adopter
17-33	Medium adopter
34-50	High adopter

Decision Rule: Since the computed X^2 value of 66.67 is greater than the tabulated value of 0.0003, the null hypothesis that the supervised Agricultural Credit Scheme has not made an impact on farmers in the study area is here by rejected. The alternate hyp9ohtesis, HA that the scheme has made impact on farmers in the study area is hereby accepted.

$$X^2 = \frac{10,000}{150}$$

$$= 66.67$$

$$df = 2\text{-}1 = 1$$

Computed X^2 value = 66.67
Tabulated X^2 value = 0.0003 at the 5 level of significance

Calculated X^2 = 41.95
df = 4
c(r) = 0.35

Significant at. 01 level.

The farmer respondents were categorized thus:

The Table 16 above shows that the Supervised Agricultural Credit Scheme (SACS) had an appreciable impact on the farming activities of respondents in the study area.

SUMMARY, RECOMMENDATIONS AND CONCLUSIONS

Summary: A major research question is how best to improve the productivity of the rural farmer in developing countries including Nigeria. Among the constraints identified by previous research include the inadequacy of agricultural credit. Credit is crucial to the practice of modern agriculture aimed at pulling the farmer out of the vicious cycle of poverty. The Ministry of Agriculture is known to operate a credit scheme for farmers known as the Supervised Agricultural Credit Scheme (SACS). This scheme is known to be beneficial to farmers and since it is 'supervised', it is relatively insured against the known inherent weaknesses prevalent in various classes of agricultural finance. The study was considered important because of the aforementioned reasons. The study was carried out in Ezeagu Local Government Area of Enugu State of Nigeria. The population of was 350 farmers made up from the seven towns that made up the local government area.

Questionnaire was administered to the 350 respondents out of which 300 were found to be analyzable giving a response ratio of 85.71 percent.

Major Findings: The major findings were as follows:

- Most of the farmer respondents were illiterates
- In the study area, four innovations had reached a high degree of adoption improved cassava, the Supervised Agricultural Credit Scheme of the Ministry of Agriculture, fertilizer and improved maize.
- All the farmer respondents had at one time or another participated in the SACS.
- Majority of the respondents (83.33%) found the scheme to be effective in the area. This was statistically tested and found to be true.
- The repayment rate was high 76 percent. Investigation revealed that a one time chief executive of the supervised agriculture, Enugu hails from the area under study. It is possible that the former chief executive, who incidentally is still a senior staff of the Ministry of agriculture, must have influenced the smooth performance of the scheme in the area.

Recommendations: To improve upon the smooth performance of the Supervised Agricultural Credit Scheme in the study area, the following recommendations are suggested:

- The Ministry of Agriculture, extension division, should adequately supervise the utilization of credit by benefiting farmers.
- The supervised agricultural credit scheme should finance all aspects of agriculture including crops and livestock.
- Loans should be timely disbursed.
- Loans should be adequately provided.
- Only genuine farmers should be made to benefit from the SACS.
- Benefiting farmers should be taught basic farm management techniques.
- Most of the respondents increased the size of their holdings as a result of participation in scheme.
- On the average, every participant got the sum of N2,000 as loan.

CONCLUSION

It may now be concluded that the supervised agricultural credit scheme has made a positive impact on the participating farmers in the local government area under study.

Every effort should henceforth be made to support the scheme as well as see that many more farmers benefit by it.

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