

Social capital participation levels and determinants among farm households in Enugu State, Nigeria

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Abstract

The study analyzed social capital participation levels and determinants among rural farm households in Abia State of Nigeria with specific focus on identifying and classifying types of local networks in the study area, assessing level of social capital participation among rural farm households and determining factors influencing level of social capital participation among rural farm households. Multistage random sampling technique was adopted in selection of 160 households as respondents from whom data were elicited using semi-structured and pretested questionnaire. Analysis of data was done using frequencies, percentages, 5 point likert scale and probit regression technique. Results showed that religious meetings, Non-Governmental Organizations (NGOs), age grades, gender-based groups, dance groups, parents/teachers association, village associations, cooperative societies, Fadama groups, farmers associations, self-help groups and trade associations were major types of local networks in the area. The level of recruitment of new members and rotation of leadership among the social groups was below optimal level. The probit analysis result showed that mode of fund generation, age, gender, marital status and primary occupation had a significant influence on the level of social capital participation among the rural farm households. It is therefore recommended that members of farm households should be encouraged to form and participate in cooperatives were opportunities for the access to social capital abound.

Keywords: Farm households, local institution, participation, social capital.

Introduction

Social integration and linkages are important intra and inter-group relationships which constitute an important source of social capital; and this can have considerable influence on group performance. A number of farmers come together with unifying interest of improving their occupational operations and hence livelihood and form a group or institution within their village or community levels. The motivation and the unifying interest amongst members in such group suggest like-mindedness and potential to work for and even help each other absorb variability in personal income and other economic shocks (Anyiro *et al.*, 2014). Many of these local institutions and groups are social, others are economic while yet a good number serve both social and economic purposes in livelihood of their members. When the groups are social groups, they help in creating social capital which among other assets includes institutional identity, relationships within the group, members' attitudes, and values that govern interactions among them as a people. These contribute to economic and social development of the communities (Grootaert and van Bastelaar, 2001).

Social capital stands for the ability of actors to secure benefits by virtue of membership in social networks, groups or other social structures. Social capital therefore holds strong position to confront poverty and vulnerability (Schafft and Brown, 2000) and share beneficial information (Rauch and Casella, 2003), crucial to understanding economic

performance, reducing transaction costs, providing contract enforcement, enabling credit constrained households access to funds, fostering adoption of new production technologies and more importantly, providing avenues for risk sharing (Isham, 2002).

Despite these significant roles of social capital, West African countries, including Nigeria are very weak in terms of popular grassroots organizations (Arokoyo, 1998; Akpabio, 2008). A lot of local institutions exist in most rural areas of the country and their inputs are being fervently sought to help improve development programmes organized by government and international non-governmental organizations which are targeted at rural farmers, but their inputs remain unfelt because of low participation in social networks. Household's participation in social network provides them the opportunities to be actively involved in decision making process and offer them an effective means of bringing about change in their way of life in terms of economic well-being and adoption of new technologies (Singh, 2009). Empirical evidence has indicated that regions and countries with relatively higher stock of social capital seem to achieve higher levels of growth and welfare (Rose, 2000).

There has been little or no consideration for the development of social capital or mechanism to enhance group participation in Nigeria. The absence of such organizations and the weakness of existing ones largely disenfranchise the households from participating in the decision making process of interventions and issues that affect their welfare

(Okunmadewa *et al.*, 2005; Yusuf, 2008). It is therefore crucial to understand the levels and factors influencing level of social capital participation. Consequently, this study was tailored to identify and classify the types of local networks in the study area; assess level of social capital participation among rural farm households in the area; and determine factors influencing level of social capital participation among rural farm households in the study area.

Material and Methods

The study was carried out in Enugu state. The state was created in 1991 and is located in the South-East geo-political zone of Nigeria. Enugu State is bounded in the North by Kogi and Benue States, in the East by Ebonyi State, in the South by Abia State and in the West by Anambra State. The state is located between latitudes $58^{\circ}50'$ and $78^{\circ}01'$ north of the Equator and longitudes $68^{\circ}50'$ and $78^{\circ}55'$ east of the Greenwich Meridian. The state comprises of 17 Local Government Areas (LGAs) with a population of 3.3 million people at a growth rate of 3% and a population density of 360 persons per square kilometre (NPC, 2006).

Agriculture contributes the largest share of the state's GDP while a greater percentage of her citizens derive their incomes and livelihoods from agriculture. The farmers rear livestock and produce a wide variety of staple crops (cassava, yam, cocoyam, maize, melon, fruits and vegetables). Livestock species reared in Enugu State include cattle, sheep, goats, pigs and poultry

A multistage random sampling technique was adopted in the selection of respondents for this study. In the first stage, four LGAs namely Nsukka LGA, Awgu LGA, Enugu East LGA and Ezeagu LGA were randomly selected from the 17 LGAs in Enugu state. Secondly, two communities were chosen at random from the selected LGAs. This gave eight communities that were selected. The selected communities were Obukpa, Opi, Ikwera, Mgbowo, Ugwogo, Emene, Oghe and Imezi- Owa. From each of the chosen communities, a list of local institutions was obtained from natives/residents. This list formed the sampling frame from which 4 local institutions were selected at random, thus giving a total of thirty two local organizations. The last stage of sampling involved the random selection of five farm households in each of the selected local institutions. In all, a grand total of one hundred and sixty households were selected for the study. Only the household heads of each selected household were interviewed.

Primary data elicited with the use of pre tested and semi structured questionnaire that was personally administered was employed for analysis. Data collected were analysed both descriptively and inferentially. Frequency tables and percentages were used to identify and classify the types of local

networks. Mean score obtained from a 5 point likert scale was used to assess level of social capital participation among rural farm households in the area while, factors influencing level of social capital participation among rural farm households was determined with the aid of probit regression model.

A five point likert scale was adopted to assess social capital participation levels of rural farm households. The level of social capital participation was measured in terms of seven elements as adopted by Akpabio (2008), viz. attendance at meetings, financial and material contributions, recruitment of fresh membership, participation in group projects, official position held in the group, committee membership and duration of membership. A household's total level of social capital participation score was obtained by the summation of respondent's responses to different questions raised on each of the aforementioned elements to which different weights were assigned.

The total farm households' participation level raw score for the number of social capital elements identified was obtained using 5 point Likert scale as presented according to Fakoya and Daramola (2008):
Social capital elements = $5(N_1) + 4(N_2) + 3(N_3) + 2(N_4) + 1(N_5)$

The mean was calculated for each of the social capital elements:

$$\text{Mean} = \frac{5(N_1) + 4(N_2) + 3(N_3) + 2(N_4) + 1(N_5) \dots}{S}$$

Where;

N = Number of participating farm households

S = sample size of farm households

The following scaling procedure following Nwaobiala (2013) was adopted: very high = 5; high = 4; moderate = 3; low = 2 and very low = 1. The values of the five responses were added and further divided by 5 to obtain 3.0, which was regarded as the mean participation level. Farm households with mean score of 3.0 and above were regarded as having high level of social capital participation, while farm households with mean score of less than 3.0 were regarded as having low level of social capital participation.

The probit regression model was used to analyse factors influencing social capital participation level. The model is appropriate when the response takes one of two possible values representing high level of social capital participation and low level of social capital participation. The model was adopted as used by Gujarati (2003)

$$P_i [y=1] = [Fz_i]$$

Where

$$Z_i = \beta_0 + \beta_1 X_{1i} + e$$

$$Y_i = \beta_1 + \beta_2 X_{2i} + \dots + \beta_k X_{ki} + \mu$$

Y_i^* is unobserved but $Y_i = 0$ if $y_i^* < 0$, if $y_i^* \geq 0$

$$P (Y_i = 1) = P (Y_i^* \geq 0)$$

$$P (\mu \geq -\beta_1 + \beta_2 X_{2i} \dots - \beta_k X_{ki})$$

Where $i = 1, 2, \dots, 160$

Y_i^* = an underlying latent variable that indexes social capital participation level

Where Y_i = social capital participation level (dichotomized with mean likert nominal score; where ≥ 3.0 = high=1, < 3.0 = low=0)

β_1 = Constant intercept

$\beta_2 - \beta_k$ = Unknown coefficients value of factors

$Y = f(X_1, X_2, X_3, X_4, X_5, X_6, X_7, X_8, X_9, X_{10}, e_i)$

X_1 = mode of funds generation (internal = 1, otherwise = 0)

X_2 = number of other groups affiliation (number)

X_3 = Number of years spent in Local Organizations (LOs) (year)

X_4 = age of respondent (years)

X_5 = mode of entry and exit (free = 1, otherwise = 0)

X_6 = gender (male = 1, female 0)

X_7 = marital status (D =1 if Married, 0 = Otherwise)

X_8 = primary occupation (D = 1 if Farming, 0= otherwise)

X_9 = number of years in community (years)

X_{10} = membership of religious organization (D =1 if household belong to a religious body, 0 = Otherwise)

Results and Discussion

Identification and classification of local institution types

Identification of institutions has been recognized as crucial since it is the starting point of endogenous development processes (CIKOD and UCC, 2004). The types and distribution of these institutions as observed amongst the rural farm households in Enugu State, Nigeria is shown in Table 1. The local institutions as shown in the table are religious meetings, Non-Governmental Organizations (NGOs), age grades, gender-based groups, dance groups, parents/teachers association and village associations. Others are cooperative societies, Fadama groups, farmers associations, self-help groups and trade associations.

Religious meetings embraced the largest proportion of the households' (66%), indicative of the fact that they are predominantly religious (Christians). This finding is in line with Emerole *et al.* (2013) who obtained similar result in Abia State. The local institution that had the least household membership in the area was NGOs involving 3% of rural farm households in the study area. This is probably because the study was conducted in the rural areas of the state where cultural, farming and religious activities predominate and attract more membership. Also, dance group, parents/teachers' association and fadama groups accounted for less than 20% members of the rural farm households in the study area. Age grades (60%) and farmers association (56%) involved not less than 50% of members of the households sampled in the state. Household membership in village associations (46%), cooperative societies (34%), dance groups (13%), age grade (60%), and gender based groups

(41%) reflected level of awareness, interests and cultural values attached to these local institutions in the state.

Level of social capital participation

Seven participation elements adopted by Akpabio (2008), viz. attendance at meetings, financial and material contributions, recruitment of new membership, participation in group projects, official position held in the group, committee membership and duration of membership were identified and studied. The summary statistics for each of these dimensions is presented in Table 2.

The distribution of the farm households according to their level of participation in group meetings is shown in Table 2. It is observed that 42% of the rural farm households in the study area recorded very high attendance to local institutions' meetings while 16% of them had very low participatory level in their group meetings. The Total Participation Raw Scores (TPRS) for meeting attendance was 728 with a mean value of 3.57. Since the midpoint score (3.0) is less than the calculated (3.57), it implies that the farm households in the area actively participated in local group meetings. This has implication on information dissemination. The dissemination of information to members of local institutions can only be easier when members of such associations attend meetings.

The distribution of the respondents according to the level of participation in financial and material contributions in their local institutions is also shown in Table 2. These financial contributions include payment of membership dues, marriage levies, burial levies, project/development levies, among others. The result shows that a good proportion (49%) of the rural farm households in the study area had very high participation level in terms of financial and material contributions in their local associations with Total Participation Raw Scores (TPRS) of 806 and mean value of 3.95. Since the midpoint score (3.0) is less than the calculated (3.95), it implies that the rural farm households actively participated in financial and material contributions in their local institutions. This result is not surprising because most rural farm households participate in these associations for economic gains.

The distribution of the respondents according to the level of participation in recruitment of new members in their local institutions is shown in Table 2. 38% of the respondents had very low participation level in the recruitment of new members to their group. The total participation raw scores (TPRS) for recruitment of fresh members was 541 with a mean value of 2.65. Since the midpoint score (3.0) is greater than the calculated (2.65), it implies that the rural farm households did not participate in recruitment of fresh members to their local institutions. This also has implication for the group sustainability.

The distribution of the respondents according to the level of participation in group project is also presented in Table 2. The table revealed that a fair proportion (39%) of the rural farm households in the area had very high participation level in their local associations' group project. The TPRS for group project was 676 with a mean of 3.31. The mean score was greater than critical value of 3.0 (which was the midpoint) and implies that the farm households participated actively in group projects. This has implications on the sustainability of the group. This result is not surprising as the study observed that most of the group projects embarked by the households were capital raising projects such as investment in the purchases of hireable equipment, light implement and durables such as canopies, plastic chairs, grinding machines, constructions of cold room, to mention but a few. 41% and 38% of the respondents had very low participation level in holding of official executive position and committee membership in their local institutions. Mean values of 2.63 and 2.78 were obtained for participation in holding of official executive position and committee membership in local institutions respectively. Since the midpoint score (3.0) is greater than the calculated mean values (2.63 and 2.78), it implies that the rural farm households did not participate in holding of official executive position and committee membership in local institutions in the study area. Participation in committee membership and holding of official executive position increases the respondents' participation in the group's decision making. According to Balogun *et al.* (2011) associations which follow a democratic pattern of decision making are more effective than others. The posture of this result could be attributed to the fact that married farm households with children may not be relieved of some filial responsibilities at home and may therefore not be able to devote more time to the obligations and commitment in leadership position of their group. This is in line with Akpabio (2008).

Lastly, 31% of the farm households recorded very high participation level in membership duration. The Total Participation Raw scores (TPRS) for membership duration was 725 with a mean of 3.55. The mean score was greater than critical value of 3.0 and implies that the farm households participated actively in membership duration. This has implications on the benefits a member obtains from the group.

Factors influencing social capital participation levels among the farm households

The probit regression estimate of factors influencing the levels of social capital participation among the farm households in Enugu State is presented in Table 3. Overall the model posted a log likelihood value of -33.708, a pseudo R^2 value of 0.327 and a goodness of fit chi-square of 32.69

which is statistically significant at 1.0% alpha level. In the model five out of the ten explanatory variables were statistically significant at given levels and these are mode of fund generation, age, gender, marital status and primary occupation.

The coefficient (0.139) of mode of fund generation had significant positive impact on farm households' level of social capital. This coefficient was significant at 1.0% alpha level and inferred therefore that a higher participation level in social capital occurs in local organization with internally generated revenue sources. This particular view had been earlier upheld by the World Bank (1997) declaration that most successful groups are those in which a larger proportion of lending capital is derived from group members' savings. Esman and Uphoff (1984) had also posited that local resources generation inhibits free ridership and also reduces cases of fund embezzlement and failure to repay financial loan packages. It may be finally inferred that local organization that derive the bulk of their material and financial resources from members and within their operating environment, attract higher participation levels of social capital from their members, because of membership desire to safeguard their investments. This result however, is in agreement with *a priori* expectation.

Specifically, the coefficient (0.900) of age of the farm households heads was positive and significant at 5% alpha level. The positive sign of this coefficient shows that as the households advance in age, the higher the level of participation in the operations and activities of local institutions. By implication, the relatively older individuals are more liable to achieve higher levels of social capital participation in local organizations. This is in line with *a priori* expectations and with the findings of Akpabio (2008) who obtained a positive relationship between age and social capital level in Akwa Ibom State. These findings may be attributed to the reason that, an older individual is expected to be more focused in his/her desires and would not affiliate for mere fun. The individual therefore ensures that the purpose of affiliation is achieved through increased participation in group activities. This result is further supported by theoretical argumentation of Halman and Luijkx (2006) and Van-Oorshot *et al.* (2006) that older people are more cooperative and trusting and attain highest level of social capital because they are raised and socialized in less secure circumstances, where they had to rely on each other. This result however is in contrast with Fidrmuc and Gerxhani (2004) that older individuals tend to have more limited level of social network.

The coefficient (1.639) of gender was positive and statistically significant at 1% probability level. This implies that the male farm household heads achieved higher levels of social capital participation level than female household heads. The result agrees with Christoforou (2005) that women tend to have

significantly lower levels of overall civic participation in social networks than males. However, the result is at variance with Fidrmuc and Gerxhani, (2004) assertion that women are more trustworthy with higher levels of participation in social networks.

The coefficient (0.468) of marital status was positive and significant at 1% probability level. Holding other factors constant, this implies that the married class achieved higher levels of social capital in local organizations. This implies that the married class was more involved in the operations and activities of local organizations. This is contrary to *a priori* expectation and Bolin *et al.* (2003) that married couples have less level of social capital than average, probably because a rise in households’ group membership is at the expense of familial obligations within the household, as family life takes time and decreases the need for outside social relations. However, Christoforou (2005) has found

that marriage increases the likelihood of being a member of a group and increased social participation in local organization for both men and women.

The coefficient (0.312) of primary occupation of the farm households was positive and significant at 1% alpha level. This implies that a higher level of Social Capital occurs in local organization with households who take farming as their primary occupation. This may be due to the fact that households with farming as their primary occupation tend to be more engaged in social networks probably because they have more time for informal socializing. This result therefore conforms to *a priori* expectation and disagrees with Christoforou (2005) and Fidrmuc and Gerxhani (2004) that a person facing formal employment (white collar jobs) has a strong incentive to participate in social groups (both informal and formal networks), partly on account of the trust he/she tends to develop towards society.

Table 1: Types and Distribution of Local Institutions to which farm Households belong

	Type of local institution	*Number of household in local institutions	Percentage of sampled households
(n – 204*)	(i) Service-Based		
	Religious meeting	46	66
	NGOs	2	3
	Age grades	42	60
	Gender-based group	29	41
	Dance groups	9	13
	Parents/Teachers association	9	13
	Village associations	32	46
	(ii) Production:		
	Cooperative societies	24	34
	Fadama groups	11	16
	Farmers associations	39	56
	Traders associations	18	26
Self help group	22	31	

Source: Field survey, 2014; *Multiple responses observed

Table 2: Social Capital participation levels of the farm households.

Social capital participation	Very high (5)	High (4)	Moderate (3)	Low (2)	Very low (1)	Total	Mean
Meeting attendance	430 (42)	136(17)	79(13)	52(13)	32(16)	728	3.57
Financial and material contributions	495(49)	156(19)	90(15)	58(14)	7(4)	806	3.95
Recruitment of fresh members	95(9)	256(31)	75(12)	38(9)	77(38)	541	2.65
Participation in group projects	400(39)	96(12)	72(19)	64(16)	44(22)	676	3.31
Official executive position	120(12)	244(30)	54(9)	36(9)	83(41)	537	2.63
Duration of membership	315(31)	184(23)	177(29)	26(6)	23(11)	725	3.55
Committee membership	250(25)	124(15)	75(12)	42(10)	77(38)	568	2.78

Source: Field survey, 2014.

Decision Rule 3.0 and above = Participation; Decision Rule < 3.0 = no participation.

Figures in parenthesis are percentages

Table 3: Binary probit regression coefficients of factors that influenced social capital participation amongst the farm households in Enugu State, Nigeria.

Variables	Estimated coefficients	Standard errors	Z-test	P>/z/
Constant	-10.201	7.188	-1.42	0.156
Mode of Fund generation	0.139***	0.037	3.77	0.000
Number of other groups affiliation	0.065	1.497	0.04	0.965
No of years in Local organizations	-0.402	0.545	-0.74	0.461
Age of respondents	0.900**	0.437	2.06	0.040
Mode of entry and exist	-0.2175	0.669	-0.32	0.746
Gender	1.639***	0.601	2.72	0.006
Marital status	1.310***	0.433	3.02	0.002
Primary occupation	0.697***	0.249	2.80	0.005
Number of years in community	0.440	0.490	0.90	0.370
Membership of religious body	-0.250	0.213	-1.18	0.239
Pseudo R ²	0.327			
Log likelihood	-33.708			
Chi ² (12)	32.69***			

Source: Computations from Field Survey data, 2014.

***, **, statistically significant at 1% and 5% risk levels, respectively.

Conclusion

The study analyzed social capital participation level and determinants. The study has shown that level of recruitment of new members and rotation of leadership among the social groups was below optimal level and that mode of fund generation, age, gender, marital status and primary occupation had significant influence on the level of social capital participation among the rural households. It is therefore recommended that members of farm households should be encouraged to form and participate in cooperatives where opportunities for the access to social capital abound. Also, since sustainable group development is predicated on good leadership, leadership positions within local institutions should be made to rotate among the broad spectrum of longer serving members. This will ensure greater commitment to group success and sustenance by a greater number of members

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