

Social Capital Formation: The Missing Link Among Food Crops Farmers in Osun State, Nigeria

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Abstract

Nigeria situation on food production is precarious as its significant percentage is left with only the bilious taste of insufficiency both in food production and consumption, especially among rural households. They are most vulnerable to this dwindling situations; this dirge persists till today. There is growing evidence that social capital is an additional input in the household's production function and as such, element for sustainable development due to the roles it plays in managing risks, shocks, and opportunities for increased food crop production and improving household welfare. It has been observed that not all social capital leads to growth or development. Some social capital may be beneficial while some may be deleterious depending on the motives behind its formation. Data collected from 233 respondents through multistage sampling was analyzed through composite score analysis, probit and ordered probit regression models. Findings revealed that more than half (66.10%) of the respondents derived intermediate benefits from social group membership. Significant determinants of social capital formation are: age, year spent in school, household size, primary occupation and indigene status. This study concludes that socio-economic characteristics and human capital endowments make significant contributions to social capital formation and the benefits derived from social group membership.

Keywords: social capital, food crops farmers, ordered probit model, composite score, Nigeria

INTRODUCTION

Social capital can be viewed as a variety of different entities which have two elements in common; that is, it consists of some aspects of social structure and as well as facilitates with certain actions either personal or corporate within the structure (Putnam, 1993). Another view also involves social environment which enables norms to develop and shape social structure. The value of connectedness and trust that exist between people is one of the keys that can sustain development because it lowers the cost of working together and facilitates cooperation (Pretty, 2003). Individuals therefore invest in collective activities knowing that others will also do so. According to Oyey (2000) and Woolcock (2001), an individual acquires social capital through participation in informal networks, registered organizations, associations of different kinds and social movement; it can also represents the sum of these experiences. Therefore, social capital holds strong position to confront poverty and vulnerability (Yusuf, 2008; Okunmadewa *et al.*, 2007), resolve disputes (Schafft and Brown, 2000), and share beneficial information (Yusuf, 2008; Okunmadewa *et al.*, 2007; Isham and Kabkonen, 1999) as well as increase agricultural productivity (Liverpool *et al.*, 2011; Adepoju *et al.*, 2011; Liverpool and Winter-Nelson, 2010; Okunmadewa *et al.*, 2007; Aker, 2007).

The social capital of a society includes the institutions, the relationships, the attitudes and values that govern interactions among people and contribute to economic and social development. Social capital, however, is not simply the sum of institutions which underpin society but also the glue that holds them together. It includes the shared values and rules for social conduct expressed in personal relationships, trust and a common sense of civic responsibility that makes society more than just a collection of individuals (World Bank, 2002). Social capital cannot be left out in the development or in the growth of an economy which makes it a multi-dimensional concept. According to Hu and Jones (2006), social capital is taken to mean very simply durable social networks because the word 'capital' is generally used as a 'stock concept to suggest present sacrifice for future benefit'. With the insight from the social capital definition; we can bring out a basic role of social capital as a factor that helps to bring a cordial relationship with the purpose of resources formation. Among other roles, it also helps in the development of a community through various associations which individually develops with their rules and regulations. This is evident from the submission of Rupasingha and Goetz (2007) who demonstrated that social capital is vital in poverty alleviation, and that strategies such as improving the educational level of

the poor and the creation of new jobs do not necessarily guarantee a reduction in poverty; hence, these efforts must be complemented with the development of social capital if the strategy is to be effective.

Social capital is pervasive and can generate benefits in a range of subtle as well as more visible ways. Trust is the bedrock of most personal relationships, which in turn is a key determinant of human well-being; trust can also give people the confidence to lend small sum of money to a colleague or a friend-in-need, or to allow neighbors to borrow tools and appliances; and living in a trust worthy community reduces the need for expenditures on personal security and policing (Saguaro, 2003). This realization has stimulated interest among policy makers and development practitioners in village and community level organization as a vehicle for social, local and national development; social capital formation therefore cuts across many sectors (Fidmac and Klarita, 2004).

PROBLEM STATEMENT

The general decline in agricultural productivity has translated into gross incapacitation of the sector in meeting the rising food demand and by extension led to incessant food shortages, soaring food prices and massive importation (Imodu, 2005; Onyenweaku and Nwaru, 2005). Tanko *et al.*, (2012) averred that Nigeria's food deficient situation has been worsened by declining food productivity owing to inefficient production techniques and poor resource base among others. It has also been observed that not all social capital lead to growth or development. However, some social capital may be beneficial while some may be deleterious depending on the motives behind its formation; on these motives, social capital destruction is rapid than its formation because it is a behavioral act which entails a series of underlined processes. A negatively motivated social capital can result in many hindrances on the path of the group member, community and the economy at large (Jane *et al.*, 2004). Hence, the need to: analyze the determinants of social capital formation among food crops farmers; examine the level of benefits derived from social capital formation and determine the factors influencing the level of benefits derived from social group formation. This study therefore hypothesized that there is no relationship between households' socio-economic characteristics and the level of benefits derived from membership in local level institution(s) (social groups).

METHODS AND PROCEDURES

The Study area is Osun State, specifically, Egbedore Local Government Area (LGA) of Osun State; its' headquarters is located in an ancient town named Awo. It is located in a warm tropic region of the rain forest of the South Western Nigeria. The choice of

this area is premised on the high concentration of farming activities compared to other areas in Osun state. Majority of farmers engaged in production of food and cash crops such as Cocoa, Kolanut, Palm-products, Orange, Banana, Maize, Yam, Cassava, Cocoyam *e.t.c*. Respondents for the study were selected through a multistage sampling technique. The first stage involved a purposive selection of Egbedore LGA because of its core rurality, prevalent farming activities, available fund and time; random sampling technique was used to select twenty eight (28) villages from the identified villages in the LGA. Then, Proportionality factor was used to select 240 food crop farmers through random sampling technique; this is because of the variation that exists in the respective population of the villages selected; but data from 233 respondents were found useful for this study because of inconsistent response. Data collected through a well-structured questionnaire was analyzed through composite score which was used to examine the level of benefits derived by respondents from social group membership while probit regression model was used to analyze the determinants of social capital formation among the crop farmers. Also, ordered probit model was used to examine the factors influencing the level of benefits derived by the respondents from social group membership and formation.

PROBIT MODEL

Probit model constrains the estimated probabilities to be between 0 and 1 and relaxes the constraint that the effect of the independent variable was constant across different predicted values of the dependent variable. This was normally experienced with the Linear Probability Model (LPM) (Sebopetji and Belete, 2009). The probit model assumed that while we only observe the values of 0 and 1 for the variable Y, there was a latent, unobserved continuous variable Y^* that determined the value of Y. The other advantages of the probit model include believable error term distribution as well as realistic probabilities (Nagler, 1994). Therefore, we assumed that Y^* can be specified as:

$$Y^* = X_i' \beta + \varepsilon \quad (1) \quad \text{where:} \\ \varepsilon \sim N(0, 1), \quad Y = 1 \text{ if } (Y^* > 0), \text{ } 0 \text{ if } (Y^* \leq 0) \text{ i.e. } (\varepsilon < -X_i' \beta), \text{ } 0 \text{ otherwise.}$$

Y = dependent variable (Decision to participate in a social group = 1; 0, otherwise), X_i = vector of explanatory variables, β = probit coefficients; μ_i = random error. Probit regression model was used to estimate the decision to participate as a function of some determinants which are the explanatory variables.

ORDERED PROBIT MODEL

This is a regression model which generalises probit regression by allowing more than two discrete outcomes that are ordered. Ordered probit model is used to model relationships between a polytomous

response variable which has an ordered structure and a set of regressor variables. Using the composite score from the set of questions developed on benefits derived from social capital formation, the level of benefit derived from membership in social capital groups were categorized using ordered probit model into high benefit, intermediate benefit and low benefit which correspond to censoring values 2, 1, and 0 respectively. The standard ordered probit model is widely used and more acceptable compared to ordered logit because the former follows a symmetric normal distribution while the latter follows a logistic distribution to analyze discrete data of this variety (see Adepoju *et al.*, 2011; Abdel-aty (2001); Kawakatsuy and Largeyz, 2008); and it is built around a latent regression of the following form:

$$y^* = x'\beta + \varepsilon \quad (2)$$

where x and β are standard variable and parameter matrices, and ε is a vector matrix of normally distributed error terms. Obviously predicted grades (y^*) are unobserved. We do, however, observe the following:

$$\begin{aligned} y &= 0 \text{ if } y^* \leq 0 \\ y &= 1 \text{ if } 0 < y^* \leq \mu_1 \\ y &= 2 \text{ if } \mu_1 < y^* \leq \mu_2 \end{aligned}$$

where: μ_1 and μ_2 are the cut points (intercepts shifters) i.e. the threshold variables in the probit model. The threshold variables are unknown and they indicate the discrete category that the latent variable falls into which are determined in the maximum likelihood estimation procedure for the ordered probit.

The likelihood for benefit derived by an individual is

$$L = [\Phi(0 - X_i\beta)]^{y_i} [\Phi(\mu_1 - X_i\beta) - \Phi(0 - X_i\beta)]^{1-y_i} [1 - \Phi(X_i\beta - \mu_2)]^{2-y_i} \quad (3)$$

$$z_{ij} = \begin{cases} 1 & \text{if } y_i = j \\ 0 & \text{otherwise} \end{cases} \quad \text{or } j = 0, 1 \text{ and } 2 \quad (4)$$

where for the i th individual, y_i is the observed outcome and X_i is a vector of explanatory variables. The unknown parameters β_{is} are typically estimated by maximum likelihood.

Composite Score

A composite score was estimated from the responses to the 10 statements developed on a binary scale; that is scoring 1 point for Yes and 0 for No responses regarding the benefits derived was used to rate the respondents. With 10 statements; a respondent can score a maximum of 10 points and a minimum of 0 point. The categorization into high, intermediate and low benefits was achieved using a composite score as earlier used by Adepoju *et al.*, (2011), Yekinni (2007) and Salimonu (2007): High category = between 10 points to (Mean + S.D) points, Medium (intermediate) = between high and low categories and Low Category = between (Mean – S.D) points to 0 point. Hence, the composite score revealed the level of benefits derived by respondents from social group membership.

Social Capital Variables Definitions And Measurements

The social capital variables that were considered in the analysis include: density of membership, heterogeneity index, meeting attendance index, cash contribution, labour contribution and decision making index. The measurement of these six social capital indices is as explained as follow and this follows the approach earlier used by Grootaert *et al.*, (2002); Okunmadewa *et al.*, (2005); Adepoju *et al.*, (2011). The measurement of each is as described as follows:

Density of membership: this is captured by the summation of the total number of associations to which each household belongs. In other words, membership of associations by individuals in the household is summed up.

Heterogeneity index: this is an aggregation of the responses of each household to the questions on the diversity of members of the three most important institutions to the households. On each of the three associations, each household answered questions on whether members live in same neighbourhood, are same kin group, same occupation, are of same economic status, are of same religion, same gender, same age group and same occupation. Hence, for each of the factors a yes response is coded 0 while no response is coded 1. A maximum score of 10 for each association represents the highest level of heterogeneity. The scores by the three associations for each household are then divided by the maximum score of 30 to obtain an index. This index is then multiplied by hundred (a zero value represents complete homogeneity while 100 represents complete heterogeneity).

Meeting attendance index: this is obtained by summing up the attendance of household members at meetings and relating it to the number of scheduled meetings by the associations they belong to. This value was then multiplied by 100.

Cash contribution: This was obtained by the summation of the total cash contributed to the various associations which the household belong. The actual cash contribution for each household is rescaled by dividing this amount by the maximum fee amount in the data and multiplying the resultant fraction by 100.

Labour contribution: this is the number of days that household members belonging to institutions claimed to have worked for their institutions. This represents total number of days worked by household members. This is also rescaled to 100 using the same process as for cash contribution.

Decision making index: this was calculated by summation of the subjective responses of households on their rating in the participation in the decision making of the three most important institutions to them. The responses were averaged across the three groups and multiplied by 100 for each household.

Aggregate social capital index: this is obtained by the multiplication of density of membership,

heterogeneity index and decision making index (following Grootaert, 1999).

RESULTS

Probit Estimates Of Social Capital Formation

The result of the probit model used to investigate the determinants of social capital formation among the food crop farmers in the study area is presented as follow: Three categories of social capital formation expressed by the type of local level institutions which households belong - social, agricultural and cooperative based organizations formed the dependent variables while the explanatory variables considered in the models were based on literature.

The result of the marginal effect of probit analysis as presented in Tables 1, 2 and 3 revealed that age is directly related to membership of social-based organization and inversely related to being a member of agric-based organization; which is significant at ($p < 0.01$) and ($p < 0.05$) levels respectively; however, an increase in age will increase the probability of social capital formation through social-based organization membership by 0.0144 and decrease the likelihood of belonging to agric-based organization membership by 0.0019; this can be due to the fact that ageing as expected, negatively affects the required ability of individuals to engage in farming activities efficiently; hence, opt for social-based organization. Years of formal education is directly related to membership of social-based organization as well as being a member of cooperative-based organization; which is significant at ($p < 0.1$) probability level each; however, an increase in years spent in school will increase the likelihood of social capital formation through social-based organization membership by 0.0163 and cooperative-based organization membership by 0.0008.

Meanwhile, household size has an inverse relationship with membership of social-based organization and directly related to being a member of agric-based organization; which is significant at ($p < 0.1$) level each; however, an increase in household size will decrease the probability of social capital formation through social-based organization membership by 0.0442 and increase the likelihood of social capital formation through agric-based organization membership by 0.0096; this suggests that the higher the household size, the less the likelihood of participation in social-based organization and the more the likelihood of participation in agric-based organization because of accessibility of labour which further emphasizes the importance of adequate labour in agricultural activities. In the same vein, primary occupation of household head is inversely related to social capital formation via membership in social-based organization and positively related to being a member of agric-based and cooperative-based organizations;

which is significant at ($p < 0.05$), ($p < 0.1$) and ($p < 0.1$) levels respectively; however, participation in the predominant livelihood activities in the study area will decrease the probability of social-based organization membership by 0.0158 and increase the likelihood of belonging to agric-based and cooperative-based organizations by 0.0046 and 0.0576 respectively; this can be due to the fact that the prevalent occupation in the study area is farming and other farming related activities. And, indigene status of the respondents is inversely related to social group formation through membership in social-based and agric-based organizations; and directly related to cooperative-based organization; which is significant at ($p < 0.05$), ($p < 0.1$) and ($p < 0.01$) probability levels respectively; however, a non-indigene status will decrease the probability of social-based organization membership and agric-based organization membership by 0.00002 and 0.00004 respectively; and increase the likelihood of belonging to cooperative-based organizations by 0.00001; this suggests that participation of majority of respondents in cooperative-based organization was premised on access to credit opportunity attached to this local level institution.

Table 1: Probit estimate for membership in social-based organization

social-based organization	Coefficient	z-statistics
gender	0.2084	0.50
age	0.0144	2.99***
years spent in school	0.0163	1.80*
household size	- 0.0442	-1.74*
consumers-workers ratio	0.0578	0.99
primary occupation	- 0.0158	-2.19**
secondary occupation	0.0241	0.23
working members	- 0.0982	- 0.47
indigene status	- 0.00002	- 2.07**

LR chi² (9) = 17.87, Log likelihood = - 81.5424,

prob> chi² = 0.0002, Pseudo R² = 0.4370,

* ** *** - significant at 10%, 5% and 1% respectively

Source: Data analysis, 2014

Table 2: Probit estimate for membership in agric-based organization

agric-based organization	coefficient	z-statistics
gender	- 0.8082	-1.55
age	- 0.0019	-2.17**
years spent in school	0.0255	0.82
household size	0.0096	1.88*
consumers-workers ratio	0.0314	0.43
primary occupation	0.0046	1.66*
secondary occupation	- 0.04391	- 0.39
working members	0.01802	0.08
indigene status	- 0.00004	- 1.89*

LR-chi² (9) = 19.23, Log likelihood = - 81.2648,

prob> chi² = 0.0000, Pseudo R² = 0.4523,

* ** - significant at 10% and 5% respectively

Source: Data analysis, 2014

Table 3: Probit estimate for membership in cooperative-based organization

Cooperative-based organization	coefficient	z statistics
gender	- 0.2528	- 0.56
age	- 0.0193	- 0.99
years spent in school	0.0008	2.07**
household size	0.1077	0.75
consumers-workers ratio	- 0.0799	- 1.17
primary occupation	0.0576	1.73*
secondary occupation	- 0.0013	- 0.01
working members	- 0.0779	- 0.36
indigene status	0.00001	2.67***

LR chi2 (9) = 16.58, Log likelihood = - 79.813784,

prob > chi² = 0.0006, Pseudo R² = 0.4292,

* ** *** - significant at 10%, 5% and 1% respectively

Source: Data analysis, 2014

Categories of Benefits Derived from Social Group Membership Based on Composite Score Approach

Based on the estimated mean score of 4.29 and standard deviation (SD) value of 0.86, the result in Table 4 revealed that the modal category is the intermediate benefit (66.1%). This is followed by low benefit (27.04%) and 6.86% accounts for the respondents who derived high benefit from social group formation. This result may suggest that there is a flow of benefits from the intended beneficiary to other unintended beneficiaries as a result of 'trust' factor. The result further corroborates the existing literature on the level of benefit derived from group participation (Adepoju *et al.*, 2011; Yekinni, 2007).

Table 4: Categories of benefits derived from social group formation

categories of benefits	Frequency
High benefit	16 (6.86)
Medium benefit	154 (66.10)
Low benefit	63 (27.04)
Total	233 (100.0)

Source: Data Analysis, 2014, figures in parenthesis are percentage values

Ordered Probit Estimates of Factors Influencing the Level of Benefits Derived from Social Group Membership

Table 5 and 6 present the result of the ordered probit model and its marginal effect used to investigate the factors influencing the level of benefit derived from social group membership. The three categories of benefit derived – low, intermediate and high - formed the dependent variables as ordered 0, 1 and 2 respectively while 14 explanatory variables were considered in the model; however, only 13 were allowed in the model from which only 8 were statistically significant at various levels. The significant variables are age, years spent in school, household size, farming status, consumers-workers ratio, meeting attendance, labour contribution and decision-making index. The likelihood ratio chi-square of 121.64 with a p-value of 0.0000 revealed that the model as a whole is statistically significant.

And, the model estimated pseudo R-squared is 0.3412.

Age significantly affects benefit derived from social group at ($p < 0.1$); however, the marginal effect analysis revealed that a unit increase in age of the respondents will reduce the probability to receive low benefit by 0.0013, intermediate level by 0.0026 and will increase the likelihood of receiving high benefit by 0.0023 as presented in Table 6. This can be due to the fact that ageing is likely to reduce the farmers' ability to work effectively on the farm but may likely have high affinity to participate in social groups and make informed contributions and as household head is ageing there is tendency to benefit more from the social group; hence, their involvement in social activities. Also, years spent in school (a proxy for human capital) is also statistically significant at ($p < 0.1$); this suggests that an increase in years spent in school will increase the likelihood of receiving low and intermediate benefits by 0.0034 and 0.0045 respectively and reduce the likelihood of receiving high benefits by 0.0069. This also implies that respondents with high educational level are less likely to participate in social capital formation; this same result is in line with the findings of (Adepoju *et al.*, 2011). Similar pattern was also recorded for household size which is statistically significant at ($p < 0.05$). Consumers-workers ratio is positively related to benefit derived from the social group and significant at ($p < 0.01$); having an appreciable number of household members working increases the probability of receiving high benefit by 0.3321 while large dependency ratio reduces the probability of receiving intermediate or low level benefit.

Then, meeting attendance was found to be significant at ($p < 0.05$) and negatively affect benefit derived from being a member of social group; the result revealed that the more the meeting attended by households, the more the likelihood of receiving low and intermediate benefits by 0.0002 and 0.0006 respectively and the less likelihood of receiving high benefit by 0.0010; suggesting that frequent meeting attendance does not guarantee members of social group from enjoying maximum benefit from the social group(s) to which they belong; this finding does depart from the findings of (Adepoju *et al.*, 2011)

Also, a unit increase in man-day will reduce the likelihood of receiving low benefit and intermediate benefit by 0.0011 and 0.0028, respectively while it will increase the probability of receiving high benefit by 0.0047. This implies that more labour contribution in social groups will increase the benefits derived and vice versa. It is also not surprising that labour contribution directly affects social capital benefit and it is statistically significant at ($p < 0.01$); this result agrees with the findings of (Yusuf, 2008, Okunmadewa *et al.*, 2007) but deviates from the

findings of (Tabi-Atemnkeng, 2009). Majority of farmers in the rural area operate on small scale farming and depend mostly on manual labour; therefore, they need contributory efforts on their farming activities, most especially during land preparation, planting, harvesting etc. Thus, there is the need to form social groups so that they can collectively assist one another on their farmlands whenever duty calls.

In the same vein, the more members of a social group are involved in decision-making, the more they derive benefit from being members of the social group, but as decision-making is positively related to social capital benefit derived and statistically significant at ($p < 0.01$), surprisingly, status in social group which emphasizes on executive membership and obviously enhances involvement decision making is not statistically significant; thus, the result revealed that a unit increase in participation in decision-making process will reduce the probability of receiving low benefit by 0.0014 while it will increase the likelihood of receiving intermediate and high benefit by 0.0019 and 0.0030 respectively as expected; this result agrees with the submission of (Okunmadewa, 2007; Balogun *et al.*, 2011 and Adepoju *et al.*, 2011). This result further implies that

it is not enough to be a member of a social group; active participation is a sufficient and necessary condition to derive the benefits of belonging to one.

Conversely, status in social group is statistically significant at ($p < 0.1$) when multiplicative social capital is considered and introduced into the model but not significant as additive social capital as evidently reported and confirmed in similar studies (see Adepoju *et al.*, 2011). However, being an executive member in social group will reduce the probability of receiving low and intermediate benefit by 0.1028 and 0.0518 respectively while it will increase the possibility of receiving high benefit by 0.1582; this result further corroborates the earlier submission made on the importance of executive membership in decision making process and the possibility of deriving maximum and expected benefits from social group formation.

The foregoing, therefore, permits the non-acceptance of the earlier stated null hypothesis that socio-economic characteristics do not influence or have relationship with the level of benefit derived from social group formation. Since some of the hypothesized variables were statistically significant, the alternative hypothesis is hereby accepted

Table 5: Result of the ordered probit for categories of benefit derived from social group membership

Social capital benefit		coefficient	std. error	z-statistics
Age		-0.0126	0.0065	-1.83*
Gender		-0.1245	0.2106	-0.59
Years spent in school		0.0267	0.0152	1.76*
Household size		0.4601	0.2163	2.12**
Farming Status		0.5657	0.2139	2.64***
Status in social group		0.4651	0.3046	1.53
Consumers-workers ratio		1.2214	0.2978	4.10***
Indigene status		-0.2630	0.4328	-0.61
Meeting attendance		-0.0052	0.0050	-2.01**
Heterogeneity index		-0.0003	0.0046	-0.06
Labour contribution		0.0145	0.0049	2.95***
Decision-making index		0.0132	0.0041	3.21***
Cash contribution		-6.6312	7.1244	-0.93
Cut 1		0.7532	0.4763	
Cut2		2.4715	0.4974	
LR $\chi^2(13) = 121.64$, Prob > $\chi^2 = 0.0000$, Observation = 233 Log likelihood = -216.23, Pseudo $R^2 = 0.3412$				
Age	0.0315	0.0226	1.39	
Gender	0.1352	0.1784	-0.76	
Years spent in school	0.0268	0.0123	2.17**	
Household size	0.6291	0.2376	2.64***	
Household size	0.7698	0.2839	2.71***	
Farming Status	0.0163	0.0084	1.94*	
Status in social group	1.3217	0.3068	4.31***	
Consumers-workers ratio	0.4832	0.3259	1.48	
Indigene status	-0.0046	0.0035	-1.31	
Aggregate social capital				
Cut 1	0.1962	0.4429		
Cut 2	2.1347	0.4221		
LR $\chi^2(9) = 78.74$, Prob > $\chi^2 = 0.0000$, Log likelihood = -224.59, Pseudo $R^2 = 0.2215$				

Source: Data Analysis, 2014

Table 6: Marginal effect of categories of benefit derived

Variables	Marginal effect for Y= low benefit	Marginal effect for Y= intermediate benefit	Marginal effect for Y= high benefit
Age	- 0.0013	- 0.0026	0.0023
Sex	0.0124	0.0201	- 0.0328
Years spent in school	0.0034	0.0045	- 0.0069
Household size	0.0040	0.0057	- 0.0112
Farming Status	- 0.0518	- 0.0623	0.1326
Status in social group	- 0.0483	- 0.0426	0.1042
Consumers-workers ratio	- 0.0212	- 0.0243	0.3321
Indigene status	- 0.0551	- 0.0311	0.2102
Meeting attendance	0.0002	0.0006	- 0.0010
Heterogeneity index	0.0004	0.00008	- 0.00013
Labour contribution	-0.0011	- 0.0028	0.0047
Decision-making index	- 0.0014	0.0019	0.0030
Cash contribution	0.0000021	0.0000048	- 0.0000023
Age	- 0.0018	- 0.0029	0.0043
Sex	0.0167	0.0219	- 0.0381
Years spent in school	0.0037	0.0033	- 0.0077
Household size	0.0046	0.0049	- 0.0098
Farming Status	- 0.0631	- 0.0637	0.1372
Status in social group	- 0.1028	- 0.0518	0.1582
Consumers-workers ratio	- 0.0251	- 0.0267	0.2982
Indigene status	- 0.0374	0.0324	0.2360
Aggregate social capital	0.000053	0.000056	- 0.0000102

Source: Data Analysis, 2014

CONCLUSION

The study concludes that there is a significant relationship between households' socio-economic characteristics and membership in social organizations; hence, the null hypothesis is not accepted while alternative is hereby hypothesis is accepted.

Based on the findings of this study, the following recommendations are of significant importance to policy making:

- Adequate funding of basic education for all should be given utmost attention in the budget by the government.
- Social organization membership should be encouraged for the purpose of easy access to credit and proper usage so as to derive maximum and expected benefits of group participation.
- Since the study revealed that most rural households in the study area see large household size as being consistent with adequate family labour; labour saving devices should be put in place while at the same time, birth control strategies and campaigns are being promoted.

CONTRIBUTION TO KNOWLEDGE AND SUGGESTION FOR FURTHER STUDIES

Many of the previous related studies have focused more on the effect of social capital on access to credit and welfare but this study bridged the knowledge gap by investigating the determinants of social capital formation and factors driving the level of benefits derived from social capital formation which previous

related studies have not dealt with. Findings from the study revealed that socio-economic characteristics and human capital endowments of respondents make significant contribution to social capital formation as well as the benefit derived from membership in social group; further research can also be made to identify the type of social group that may likely influence the maximum benefits derived by households from social group formation.

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