

# Social Capital and Vulnerability of Households to Poverty in Asa Local Government Area of Kwara State

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## Abstract

This study examined the effects of social capital on vulnerability to poverty among farming households in Asa local government, Ilorin, Kwara State. A two-stage sampling procedure was used to collect data (using questionnaire/interview guide) from 120 households across four randomly selected villages. The data were analyzed using three stage feasible generalized least square (3FGLS) and logistic regression. Analysis of the socio-economic characteristics with social capital dimensions showed that meeting attendance, cash contribution, and decision-making indices were higher among male headed households than the female headed households. Further analysis of households' poverty indicated that 27.4% households were poor while 72.6% of the households were non-poor. However, vulnerable households accounted for 61.5% of the respondents while only 38.5% were non-vulnerable (indicating that a part of the 72.6% non-poor households were likely to be poor if they experience shock(s) in near future. Decision making index had a negative effect on households' vulnerability to poverty, whereas cash contribution affected it positively. The study therefore recommended that policymakers should increase awareness on the benefits of social capital to enhance rural households' participation and reduce vulnerability to poverty.

**Keywords:** 3FGLS, Logistic regression, Shocks, Social capital, Vulnerability to poverty.

## Introduction

Social capital is the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance and recognition (Szeman and Kaposy, 2011). In the social sciences, the term refers to (a) resources, and the value of these resources, tangible (public spaces, private property) and intangible ("actors", "human capital", and people), (b) the relationships among these resources, and (c) the impact that these relationships have on the resources involved in each relationship, and

on larger groups. It is generally seen as a form of capital that produces public goods for a common good which explains the improved performance of diverse groups, the growth of entrepreneurial firms, superior managerial performance, enhanced supply chain relations, and the value derived from strategic alliances that lead to better welfare of members (Lecroff *et al.*, 2015). Similarly, the volume of the social capital possessed by a given agent depends on the size of the network of connections he can effectively mobilize and on the volume of the capital (economic, cultural or social) possessed by him/her and those to whom he/she is connected. Summarily, it is the degree of

connectedness and the quality and quantity of social relations in a given population (Lin, 1999). However, social capital cannot be studied in isolation; rather it is studied in association with all forms of empowerment it facilitates. Few studies have attempted pairing social capital with health, community based human capital development initiative, but this study attempts to see the link between social capital and households' vulnerability to poverty. This, in essence, will enable the stakeholders and policy makers realize that any poverty alleviation intervention should consider the possibility of household and community shocks and incorporate measures that can enhance their resilience to such shocks. If this measure makes the household or community to remain or return to their consumption level in a short term, it is not qualified to be regarded as a forward-looking poverty alleviation measure.

Mohan and Mohan (2002) identified low endowment of human capital and lack of access to social capital as one of the major causes of poverty in Nigeria and other African countries. The Nigerian poverty situation has continued to increase by the day, despite years of intervention of poverty alleviation programs (such as Youth Empowerment Scheme (YES); National Poverty Eradication Program (NAPEP); Family Economic Advancement Program (FEAP); among others). Therefore, recognizing social capital became necessary because of its potential as a cushion to the negative effects of unexpected households and community based shocks. In a world full of uncertainties, households are often confronted with severe idiosyncratic risks (i.e. household-level shocks, like human illness, death, injury, unemployment, job loss, asset loss, crop/livestock failure and so on) and covariate risks (such as natural

disaster or epidemics) resulting in high income volatility (Baiyegunhi and Frazer, 2011). Although, some households may be able to smooth their consumption by adopting ex-ante risk mitigating strategies through sales of productive assets e.g. livestock, withdrawing their children from school when there is shortfall in income, or using assets as a buffer for consumption, but many may find it difficult to survive the shock and as a result their future consumption continues to worsen (Jacoby and Skoufias, 1997). Currently, social capital which is the non-financial, often intangible benefits that one gains from interactions with one's community is lacking in the harsh economic climate of many low income neighbourhoods.

Although, many studies on social capital and household welfare have been carried out in Nigeria, the focus has been on the use of credit facilities, fertilizer supply, improved infrastructure and other input supply as ways of improving farmers' welfare through improved agricultural productivity (Allahdadi, 2011; Mukaila *et al.*, 2012; Adepoju and Oni, 2012; Omonona *et al.*, 2014) among others. As at the time this study was conceptualized, there was little information on how social capital can prevent households from being vulnerable to future poverty. This study, therefore, seeks to examine whether or not there exists a relationship between households' social capital and their chances of being vulnerable to future poverty.

## **Materials and Methods**

### **Study area**

The study was conducted in Asa Local Government Area (LGA) of Kwara state with its headquarters in the town of Afon. The LGA has a land area of 1,286 km<sup>2</sup> and an

estimated population of 168,300 in 2016 (City population, 2016). Asa is primarily agrarian, comprising of major farming communities in the State, with a great expanse of arable land, rich fertile soil, and a major river (Asa River) for artisanal fishery and aquacultural activities. Agriculture is the main source of income and the principal produce are fish and fish products, major food crops such as yam, maize, cassava, groundnut, cowpea, sorghum, melon, okra, pepper, and some leafy vegetables are as well produced. Also, a humid tropical climate prevails in the Local Government with two distinct seasons; the wet and dry seasons. The rainfall ranges from 50.8 mm during the driest months to 2413.3mm in the wettest months while the temperature ranges between 21.1°C to 35°C (Kwara Agricultural Development Projects, 2006).

#### Sample size and sampling procedure

This study used primary data which were obtained through a two stage sampling technique to obtain relevant information from households. Asa LGA was purposively selected due to the dominance of artisanal fishermen and farmers in the area (KWADP, 2006). The first stage involved the random selection of four (4) out of the ten (10) towns that make up the local government area. In the second stage, thirty farming household heads were selected from each town using systematic sampling procedure, thereby making a total of 120 respondents. However, of the 120 copies of questionnaires employed in the survey, data from only 117 were analyzable.

#### Methods of data analysis

Analytical techniques used were descriptive statistics and regression models. The descriptive tools include frequency distribution, mean, standard deviation, and percentages. The regression models employed are Three Stage Feasible Generalized Least Squares (3FGLS) and logistic regression. Relative poverty line was set as the two third of households' mean per capital expenditure. Households' with consumption level below the thresholds were categorized as been poor while those above the threshold were non-poor. Logistic regression was used to show the effect of social capital on household vulnerability.

This study adopted the analytical tool that was proposed by Chaudhuri *et al.* (2002), following Oni and Yusuf, (2008) and Dereje (2013) especially for cross-sectional data. Households' consumption pattern was used to assess its level of vulnerability to poverty. The level of households' vulnerability at a particular time(t) is defined in terms of the households' consumption prospects at some point in time t+1 to make an important distinction between the notion of vulnerability and poverty (Chaudhuri *et al.*, 2002).

$$V_{ht} = \Pr,(C_{h \ t+1} < Z) \quad (1)$$

Where  $V_{ht}$  = Vulnerability of household at time t

$C_{h \ t+1}$  = Household's consumption level at time t+1  
 $Z$  = poverty threshold (relative poverty)

Household consumption in general, was considered to depend on a variety of household characteristics including idiosyncratic and aggregate shocks. Therefore, household consumption can be expressed as:

$$C_{ht} = f(X_h, \beta_t, \alpha_h, \varepsilon_{ht}) \quad (2)$$

Where:

$X_h$  = the bundle of observable household characteristics

$\beta_t$  = vector of parameters describing the returns to household characteristics, which reflects the state of the economy at time  $t$ .

$\alpha_h$  = an unobserved time-invariant household level effect,

$\varepsilon_{ht}$  = error term that measures any idiosyncratic factors that contribute to differential welfare outcomes for households who are otherwise equivalent

Meanwhile, households (h) future consumption (t+1) cannot be observed in time  $t$ , estimating the consumption equation based on equation (2) enables us to measure household vulnerability as;

$$V_{ht} = \Pr(C_{h,t+1} = f(X_h, \beta_{t+1}, \alpha_h, \varepsilon_{ht+1}) < Z / f(X_h, \beta_t, \alpha_h, \varepsilon_{ht})) \quad (3)$$

However, vulnerability of households can be derived from the stochastic properties of the inter-temporal consumption stream.

Vulnerability as expected poverty (VEP), is the probability that a household's consumption will lie below the predetermined poverty line in the future. For this study, households were classified as vulnerable and non-vulnerable based on half of their mean vulnerability index. Households' with vulnerability index less than 0.5 are non-vulnerable and those above 0.5 are vulnerable. According to Chaudhuri *et al.* (2002) vulnerability of household is the probability of household, 'h'

finding itself (consumption) poor at time t+1 and can be expressed using cross-sectional data as follows:

$$\ln C_h = X_h \beta + \varepsilon_h \quad (4)$$

$$\text{where } \varepsilon_h < (0, X_h \Delta) \quad (5)$$

Assuming that the structure of the economy is relatively stable over time, future consumption stems solely from the uncertainty about the idiosyncratic shocks and unobservable characteristics, which contribute to different per capita consumption levels. It is also assumed that the variance of the disturbance is given as:

$$\sigma_{\varepsilon,h}^2 = X_h \vartheta \quad (6)$$

Estimates for  $\beta$  and  $\vartheta$  can be found using a three-step feasible generalized least squares (3FGLS) procedure. Using  $\beta$  and  $\vartheta$ , we can estimate the expected log consumption and the variance of log consumption for each household as follows:

$$E[\ln C_h | X_h] = X_h \beta \quad (7)$$

$$V[\ln C_h | X_h] = X_h \vartheta \quad (8)$$

By assuming '  $\ln C_h$  ' is normally distributed and using the estimates above, the probability of falling into (for the currently non-poor), or remaining (for the currently poor), poverty in the future is given by the expression:

$$\hat{V}_h = \phi \left( \frac{\ln z - X_h \hat{\beta}_{FGLS}}{\sqrt{X_h \hat{\vartheta}_{FGLS}}} \right) \quad (9)$$

Equation (9) reflects the presumption that high variation of consumption reduces vulnerability for those with expected consumption below

poverty line, whereas it increases vulnerability for those whose expected consumption is above poverty line. Hence, if we reasonably assume that the poor are risk-averse, they might have little chance to escape from poverty:

Where,  $\theta$  = cumulative normal distribution function,

$Z$  = poverty line that is considered to be the minimum consumption level below which each household is assumed to be vulnerable,

$X_h \hat{\beta}_{FGLS}$  = expected mean of real household consumption

$X_h \hat{\theta}_{FGLS}$  = estimated variance in consumption

Dependent variable is the Log of per capita consumption expenditure while the independent variables are

$X_1$  = Age of household head in years

$X_2$  = Square of age of household head

$X_3$  = Household size

$X_4$  = Gender of household head (male =1 otherwise=0)

$X_5$  = Marital status of household head (single=1 otherwise=0, married monogamous=1 otherwise=0, married polygamous=1 otherwise=0, divorced=1 otherwise=0, widow=1 otherwise=0).

$X_6$  = Primary occupation of household head (farming=1 otherwise=0, non-farming=1 otherwise=0)

$X_7$  = Educational level of household head (no formal education=1 otherwise=0, primary education=1 otherwise=0, secondary education=1 otherwise=0, tertiary education=1 otherwise=0, Vocational education=1 otherwise=0, Quranic education=1 otherwise=0)

$X_{10}$  = Dependent

$X_{11}$  = Dwelling

$X_{12}$  = Toilet

$e_i$  = Error term

**Logit regression:**

Logistic regression was adopted following Dereje (2013). In estimating the effects of social capital on households' vulnerability to poverty, categorical data analysis will be performed in this regard. The dependent variable in the model is the vulnerability categories while independent variables are the social capital dimensions and households' characteristics. Binary response models (e.g. probit, logit) are used where vulnerability to poverty is considered as a "yes" or "no" decision (Bogale, 2011).

It was then operationalized as follows;

$$V_h = f(SC_i, X_1, X_2, \dots, X_n) \quad (10)$$

Where  $V_h$  = Binary response dependent variable

0 = Non-vulnerable

1 = Vulnerable

$SC_i$  = social capital dimensions such as;

$X_1$  = Density of membership,

$X_2$  = Heterogeneity index,

$X_3$  = Meeting attendance index,

$X_4$  = Cash contribution,

$X_5$  = Decision making index,

$X_6$  = Aggregate social capital index,

$X_i$  = Household head characteristics (such as)

$X_7$  = Age

$X_8$  = Marital status of household head (single=1 otherwise=0, married monogamous=1 otherwise=0,

married polygamous=1 otherwise=0,  
divorced=1 otherwise=0, widow=1  
otherwise=0

$X_9$  = Primary occupation of household  
head (farming=1 otherwise=0,  
non-farming=1 otherwise=0)

$X_{10}$  = Educational level of household  
head (no formal education=1  
otherwise=0, primary education=1  
otherwise=0, secondary education=1  
otherwise=0, tertiary education=1  
otherwise=0, Vocational education=1  
otherwise=0, Quranic education=1  
otherwise=0)

$X_{11}$  =Dependent ratio

## Results

### Socioeconomic characteristics of respondents

#### *Distribution of respondents' age and social capital dimensions*

The age distribution of the respondents in the study area is shown in Table 1. The per capita expenditure of household with age group less than 31 years was higher than others. The result

also shows that households with age group less than 31 years had the highest meeting attendance which implies that they had a higher commitment to attending meetings.

Households with age group less than 31 also had the highest membership density, decision making index and annual cash contribution. However, age group 31- 40 had the highest diversity or heterogeneity index, and highest aggregate social capital index.

### Sex distribution of household and social capital dimensions

Male-headed households were more (107) than the female-headed households (Table 2). Households headed by males had higher membership and decision making indices. Male-headed households were into at least three associations or groups and had a meeting attendance of 78.66%. The average annual contribution of the male-headed households to the association showed that it was more than that of the female-headed households. Male-headed household had higher per capita expenditure than their female counterpart.

**Table 1:** Distribution of respondents' age and social capital dimension

Age (years)	Freq.	Density of Membership	Heterogeneity Index	Meeting Attendance Index	Decision making index	Annual cash contribution (₦)	Mean per capita
<31	4	4.25	45.00	80.78	87.50	168312.50	30368.75
31-40	31	4.07	65.00	81.58	86.90	60795.71	20322.32
41-50	44	3.12	58.24	77.25	62.75	90358.82	18373.09
>51	38	3.11	55.85	78.03	67.07	58998.78	12723.13

**Source:** Field Survey, 2016

**Table 2:** Gender Distribution of respondents and social capital dimensions

Gender	Freq	Density of Membership	Heterogeneity Index	Meeting Attendance Index	Decision making index	Annual cash contribution (₦)	Mean per capita
Female	10.00	2.70	52.00	76.04	48.33	12174.00	6518.70
Male	107.00	3.32	57.38	78.66	71.51	72678.97	15854.57

**Source:** Field Survey, 2016

**Respondents' marital status and social capital dimensions**

Distribution of respondents' marital status and social capital dimensions is presented in Table 3. Majority of the respondents were married. Average per capita expenditure of the household heads who are not married was more than that of the married households due to the large family size of the married households. Also, households headed by married persons had higher meeting attendance, decision-making index, cash and labour contributions and were more likely to belong to local level institutions. The heterogeneity indexes of the married household heads were also higher and, polygamous households belonged to at least four associations.

**Respondents' educational level and social capital dimensions**

Households with formal education belonged to at least three groups, and they had the highest heterogeneity index (Table 4). Meeting attendance index was highest among households with tertiary education. Also, decision-making index increased as the educational qualification increased. This is because educational attainment is important in making reasonable decisions among the local level institution members. The result also reveals that household heads with tertiary education gave more cash contribution to the association relative to others.

**Table 3:** Respondents' marital status and social capital dimensions

Marital status	Freq	Density of Membership	Heterogeneity Index	Meeting Attendance Index	Decision making index	Annual cash contribution (₦)	Mean per capita
Single	3	3.33	46.67	72.67	83.33	29150.00	49673.33
Monogamous	74	2.98	58.24	79.49	70.50	63772.97	15742.56
Polygamous	29	4.14	54.83	77.84	71.84	99062.07	12474.83
Separated	2	3.50	75.00	76.99	75.00	52200.00	12590.00
Divorced	3	3.00	63.33	81.34	55.56	12800.00	7463.06
Widow	6	2.50	46.67	70.59	44.44	12690.00	6386.31

Source: Field Survey, 2016

**Table 4:** Respondents' educational level and social capital dimensions

Education	Freq	Density of Membership	Heterogeneity Index	Meeting Attendance Index	Decision making index	Annual cash contribution (₦)	Mean per capita
No formal	29	3.10	52.76	74.73	62.07	38506.55	11879.28
Primary	35	3.69	59.14	81.72	81.90	67950.29	12510.38
Modern/ Secondary	35	4.00	70.00	75.23	41.66	69600.00	12742.22
Vocational	2	1.50	30.00	44.17	25.00	2400.00	6508.75
Tertiary	14	3.50	70.00	93.44	89.29	145585.70	24317.84
Quranic	2	0.50	35.00	50.00	16.67	4241.64	12048.75

Source: Field Survey, 2016

**Respondents' household size and social capital dimensions**

In Table 5, 70.0% of the respondents had household size that ranged between six to twelve persons. Heterogeneity index and meeting attendance were highest among the households' with 6-12 persons while households' with 13-20 belonged to at least four associations. Households with smallest size participated more in decision making than households with larger family size.

**Respondents' occupation and social capital dimensions**

Table 6 reveals that 46% of the respondents were farmers practicing mainly rain-fed agriculture. The per capita expenditure of the civil servant was higher than that of the farmers but cash contribution by farmers was higher than that of civil servants.

Heterogeneity index of the artisan was higher than that of the trader. The Private business household heads were more regular in attending meetings than the civil servant's households. Artisan households participated more in decision making of the association than other households, their decision-making index was higher than the households headed by a civil servant.

**Determinants of households' consumption expenditure**

The analysis of households' vulnerability shows that households' consumption expenditure was positively affected by dependent ratio and age of household head (Table 7). The higher the age of household heads the higher the consumption expenditure. Also, old age (proxied by age square) influenced consumption expenditure negatively. This shows that increase in age of

**Table 5:** Distribution of Respondents by household size and social capital dimensions

Household size	Freq	Density of Membership	Heterogeneity Index	Meeting Attendance Index	Decision making index	Annual cash contribution (₦)	Mean per capita
0-5	38	3.03	55.00	76.28	69.74	65091.84	21387.39
6-12	70	3.39	58.43	80.48	70.00	64332.86	12535.13
13-20	9	4.11	53.33	71.67	64.82	102400.00	7938.47

Source: Field Survey, 2016

**Table 6:** Respondents' occupation and social capital dimensions

Occupation	Freq	Density of Membership	Heterogeneity Index	Meeting Attendance Index	Decision making index	Annual cash contribution \$	Mean per capita
Farming	46	3.39	56.09	75.50	68.48	63872.61	13955.99
Trading	16	2.88	57.50	79.46	65.63	77100.00	16643.52
Civil servant	7	2.71	55.71	78.64	66.67	126714.30	20078.45
Private business	8	2.38	56.25	81.10	54.17	36175.00	13139.37
Artisan	40	3.55	58.00	80.84	75.83	63756.25	15192.26

Source: Field Survey, 2016



household after certain level negatively influences consumption. Households engaged in the private sector had a positive relationship with households' expenditure. The coefficient of toilet used by a household is significant at 1% and had a positive impact on their consumption. The coefficient of separated households had a negative relationship with their consumption expenditure. Similarly, living in a divorced household reduced consumption expenditure. Households' with no formal education had low consumption expenditure. The adjusted R-squared showed that the independent variable jointly explains about 58% variation in the per capita expenditure.

**Households' poverty and vulnerability**

Table 8 indicates that eighty-five persons out of the respondents were not poor while thirty-two were poor. Out of those respondents that were non-poor, twenty-three were non-vulnerable while sixty-two were vulnerable.

This shows that expected poverty (vulnerability to poverty) is much higher than the estimates of poverty. This underscores the importance of forward-looking poverty analysis. Similarly, out of the respondents that were poor, twenty-two were non-vulnerable while ten were vulnerable.

**Effects of social capital on households' vulnerability to poverty in Asa LGA**

Table 9 presents the logit regression result and its marginal effects of the social capital dimensions on the likelihood of being vulnerable among respondents in Asa Local Government Area. Out of the social capital dimensions used for this study only decision-making index and cash contribution were significant at P=1.0 Decision-making index

had a negative coefficient implying that higher decision-making index reduced households' vulnerability to poverty.

**Table 7: Determinants of households' vulnerability to poverty**

Ln H/expenditure	Coefficient	P> t
Dependency Ratio	2.87	0.005*
Age	1.90	0.060***
Age Square	-1.70	0.093***
Primary Occupation	1.89	0.062***
Type of Dwelling Place	1.17	0.244
Water source	-0.63	0.530
Toilet	2.97	0.004*
Household Risks	-0.09	0.932
Gender_dum1	0.97	0.332
Marital Status_dum2	-0.25	0.802
Marital Status_dum3	0.69	0.501
Marital Status_dum4	-0.79	0.434
Marital Status_dum5	-0.19	0.060***
Marital Status_dum6	-2.23	0.028**
Education_dum1	-0.35	0.725
Education_dum2	0.01	0.996
Education_dum3	0.61	0.542
Education_dum5	0.56	0.574
Education_dum6	1.01	0.314
Constant	11.62	0.000
R-Squared	0.5779	
F(19, 97)	6.99	
Prob. (F)	0.0000	

**Source:** Field Survey, 2016

Significance: \*, \*\*, \*\*\*; = 1%; 5%; and 10% respectively

Dum=dummy; each class of categorical variables was proxied by a dummy (0, 1), then a dummy from each categorical variable was specified as a reference category, hence the omission of one dummy in each category. This specification allows for the direct effect of each class of an independent categorical variable to be visible.

**Table 8: Households' poverty and vulnerability**

Poverty level	Non vulnerable	Vulnerable	Total
Non poor	23 (51.1%)	62 (86.1%)	85 (72.6%)
Poor	22 (48.9%)	10 (13.9%)	32 (27.4%)
Total	45	72	117

**Source:** Field Survey, 2016

On the other hand, cash contribution was positive, indicating that the more the cash contributed by households' the higher the vulnerability to poverty. The age of households was significant at 10% with a positive coefficient. The dependent ratio also increased the likelihood of households' vulnerability to poverty. Conversely, primary occupation had a negative coefficient and was significant at 10%.

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**Effects of social capital on households' vulnerability to poverty in Asa LGA**

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**Discussion**

The result implies that male household heads participated more in associations than the female household heads, this is in agreement with the work of Azanaw and Tassew (2017) who found that male participated more than the female in associations. Although, this may not be unconnected with the various domestic duties that women have to do aside from farm and off-farm responsibilities. The younger the age of the children, the more the time a woman has to dedicate to domestic and child care and the less the time available for associations. Respondents whose ages were

**Table 9:** Effects of social capital on households' vulnerability to poverty

Vulnerable group	Logistic Regression output			Marginal Effect		
	Coefficient	SE	P> t	Coefficient	SE	P> t
Constant	-6.5340	2.4695	0.0080			
Decision index	-0.0273	0.0160	0.0880***	-0.0040	0.0023	0.0790***
Membership density	0.3192	0.2524	0.2060	0.0470	0.0373	0.2080
Heterogeneity index	-0.0038	0.0171	0.8260	-0.0005	0.0025	0.8240
Cash contribution	0.000	0.0000	0.1050	0.0000	0.0000	0.0600***
Meeting attendance	-0.0002	0.0150	0.9920	-0.0000	0.0022	0.9920
Age	0.0608	0.0345	0.0780***	0.0090	0.0052	0.0830***
Marital status	0.8077	0.8151	0.3220	0.1189	0.1237	0.3360
Educational level	0.9173	0.2308	0.0000*	0.1350	0.0358	0.0000*
Primary occupation	-0.2977	0.1717	0.0830***	-0.0438	0.0259	0.0910***
Dependent	0.5207	0.1935	0.0070*	0.0766	0.0286	0.0080*

Source: Field Survey, 2016.

Significance: \*, \*\*, \*\*\*, = 1%; 5%; and 10% respectively, SE = Standard error

less than or equal to 40 years were active in building social capital. This is also the case with their higher decision making index, membership, heterogeneity, and aggregate social capital index. It is not surprising to find youths being active especially when the activities they engage in are highly rewarding, and the association they are involved in is facilitating the growth of their respective enterprise. Practically, this is one of the basic characteristics of youths, the drive, passion, and energy committed to duty tend to increase with increase in rewards, and most times they can take up multiple tasks at the expense of their leisure. This is partly in line with the findings of Weller (2010) where it was found that persons aged between 20-40 years have higher per capita expenditure, decision making index than the older persons aged 65 years and above (This implies that vulnerability increased with age of households' head). Female members have lower annual contribution to association because per capita expenditures of female-headed households were lower than their male counterparts. Family size contributes negatively to lower per capita expenditure of married households; this is in line with the work of Maralani (2008) wherein it stated that larger household size is a precursor to low per capita consumption, other things being equal. Conversely, family size contributes positively to meeting attendance, cash and labour contributions than for the single individuals. However, this is quite surprising and unexpected given the assumption that singles have less responsibilities and more time to serve associations.

Education is one of the most important predictors of many forms of political and social engagement, it influences the respondents' participation in the local level institution and it

shows the degree of benefits that respondents can derive from the institution. Education equips people with knowledge, skills, values and behavior needed for collective empowerment, it is at the centre of social and economic development. Education facilitates the diffusion of innovation and increases labour productivity. Most of the respondents had primary education, however, household heads with tertiary education had higher per capita expenditure than others, as well as decision-making index and meeting attendance. This is in line with the finding of Omonona *et al.* (2014) wherein it was found that decision making and per capita expenditure were higher among respondents who are university degree holders than other categories of respondents. Also, as household size increased, the mean per capita expenditure decreased. More so, cash contribution decreased with increasing household size. Ownership of businesses affords the members the opportunity to build aggregate social capital index as seen in farmers, artisans, and private business owners' participation in decision making, regular meeting attendance and heterogeneity index. The civil servants have higher per capita expenditure than farmers perhaps because farmers in the study area practice mainly rain fed agriculture and this makes their income streams seasonal.

### **Conclusion and Recommendations**

On the basis of the result obtained from the analysis, this study concludes that social capital dimensions such as decision-making index and heterogeneity index reduced households' vulnerability to poverty while cash contribution enhanced households' vulnerability to poverty. The vulnerability is higher among female-headed households

compared to their male counterpart. Also, vulnerable household heads were found to participate less in social network compared to households' that were not vulnerable. The primary occupation of the household head encouraged their participation in social network thereby reducing their vulnerability to poverty. However, large households size reduced households head participation and increase vulnerability to poverty. Married household heads were less vulnerable compared to household heads that were single. This is because married households' head received support from their spouses.

Based on the empirical findings of this research and the conclusions drawn, the following policy recommendations are made towards reducing households' vulnerability in Asa Local Government area and enhancing their participation in social network. Policy makers when formulating poverty alleviation programs should not just look at the current poor but consider the vulnerable groups. This is because a large number of households that are presently non-poor are certainly vulnerable to falling into poverty in future due to certain circumstances beyond their control.

Community-based enlightenment on the benefits of social capital as a tool to enhance rural households' resilience to shocks should be strengthened. Policy measures directed towards the provision of better family planning to reduce household size should be given adequate attention and priority by the government.

## References

Adepoju, A. A. and Oni, O. A. (2012). Investigating endogeneity effects of social capital on household welfare in Nigeria: A Control Function Approach. *Quarterly Journal of*

- International Agriculture* 1: 73-96.
- Allahdadi, F. (2011). Building social capital for poverty reduction in rural areas of Marvdasht Iran. *Journal of American Science* 7(6): 532-535.
- Azanaw A. and A. Tassew (2017). Gender equality in rural development and agricultural extension in Fogera district, Ethiopia: Implementation, access to and control over resources. *Ajfan* 17(4) 12509-12533.
- Baiyegunhi, L. J. S. and Fraser G. C. G. (2011). Vulnerability and poverty dynamics in rural areas of Eastern Cape Province, South Africa. *Ghana Journal of Development Studies* 8(2): 84-100.
- Bogale, A. (2011). Analysis of poverty and its covariates among smallholder farmers in Eastern Hararghe highland of Ethiopia. *Journal of Development and Agricultural Economics* 3(4): 157-164
- Chaudhuri, S., Jalan, J. and Suryahadi, A. (2002). Assessing household vulnerability to poverty: A methodology and estimates for Indonesia. Columbia University Department of Economics Discussion Paper No. 0102-52. New York: Columbia University.
- CIA (Central Intelligence Agency) (2016). The World Factbook: Available online: <https://www.cia.gov/library/publications/the-world-factbook/geos/ni.html>
- City Population (2016). Nigeria: Administrative Division (States and Local Government Authority) [www.citypopulation.de/php/nigeria-admin.php](http://www.citypopulation.de/php/nigeria-admin.php)
- Deaton, A. (1992). Understanding Consumption: Carendon's Lectures in Economics, Oxford. Oxford University Press, pg. 44-80.
- Dereje, F. D. (2013). Assessing households' vulnerability to poverty in rural Oromiya – Ethiopia. *Journal of Economics and Sustainable Development* 4(8): 110.
- Jacoby, H. and Skoufias, E. (1997). 'Risk, financial markets, and human capital in a developing country'. *Review of Economic Studies* 64(3): 311-336.

- Kwara State Agricultural Development Project (KWADP) (2006). Agronomic Survey Report for 2006.
- Lecerof S. S., Stafstrom, M., Westetling, R. and Ostergreen, P.O. (2015) Does social capital protect mental health among migrants in Sweden? *Health Promotion International* 31 (3): 644-652.
- Mohan. G. and John, M. (2002). Placing Social Capital. *Sage Journals* 26 (2): 191-210.
- Mukaila, A. I., Sakariyau, O.B., Dauda, C.K.K., Paiko, I. I. and Zubairu, U. M. (2012). Social Capital and Poverty Reduction in Nigeria: A Case Study of Minna Metropolis. *International Journal of Business and Social Science* 3 (12): 229.
- Lin, N. (1999a). Building a network theory of social capital. *Connections* 22(1): 28-51
- Maralani V. (2008). The changing relationship between family size and educational attainment over the course of socioeconomic development: Evidence from Indonesia. *Demography* 45(3) 693-717.
- Omonona, B.T., Amao, J.O. and Bamimore J.A. (2014): Social capital and farming household welfare in Oyo State, Nigeria. *International Journal of Business and Social Science* 9(1): 245-255.
- Oni, O. A. and Yusuf, S. A. (2008). Determinants of expected poverty among rural household in Nigeria. African Economic Research Consortium (AERC) Research Paper 183.
- Rosenzweig, M. R. and Kenneth, I. W. (1993). Credit market constraints, consumption smoothing and the accumulation of durable production assets in low-income countries, *Journal of Political Economy* 101(2): 223-244.
- Szeman, I. and Kaposy, T. (2011). *Cultural Theory: An Anthology*, Blackwell Publishing, John Wiley and Sons Ltd, The Atrium, Southern Gate, Chichester, West Sussex, P0198SQ, United Kingdom, 249-252.
- Weller S. (2010). Young People's Social Capital: Complex identities, dynamic networks. *Ethnic and Racial Studies* 33(5): 872-888.