Full Length Research Paper

Sustainability of farm credit delivery by cooperatives and NGOs in Edo and Delta states, Nigeria

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The paper examined the sustainability rates of co-operatives and NGOs in farm credit delivery in Edo and Delta States of Nigeria. The Subsidy Dependence Indices (SDI) and the capital formation rates were determined using both primary and secondary data obtained from 80 and 20 purposively selected cooperatives and NGOs respectively, based on their involvement in farm credit delivery. A well structured questionnaire was used to obtain the primary data from the 100 organizations selected from a comprehensive list from the Ministry of Commerce and Industry as well as Corporate Affairs Commission. Both descriptive and quantitative statistics as well as financial analysis were employed in analyzing the data. The results showed low capital formation rate of 0.1815 and 0.123 for cooperatives and NGOs respectively. Cooperatives had zero SDI, having no subsidies throughout the period while NGOs had an SDI of 0.7642 which is considered too high for them to sustain the credit delivery function on the withdrawal of subsidies. Though with low loan volumes, the study showed cooperatives more likely to sustain the credit delivery function than the NGOs, but they may need to improve their capital formation rate.

Key Words: Sustainability, Farm credit delivery, Cooperatives, NGOs, Nigeria.

INTRODUCTION

Credit is considered as a catalyst that activates other factors of production and makes under-used capacities functional for increased production (Ijere, 1998). Thus farm credit plays a crucial role in agricultural and rural development as it enables farmers reap economies of scale, venture into new fields of production, employ new technologies and empower them to provide utilities for a widening market. Farm credit plays this role because it bridges the capital gap that exists in agricultural production. Farm credit could be obtained from either the formal sources which are the commercial banks and government owned institutions, or the informal sources which are the self-help-group (SHG) money lenders, cooperatives and Non-Governmental Organization (NGOs). However, Aryeetey (1997), stated that the informal rural financial sources in Africa perform better than the formal system because they have adapted to the high-risk environment. He therefore advised that the formal sector should learn from the informal institutions.

Subsequently, the cooperatives and NGOs which are formalized informal sources of credit in both rural and urban sectors are being considered as more credible sources to both farmers and small scale enterprises. Nevertheless, these informal institutions do not seem to be fulfilling this obligation as evidence still abounds that farmers are still in dire need of adequate capital, Oni (1999). This raises such questions as whether these institutions have enough loanable funds to meet the needs of applicants and whether they have the ability to sustain the credit delivery function in terms of capital availability.

This study is therefore designed to assess and compare the financial ability of the cooperatives and NGOs to sustain the farm credit delivery function as its main objective with such specific objectives as to identify their sources of loanable funds, examine their volume of loanable funds and their adequacy, examine their degree of subsidy dependence and to estimate their capital

formation rates.

Though the issue of self-sustainability and how to assess and measure it remains unclarified especially with the existence of explicit and implicit subsidies, a development financial institution may be considered sustainable if it is able to maintain its lending operations with a reasonable profitability over time (Yaron, 1992). It is true that financing investments depends seriously on access to credit facilities and most organizations often cover their operating costs by outside aids. It is however worth noting that if external aids create dependency, and development organizations plan their organisation's programmes within this dependency, such Organisations would crumble in the extreme cases (Vincent 1995). In line with this, Yaron (1992) stated that institutions with high financial sustainability are said to have low subsidy dependence index (SDI), this was supported by the observations of CGAP (1996), and MacIsaac (1996), that sustainability appears to correlate with "best practice" design features such as reasonable interest/lending rates, availability of voluntary savings facilities, frequency of loan collection, incentive materials for borrowers and lending staff, as well as high loan repayment rates. Managerial ability to move the organization towards self-sustainability is therefore an important task for financial institutions.

Though the paucity of literature on the argument as to which of either the cooperative movement or the NGOs has demonstrable ability to attain sustainability in loan delivery is still of serious concern to researchers, the World Bank (1998) asserted that NGOs and indigenous savings and credit schemes frequently suffer from lack of sustainability because of their welfare orientation, small scale, low absorptive capacity and lack of exposure to international best practices. As government seeks the best possible micro-finance institutions through which credit could be channeled to farmers for sustainable agricultural development, such microfinance institutions must also be sustainable to deliver the goods. This study therefore looks at the ability of the cooperatives and the NGOs to sustain this all important function compare them and advise on options for the achievement of the self-sufficiency policy in food production in Nigeria.

Methodology

The study was carried out in Edo and Delta States of Nigeria, an area where agricultural production is the mainstay of the citizens. Seven Local Government Areas from Edo State and nine from Delta were purposively selected for the study due to the preponderance of NGOs and cooperatives in the area compared to other parts of the states. A total of twenty NGOs and eighty cooperative societies involved in farm credit delivery were purposively selected from the list obtained from the state ministries of

commerce and industry and corporate affairs commission. Primary data were obtained through the use of a structured questionnaire administered through personal interview while the secondary data were obtained from the annual reports and monthly records of the institutions. Three analytical techniques were adopted in this study;
— The use of descriptive statistics involving means, percentages and frequency counts
— Some measures of financial analysis which involved the computation of subsidy dependence index (SDI) for both institutions in line with Yaron (1997).
— The use of some quantitative techniques, inferential statistics and the calculation of capital formation rates.

The SDI Model

The computation of the SDI was based on Yaron (1997) given as

$$SDI = \frac{S}{LP.\,n}$$

where
    S = Annual subsidy received by each organization calculated from
    S = A (M-c) + [(E.M) − P] + K
Where
    A = Organization's concessional borrowed funds outstanding (annual average no differentiation between long or short term loans)
M = interest rate the organization would be assumed to pay for borrowed funds if access to concessional funds were eliminated.
C = average annual concessional rate of interest actually paid by the organization on its average annual outstanding concessional borrowed fund.
E = Average annual equity of the organization.
P = Reported annual profit (adjusted for loan loss provisions and inflation).
K = The sum of all other types of annual subsidies received by the organization (such as partial or complete coverage of the organization's operational costs by the state or Federal Governments).
LP = Average annual outstanding loan portfolio of the organization
n = Average on – lending interest rate of the organization.

The financial ratio (SDI) gives a measure of the level of financial self sustainability of the microfinance organizations. The Subsidy Dependence Index (SDI) assesses and quantifies subsidy dependence of a financial organization which is a measure of self sustainability. An SDI of zero means the financial institution achieved full self-sustainability. An SDI of 100% indicates that the institution cannot sustain itself without subsidies and that a doubling of the average on-lending interest rate is required if subsidies are to be

eliminated. A negative SDI indicates that a financial institution not only fully achieved self- sustainability but that its annual profits less the equity charged at the approximate market interest rate exceeded the total annual value of subsidies, if subsidies were received.

CAPITAL FORMATION RATE

The capital formation rate was based on a crucial assumption that the ability to sustain the lending function would depend on the rate of capital formation which is to provide the re-investable funds.

The sustainability rate is therefore equated to the capital formation rate (Rc) computed from the equation below.

Rc_i =

$$\frac{\left(F_i + r\right)_{i=1} - D_i + C_{l_i} + C_{C_i} + r_{a_i}}{N}$$

Where:

R_{ci} = Rate of capital formation for period N by Institution
$Y_i\ F_i$ = Total funds received from all sources by institution
$Y_i\ r_i$ = Total interest charged on loans by institution y_i D_i = Total loans disbursed by institution y_i

C_{li} = Loan administrative costs for institution y which includes costs of printing loan forms, interest paid on borrowed funds, loan recovery/supervision costs and other costs.

C_{ci} = Overhead costs for loan administration by institution y_i

r_{di} = Total defaults by clients of institution y_i

The above computation is based on the expectation that total receipts less total disbursements and expenditure per time period would give the rate of capital building for the given period, i.e.

Rate of capital = Total receipts – total disbursements/Expenditure

Building per year   Time period in years

The numerator represents the re-investable surplus which is an indicator of sustainability. The above presentation suggests that there is no default, yet defaults cannot be ruled out in credit delivery hence the modification in the initial formula to reflect the amount of defaults. (r_{di}).

Results and Discussion

- **Socio-economic Characteristics of the Organizations:** The studied cooperatives were within the age range of five to thirty nine years with average membership strength of 60, involved in multipurpose activities with credit delivery as their main function.

The NGOs were within the age range of three to fourteen years, also involved in a wide range of activities with credit delivery as a very small segment of their operations, playing mainly an on-lending role.

- **Sources of Loanable Funds:** Two main sources were identified; they were the external sources from donors and loaning bodies and internal sources which were within the organisation's efforts. The analysis showed that all studied NGOs depended on external sources which were mainly international donors while the cooperatives depended solely on internal sources which were mainly contributions from members.

Loan Volume Assessment

The results showed that the NGOs had higher loan volumes than the cooperatives (Table 1) about 88% of their loan requests were met during the period while about 68% of loan requests were met by cooperatives. This may not be unconnected with the availability of funds from the NGOs external sources. The cooperatives however had a wider outreach in terms of individual beneficiaries but lower individual loan volumes.

Subsidy dependence indices (SDI) for the studied cooperatives and NGOs

The subsidy dependence analysis showed that all the studied cooperative societies were self-sustaining as the computation gave a subsidy dependence index (SDI) of zero. This was as a result of their internally generated revenue as no cooperative society received any form of subsidy from any source according to the information gathered. An SDI of zero means that the Cooperative Societies achieved full self-sustainability during the period in question, which can be translated to mean that they had no form of external financial assistance.

However, an average annual Subsidy Dependence Index (SDI) of 0.7642 (76.42%) was obtained for the NGOs. This indicates that if subsidies are to be eliminated, the present on-lending interest rate of the NGOs may almost be doubled (requiring about 76% increase) to sustain the credit delivery function. The implication of this is that the NGOs may face sustainability crisis if subsidies (i.e. the identified grants from donors) are withdrawn.

The SDI value which measures the degree of external funding of the organization is a good reflection of the importance of dependable sources of loanable funds for both institutions if they are to be relied upon as channels of credit delivery to farmers.

The over all interpretation of these findings in comparing the sustainability level of the credit delivery function of the cooperatives and NGOs is that whether external funding

Table 1. Loan Volume Assessment for NGOs and Cooperatives Cooperative NGOs.

Class of loan	Cooperatives			NGO		
	Average Loan request	Average Loan Approval	Average Loan disbursement	Average Loan request	Average Loan approval	Average Disburse-ment
<100000	2,400,000	2,272,000	2,272,000	4,500.000	4,500.000	4,500.000
101,000-200,000	4,550,000	3,500,000	3,500,000	10,000,000	9,000,000	9,000,000
201,000-300,000	5,500,000	3,000,000	3,000,000	7,000,000	4,800,000	4,800,000
301,000-400,000	Nil	Nil	Nil	5,000,000	3,500,000	3,500,000
401,000-500,000	1,500,000	1,000,000	1,000,000	5,000,000	4,500,000	4,500,000
501,000-600,000	2,000,000	2,000,000	2,000,000	3,500,000	3,500,000	3,500,000
601,000-700,000	Nil	Nil	Nil	4,580,000	4,000,000	4,000,000
701,000-800,000	3,500,000	1,700,000	1,700,000	Nil	Nil	Nil
801,000 and above	1,800,000	1,000,000	1,000,000	5,000,000	5,000,000	5,000,000
TOTAL	21,250,000	14,472,000	14,472,000	44,580,000	38,800,000	38,800,00
Percentages	NA	68.10	68.10	NA	87.70	87.70

Source: Survey Data 2005

Table 2: Correlation Coefficients for Capital Formation Rate and Its Determinants for NGOs and Cooperative.

DETERMINANT	CORRELATION COEFFICIENTS	
	NGOs	COOPERATIVES
(sources of funds)	0.912	Nil
(Motivation of members)	Nil	0.487
(Lending rate)	0.837	0.561
(Loan repayment rate)	0.832	0.768
(Savings rate by clients)	0.853	0.922
(membership participation index)	0.398**	0.915

Source: survey data, 2005.

• All NGOs had no motivation programmes

** Significant at 5%

All other coefficients are Significant at 1%. Cooperatives had no External Sources.

exists or not, the Cooperatives would have 100% sustainability level whereas the NGOs would have just about 25% which might be an indication of phasing out the credit delivery function from their programmes if subsidies are withdrawn.

Capital formation Rates (R_c)

The computed capital formation rates showed an average rate of 18.15% (0.1815) for the cooperative societies and 12.3% (0.123) for the NGOs. On the basis of the assumption earlier stated, the capital formation rate was equated to the sustainability rate of the lending institution as regards the credit delivery function, the sources of funds not withstanding. In line with this, the figures above indicate a slightly higher sustainability rate for the Cooperative Societies than the NGOs which also confirms the results of the SDI analysis. This may probably indicate higher reliability on the sources of funds

for the Cooperatives than those for the NGOs. These rates are however too low for both organization which indicates low sustainability in line with World Bank (1998).

Determinants of the Capital formation Rate

Major determinants of the capital formation rates for both organizations were the external sources of funds, lending rates, loan repayment rates, savings rate by members/clients, motivation of members and membership participation index. Correlation analysis between these determinants and the capital formation rate for each organization is given in Table 2. The results showed that external sources had the highest correlation coefficient for NGOs while savings rate and membership participation index (MPI) had high coefficients for the cooperatives. The implication here is that the capital formation rate depends highly on the external sources of

finance for the NGOs while for the cooperatives it depended on the willingness of members to save and participate highly in the cooperative activities especially in paying their contributions/savings.

Conclusion and Recommendations

The study looked at the sustainability rates of NGOs and cooperatives in farm credit delivery through their subsidy dependence indices and capital formation rates. Summarily, the findings were that, the cooperatives had an SDI of zero with 0.1815 capital formation rate, depending solely on internal sources with capital building relying mainly on savings by members and membership participation index. Whereas, the NGOs had 0.7642 SDI with a capital formation rate of 0.123 and relied mainly on external sources of loanable funds.

The paper therefore concludes that the sustainability rate is low and the cooperatives had an edge over the NGOs since they had a higher sustainability rate with zero SDI. It is therefore recommended that both organizations seek better strategies of building their capital. More avenues of internally generated revenue should be exploited to improve on their capital formation rates. It is equally recommended that some level of external funding may be needed by cooperatives to augment their capital formation to improve their loan volumes.

However, cooperatives may be recommended as a better channel of credit delivery to farmers in terms of ability to sustain the loan delivery function.

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