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Social capital differentials and rural household poverty outcomes in Osun State, Nigeria

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Abstract - This study investigates the influence of social capital differentials on poverty outcomes among rural households in Osun State, Nigeria. Social capital, operationalized through dimensions such as trust, reciprocity, group membership, and access to informal networks, is increasingly recognized as a key determinant of welfare and poverty dynamics. Using cross-sectional data collected from 312 randomly selected rural households across six local government areas in Osun State, the study employs Descriptive statistics and Composite Score to construct social capital indices and applies a m descriptive analysis to assess the validation of the relationship between social capital and household poverty status. The results reveal significant disparities in social capital endowments across the households, with households possessing higher levels of bonding and bridging social capital exhibiting a lower probability of falling below the poverty line. Particularly, membership in cooperative societies, participation in community decision-making, and strong heterogeneity index were positively associated with poverty reduction. Using discriminant analysis, the model achieved a classification accuracy of 97.8%, with membership density, annual cash and labor contributions, and aggregate social capital emerging as statistically significant discriminators. The findings underscore the need for policy frameworks that strengthen rural social networks, promote inclusive community-based organizations, and integrate social capital development into rural poverty reduction strategies. Enhancing social capital could serve as a complementary tool for improving the effectiveness of conventional poverty alleviation programs in rural Nigeria.
Keynote: Social Capital, Poverty, Composite Score, discriminant analysis

INTRODUCTION

Poverty remains one of the most persistent developmental challenges Nigeria is facing, it undermines all efforts made towards economic growth, social cohesion, and human development. Jetin (2016), Boarini *et. al* (2018), Sommer (2019), Akande and Shittu (2022). Despite various policy interventions at national and sub-national levels—ranging from direct cash transfers to agricultural empowerment programs—poverty continues to affect a large portion of the population, particularly rural and semi-urban dwellers, Ruel *et. al.* (2017), Osun State, is no exception. Although the state enjoys relative political stability and a strong cultural heritage, it still struggles with high levels of income inequality, limited access to basic services, and widespread household poverty (Abiola 2019).

Traditionally, poverty analyses have emphasized economic indicators such as income, employment, education, and asset ownership (Akinbode and Hamzat 2017). However, recent scholarly and policy attention has turned to non-monetary dimensions of well-being, Anand *et. al* (2021,) among which social capital stands out as a crucial yet often overlooked determinant of poverty and livelihood outcomes. Social capital refers to the networks, norms, values, and trust embedded in social relationships that facilitate cooperation and mutual support within and among communities (Algan 2018). It is increasingly recognized as a form of capital that households can draw upon to access resources, reduce vulnerability, and enhance their socio-economic status. (Alam *et.al*. 2016, Panday *et. al* 2021)

According to Pharm and Mukhopadhaya (2022), Liu *et al* (2021) social capital is known to be very relevance to the reduction of poverty level because of its capacity to influence access to information, employment opportunities, credit, education, health services and give emotional support. In Osun State where formal institutions may be weak or insufficiently resourced , social networks which includes family ties, community associations, religious groups, and cooperative societies frequently play a central role in bridging this institutional gaps (Adewumi and Keyser 2020, Oladeji *et. al*. 2017). However, not all households have equal access to or benefit equally from these social structures. The disparities in the type, quality, and intensity of social capital across different communities and households can significantly influence their poverty outcomes.

Furthermore, social capital manifests in different forms such as bonding which involves close ties within a group, bridging which has to do with connections across different groups, and linking which involves networks with institutions and individuals in positions of power (Claridge 2018). Each of these forms of social capital can have distinct effects on poverty levels, depending on the socio-economic and cultural context.

Despite the growing recognition of social capital in development discourse, empirical studies focusing on its relationship with poverty in specific Nigerian contexts remain limited. In Osun State, there is a noticeable gap in the literature regarding how differentials in social capital influence household poverty levels. Understanding this

relationship is crucial for designing effective and context-sensitive poverty alleviation programs that leverage existing social structures and norms.

This study, therefore, seeks to analyse the differentials in social capital among households in Osun State and examine how these disparities affect households' poverty levels. By adopting a multidimensional approach that considers the various forms of social capital and their interaction with socio-economic variables, the research aims to provide comprehensive insights into the role of social relationships in shaping household welfare though reduction in poverty level. The findings are expected to inform both academic debates and practical policy interventions aimed at reducing poverty through socially inclusive and participatory strategies using the following objectives

i. identify and describe the various dimensions of social capital available in study area.
ii. categorise households based on their poverty status and their level of social capital involvement.
iii. analyse the socioeconomic factors determining the level of social capital among the respondents.

METHODOLOGY

The study was conducted in Osun State, Nigeria. Osun State lies between latitude $8^0$10' to the North and Latitude $6^0$5' to the South. It is marked by longitude 4^0 to the West and Longitude5^0 4' to the East. It lies in the equatorial rain forest belt and has a land area of 8,882.55 square kilometers and a population of 2,203,016. The State is bounded in the North by Kwara State, on the south by Ogun State, on the West by Oyo State and on the East by Ondo State. Osun State was carved out from the old Oyo State in August 1991 and has 30 local governments and one area office. The State is dominated by Yoruba ethnic group.

Agricultural activities follow the traditional system of mixed cropping. The favourable condition made the state to be agrarian, suited for the production of permanent crops such as cocoa, kola nut, oil palm as well as arable crops like yam, cassava, etc. Majority of the households in the State are predominant small-scale farmers that still depend on traditional method of farming. Besides farming, the inhabitants also engage in other occupations like trading, manufacturing and commerce. In all these farming and other livelihood activities, benefits are also derived through social capital membership.

This study employed a multistage sampling technique to select the respondents. Osun State has been stratified into three ADP (agro ecological zones): Ife/Ijesha, Iwo and Osogbo zones. These strata were selected in the first stage of sampling. In the second stage, primary sampling units (PSU) were used to select local Government areas based on sample proportionate to size.

Each of the three ADP zones is made up of ten local government areas. Therefore, because of cost and time, two local Governments (20%) were randomly selected from each zone. In the third stage, secondary sampling units (SSU) were used to select localities/rural communities per selected local government with equal probability of selection. Three 315 respondents were selected from the various rural areas in the State, out of which 312 were cleaned and used for the study.

Descriptive statistics was used to analyse the first objective of this study which was to identify the dimensions of social capital among respondents in the study area. The descriptive analysis includes the use of frequency distribution, mean, median, average, percentage. The information collected from their cash contribution, labour contribution, meeting attendance, participation in decision making etc. were used to generate heterogeneity index, membership density, decision making index and the aggregate social capital.

The aggregate social capital was arrived at through the construction of a multiplicative index of the three social capital dimensions (which have always been indicated in the literature) density of association, internal heterogeneity and active participation in decision making.

Descriptive analysis was also used categorize household based on their poverty status. It includes the use of mean, percentage etc.

The three main approaches to household poverty measurement according to Muellbauer (1980) are estimation of true indices of poverty, total household expenditures and full income concept.

This study adopted household total expenditure as a measure for household poverty considering the advantage of less required data and the fact that getting the actual total income of farming household may not be possible. The approach has been extensively used in various similar studies, Okunmadewa *et al.* (2007), Yusuf (2008) Adepoju *et.al* (2012), Heshmati (2019). This is the household monthly expenditure on food and non-food items which include consumed household's own production. Data collected from monthly expenditure on food items, clothing, electricity/telephone bills, education, health facilities, water, and monthly remittance etc. and their household sizes were used to generate their per capita expenditure (PCE). The mean PCE was generated by dividing the per capita expenditure by the number of respondents. One-third and the two-third of mean was generated which was used to categorise households into three categories of poverty level; core poor, moderately poor and the non-poor. Respondents that fall below one third of

PCE are core poor, those that fall in between the range are the poor category. While those that fall above two-third PCE are the non-poor.

Most studies have adopted a rather arbitrary and variable method of defining the poverty line on the basis of which poverty is profiled for Nigeria. For example, Aigbokhan (2000), Canagarajah *et al.* (1997), and Federal Office of Statistics (FOS, 1999, 1999b) all adopted ratios (one-third and two-thirds) of mean income/expenditure as a basis for defining the poverty line. The limitations of this approach in tracking poverty are now well known. For example, having a particular level of income/expenditure is not a sufficient indicator of the level of welfare to define the poverty line. More important is how that amount is spent in determining the level of poverty and ability to undertake economic activity. Recognition of this fact has led to adoption of consumption-based approaches to defining the poverty line.

Composite Score was used to measure the categories of household based on their levels of involvement in their various social groups. The composite score was earlier used by Yekinni (2007) and Adepoju *et al* (2013), Kim *et.al* (2015). Respondents were made to respond to questions relating to the number of associations to which they belong and their level of involvement. This was used to generate their membership density.

Membership density of the respondents and their standard deviation were used to categorise household into the level of social capital participation. Membership density was calculated by dividing the number of associations of each respondent is involved in by the total number of associations available. The mean of the observation was generated. The mean was calculated to be 0.223, while the standard deviation of the observation is 0.042.

Level 1 = 0 (no membership) – (mean –SD)
Level 2 = values between 1and3
Level 3 = mean + S.D – 6 (maximum membership for households)

Discriminant analysis was used to analyse the factors responsible for the differences in the level of social capital and poverty among the households. Households were earlier categorised into three levels of social capital and poverty, the separation in the levels of social capital is expressed in terms of variability among the group means on the variable Z. In this study, variables which describe households' socio-economic, demographic, farm and farming characteristics were included in the discriminant analysis as independent variables. The *a priori* expectation is that the variables would contribute significantly towards discriminating between the households and social capital categories. Though the present study has been conceived to critically look into the social capital and poverty differentials, it is important to study the characteristic factors and features of the households which are related to the likelihood of respondents to belong to one of the social capital and poverty groups. This *a priori* expectation is based on some relationships between the social capital groups and these variables.

Some of the exogenous variables that are thought to discriminate between the social capital groups include age, education, household size, whether a household head holds a leadership position in the community or not, farm size, total land and asset owned, access to extension, wealth index. The variables hypothesized to determine poverty include household size, monthly expenses on food, clothing, electricity bill, education, kerosene and gas, monthly remittance etc. The membership density of household was used to categorise household into three social capital groups based on their level of involvement: level one (low level) two (intermediary) and three (high level). Poverty level is categorised into core poor, poor and non-poor. This was previously used by various researchers like Campos *et.al.* (2015), Campos (2023)

Discriminant functions were estimated by maximizing the ratio of between-group to within-group variance using the following linear form:

$$D_J = a + b_1X_1 + b_2X_2 + \ldots\ldots + b_kX_k$$

Where $D_J$is the discriminant score for group j are the predictor variables, X_1, X_2, $\ldots\ldots X_k$ and $b_1, \boldsymbol{b}_2 \ldots\ldots b_k$are the discriminant coefficients. The numbe r of discriminant functions generated is the lesser of g−1 and k, where gis the number of groups and k is the number of predictors.

RESULTS AND DISCUSSION

Socioeconomics characteristics of households

Socioeconomic characteristics of the households presented in Table 1 shows that the mean age of the household in the study area is 42.3 years. This showed that higher proportion of the sample household are in their active and productive age. Also, the average year of education of the households is 10.53 years, the average family size is 6, 54 percent are male while 59 percent are married. Their primary occupation includes farming, Artisans, Civil service, Transportation services and contractor, which reveals all the respondent have good and stable sources of income.

Table 1: Household's Socio-Economic Characteristics

Variables	Frequency	Mean	Std. Deviation	Minimum	Maximum
Age (yrs)					
<30	67(21.47)	42.30	11.86	24	85
31- 40	106(33.97)				
41 -50	83(26.60)				
51- 60	32(10.26)				
> 60	24 (7.70)				
Education status					
0-6	51(16.05)	10.54	3.85	0	20
7-12	177(56.73)				
13-17	73(23.40)				
≥18	11(3.53)				
Household size					
1-4	29 (9.30)	6.730	1.93	2	13
5-12	229(73.40)				
13-17	53(17.00)				
≥18	1(0.30)				
Sex					
Female	143(45.83)				
Male	169(54.17)				
Marital status					
Married	184(58.97				
Not married	128(41.03)				
Primary occupation					
Farming	92(29.48)				
Artisanship	62(19.87)				
Civil service	40(12.82)				
Trading	71(22.76)				
Transportation	13 (4.17)				
Contractor	34(10.90)				

Source: Authors computation from 2023 field Survey

Dimensions of social capital

Six dimensions of social capital were the focus of this study: decision making, membership in social capital, meeting attendance, heterogeneity, cash and labour contribution (Table 2). Sixty-five percent of the respondents belong to three to four social groups: 33.97 percent falls in between the range of 5-6 social groups. 60.58 percent of the respondents participate in over 80 percent decision made in their social groups, while 10 percent make less than 40 percent participation in decision making.

The heterogeneity index for an average household to is 28 percent. Seventy-one percent of households fall between 21 to 40 heterogeneity indices. Average meeting attendance of the households is 57 percent. Only 5 percent have less than 40 percent meeting attendance index, and 0.32 percent of the respondents was above 80 percent of meeting attendance index among the respondents. 5 percent of the households contributed less than ₦50,000 as annual contribution in their social groups. Only 1.3 percent of the households contributed above ₦200,000 as annual contribution. The average amount of money the respondents contributed was ₦99,030 as annual contribution to their various social groups.

The average labour contributed annually to their various social groups is 49.8 man-days, about 30.45 percent contributed 40-50 man-days of labour annually. About 1 percent (0.96) contributed less than 20 man-days of labour annually. About 12 percent (12.1) percent contributed above 60 man-days annually to their social group. The average social capital index is 31percent, 27.2 percent have less than 20 percent social index, while 0.32 percent have over 60 percent social capital index.

Table 2: Household's Social Capital Dimensions

Social capital	Frequency	Mean	Std. Deviation	Minimum	Maximum
Membership in social group					
≤ 2	3(1.00)	4.30	0.80	1	6
3-4	203(65.00)				
5-6	106(34.00)				
Decision-making index					
21-40	33(10.57)	61.76	14.00	23.33	84.44
41-60	76(24.36)				
61-80	189(60.58)				
>80	14 (4.49)				
Heterogeneity index					
≤ 20	67(21.50)	28.18	8.82	10.00	63.30
21-40	223(71.50)				
41-60	21(6.70)				
61-80	1(0.30)				
Meeting attendance index					
21-40	17(5.45)	57.45	7.88	28.33	82.82
41-60	182(58.33)				
61-80	112(35.90)				
>80	1(0.32)				
Annual cash contribution (₦)					
<50000	16(5.13)	99030.84	28820.12	36000	186000
50001-100000	144(46.15)				
100001-150000	147(47.11)				
150001-200000	5(1.60)				
Annual labour contribution					
<30	20(6.41)	50.00	14.21	12	96
31-40	80(25.64)				
41-50	96(30.77)				
51-60	78(25.00)				
>60	38(12.18)				
Aggregate social capital index					
<20	85(27.20)	31.30	15.50	2	82.5
20-39	121(38.80)				
40-59	105(33.70)				
>60	1(0.30)				

Source: Author's Computation, field Survey, 2023

Categorisation of households according to their social capital level.

The distribution of households based on their level of social capital is shown in Table 3. Households were categorized based on the number of associations they engaged in using composite score. Households with the highest membership density was categorized as upper category while households with the lowest membership density represent the lower category. However, households that fall in between these two categories were tagged in the middle category. The membership density of the respondents was generated by adding together the number of associations the respondents belong to. The mean of the membership density is 0.2239 while the standard deviation is 0.0421. The levels were then put into three categories as used earlier used by Yekini (2007), Salimonu (2007) and Adepoju (2011).

Table 3: Distribution of Households' level of Social Capital

Social Capital Level	Frequency	Percentage
Level 1	42	13.46
Level 2	251	80.45
Level 3	19	6.09
Total	312	100.00

Source: Author's Computation from 2023 field survey

Level three or upper category = Mean + SD to 1.0 that is between 0.259 to 0.315
Level two or middle category = between lower and upper category limit = 0.265 to 0.1818
Level one or lower category = 0 to (Mean –SD) = 0 to 0.1817

Level two has highest percentage (80.45), level one has 13.46 percent. Level three has the least percentage (6.09). Majority of the respondents in the study area belong 2.

Categorisation of household according to their Poverty status

Table 4 shows the distribution of the respondent based on their poverty status Households were categorised into three poverty levels based on the measure of per capita expenditure (PCE) on food and non-food items. The PCE was generated by dividing each household monthly expenditure on food, clothing, rent allowance, toiletries, education, fuel, kerosene and gas, electricity bills, water expenditure and other expenses by their household size. The mean PCE for the sampled households in the study was also generated with a value of ₦51,210.98.

One-third and two-third of the mean PCE was generated and used to categorise the households into three poverty levels. These are the core poor, moderately poor and the non-poor. Respondents spending below one-third of the mean PCE which is ₦17,070.32 are the core poor, the moderately poor are those that spend between the one third and two-third of the mean PCE while the non-poor are the respondents spending above two-third of the Mean PCE. This approach was earlier used Yusuf 2007 and Balogun 2010

Core poor = below 1/3mean PCE = below ₦17,070.32
Moderately poor =between 1/3 and 2/3 of Mean PCE = Between ₦17,070.32 and ₦34,140
Non poor = ₦34,140 and above. The core poor household accounted for (5.77 percent) of the total respondents with the mean of ₦13,120.19. The poor households have (30.13 percent) of the respondents with mean of ₦25,930.25. The non-poor accounted for (64.10 percent) of the total respondents. They have the mean of ₦25,930.25. The respondents that are non-poor according to this study are above average. (₦51,210.98)

Table 4: Distribution of respondents' poverty status

Poverty status	Frequency	Percentage	Mean PCE (₦)
Core poor	18	5.77	13,120.19
Moderately Poor	94	30.13	25.930.25
Non poor	200	64.10	66,530.35
Total	312	100.00	105,580.79
Mean PCE	N51,210.98		

Source: Author's Computation from 2023 Field survey.

Social capital dimensions of respondents in relation to their poverty status.

The social capital dimensions of respondents in relation to their poverty level of household is presented in Table 3. Respondents in the core poor category have the highest membership density of 23.10 percent while the households that are moderately poor have the lowest membership density of 21.90 percent. The average meeting attendance for the three categories are above average with the highest mean average of 60.33 percent and 57.16 percent in the core poor and the non- poor categories respectively. The mean value of the households meeting attendance reduces as their poverty level reduces. This means that the wealthier the households are the less the meeting they attend.

Households in the non-poor category have the highest (62.84) percent of decision making, while the households in the core poor category have the lowest average (61.29) percent in decision making. This shows that poor household rarely participate in decision making in their various social groups. All the households in the three categories of poverty have low membership diversity. However, the core poor category has the highest level of membership diversity of 30.09 percent, while the second category has the least level of diversity of 25.96 percent.

However, households in the core pore category have the highest average of annual cash contribution of ₦101,660, while the poor category have the least average value. The moderately poor category has the highest mean value of 49.91 man-days as annual labour contribution. The core poor category has the least mean value of 44.66 man-days. Lastly, the highest aggregate social capital index is found in the moderately poor category, while the core poor has the least average (29.20 percent).

Table 5: Distribution of households' social capital dimensions in relation to their poverty status

Social capital dimensions	Core poor	Poor	Non-poor
Membership index			
Average	23.10	21.90	22.52
Minimum	3.0	1.0	2.0
Maximum	60.0	50	67.5
Standard deviation	9.78	8.46	7.54
Meeting Attendance index			
Average	60.33	57.73	57.16
Minimum	13.33	28.33	30.41
Maximum	43.33	70.00	82.82
Standard deviation	5.05	7.45	8.18
Decision-making index			
Average	61.30	61.70	62.84
Minimum	34.44	28.88	23.33
Maximum	84.44	84.44	84.44
Standard deviation	13.64	13.63	14.09
Heterogeneity index			
Average	30.09	25.96	27.97
Minimum	13.32	10	10
Maximum	43.33	63.63	50.00
Standard deviation	8.01	9.19	8.72
Cash contribution (₦)			
Average	101,660.67	98,230.40	99,320.35
Minimum	36,000	36,000	48,000
Maximum	150,000	144,000	186,000
Standard deviation	30270.90	27000.5	294300.12
Labour contribution (man-day)			
Average	44.66	49.91	49.70
Minimum	12	12	12
Maximum	72	84	96
Standard deviation	16.87	15.67	15.35
Aggregate Social Capital			
Average	29.19	32.72	31.07
Minimum	6	6	2
Maximum	55.86	59.89	83.50
Standard deviation	29.19	15.71	15.45

Source: Author's computation from 2023 Field survey

Description of households based on social capital level in relation to socioeconomic variables and poverty status

Table 4 presents the description households' socio-economic characteristics and poverty status in relation to their social capital level. 19.06 percent of the households in level are below 30years of age, while 22.31 percent of the households in level two are below 30 years. Only 15.80 percent of the households in level three social capital level are below 30 years. Also, 2.38 percent of the households in level one is above 70 years, 1.99 percent of the households in level two are above 70 years, none of the respondent in level three of social capital is above 70 years old.

Furthermore, 2.38 percent of the households in level one has no formal education; 1.20 percent in level two has no formal education. 2.38 percent of the households in level one has above 18 years of formal education. Only 3.19 percent of those in level two have above 18 years of formal education, 10.52 percent of the households in level three have above 18 years of formal education. It could be deduced that the level of education affects the level of social capital involvement.

Consequently, 2.38 percent of the households in level one has family size above 12. Female households have a greater percentage than male in level one while in level 2 and 3 males have a greater percentage than the female respondents. The households in the non-poor category have a greater percentage in social capitals one and two. From the results, it could be deduced that socio-economic characteristics of respondents affect their social capital level.

Table 6: Distribution of Household based on social capital level in relation to socioeconomic variables and poverty status

Variables	Level 1	Level 2	Level 3	Total
Age(yrs)				
<30	8(19.06)	56(22.31)	3(15.80)	67(21.47)
31- 40	14(33.33)	85(33.86)	7(36.84)	106(33.97)
41 -50	14(33.33)	61(24.30)	8(42.10)	83(26.60)
51- 60	1(2.38)	31(12.35)	0(0.00)	32(10.26)
61- 70	4(9.52)	13(5.18)	1(5.26)	17(5.77)
> 70	1(2.38)	5(1.99)	0 (0.00)	6(1.92)
Education (years)				
0	1 (2.38)	3 (1.20)	0 (0.00)	4(1.28)
1- 6	8(19.06)	36(14.34)	3(15.80)	47(15.06)
7-12	25(59.52)	140(55.77)	12(63.16)	177(56.73)
13-17	7(16.67)	40(15.94)	4(21.05)	51(16.35)
≥18	1 (2.38)	8(3.19)	2(10.52)	11 (3.52)
Household size				
1-4	3 (7.14)	26(10.36)	0(0.00)	29(9.30)
5-8	31(73.81)	185(73.70)	15(78.95)	231(74.03)
9-12	7(16.67)	40(15.94)	4(21.05)	51(16.35)
≥12	1(2.38)	0(0.00)	0(0.00)	1(0.32)
Sex				
Female	22(52.38)	111(44.22)	9(47.37)	142(45.51)
Male	20(47.62)	140(55.78)	10(52.63)	170(54.49)
Marital status				
Married	18(42.86)	151(60.16)	10(52.63)	179(57.37)
Not married	24(57.14)	100(39.84)	9(47.37)	133 (42.63)
Primary occupation				
Farming	8(19.05)	74(29.48)	14(75.68)	96(30.77)
Artisan	13(30.95)	51(20.32)	1 (5.26)	65(20.08)
Civil service	1(2.38)	38(15.14)	2(10.52)	41(13.14)
Trading	10(23.31)	52(20.72)	2(10.52)	64(20.51)
Transportation	3(7.14)	11(4.38)	0(0.00)	14 (4.49)
Contractor	7(16.67)	25(9.96)	0(0.00)	32(10.25)
Poverty status				
Core poor	4(9.52)	12(4.78)	2(10.53)	18 (5.77)
Poor	15(35.72)	74(29.48)	5(26.31)	94(30.31)
Non poor	23(54.76)	165(65.74)	12(63.16)	200(64.10)
Total	**42**	**251**	**19**	**312(100)**

Source: Author's computation from 2023 field survey.
Figure in parentheses are percentage

Validation of the categorisation of the levels of social capital

The result of the discriminant analysis as shown in Table 7 shows that the typologies i.e. grouping of the respondents into three groups based on the levels of their involvement in social capital group which are levels one, two and three respectively. The grouping of the respondents into the three levels was effective, in that 97.8% of the respondents were correctly placed into the respective social capital levels they belong to even in the first iteration. It could be seen from the Table 7 that all households in level one was correctly placed in their group. In level two, out of 251 households, 244 or 97.2% were correctly grouped while seven households 2.8% who ought to be in level three were wrongly placed in level two. All the households in level three were correctly placed.

Table 7: Distribution of Classification of respondents' social capital differences

Social capital level	Predicted group membership			Total
	Social capital level 1	Social capital level 2	Social capital level 3	
Original count				
Level 1	42	0	0	42
Level 2	0	244	7	251
Level 3	0	0	19	19
Total	42	244	26	312
Percentage				
Level 1	100.0	0	0	100.0
Level 2	0	97.2	2.8	100.0
Level 3	0	0	100.0	100.0

Note: 97.8% of original group cases correctly classified.
Source: Author's computation from 2023 field survey.

Wilk's Lamba statistics and level of significance

Table 8 shows Wilk's lamba statistics and level of significance of discriminating variables (with 2 and 309 degrees of freedom). Five variables emerged as statistically significant discriminators across the three social capital levels. Total expenditure of household was significant at $p<0.10$, membership density, annual cash contribution, annual labour contribution were significant at $p< 0.01$ while aggregates social capital of households was significant at $p<0.05$. In contrast, key socio demographic variables such as sex**,** age**,** household size**,** marital status**,** and years of education did not significantly discriminate between the levels of social capital. These findings suggest that behavioral and participatory attributes are more decisive in determining the depth and quality of household engagement in social capital networks rather than demographic factors.

Table 8: Test of equality of group means

Variable	Wilk's Lamba	F	df1	df2	Significant
Sex	.996	.667	2	309	.514
Age	1.000	.016	2	309	.985*
Age squared	1.000	.066	2	309	.936
Household size	.998	.332	2	309	.717
Marital status	.996	.627	2	309	.535
Education year	.992	1.304	2	309	.273**
Total expenditure	.980	3.087	2	309	.047***
Membership density	.314	333.706	2	309	.000*
Heterogeneity index	.998	.365	2	309	.695
Meeting attendance index	1.000	.005	2	309	.995
Decision making index	.998	.247	2	309	.781
Annual cash contribution	.752	51.068	2	309	.000*
Annual labour contribution	.869	23.304	2	309	.000*
Aggregate social capita index	l.971	4.550	2	309	.011**

*significant @1%level **significant @5% level ***significant @10% level
Source: Authors computation from field survey 2023

CONCLUSION AND RECOMMENDATION

The study revealed that social capital involvement helps reduce poverty, there is therefore needed to encourage social capital involvement among rural households. The study revealed that the households in the study area have a relatively high household size. This tends to increase the level of household per capita expenditure and hence increase household poverty. It is recommended that birth control campaign should be promoted among the rural households in the study area. Since most rural household see large family size as being consistent with adequate family labour, labour saving device should be put in place when birth control device control campaign is being promoted.

The involvement of education in social organization helps the organization and hence improves the poverty level of rural households. However, this may pose some difficulties since the average education level in the study area is 10 years. It is therefore very imperative for government to render further assistance to rural households in better funding of their children's education and organize adult education for the older ones. Osun state Government is in the vanguard of free education but there is need for proper enlightenment

to enable more children in the rural setting to understand the need to be educated.

REFERENCES

Abidemi Abiola, I. (2019). Women's Political Participation and Grassroots Democratic Sustainability in Osun State, Nigeria (2010-2015). Journal of Interdisciplinary Feminist Thought, 11(1), 3.

Adepoju, A.A., (2013). Effect of social capital on rural household welfare in south western Nigeria. *An unpublished PhD thesis submitted to the Department of Agricultural Economics (UI) Ibadan*

Adewumi, S. A., and Keyser, E. (2020). Challenges and prospects of rural entrepreneurship: A discourse analysis of selected local government areas of Osun state, Nigeria. International Journal of Business and Management Studies, 12(2), 544–560. *Agricultural Economics (UI) Ibadan*

Aigbokkan, B. E. (2000). Poverty growth and inequality in Nigeria: A case study. AERC Research Paper 102, Nairobi.

Akanle, O., Shittu, O.S. (2022) The Unending Development Question of Nigeria. *Eur J Dev Res* **34**, 321–342 (2022). https://doi.org/10.1057/s41287-021-00377-1

Akinbode, S. O., and Hamzat, S. G. (2017). Women asset ownership and household poverty in Rural Nigeria. Journal of Studies in Social Sciences, 16(1). https://www.scienta.asia/index.php/jsss/article/view/1462

Alam, G. M., Alam, K., and Mushtaq, S. (2016). Influence of institutional access and social capital on adaptation decision: Empirical evidence from hazard-prone rural households in Bangladesh. Ecological Economics, 130, 243–251.

Algan, Y. (2018). Trust and social capital. For Good Measure: Advancing Research on Well-Being Metrics beyond GDP, 285–322.

Anand, P., Jones, S., Donoghue, M., and Teitler, J. (2021). Non-monetary poverty and deprivation: A capability approach. Journal of European Social Policy, 31(1), 78–91. https://doi.org/10.1177/0958928720938334

Boarini, R., Causa, O., Fleurbaey, M., Grimalda, G., and Woolard, I. (2018). Reducing inequalities and strengthening social cohesion through inclusive growth: A roadmap for action. Economics, 12(1), 20180063. https://doi.org/10.5018/economics-ejournal.ja.2018-63

Canagarajah, S., J. Ngwafon and S. Thomas. (1997). "The evolution of poverty and Claridge, T. (2018). Functions of social capital–bonding, bridging, linking. Social Capital Research, 20(1), 1–7.

Campos, A., Borges, C., Vargas, A., Gomes, V., Lucas, S., and Ferreira E Ferreira, E. (2015). Measuring social capital through multivariate analyses for the IQ-SC. BMC Research Notes, 8(1), 11. https://doi.org/10.1186/s13104-015-0978-2

Claridge, T. (2018). Functions of social capital–bonding, bridging, linking. Social Capital Research, 20(1), 1–7.

Federal Office of Statistics (FOS) 1999a. *Poverty Profile for Nigeria, 1980-1996* Lagos:

Federal Office of Statistics (FOS) 1999b. *Poverty and agricultural in Nigeria*.

Ganguly, A., Talukdar, A., and Chatterjee, D. (2019). Evaluating the role of social capital, tacit knowledge sharing, knowledge quality and reciprocity in determining innovation capability of an organization. *Journal of Knowledge Management*, *23*(6), 1105–1135.

Heshmati, A., Maasoumi, E., and Wan, G. (2019). An analysis of the determinants of household consumption expenditure and poverty in India. Economies, 7(4), 96.

Jetin, B. (2016). Reduction of Absolute Poverty, Increase of Relative Poverty, and Growing Inequalities: A Threat to Social Cohesion. In B. Jetin and M. Mikic (Eds.), ASEAN Economic Community (pp. 267–289). Palgrave Macmillan US. https://doi.org/10.1057/9781137535085_14

Kim, Y.-C., Lim, J. Y., and Park, K. (2015). Effects of Health Literacy and Social Capital on Health Information Behavior. *Journal of Health Communication*, *20*(9), 1084–1094. https://doi.org/10.1080/10810730.2015.1018636

Liu, Z., Wei, Y., Li, Q., and Lan, J. (2021). The mediating role of social capital in digital information technology poverty reduction an empirical study in urban and rural China. Land, 10(6), 634.

Okunmadewa, F V. Yusuf S. A. and Omonona, B.T. (2007) Social Capital on Rural Poverty in Nigeria. Pakistan Journal of Social Sciences 4 (3): 331-339

Oladeji, J. O., Olaore, O. M., and Fapojuwo, O. E. (2017). Participation of rural youths in community development process in Osun State, Nigeria. Nigerian Journal of Rural Sociology, 17(2), 51–57.

Panday, S., Rushton, S., Karki, J., Balen, J., and Barnes, A. (2021). The role of social capital in disaster resilience in remote communities after the 2015 Nepal earthquake. International Journal of Disaster Risk Reduction, 55, 102112.

Pham, A. T. Q., and Mukhopadhaya, P. (2022). Multidimensionl Poverty and The Role of Social Capital in Poverty Alleviation Among Ethnic Groups in Rural Vietnam: A Multilevel Analysis. Social Indicators Research, 159(1), 281–317. https://doi.org/10.1007/s11205-021-02747-y

Ruel, M.T., Garrett, J., Yosef, S., Olivier, M. (2017). Urbanization, Food Security and Nutrition. In: de Pee, S., Taren, D., Bloem, M. (eds) Nutrition and Health in a Developing World . Nutrition and Health. Humana Press, Cham. https://doi.org/10.1007/978-3-319-43739-2_32

Sommer, C. (2019). Social cohesion and economic development: Unpacking the relationship. Briefing Paper. https://www.econstor.eu/handle/10419/206857

Yekinni, O. T. (2007). Political economy of agricultural policy implementation in Nigeria: Oyo state as a case study. A research project submitted to F. S. Idachaba foundation for research and scholarship, Ibadan, 2007

Yusuf, S. A. (2008). Social Capital and Household Welfare in Kwara State, Nigeria. Journal of Human Ecol., 23 (3): 219-229