

Homogeneity in Group Membership Social Characteristics and Loan Recovery: Implications for Success of Formal-Informal Sector Linkage in Akwa Ibom State, Nigeria

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Abstract: The program of lending to farmers in groups in the formal-informal sector linkage introduced in Nigeria to boost lending to the agricultural sector under the Agricultural Credit Guarantee Fund Scheme has not been all success. In fact, group lending has been problematic since its inception, particular in the area of loan recovery. As the lenders continue to search for a satisfactory approach of ensuring satisfactory level of loan recovery this study assesses how homogeneity in social characteristics of group members relates with loan recovery among informal finance groups. The result shows that the self-help groups were heterogeneous in membership social characteristics. Loan recovery was not significantly affected by homogeneity in membership social characteristics instead; the amount of loans recovered was proportional to the amount of loans disbursed. However, loan repayment was generally better for young group members; members with small family size and those who spent few years to obtain formal education. Invariably, loan recovery would greatly be enhanced if group loan schemes embrace groups with younger and economically active members, members with small family size, members who spend fewer years to obtain formal education. Such groups must have existed for a sufficiently long duration and must have a manageable size.

Key words: Homogeneity, social characteristic, informal finance groups, loan recovery

INTRODUCTION

It is widely acclaimed that providing loans to small operators in groups guarantee high rate of loan repayment since it solves the problems of adverse selection, moral hazard, auditing cost and loan contract enforcement (Adams, 1990; Udry, 1990; Stiglitz, 1990; Aryeety and Udr, 1997; Oludimu, 2000; Ghattak and Guinane, 1998; Reinke, 1998). Unfortunately group lending schemes in Nigeria seldom achieve satisfactory result. Apart from being invaluable in ensuring that the formal financial institution continue to supply loan-able funds to operators of that sector under the Agricultural Credit Guarantee Fund Scheme (ACGFS) available. Existing literature confirms that the formal-informal sector linkage in Nigeria achieve only 63-70% loan repayment on the average and it is common to have groups disband after few years of obtaining loans due perhaps to not being able to repay group loans. This scenario whereby members disband after few years of obtaining loans has brought about the proposal that the problem of repayment of loans would be a thing of the past if groups that had existed overtime are enlisted in the program as against

group of between 5 and 10 persons formed for the purpose of the linkage.

Several factors can result in the inability of groups to repay loans such that they disband after few years of obtaining loans. One of such factors is non-homogeneity in membership social characteristics. In fact, when groups are organized with non-homogenous members, the potential for default is always high and the chance that the group will stay together over time is low (Devereaux and Fishes, 1993). Homogeneity in membership social characteristic is a desirable attribute of Self-help groups, particularly those that provide financial services to members. This is particularly so because it influences information flow among members of informal groups. In fact, accessing the available information and interpreting its implications is easier with individuals who have relatively better degree of homogeneity in membership characteristic (Slover, 1991). Homogeneity in membership characteristics engender mutual trust, enhance group cohesion and the we feeling which make group members to show loyalty in undertaking group activities and helps mollify the problem of informal asymmetry (Oludimu

1983; Devareaux and Fisher, 1993; Slover, 1991; Nagaraja *et al.*, 1999). Consequently, the more homogenous the group members are in the social characteristics, the more intensive the social ties and trust within the group and the higher the groups endowment of social capital (Woolcok, 1998). In fact, because of the closely-knit relationship that is known to exist among members and officials of homogenous groups the problem of misappropriation of fund by the officials is known to be rare (Jerome, 1991) in such groups. This study examines the nature of social homogeneity in Group membership characteristics, among informal groups and how it impacts on the efforts of groups to recover loan. It analyses the impact of some social characteristics on the ability of members to repay loans and assess factors that impact negatively on the groups' loan recovery drive.

MATERIALS AND METHODS

Study area, sampling and data collection: This study focused on the informal finance groups in Akwa Ibom State, the cradle of wetland agriculture in Nigeria. The state occupies an area of approximately 7,081 km² between latitude 4°33' and 5°33' North and Longitude 7°25' and 8°25' East. The State is generally characterized by a wide expanse of flood plain and swampy terrain in the southern local government areas while the northern local government areas are hilly. By the 1991 population census it has a population of over 2.4 million people; of which 80% work in the agricultural sector. Agriculture in the state is characterized by sole proprietorship with some form of specialization. An individual crop farmer concentrates on the practice of a mixed cropping whereas a pig or poultry farmer concentrates on pig or poultry production. By its location, Akwa Ibom State is within the tropical region with two main seasons. These are the rainy season and the dry season. Although most of the literature indicates that the area has about 9 months of rainy season and about 3 months of dry season, rain falls almost all through the year. According to the Meteorological Division of the Federal Ministry of Aviation, Uyo, rainfall is usually heavy and it ranges between 2,400 mm along the coast to about 2,000 mm on the Northern fringe.

The vegetation consists of the mangrove swamp forest along the coastal areas and thick rain forest in the hinterland. The soil is basically sandy loam, which favors a wide variety of agricultural activities including crop and livestock production. Common crops and livestock raised include cassava, cocoyam, maize, melon, oil palm, poultry, rubber, swine, vegetables and yam.

It is also suitable for wildlife conservation, fish farming and artisanal fishing.

Generally, agriculture is undertaken on full time or part time basis. In the coastal areas fishing is the primary occupation of the people. They also undertake various trades as supplementary occupations. The majority of farming and fishing activities are done in small scale and the informal financial market is a significant source of loans available to the operators and the formal financial institution who provide financial services to the small operators in the agricultural sectors do so under the formal-informal sector linkage program introduced by the Central Bank of Nigeria under the Agricultural Credit Guarantee Fund Scheme.

This study used principally primary data. A stratified random sample of 17 informal finance groups and 145 members of these groups were interviewed during a survey that was undertaken with the help of trained enumerators. Data analysis utilized descriptive statistical tools and the multiple regression analytical technique.

The empirical model: Two regression models were estimated in this study. In the first model, it is postulated that the percentage loan repayment by group members, (L) is a function of Age (A), of the respondent, in years, his/her Family size (F), number of years spent to obtain formal Education (E) and the amount of money borrowed (N) in Naira.

Consequently, the mathematical model is expressed as

$$L = f(A, F, E, N) \quad (1)$$

The apriori expectation is that

$$L = a_0 + a_1 A + a_2 F + a_3 E + a_4 N + e$$

In the second regression model it is postulated that the amount of Loans Recovered, (L_R) by a group is a function of the group Membership strength (M), Duration of group existence (D) in years, amount of Loan disbursed (L_d) in Naira and the group social Homogeneity index (H). Homogeneity in membership composition is commonly described in terms of key social characteristics on which moral bond, mutual trust, social pressure and familiarity are predicted (Slover, 1991; Olomola, 2000). Consequently, social Homogeneity index (H) was measured by summing up the coefficient of variation for some key social variables-age, education and family size for each group. The mathematical form of the model is given as:

$$L_R = g(M, D, L_d, H) \quad (2)$$

The apriori expectation is that

$$L_R = b_0 + b_1 M + b_2 D + b_3 L_d + b_4 H + e$$

Where, a_0 and b_0 are constants, a_1, a_4 and b_1, b_4 are the parameters and f and g shows that the functions are continuous and differentiable.

RESULTS AND DISCUSSION

Characteristics of groups and members: The informal finance groups in the study were those that had existed for a minimum of three years and a maximum of twelve years. These groups give loan to members in durations as short as three months and as much as 6 months and they achieve about 85% loan recovery, on the average. Table 1 shows the mean characteristics of the informal finance groups. According to this table, membership strength was 17 members on the average. The smallest group had 15 members while the largest group had 25 members. The mean number of group meetings per month was 2 times. However, the minimum number of meetings was once per month and the maximum number of meetings was four times per month. The mean age of the group members was 35 years, with the youngest member aged 26 years while the oldest member was 52 years old.

The informal finance groups serve members in 3 capacities, namely: Giving loans to members, settlement of dispute involving members and mounting educational programs to enhance economic activities of members.

However, the most popular service of the informal groups to members is the provision of loans.

These groups have criteria for eligibility of members to obtain group loans, packages of incentives that are given to members who repay loans promptly, loan monitoring strategies and a set of non-financial sanctions that are adopted to ensure that members behave predictably

Table 2 shows the nature of loan management, characteristic of the informal finance groups. According to this table, the most popular eligibility criterion for obtaining loan is being a group member, the most popular loan repayment incentive is the access to more loans and the most popular loan monitoring strategic is to ensure that loan beneficiaries repay interest on loan during the monthly meetings. However, 82.35% of the groups use access to more loans on prompt repayment whereas only 17.65% of the groups prefer to entice members to repay loans with the promise to elevate members to key positions in the group if they performed creditably in loan repayment throughout the year. The majority of the groups (82.35%) monitor loans given to members by ensuring that members pay interest on loan during the monthly meetings whereas only 17.65% of the groups prefer members to present the principal and interest during monthly meetings. Apart from these monitoring strategies, the groups employ non-financial sanctions like confiscation and sale of valuable property, arrest of

Table 1: Mean characteristics of the finance groups

Charateristics	Mean	Minimum	Maximum
Membership strength	17	15	25
Number of meeting per month	2	1	4
Age of members in years	35	26	52
Group Existence (Duration)	4	3	12
Percentage loan Recovery	84.6	71.0	100
Loan size in Nora	N21,470	10,000	40,000
Duration of loan in Months	3.7	3	6
Social Homogeneity Index	99.03	44	279
Years spent to obtain formal education.	2	2	17

Source: Survey data 2006

erring member by the law enforcement agents, complaining to the village head, denial of subsequent loan and demotion from key position in the group. Of these measures, suspension from the group is the most popular sanction whereas denial of next loan and demotion from key position is the least utilized non-financial sanction (Table 2).

The socio economic characteristics of the members of these informal groups, which is shown in Table 3 confirms that group membership composition was generally with no bias to level of education, gender, marital status, or sex, generally, members were either married, single, divorced or widowed. Table 3 shows that 20% of the group members were single, 55.86 % were married, 13.10% were divorced and 11.04% of the respondents were widowed. The majority of the group members were farmers (59.31%).

However, 31.80% of the respondents were traders whereas 6.89% were primary school teachers. Although the mean family size of the group members is 4 persons, only 8.97% of the respondents had below 3 children and about 9.0% had more than 8 children. However, the level of education of the respondents was above average. This is evident from the fact that 54.48% of the respondents had attained tertiary education, 15.86% attained secondary education while only. 29.66% of them had attained primary education

Membership characteristics and loan repayment: The nature membership characteristic is known to influence group members' ability to meet their financial obligation to the groups. In this study the multiple regression analysis was used to analyze the effect of some social variables on the ability of members to repay group loans. The resulting regression equation is as follows:

$$L = 9.49-11E-02 A-1.10E-02F 4.22E-03E + 2.25E-05N$$

$$t_0 = 17.28^* \quad t_a = -0.82 \quad t_f = -0.322 \quad t_e = 0.219 \quad t_{1N} = 5.04^*$$

$$R^2 = 25\%, \text{Adj. } R^2 = 22\%, \text{ St. Error of estimate} = 0.749 <$$

$$F\text{-value} = 794^*$$

[* = Significant at 1% level, two-tailed test.].

Table 2: Operating characteristics of informal finance groups

Group activities	FREQ	(%)
1. Give loan to members	123	84.83
2. Settlement of dispute	9	6.21
3. Group educational programs	13	8.97
Eligibility criteria		
1. Must be a group member.	14	82.35
2. Must be honest and sincere to the group.	3	17.65
Monitoring strategy		
1.1. Payment of loan interest during monthly meeting.	12	76.47
2. Presenting the principal and interest during monthly meetings.	5	33.52
Incentive		
1. Access to more loans.	14	82.35
2. Elevation to key position in the finance group	3	17.65
Non-financial sanctions		
1. Suspension from group	10	58.82
2. Confiscation and sell of property.	8	47.06
3. Arrest by law informants agent	7	41.18
4. Report to village head	7	41.18
5. Denial of next loan.	5	29.41
6. Demotion from key position in the Group.	4	23.53

Source: Field survey data 2006

Table 3: Characteristics of group members

Marital status	Frequency (n = 145)	(%)
Single	29	20.00
Married	81	55.86
Divorced	19	13.10
Widowed	16	11.04
Sex		
Male	88	60.69
Female	57	39.31
Education		
Primary	43	29.66
Secondary	23	15.86
Tertiary	79	54.48
Family Size (mean = 4)		
0-2	13	8.97
3-5	85	58.62
6-8	33	22.76
9-11	12	8.28
12-14	2	1.37
Occupation		
Farming	86	59.31
Trading	49	31.80
Teaching	10	6.89
Social homogeneity index		
Below 50	1	5.88
51-100	9	52.94
101-150	5	29.41
Above 150	2	11.76S

Source: Survey date 2006

Although, this result shows that the explanatory variables explained 25% of the total variation in the percentage loan repaid by the group members, the F value confirms that the explanatory variables included in the model were relevant in estimating the model. However, this result indicates that age, family size and number of years spent to obtain formal education were not significant in their effect on the percentage of loans groups members repaid. Instead, it is only the amount of money taken as loan that had significant effect on the amount of loans the members repaid. This implies that group members have the will to repay loans irrespective of their age, family size and educational status.

However, loan repayment was better for younger group members, members with smaller family sizes and for members that spent fewer years to obtain formal education. These implies that the younger group members are economically active and can work tirelessly to earn more income to repay loans promptly, where as, the smaller family sizes connotes low family expenses, which allows income to be available for use in servicing group loans. On the other hand, when one considers the proportion of respondents that actually attained the tertiary, secondary and primary education, it becomes clear that respondents that spent fewer years to obtain formal education would include those that obtained primary education, secondary education and perhaps few that may have attained tertiary education with fewer years. Ideally for one to spend more years than necessary in pursuit of higher education portrays certain inadequacies in the individual, which translate into negative traits in the will to repay group loans. On the other hand, spending more years to obtain formal education implies that the individual has acquired higher education, then it becomes clear that the more educated members of informal groups are the more problematic in loan repayment.

When one consider the magnitude of the coefficient, it is clear that the amount of loan obtained is the most important determinant of the amount of loan repaid. This is closely followed by the number of years spent to obtain formal education, age of the respondent and then the family size.

Effect of social homogeneity on amount of loans recovered by informal finance groups: The multiple regression analysis was used to analyze the effect of the extent of homogeneity in the social characteristics of the group members on the ability of the group officials to recover loans.

The result of the multiple regression analysis as follows:

$$\begin{aligned} \ln LR &= 11.3 - 5.78E-03M + 323E-02D \\ &\quad + 2.72E-06L_D - 4.76E-04H \\ t_0 &= 31.10^* \quad t_m = -0.41 \quad t_D = 1.42 \quad t_{L_D} = 12.23^* \quad t_H = -0.53 \\ R^2 &= 93.4\%; \text{Adj } R^2 = 91.2\%; \text{F-value} = 42.69^* \\ \text{Standard error of Estimate} &= 0.23 \\ [* &= \text{Significant at 1\% level, two-tailed test.}] \end{aligned}$$

This model shows that the explanatory variables explained 93% of total variation in the amount of loan recovered by the Informal Finance Groups, the F-value was significant at one percent confirming the adequacy of the explanatory variable included in the model and the standard error of the estimate was only 23%. When one considers the magnitude of the coefficients, it is clear that the social homogeneity index is the most important parameter that enhances group loan recovery. This is closely followed by the amount of money disbursed to members as loans. However, it is only the amount of loans disbursed that had significant effect on the amount of loans repaid. The other explanatory variables, including the social homogeneity index were of no significant effect on the amount of loan recovered. The non-significance of the social homogeneity index implies that the level of social homogeneity among the existing informal finance groups was of no significant effect on loan recovery. More so, against the apriori expectation, the membership strength and social homogeneity index were negatively related to the amount of loan recovered by the Informal Finance Groups. This implies that, the percentage of loans recovered reduces as the groups' membership strength increases and as the social homogeneity index increases. However, the duration of group existence and the amount of loans disbursed were positively related to the amount of loans recovered by the groups. This implies that the older and more experienced groups do better in loan recovery comparatively.

CONCLUSION

Efforts are continuously being made to ensure the performance of agricultural loans made under the scheme. Only recently there has been a suggestion that only existing informal finance groups would ensure the success in loan recovery in the formal informal sector linkage. In this study, the empirical model postulated that the percentage loan repaid increases with the age of the farmer due to the disposition of the older members to own more resources than the younger ones; increase in family size due to the fact that existing literature says that in Africa, people prefer larger family sizes since they provide adequate labour for agricultural purposes; and the more educated people are the more likely they are to repay

loans taken, since the more years spent to obtain formal education is believed to culminate in better skills, which assist them do better in their chosen business comparatively. Unfortunately, group members with small family size, actually performed better in repayment of group loans. In fact, loan repayment is more effective among young members of the groups and members with small families could easily muster their finances to repay loans; members who spent fewer years to obtain formal education could repay their loans faster; and the amount of loans repaid was proportional to the amount of loans obtained. On the other hand, this study confirms that homogeneity, as a social characteristic is important for the success of Informal Finance Groups in loan recovery. Unfortunately, the groups are not homogenous in membership characteristics with a mean Social homogeneity index of 99.3. It thus follows that these groups operate with varying degree heterogeneity in membership social characteristics. However, the non-significance of the parameter estimate clearly confirms that the Informal finance groups assume away the need to have satisfactory homogeneity in membership social characteristics.

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