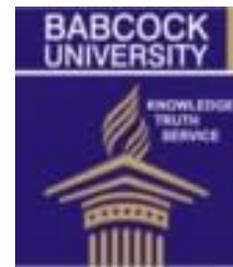




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Social capital and well-being of rural households in Southwest Nigeria- a capability approach

***OLWE, O. O¹. and BALOGUN, O. L².**

¹*Department of Agricultural Economics, Faculty of Agriculture and Forestry University of Ibadan, Oyo State, Nigeria*

²*Department of Agricultural Economics and Extension, School of Agriculture and Industrial Technology Babcock University, Ilishan-Remo, Ogun State, Nigeria*

*Corresponding author: < blarrybunmi@gmail.com >

Abstract

Majority of rural households in Nigeria are engaged in farming with small holdings and continue to experience low well-being in spite of several rural and agricultural development programs embarked upon by successive governments. Social capital has been identified as a potential instrument for improving well-being. This study examined the social capital and well-being of rural households in Southwest Nigeria using the capability approach. The primary data employed in the study were obtained with the aid of a semi-structured questionnaire from 439 households using a four-stage sampling technique. A wide range of indicators in nine dimensions of life of the households were used to generate a well-being index. Social capital variables used in the study were based on network participation, collective action and trust. Data were analyzed using descriptive statistics, fuzzy set and the ordered Probit model. Average meeting attendance was four out of five association meetings while well-being index in the study area is 0.5849. The result of the ordered Probit regression revealed that meeting attendance and trust improved well-being. The study recommends that rural households should be encouraged to increase their activities in social network to improve their well-being.

Keywords: Capability approach; fuzzy set; well-being; social capital; rural household.

1. Introduction

The human development report of the United Nations Development Programme reveals that Nigeria is one of the poorest countries in the world with a human development index (HDI) of 0.504 and ranked 152nd out of 188 countries covered by the report despite the huge Gross Domestic Product (GDP) of \$509 billion placing the country as the 26th largest economy in the world (United Nations Statistics Division 2014; UNDP, 2014). This suggests that the well-being of a people should not be measured by aggregated income alone but opportunities to achieve in various dimensions of life. The HDI measures achievements in terms of longevity (life expectancy at birth), knowledge (adult literacy and mean years of schooling), and income (the proportion of people with sufficient resources for a decent life). The HDI summarizes a small number of indicators and has been by the UNDP used as an alternative measure to GDP. The former has been used as a measure of development and the well-being of nations while the latter is a measure of economic growth. Well-being measures achievements of individuals, communities and/or nations but cover a wider array of components ranging from nutrition to freedom to attain certain achievements (Baliamoune-Lutz and Lutz, 2004; Majumder, 2007).

A community with less than 20,000 people is classified as rural in Nigeria (Egbe, 2014). This classification is based on population alone and this definition is grossly inadequate as rural areas are also defined by other criteria like employment and infrastructure (The Wye Group, 2007). The rural areas in Nigeria are characterised by low level of infrastructural facilities, poor housing, low productivity resulting from small holdings by majority

of rural dwellers who are mainly involved in agricultural production and high level of poverty (Omonona, 2009; Anyanwu, 2013). Both the income and non-income indicators like access to education, household infrastructure, secure housing and access to medical services show that people in the rural areas have a lower well-being than those in the urban areas and all indicators show lower values than the national average. For example literacy rate in the urban sector is 87.0% while value for rural Nigeria is 56.6%, urban access to improved drinking water source and sanitation facility are 72.4% and 42.7% respectively while values for rural are much lower at 51.3% and 30.1% respectively (NBS 2010, 2013).

In Sen's Capability Approach, well-being can be defined as the freedom of choice to achieve the things in life which one has reason to value most for his or her personal life (Muffels and Heady 2013). Hence, the Capability Approach (CA) assesses people's welfare in terms of their functionings and capabilities, which are defined as an individual's actual and potential activities and state of being respectively (Kuklys and Robeyns 2004). The core characteristic of the capability approach is its focus on what people are effectively able to do and to be, that is, on their capabilities. The capability approach focuses more on people and less on goods. In it, resources do not have an intrinsic value; instead their value derives from the opportunity that they give to people (Anand, Hunter and Smith, 2005). The capability approach recognizes that resources are important as means to an end (capability) while human beings should be the focus of development.

Putnam (1993) defines social capital as "networks, norms and trust that enable participants act together effectively to pursue shared objectives". This

definition implies that social capital is made of networks, trust and collective action leading to positive outcomes. Social capital has been known to improve well-being. Halpen (1999) suggested that the presence of social capital might generate a sense of well-being and belonging. Well-being as an outcome of social capital has been enhanced through information sharing and collective action as a result of participation in both formal and informal associations and networks. Socializing often involves the transfer of information, even if the purpose of socialization is not to transfer this knowledge (Durlauf and Fafchamps, 2004). Groups and networks are considered as stock of social capital essential to the process of development. Social capital is broadly seen as social interactions resulting in improved well-being. The promotion of social interaction among rural dwellers may need to complement other efforts of government geared towards improving the well-being of rural households. There have been several studies on the effect of social capital on several outcomes like income, asset accumulation, consumption, education and health (Okunmadewa *et al.*, 2005; Balogun and Yusuf, 2011; Yip *et al.*, 2007) but few studies have tried to isolate the effect of social capital on multidimensional well-being using the capability approach.

The study conceptualized social capital as operating in members of a household to affect well-being. The scope of the study on social capital is limited to the three types of proxies suggested by Grootaert and Bastelaer (2002). These are membership in local associations and networks, indicator of trust and an indicator of collective action. Coleman (1990) provides a definition that emphasizes the function of social capital and describes it as “some aspect of social structure that enables the achievement of certain ends

that would not be attainable in its absence”. Social capital is viewed as a valuable component in the asset endowment of households, improving productivity and enhancing well-being (Okunmadewa *et al.*, 2005).

The approach adopted in this study was to disaggregate social capital into component parts or stock variables of groups and networks, trust and collective action. Further, it considered outcome variables of social capital. The outcome variables were identified as dimensions of well-being. Evaluation of well-being is based on freedom to achieve referred to as capability in Sen’s capability approach (Sen 2003). In the evaluation of capability; autonomy, political participation and transportation are considered as dimensions as they reflect the freedom or ability of subjects to access other resources that may enhance further opportunities. Measures of autonomy and political participation are reflections of the freedom of subjects in taking decisions affecting their personal life and in participating in processes leading to the choice of leaders. In addition, the dimensions of health, nutrition, education, housing, reproductive life and security are also considered. The evaluation of the latter set of dimensions as capabilities is based on the notion that access to these dimensions can serve as proxies or measures of freedom to achieve in these dimensions (Anand *et al* 2005, Anand and van Hees 2006; Burchardt 2005, Oni and Adepoju 2011). Thus, this study perceives capability as the set of opportunities available to rural dwellers and measured mainly from the ability of subjects to access facilities which will enhance well-being achievement.

2. Materials and methods

The study was conducted in Southwest, Nigeria. The Southwest is one of the six geo-political zones in Nigeria. Primary data were collected for the purpose

of this study using structured questionnaire. The primary data collected from each household include socio-economic and demographic characteristics of rural households (age, gender, marital status, educational level, primary occupation, household size, and distance to nearest urban centre), participation in local level institutions (density of membership, participation in decision making, number of meetings of associations, annual cash and labour contributions to various groups), indications of trust and collective action. Information on dimensions of well-being include health, nutrition, education, type of housing, transportation, political participation, autonomy, reproductive health and security.

Sampling procedure: A multi-stage sampling technique was employed for this study. The first stage is the random selection of two states: Osun and Ogun states in the region. In the second stage, five Local Government Areas (LGAs) were randomly selected from the two states based on probability proportionate to size of local government areas. In the next stage of the selection, 10 rural enumeration areas (EAs) were randomly selected from each local government area based on the EA maps of the National Population Commission (NPC 2006). In the last stage, 10 households were randomly selected from each EA. In all, a total of 500 households were interviewed for the study. However, only 439 copies of questionnaire with adequate and consistent information were used in the analysis.

Descriptive statistics such as tables, frequencies, mean and percentages were used to profile the dimensions of social capital. The fuzzy set was used to assess well-being and the ordered probit model was used to establish the relationship between social capital and well-being.

The fuzzy set: The fuzzy set was used in order to assess the level of household well-being. Fuzzy set substitutes the characteristic function of a crisp set that conventionally assigns a value of either 1 or 0 to each element in the universal set, with a generalized characteristic function which varies between 0 and 1. (Chiappero- Martinetti 2000, 2006, Lelli, 2001 and Majumder 2007).

The model is considered thus: Assume X is a set and x an element of X . A fuzzy subset Q of X can therefore be defined as follows: $Q = \{x, \mu_Q(x)\}$ for all $x \in X$.

$\mu_Q(x) = X \rightarrow 0, 1$. The $\mu_Q(x)$ is a particular function with values between 0 and 1. In this analysis, given X is a set of households ($j=1, \dots, n$) and Q is a fuzzy subset of X (the set that denotes well-being membership); the membership function of well-being for the i^{th} individual $x_{ij}=1$; condition of full achievement with respect to a given indicator of well-being
 $x_{ij}=0$; condition of non-achievement with respect to a given indicator of well-being

$0 \leq x_{ij} \leq 1$; conditions **within the range of full achievement and zero achievement**.
The degree of well-being is shown by the placement of the individual on the 0 or 1 value or other values in between.

Estimating membership functions

The variables that define indicators of well-being for the study are either dichotomous or categorical.

- **Dichotomous variables**

Dichotomous variables are answered by either 'Yes' or 'No'; being states of well-being or deprivation respectively. The equation given by Adeyemo and Oni (2013) is adopted as follows.

From a universal set of X households, we define the membership function of fuzzy subset of Q for the i^{th}

household (i=1....n) with the jthwell being attribute j=(1----m) as:

$$\mu_q(a_i) = X_j(a_i) = x_{ij}, \dots \text{Eqn 1}$$

X_j(a_i) is the m order of well-being attributes that will result in a state of well-being if owned by the a_ithhousehold.

x_{ij}=1, if the a_ith household possess the jth attribute (that is it completely has the well-being attribute)

x_{ij} =0 if the a_ithhousehold does not possess the well-being attribute

• **Categorical variables**

Categorical variables express themselves in a range of values. The linear equation given by Lelli (2001), Majumder (2007) is adopted as follows.

$$\mu_q(a_i) = X_j(a_i) = x_{ij} \dots \text{Eqn 1}$$

and thus;

$$x_{ij} = 0, \text{ if } C_{ij} = C_{\min}$$

$$x_{ij} = (C_{ij} - C_{\min}) / (C_{\max} - C_{\min}) \quad \text{if } C_{\min} < C_{ij} < C_{\max} \dots \text{Eqn 2}$$

$$x_{ij} = 1, \text{ if } C_{ij} = C_{\max}$$

Where C_{min} is the value that depicts the lowest level of well-being in the jth attribute, while C_{max} is highest level of well-being in the jth attribute which indicates highest level of well-being in the a_ith household. Thus, the modalities are arranged in increasing order of well-being attainment. C_{ij} values are the intermediate values within the two thresholds, which depicts the position of the a_ith household within the modalities set forth. This assumes that the modalities in the data set are equally spaced.

In specifying the Fuzzy Well-being Index for the population, as a ratio of the well-being index of the a_ithhousehold, the formula presented by Oyekale *et al* 2010 is adopted as follows:

$$\mu_q = \frac{\sum_{i=1}^n \mu_q(a_i) n_i}{\sum_{i=1}^n n_i} \dots \text{Eqn 3}$$

μ_q is the fuzzy well-being index for the population of households studied.

$$= \frac{1}{n} \sum_{i=1}^n \mu_q(a_i) n_i \dots \text{Eqn 4}$$

Equations 3 and 4 express the degree of attainment of the selected well-being attribute

This could also be conceptualized as:

$$\mu_q = \frac{\sum_{j=1}^m x_{ij} w_j}{\sum_{j=1}^m w_j} \dots \text{Eqn5}$$

Where w_j is the weight given to the jth attribute

$$w_j = \log \frac{n}{\sum_{i=1}^n x_{ij} n_i} \dots \text{Eqn6}$$

In the multidimensional approach used by Majumder (2007), each dimension of human well-being is considered as equally relevant. The approach is used in this study.

Ordered Probit model

The causal relationship between the social capital variables and well-being indicators was analyzed using the Ordered Probit Model following the work of Royo and Velazco (2006).

The structural equation expressed as:

$$y_i^* = \sum \beta_{ki} x_{ki} + \varepsilon_i \quad \dots\dots\dots \text{Eqn 7}$$

Where $\varepsilon_i \sim ND(0,1)$

It is assumed that there are N individuals, the empirical specification is formulated in terms of a latent response variable, y_i^* which is a linear combination of some predictors, x , plus a disturbance term that has a standard normal distribution and is defined by:

i : The surveyed individual

x_{ki} : Independent variables that explain the individual's well-being

β_k : Parameter that indicates the effect of x_k on y_i *

ε_i : A normally distributed independent error term for household i

Let y_i be a discrete random variable whose value ranges from 1 to 4. The well-being categories for the households are divided into quartiles “very high”, “high”, “medium” and “low” (4, 3, 2 and 1). Therefore, the Ordered Probit Model with 4 alternatives is defined as follows:

$$\begin{aligned} y_i=1 & \text{ if } y_i^* \leq u_1 \\ y_i=2 & \text{ if } u_1 < y_i^* \leq u_2 \\ y_i=3 & \text{ if } u_2 < y_i^* \leq u_3 \\ y_i=4 & \text{ if } y_i^* > u_3 \\ \dots\dots\dots & \text{Eqn 8} \end{aligned}$$

Where $\mu_1 < \mu_2 < \mu_3$

Where μ_1, μ_2 and μ_3 are the cut points or the threshold parameters in the probit model. The threshold variables are unknown and they indicate the discrete category that the latent variable falls into. The model was estimated using maximum likelihood estimation.

The explanatory variables are:

Y= Capability (4 is very high, 3 is high, 2 is low and 1 is very low)

X₁= age of household head in years (base 30-39),

X₁₁= age of household head in years (others <30)

X₁₂= age of household head in years (40-49)

X₁₃= age of household head in years (50-59)

X₁₄= age of household head in years (≥60)

X₂ = gender of household head (male=1, 0 otherwise)

X₃= marital status (base single)

X₃₁=married

X₃₂= widowed

X₃₃= divorced/separated

X₄= household size (base ≥10)

X₄₁= household size (1-5)

X₄₂ = household size (6-9)

X₅ = level of education (base non formal)

X₅₁= primary education

X₅₂= secondary education

X₅₃= tertiary education

X₆= employment (employed=1, 0 otherwise)

X₇= primary occupation (base government)

X₇₁= private

X₇₂= trading

X₇₃= wage labour

X₇₄= artisan

X₇₅= driving

X₇₆= others

X₈= distance to nearest urban center (base>20km)

X₈₁= 0-10km

X₈₂= 11-20km

X₉= density of membership (number)

X₁₀= heterogeneity (%)

X₁₁= meeting attendance (%)

X₁₂= decision making (%)

X₁₃= cash contribution (N)

X₁₄= labour contribution (man-day)

X₁₅= trust (index)

X₁₆= collective action (index)

X₁₇= aggregate social capital (percentage)

The ordered probit model was employed in this study to compare the probability of a household falling into any of the quartiles as a result of its social capital endowment through household participation in social groups, level of trust in community members and participation in collective action

Results and discussions

Socioeconomic/demographic characteristics (conversion factors) of households

The socio-economic characteristics of households in the study area are presented in Table 1. Average age of household head in the study area is 53.5years which means that most of the respondents are in their economic active age. Mean household size of the sampled population is 4.4. This implies that most of the households are not excessively large in size. The majority of the respondents in the study area are male (70 percent) while a larger proportion of respondents (66%) are married. The result also reveals that about 80% of the households do not live more than 10km to urban centers while less than 7% of respondents live in villages farther than 20km to the nearest urban center.

About 38% of the sampled population have no formal education, 36% have primary education while only 5% have tertiary education. Average year of schooling for the sample is 5.36years. This implies that more than half of the population does not have the minimum of nine years of basic education prescribed under the Universal Basic Education Programme in Nigeria (Igbokwe 2014 while more than a third of the population is without any form of formal education. This agrees with the description of the Nigerian rural

sector as characterized by low level of education by Adeoti (2014).

Results further show that 15% of respondents are unemployed. Lack of employment opportunities in the rural area is a problem that contributes to low level of development in the rural areas. A large proportion (68%) of people living in the study area considers farming as their primary occupation; this is followed by trading (17.3%). This agrees with findings from previous

studies (IFAD 2012, Omonona 2009) that rural communities in Nigeria are mainly agrarian. Farming is the main source of employment in rural South West.

Table 1: Distribution of socio-economic characteristics of households

Variable	Frequency	Percent	Mean	Standard Deviation	Minimum	Maximum
Age(yrs)<30	40	9.1	53.5	17.1	18	100
30-39	59	13.4				
40-49	69	15.7				
50-59	94	21.4				
>60	177	40.3				
Household Size 1-4	248	56.5	4.4	2.9	1	20
5-9	164	37.4				
>10	27	6.1				
Distance To urban (km)>20	349	79.5	8.6	5.8	.8	25
11-20	60	13.7				
30	30	6.8				
Years of schooling			5.4	5.0	0	16
Educational status no formal	168	38.3				
primary	158	36				
secondary	91	20.7				
tertiary	22	5.0				
Gender male	306	69.7				
Female	133	30.3				
Marital Status married	289	65.8				
single	26	5.9				
widowed	93	21.2				
Divorced/Separated	31	7.1				
Employment Status						
Employed	373	85				
Unemployed	66	15				
Primary Occupation						
Farming	298	67.9				
Government job	8	1.8				
Private Enterprise	1	0.2				
Trading	76	17.3				
Wage labour	5	1.1				
Artisan	13	3.0				
Driving	12	2.7				
Others	26	5.9				

Source: Author's Compilation 2013

Table 2 presents the social capital dimensions of membership density, heterogeneity index, meeting attendance and decision making index of households. A household in the study area belongs to an average of 3.4 groups. Level of diversity of groups to which a household belongs is measured by heterogeneity.

Heterogeneity of associations to which an average household belongs is 47.6 percent. Diversity of groups

to which households belong is low (<50%). The result further reveals that meeting attendance is high; a household attends an average of 80% of all scheduled meetings. Decision Making is moderate, with an average of 54.1percent. Members participate in one (1) out of two (2) of decisions affecting their associations.

Table 2: Summary statistics of membership density, percent heterogeneity, meeting attendance and decision making of households.

SC Variable	%	Mean	SD	Min	max
Density of membership		1.4	0.7	1	5
1.00	74.0				
2.00	18.0				
3.00	5.7				
4.00	1.8				
5.00	0.5				
Total	100				
Heterogeneity		47.6	15.7	1.3	75
1-20	11.2				
21-40	9.8				
41-60	67.0				
61-80	12.1				
>80	0				
Total	100				
Meeting attendance		79.8	30.5	5	100
1-20	11.8				
21-40	0				
41-60	8.0				
61-80	14.4				
>80	65.8				
Total	100				
Decision making		54.05	20.3	7.8	100
	4.1				
1-20	23.0				
21-40	42.4				
41-60	22.6				
61-80	8.0				
>80	100				
Total					

Cash contribution, labour contribution, collective action and trust.

Result of Table 3 shows that average cash contribution to associations by households is ₦2314.85 per annum. Labour contribution by majority of households (94.8%) is less than 1man-day per annum. Labour contribution to associations is very low in the study area. A household has an average collective action index of 0.86. The average trust index in the study area is 0.87. The low collective action may not be unconnected with the level of trust. It may be difficult for community members to work together if trust in other members is low. Average social capital aggregate is 29.9%.

Capability index and elementary subsets

Capability index measures the opportunities or the freedom of a household to achieving a valued level of well-being. Table 4 presents the capability index of households to the elementary subsets. The fuzzy logic computation of the elementary indicators gives an index of 0.5849. The capability index for this study is higher than the national HDI of 0.504 (UNDP 2014). The HDI is a composite measure of well-being using the three dimensions of health, education and income while this study used an index with nine dimensions of health, nutrition, education, housing, autonomy, reproductive life, political participation, transportation

Table 3: Summary statistics of cash contribution, labour contribution, collective action, trust and social capital aggregate.

SC Variable	%	Mean	SD	min	max
Cash Contribution(₦)		2314.9	265.0	0	14400
0-500					
501-1000	32.3				
1001-5000	10.3				
>5000	41.2				
Total	16.2				
	100				
Labour Contribution		0.6	0.8	0	9
0-0.99					
1	94.8				
>1	0.2				
Total	5.0				
	100				
Collective Action		0.9	0.5	0.1	2.2
0-0.5					
0.51-1	34.2				
>1	34.6				
Total	31.2				
	100				
Trust		0.9	0.5	0.2	3.2
0-0.5	46.0				
0.51-1	1.6				
>1	52.4				
Total	100				
Social Capital Aggregate		29.9	14.1	0.8	87.5
1-20	28.7				
21-40	49.4				
41-60	18.2				
61-80	3.2				
>80	0.5				
Total	100				

and security. Transportation dimension with a figure of 0.1315 has the highest contribution to capability. This is important as transportation of goods is essential in achieving higher capability in other dimensions by improving access to education, health and nutrition. For example, improved access to food market by producers is likely to raise income which can further be used to access other resources that can improve both capability and living conditions of rural dwellers. Improved access to food market by the consumer may also lead to higher capability in nutrition. Improved transportation will also reduce time needed to reach

health facilities especially in emergencies thus improving health capability. Housing has a contribution of 0.0634, with the subsets of autonomy and security having contributions of 0.0748 and 0.0580 respectively. The relative contribution of autonomy to overall capability shows that in spite of cultural restraints, the degree of autonomy of rural dwellers is relatively higher than political participation and health. However, Reproductive life, political participation and health have the lowest contributions of 0.0183, 0.0284 and 0.0285 respectively to the capability well-being of rural Southwest. Thus, access

to these three dimensions is low in the study area and this implies that the opportunities available to rural households in these dimensions are low. Access to health facilities is important as health is crucial to the development of human capital. Political participation

is also low in the study area implying that the rural households have limited freedom in choosing the kind of leaders they want which can subsequently hinder rural and national development.

Table 4: Capability Index to the Elementary Subset (Indicators)

Dimension	Indicator	Index Per Indicator	Index Per Dimension
Health (μ_1)	μ_{11} Time to nearest facility	0.0151	0.0285
	μ_{12} Mode of transportation	0.0134	
Nutrition	μ_{21} Problems satisfying food needs	0.0457	0.0833
	μ_{22} Distance to nearest food market	0.0376	
Education	μ_{31} Time to primary school	0.0138	0.0988
	μ_{32} Mode of transportation to primary school	0.0072	
	μ_{33} Time to secondary school	0.0467	
	μ_{34} Mode of transportation to secondary school	0.0311	
Housing	μ_{41} Problem paying house rent	0.0132	0.0634
	μ_{42} Problem paying utility bills	0.0239	
	μ_{43} Problem with supply of drinking water	0.0172	
	μ_{44} Time to source of drinking water	0.0091	
Autonomy	μ_{51} Who decides on obtaining health care?	0.0184	0.0747
	μ_{52} Allowed to keep money aside	0.0015	
	μ_{53} Ever used contraceptive	0.0548	
Reproductive Life	μ_{61} Time to the nearest maternity centre	0.0183	0.0183
Political Participation	μ_{71} Time to nearest polling booth	0.0284	0.0284
Transportation	μ_{81} Distance to highway or tarred road	0.0603	0.1315
	μ_{82} Road condition	0.0321	
	μ_{83} mode of transportation	0.0391	
Security	μ_{91} distance to the nearest police post	0.0359	0.0580
	μ_{92} robbery attack in the community	0.0221	
			0.5849

Determinants of well-being

Table 5 presents the result of the Ordered Probit model used to investigate the determinants of well-being. The four categories of well-being—very low, low, high and very high formed the dependent variables as ordered

0, 1, 2 and 3 respectively while 31 explanatory variables were considered in the model. However, only 30 were allowed in the model of which only seven were statistically significant at various levels. They are age group 40-49, tertiary education, employment, meeting attendance, decision making index, collective

action and trust. The likelihood ratio chi-square of 53.52 with a p-value of 0.0052 reveals that the model is fit.

Meeting attendance is positively related to well-being and significant ($p= 0.009$). The more meetings members of a social group attend, the more the opportunity they have for better living. Meeting attendance exposes members to information which enables them to take advantage of benefits accruing to members. Trust is also statistically significant to achieving higher capability well-being ($p=0.057$). Trust in other members of the community is important as it has been found to lower transaction cost leading to higher profits (Fukuyama, 1995) and this may lead to higher potential well-being. Collective action is negatively correlated with well-being ($p=0.014$). Low collective action in the study area may reflect lack of cohesion in the communities leading to lower cooperative attitude which may deny members from deriving benefits leading to higher potentials for well-being.

The marginal effect of the categories of well-being is presented in Table 6. A unit increase in meeting attendance improves the probability of having high and very high well-being by 0.005 and 0.002 units but increases the probability of not having very low and low well-being by 0.002 and 0.004 units. A unit increase in trust index increases the probability of not having very low and low well-being by 0.065units and 0.019 units while it increases the probability of having high and very high well-being by 0.019 and 0.065 units respectively. A unit increase in decision making index increases the probability of not having high and very high potential well-being by 0.001 and 0.002 units, while it increases the probability of having very low and low well-being by 0.002 and 0.001 units. A unit increase in collective action increases the

probability of not having high and very high potential well-being by 0.026 and 0.088 respectively but increases the probability of having very low and low well-being by 0.088 and 0.026units respectively.

Table 5: Result of the Ordered Probit for Capability (Well-being)

Variable	Coefficient	Z	P>	z
Age <30	-0.007	-0.03	0.978	
Age40-49	0.448**	2.21	0.027	
Age 50-59	0.286	1.44	0.149	
Age ≥60	0.128	0.68	0.493	
Gender	-0.248	-1.37	0.170	
Married	-0.129	-0.49	0.626	
Widowed	-0.265	-0.82	0.413	
Divorced/separated	0.039	0.11	0.910	
Householdsize1-4	0.135	0.56	0.577	
Householdsize5-9	0.084	0.35	0.726	
Primary education	0.066	0.48	0.631	
Secondary	0.273	1.59	0.113	
Tertiary	0.517*	1.84	0.065	
Employment	0.357**	2.17	0.030	
Private job	0.155	0.38	0.703	
Trading	-0.103	-0.61	0.542	
Wage labour	-0.225	-0.47	0.640	
Artisan	-0.098	0.29	0.772	
Driving	-0.210	0.62	0.535	
Others	-0.180	0.77	0.440	
Distance toUrban11-20km	0.200	1.21	0.226	
Distance to Urban >20km	-0.263	-1.16	0.244	
Density of membership	0.070	0.74	0.458	
Heterogeneity index	-0.005	-1.27	0.205	
Meeting attendance index	0.005***	2.60	0.009	
Decision making index	-0.008***	-2.60	0.009	
Cash contribution	-0.000	-1.48	0.139	
Labour contribution	-0.092	-1.33	0.183	
Collective action	-0.286**	-2.46	0.014	
Trust	0.210*	1.90	0.057	
/cut1	-0.728			
/cut2	-0.010			
/cut3	0.715			
No of Observation	439			
Pseudo R2	= 0.046			
Log likelihood	= -581.820			
prob>chi2	= 0.005			

*** 1% significant level, ** 5% significant level, * 10% significant level

Source: Author's estimates (2013)

Table 6: Marginal Effect of Capability (Well-being)

Variable	Marginal effect Y=1 (very low)	Marginal effect Y=2 (low)	Marginal effect Y= 3 (high)	Marginal effect Y= 4 (very high)
Age <30	0.002	0.006	0.001	-0.002
Age40-49	-0.122**	-0.053*	0.024***	0.151**
Age 50-59	-0.083	-0.031	0.021*	0.093
Age ≥60	-0.039	-0.012	0.012	0.040
Gender	0.074	0.025	-0.020	-0.079
Married	-0.039	0.012	-0.011	-0.040
Widowed	0.086	0.019	-0.029	-0.077
Divorced/separated	-0.012	-0.004	0.003	0.012
Household size1-4	-0.042	-0.012	0.013	0.041
Household size5-9	-0.026	-0.008	0.008	0.0260
Primary education	-0.0200	-0.006	0.006	0.020
Secondary	-0.079*	-0.029	0.020**	0.088
Tertiary	-0.131**	-0.067	0.018	0.181*
Employment	-0.119**	-0.022***	0.042*	0.099**
Private job	-0.045	-0.016	0.012	0.050
Trading	0.032	0.009	-0.010	-0.031
Waged labour	0.075	0.015	-0.026	-0.063
Artisan	0.031	0.008	-0.010	-0.029
Driving	0.069	0.014	-0.024	-0.060
Others	0.058	0.013	-0.020	-0.052
Distance to Urban11-20km	-0.058	-0.021	0.015	0.064
Distance to Urban >20km	0.087	0.017*	-0.030	-0.074
Density of membership	-0.022	-0.006	0.007	0.022
Heterogeneity index	0.002	0.005	-0.001	-0.002
Meeting attendance index	-0.002**	-0.004**	0.005**	0.002**
Decision making index	0.002**	0.001**	-0.001**	-0.002**
Cash contribution	9.68×10^{-6}	2.84×10^{-6}	-2.89×10^{-6}	-9.63×10^{-6}
Labour contribution	0.028	0.008	-0.008	-0.028
Collective action	0.088**	0.026**	-0.026**	-0.088
Trust	-0.065*	-0.019*	0.019*	0.065

Source: Author's Estimates (2013)

Conclusion and policy recommendation

The study examined the effect of social capital on well-being of rural households and provides empirical evidence that social capital has a positive influence on household well-being. It is however evident from the result of the Ordered Probit model that meeting attendance and trust are drivers for potential well-being. Meeting attendance may provide the occasion needed for interactions among rural dwellers which may further enhance trust between community

members. This suggests that it is not enough to belong to local associations but participation in local level institutions in terms of meeting attendance is important to having opportunities necessary for better living. Rural dwellers should be encouraged to participate in local level associations as government at all levels are increasingly using local associations as channels through which individuals and communities can access various benefits like loans, farm inputs and information and other services essential for well-being.

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