Assessing the Vulnerability of Poor Households in Selected Regions of Oyo State, Nigeria

[1]Zubair O. M, [2]O. J. Kehinde; [3]M. A. Adeniji

[1]Department of Urban and Regional Planning, Ladoke Akintola University of Technology, Ogbomoso, Nigeria

[2]Department of Urban and Regional Planning, Lead City University, Ibadan, Nigeria

[3]Department of Urban and Regional Planning, Osun State Polytechnic, Iree, Nigeria

Abstract

This study examines the multifaceted dimensions of households' vulnerability to poverty in selected communities of Oyo State, Nigeria.This is premised on the fact that the environmental, social and spatial dimensions of the above issues are under-explored in the literature. Primary data on socioeconomic characteristics, assets acquired, monthly earnings and expenditures, and responses to poverty were collected among 1002 heads of households across the study area. While the socioeconomic characteristics were cross-tabulated for any spatial variation, the household poverty was measured through Foster-Greer-Thorbecke (FGT) model. However, respondents' vulnerability to poverty was analysed using UNDRR's Vulnerability Model. Results show that household heads, who were mostly male (79.9%) and within working ages (77.2%), had weak assets and an income base. Thus, the majority of them (61.0%) were poor (poverty headcount (P_0) = 0.61, with poverty gap index (P_1 = 0.2888), severity index (P_2) = 0.11 and a poverty line of US\$1.25 per day (₦1,029)). Less than a quarter of households that scored -1 and 0 (23.9%) were resilient, whereas the majority of others (76.1%) were vulnerable to poverty, having scored 1 – 8 on the vulnerability scale. Given their underemployment (4.07), large family size (4.04), and unemployment (3.95), among others, households had fallen into poverty. For their assets acquisition's level (r = 0.560), expenditure (r = 0.739) and indebtedness (r = 0.793) (p < 0.000 in all cases), among others, they had remained vulnerable. However, they had resorted to family planning (4.03), buying food on credit (3.95), reduction of eating times (3.90), and withdrawal of wards from school (3.86), among other coping strategies. While poverty has persisted with more households becoming vulnerable, this study advocates for support in infrastructure development and housing environment improvement, as well as enhanced accessibility to social services. Stakeholders' participation in decisions to end unemployment through skill acquisition training and social networking is vital.

Keywords: Households' Vulnerability, Poverty, Poverty line, FGT model, Oyo state,

Introduction

Despite its vast land area, huge resource endowments and teeming population, Nigeria, like many other countries in Sub-Saharan Africa, has not ceased to be challenged by poverty (Lybbert and Wydick, 2018; Dang and Dabalen, 2019 and Adeboyejo, Olaitan and Ogunkan, 2024). Across its boundaries and over time, several anticipated solutions and the outcomes of poverty alleviation efforts have not justified the strategic inputs (Kolawole, Omobitan and Yaqub, 2015; Mba, Nwosu and Orji, 2018). Hence, its incidence and persistence have been pervasive and precarious (FOS, 1999; Aigbokan, 2000). The poor people, unlike their rich counterparts, had little or no access to nutritious food, decent housing, capital assets, economic opportunities, education and information that they could leverage to survive the scourge of poverty. Consequently, they are predisposed to health risks, economic dislocation and bolstering natural and man-made hazards such that their well-being is further threatened (Stifel and Woldehanna, 2016, 2017; Salawu, Meding and Giggins, 2017).

Further, the extenuation of the predicaments of the poor people has been befuddled with misconceptions on the subject of poverty. Therefore, the resulting misapplication of strategies aimed at solving its impacts has caused the ineffectiveness of the outcomes. Past efforts targeted at palliating the scourges of poverty on the poor by the government had been directed towards the wrong locations and populations owing to lopsided attention on urban areas. As a result, the number of poor people is not just increasing, but their vulnerability is further aggravated due to their deprivation and marginalisation (Eguaroje *et. al.,* 2015; Agunbiade and Oke, 2019).

Their exposure to economic downturns and inflation, and engagement in socioeconomic activities that yield less returns have earned them a weak income base and increased expenditures. The poor education and inaccessibility to helpful information of poor households have been responsible for their poor understanding of what the causes of poverty are. This also had its toll on the inappropriateness of palliative measures they applied to address the emanating challenges hence, they remained trapped and vulnerable to poverty.

Against this backdrop, this study seeks to evaluate levels of, and, variations in households' vulnerability to poverty in Oyo state. This is to suggest strategies to further enhance people's resilience against factors leading households into poverty on the one hand and to alleviate its pervasiveness among vulnerable citizens on the other hand.

Their exposure to economic downturns and inflation, and engagement in socioeconomic activities that yield less returns have earned them a weak income base and increased expenditures. The poor education and inaccessibility to helpful information of poor households have been responsible for their poor understanding of what the causes of poverty are. This also had its toll on the inappropriateness of palliative measures they applied to address the emanating challenges hence, they remained trapped and vulnerable to poverty.

Against this backdrop, this study seeks to evaluate levels of, and, variations in, households' vulnerability to poverty in Oyo state. This is to suggest strategies to further enhance people's resilience against factors leading households into poverty on the one hand and to alleviate its pervasiveness among vulnerable citizens on the other hand.

Figure 1: Ibarapa, Oyo and Oke-Ogun in the Context of Oyo State
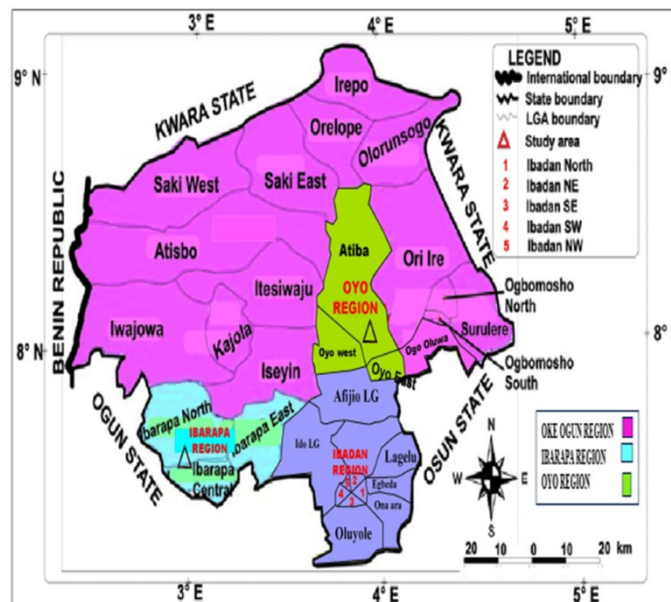
Source: Ministry of Lands, Housing and Urban Development, Oyo State, 2022

III.   Methodology

Sampling Frame and Techniques

This study was undertaken within major towns and settlements (largest by population) purposively selected in two urban and one rural area from the Ibarapa, Oyo and Oke-Ogun regions of Oyo State. With 5 persons per household in urban centres (Statista Research Department, 2022), there were 532,785 households (total population 2,663,925 people (NPC, 2006)) out of which 1002 households were sampled. The first head of household was randomly selected from a building at the entrance of each community, while others were selected from buildings at intervals of five (See Table 1).

Table 1: Selected Regions, Major Towns, Communities and Distribution of questionnaire

.

Region	Major Towns (LGA Headquarters)	Selected Communities	Number of Questionnaire
Oke Ogun	Saki, Iseyin, Kisi, Tede, Iwere-Ile, Oke-ho, Igboho, Otu, Igbeti, Ago-Amodu	Iseyin, Saki and Otu	558
Ibarapa	Eruwa, Ayete and Igbo-Ora	Eruwa, Ayete and Igbo-Ora	282
Oyo	Kosobo, Ojongbodu, Offa Meta,	Kosobo, Ojongbodu and	162
Total	16	9	1002

Note: The Questionnaire was proportionally distributed in selected communities in major towns.

Source: Authors' Fieldwork, 2024

Data Types and Sources

Information on socioeconomic characteristics (age, gender, monthly income and expenditure, educational qualifications and asset acquisition); causes of poverty and level of vulnerability, and coping strategies against poverty, among others were elicited from household heads through structured questionnaire.

Data Analysis

To determine the significance of variations in households' socio-economic characteristics, the relevant variables were cross-tabulated against locality and a chi-square test was performed on them. Through the Foster, Greer and Thorbecke (FGT) model (Foster, Greer and Thorbecke, 1984), the incidence of poverty was evaluated while factors of poverty and adopted coping strategies were cross-tabulated and tested with a chi-square for any significant spatial undertone. However, with UNDRR's Vulnerability Model, the susceptibility of households to poverty was measured (Blaikie, 1994). The FGT Model is symbolically represented as:

$P\alpha = (1/N) * \sum(z-yi)/z^\alpha$

Where: - $P\alpha$ = Poverty measure

- N = Total population

- z = Poverty line

- yi = Income/consumption of individual I

- α = Sensitivity parameter for head count, gap and severity

respectively (0, 1, or 2)

Similarly, the UNDRR's Vulnerability Model has the expression:

Vulnerability = Hazard Exposure + Hazard Sensitivity – Adaptive Capacity

V = HE + HS – AC Where: V = Vulnerability of Households

HE = Hazard Exposure (Joblessness, Low Income, Lack of Education, Poor Health etc.)

HS = Hazard Sensitivity (Dependence on a single income source, limited access to social services, weak social networks, etc.)

IV.   Results and Discussion

Socioeconomic Characteristics of Households

Household heads in the study area were aged 45 - 64 years (43.3%), > 64 years (22.9%), 35 - 44 years (19.0%), and < 35 years (14.9%), and they were largely male dominated (79.9%). However, other households had female head representatives (20.1%) probably due to the male head's death and/or unavailability. Most of these household heads were married (92.5%) while others were widowed (7.5%) (See Table 2). Observations show that variations in the age, gender and marital status of household heads were not statistically significant, given X^2 = 24.399, 12.826 and 0.469 respectively with $p > 0.005$ in all cases. Hence, these were mere coincidences because they cannot be attributed to differences in the location of household heads. These concur with findings of NDHS (2003) and Adebisi, Okeyinka and Ayinla (2018) on Nigerian household characteristics.

Concerning educational qualifications of household heads, a majority of them (44.7%) had secondary, while others had tertiary (41.5%), no formal (11.3%) and primary (2.5%) levels of education. They were mostly artisans (31.8%), unemployed (24.7%), traders (17.6%), farmers (16.9%), civil servants (8.3%) and retirees (0.8%). The total monthly income earned ranged from ₦90,001 - ₦150,000 (37.3%), ₦30,000 - ₦90,000 (30.9%), > ₦270,000 (14.2%), ₦150,001 - ₦210,000 (9.4%) and ₦210,001 - ₦270,000 (8.2%) (See Table 2). The observed variations in the educational qualifications and total monthly income earned among household heads were not statistically significant, given $X^2 = 3.258$ and 24.399, respectively, with $p > 0.05$ in both cases. However, the variation in their primary occupation as observed across the study area was significant ($X^2 = 90.299$, $p = 0.000$). The findings on households' educational qualifications, primary occupations and monthly income earned underscore existing literature on households' socioeconomic dynamics in the region (NBS, 2012). This can facilitate the formulation of policies directed at the enhancement of economic development and poverty alleviation in the study area.

Poverty Incidence in the Study Area

Using US$1.25 per day (≈ ₦1,029.00 in 2024) as the poverty line to compare households' daily income, an explanation was sought on the extremes of poverty in the study area. This baseline was used for the evaluation of poverty,

being the closest to the national minimum wage (₦30,000 = $29.15) in operation in the country as at the research time. The result on daily wage showed that while a majority of household heads earned ₦1,000 - ₦2,000 (60.3%), others earned ₦2,001 - ₦3,000 (20.1%), < ₦1,000 (15.2%), ₦3,001 - ₦4,000 (3.8%), ₦4,001 - ₦5,000 and ₦5,001 - ₦6,000 (0.3%) and > ₦6,000 (0.1%). The observed variation in daily income of heads of household varied significantly across the study area ($X^2 = 107.918$; $p = 0.000$).

Therefore, having adopted the Foster, Greer and Thorbecke (FGT) model, the study observed that with poverty headcount ($P_0 = 0.6100$), 61.0% of household heads were poor as observed in the study area. With the poverty gap index ($P_1 = 0.2888$) and the severity index ($P_2 = 0.1117$), it respectively implied that households' daily income must be heightened by 28.9% to exit them out of poverty, just as 11.2% of these households were extremely poor (see Table 3). These corroborated the findings of the African Development Bank (AfDB) (2014) and World Scholars (2020) that a significant proportion of Nigerian households live below the poverty line. This is because the substantial gap between their current income and the poverty threshold has not been successfully bridged. Consequent upon the severity index, this study advocates an urgent and pro-poor intervention to address the vulnerability of households in the study area .

Table 3: FGT Results on Households' Poverty Incidence

Description	FGT Values	%
Headcount Index (P_0)	0.6100	61.0
Poverty Depth/Gap Index (P_1)	0.2888	28.9
Poverty Severity Index (P_2)	0.1117	11.2

Source: Authors' Fieldwork, 2024

While comparing the incidence of poverty (by mean score) among households across the study area, it was observed that households from Oyo East were the poorest because they had the lowest poverty mean score (1.3807). Other households from Itesiwaju (1.4150), Oyo West (1.4443), Ibarapa North (1.5478), Ibarapa East (1.5609) and Iseyin (1.5701) were also accounted as poor for mean scores lying below the poverty line (1.6046).

Following this monetary poverty, households have

On the contrary, households from Ibarapa Central (1.6218), Atiba (1.6664) and Saki West (1.9646) were regarded as non-poor since their mean scores lie above the poverty line (See Figure 2). Summarily, households from 66.7% of localities in the study area were poor, indicating a high incidence and persistence of poverty in the study area.

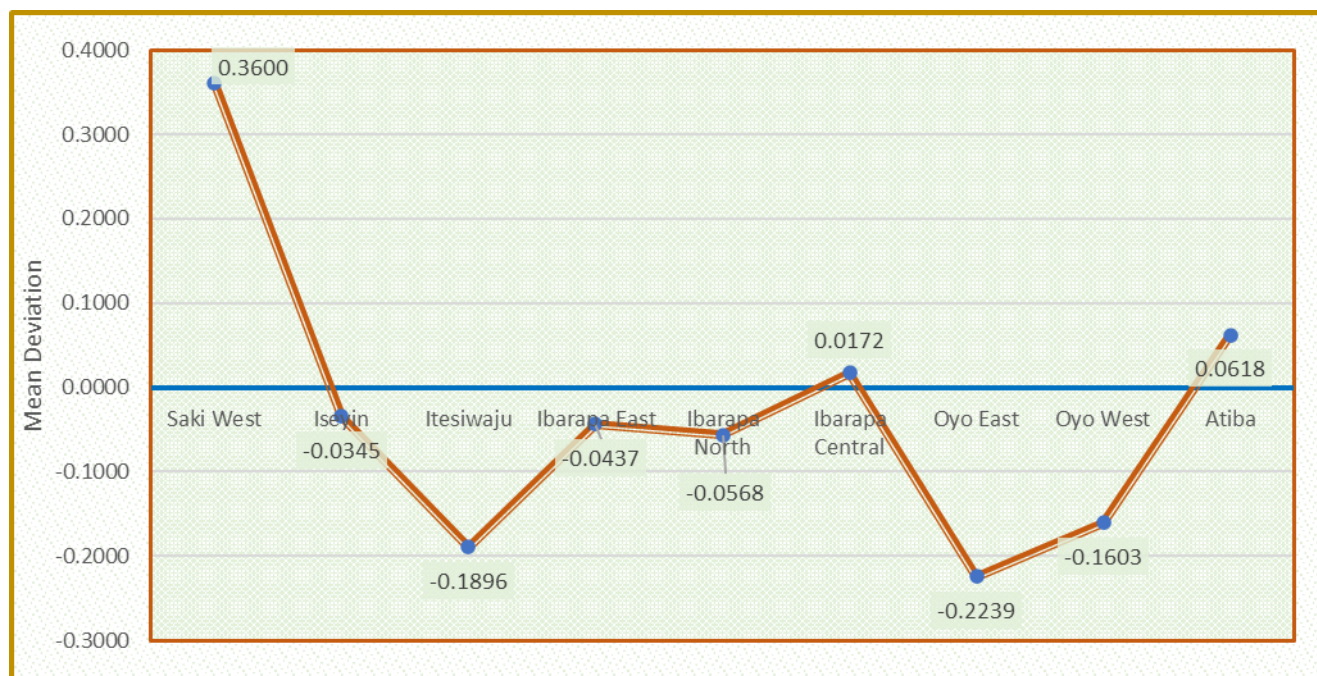***The Incidence and Consequences of Poverty in the Study Area***

Figure 2: Households' Performance by Locality on Poverty Scale

Source: Authors' Field work, 2024; mean score of poverty line = 1.6046

been socially isolated, politically marginalised and have not enjoyed equitable resource allocation. They have been subjected to economic deprivation and are further exposed to health disparities, among others. Choe (2008, Bhattacharya, Currie, and Haider (2011 and Cheung *et. al.* (2019 also had similar observations in their studies. They claimed that reduced economic growth and infrastructure development, social unrest and disparities as associated with poverty-stricken localities and regional boundaries as found in this study.

This study observed that certain factors are contributing to poverty incidence in the study area. Given households' attestation, the following were the 4 topmost factors blamed for the incidence of poverty: under-employment (4.07), large family size (4.04), joblessness (3.95), and lack of access to land (3.94). While other factors contributed to poverty incidence, lack of assets (3.87), increased expenditure owing to the hiking exchange rate, insecurity of tenure on land and homelessness (3.83) and illiteracy (3.79) were the 3 least significant factors considered as contributors of poverty in the study area (See Figure 3). The World Bank (2019), UNFPA (2019) and UN-Habitat (2020), among other studies had similar findings in their studies.
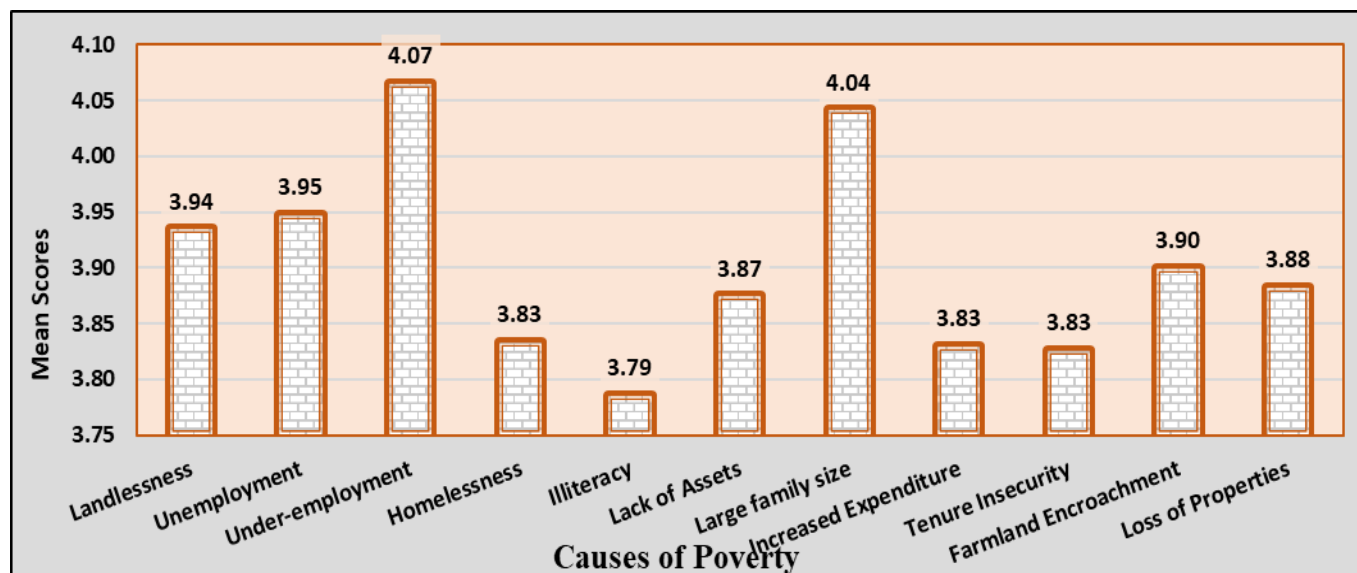
Figure 3: Factors Influencing Households' Poverty in the Study Area

In line with the findings of Hulme and Shepherd (2016) and Amnesty International (2020), this study identified: health complications (4.04), forced eviction (4.00), withdrawal of children from private to public or outrightly from school (3.99), and social exclusion (3.97) as four topmost effects of poverty in the study area. However, increased indebtedness and child labour (3.93), sale of farm seedlings (3.92), malnourishment and low educational attainment (3.90) have added their impetus to the effects for which the poor people are exposed (see Figure 4).
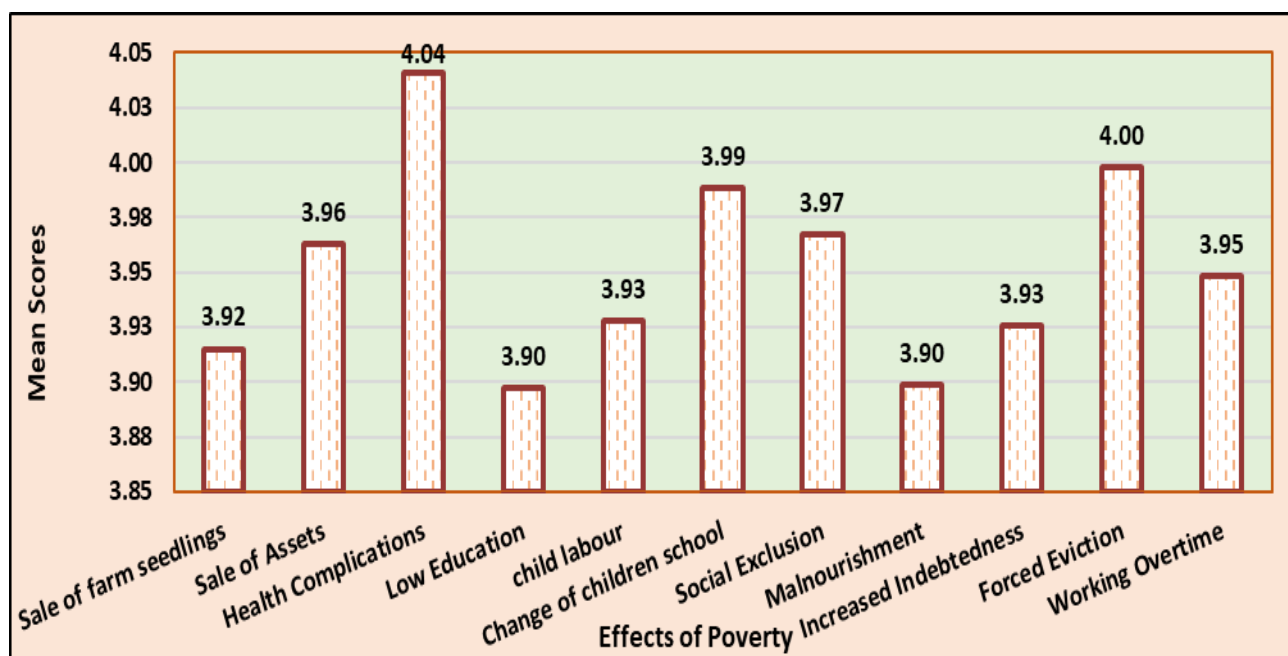

Figure 4: Effects of Households' Poverty in the Study Area

Source: Authors' Fieldwork, 2024

Vulnerability of Households in the Study Area

This study like others opined that the vulnerable households to poverty are those that have fallen into the poverty trap either in the past or present, and are likely to remain in the poverty vicious cycle because of their inability to swim out of it (Luigi, 2004, Bohle *et. al.,* 1994 and Chamber, 1989). Such households, which before or at the time of study, and shortly have attested to their continuous indebtedness owing to the difference between their monthly income and expenditures, were assumed to be vulnerable.

Households' Indebtedness in the Study Area

Considering the difference between total monthly income and expenditure of households, the levels of indebtedness vary among households and across localities. The highest household's monthly indebtedness reported was ₦62,000. This implies that all things being equal, that particular household will accrue its debt to the tune of ₦744,000 at the end of the year (12th month).

Without any intervention, therefore, such a household will be vulnerable and may remain so perpetually Luigi, 2004, Bohle *et. al.,* 1994. Further evaluation of households' indebtedness shows that 67.8% of households in the study area were indebted. These households are indebted to the tune of ₦20,000 (35.3%), ₦20,000 - ₦40,000 (26.8%) and > 40,000 (5.7%) monthly (See Figure 5).Among the highest indebted households (owing > ₦40,001 monthly) were those from Itesiwaju (28.1%), Iseyin (15.8%), Ibarapa Central (14.0%), Oyo West (12.3%), Ibarapa East and North (8.8%), Saki West and Oyo East (5.3%) and Atiba (1.8%). Households owing between ₦40, 000 and ₦20,001 monthly include those from Itesiwaju (22.3%), Iseyin (18.2%), Ibarapa North (11.9%), Ibarapa East (10.0%), Ibarapa Central (8.9%), Saki West (8.2%), Oyo East (7.4%) and Atiba (7.1%) and Oyo West (5.9%). However, households owing up to ₦20,000 monthly include those from Iseyin (20.6%), Saki West (19.8%), Itesiwaju (19.5%), Ibarapa East (8.8%), Ibarapa Central (8.5%), Ibarapa North (7.6%), Oyo East (6.5%), Oyo West (5.1%) and Atiba (3.7%) (See Figure 5). The observed variation in level of indebtedness among households in the study area was significant with $X^2 = 88.817$ and p = 0.000.
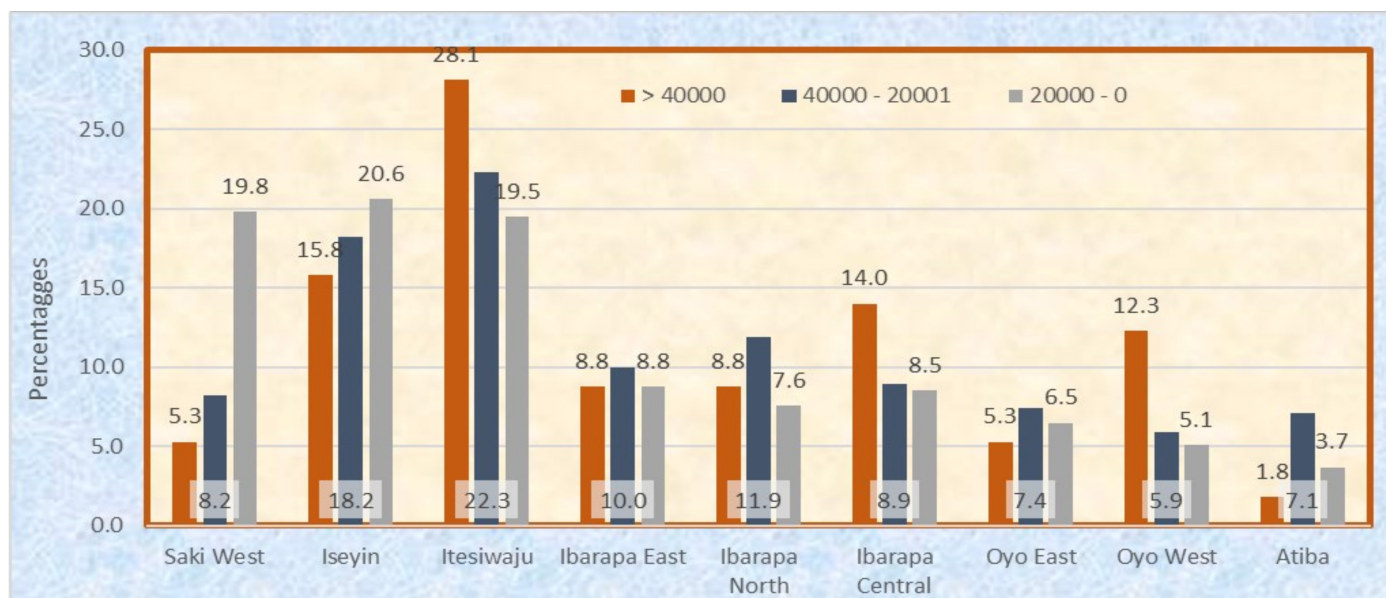

Figure 5: Households' Indebtedness Level

Source: Author's Fieldwork, 2023; $X^2 = 88.817$, p = 0.000

Levels of Vulnerability among Households in the Study Area

Households' vulnerabilities were measured through a summation of their total monthly expenditure and indebtedness minus their monthly income. Thus, the UNDRR's Vulnerability Model was adapted as follows:

$$HE + HI - HC = Pv$$

(Where: HE = Households' Expenditure;
HI = Households' Indebtedness;

HC = Households' Capacity (income);

Pv = Households' Vulnerability)

Households' Performance on Expenditure Scale in the Study Area

The index of household expenditure was computed by dividing households' mean deviation of total expenditure by the mean total monthly expenditure multiplied by 100 to convert to a percentage. The percentage score is therefore considered the Index of households' total monthly expenditure (HE). The conversion to percentage was done to make a comparison of indices required for vulnerability assessment possible at a similar scale. Results of the computation for households' expenditure index ranging from < 16.91 to 40.22 show that on the expenditure scale running from *1 - 4*, the majority of households scored *1* (- 16.91 - 0.00) (63.0%). Other households scored *2* (0.01 - 20.00) (20.1%), *3* (20.01 - 40.00) (8.8%) and *4* (40.01 - 60.00) (8.2%).

Across the study area therefore, households that scored *1* on the expenditure scale include those from Iseyin (19.2%), Saki West and Itesiwaju (18.2%), Ibarapa North and Central (9.4%), Ibarapa East (9.2%), Atiba (5.7%) and Oyo East and West (5.4%). Some of the households also scored *2* on the expenditure scale and they include those from Saki West (19.9%), Itesi-waju (18.9%), Iseyin (16.9%), Ibarapa East (10.4%), Ibarapa North (10.0%), Ibarapa Central (9.0%), Oyo East (6.0%), Oyo West (5.0%) and Atiba (4.0%) where-as, other households from Itesiwaju (19.3%), Saki West and Iseyin (18.2%), Ibarapa Central (10.2%), Ibarapa East and North (9.1%), Oyo West and Atiba (5.7%) and Oyo East (4.5%) had scored *3* on the expenditure scale.

Lastly, households from Itesiwaju (19.5%), Saki West and Iseyin (18.3%), Ibarapa Central (9.8%), Ibarapa East and North (8.5%), Oyo West and Atiba (6.1%) and Oyo East (4.9%) had scored *4* on the expenditure scale (See Figure 6). The observed variation in households' performance on the expenditure scale is not statistically significant across the study area, given X^2 = 2.774 and p = 1.000. This implies that the observed differences in performance do not have any spatial undertone.
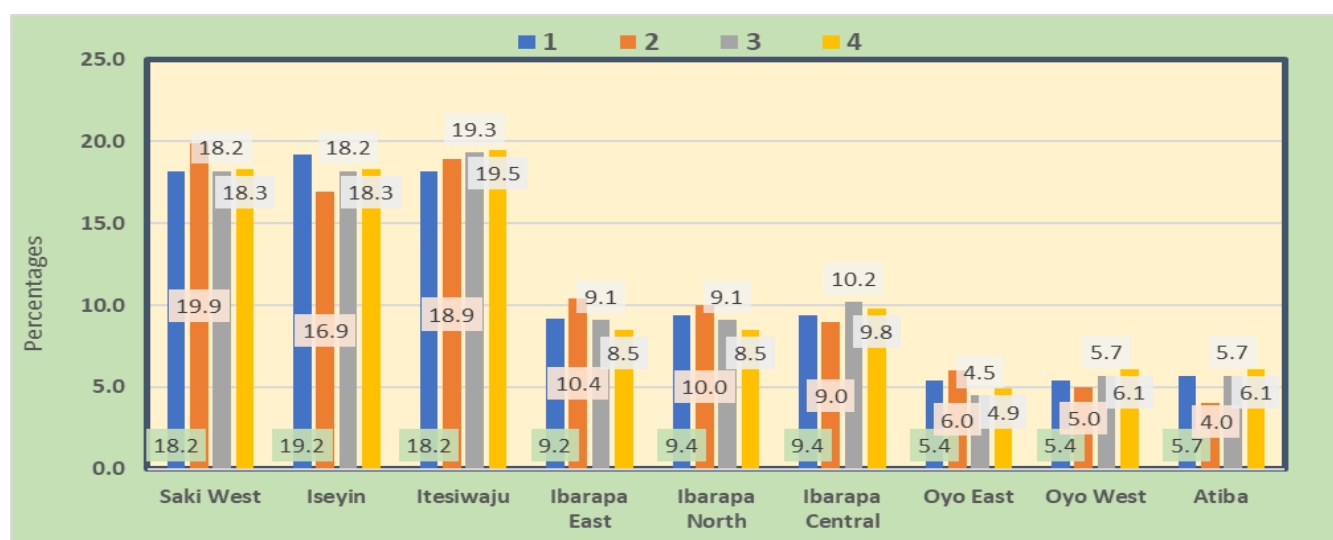

Figure 6: Households' Performance on Expenditure Scale
Source: Author's Fieldwork, 2023; X^2 = 2.774, p = 1.000

Households' Performance on Indebtedness Scale in the Study Area

Similarly, the index of household indebtedness was computed by dividing households' mean deviation of total indebtedness by the mean total monthly indebtedness multiplied by 100 to convert to a percentage. The percentage score is therefore considered the Index of households' indebtedness. The conversion to percentage was done to make a comparison of indices required for vulnerability assessment possible at a similar scale. Results of the computation for households' indebtedness index ranging from - 209.00 to 69.61 show that on the indebtedness scale running from **1 - 5**, the majority of households (43.0%) scored **1** while others scored **2** (29.9%), **3** (20.3%), **4** (5.5%) and **5** (1.3%).Across spatial units, results further show that among households that scored **1** on the indebtedness scale were those from Saki West (28.8%), Iseyin (17.6%), Itesiwaju (12.5%), Ibarapa Central (10.2%), Ibarapa East (9.0%), Ibarapa North (8.4%), Atiba (5.8%), Oyo West (4.2%) and Oyo East (3.9%).

Some of the households also scored **2** on the indebtedness scale were from Itesiwaju (23.0%), Iseyin (22.3%), Saki West (14.0%), Ibarapa East (9.3%), Ibarapa North (8.0%), Oyo East (7.3), Ibarapa Central (6.3%), Oyo West (6.0%) and Atiba (3.7%). Households from Itesiwaju (19.7%), Iseyin (16.3%), Ibarapa Central (13.3%), Ibarapa North (11.3%), Ibarapa East (10.8%), Saki West (9.4%), Atiba (8.4%), Oyo East (5.9%) and Oyo West (4.9%) had scored **3** on the indebtedness scale. While households from Itesiwaju (32.7%), Iseyin (16.4%), Ibarapa North (12.7%), Ibarapa Central and Oyo West (9.1%), Oyo East (5.5%) and Atiba (1.8%) scored **4** on the indebtedness scale, others from Itesiwaju (38.5%), Ibarapa Central and Oyo West (23.1%), and Iseyin and Ibarapa East (7.7%) scored **5** on the indebtedness scale (See Figure 7).
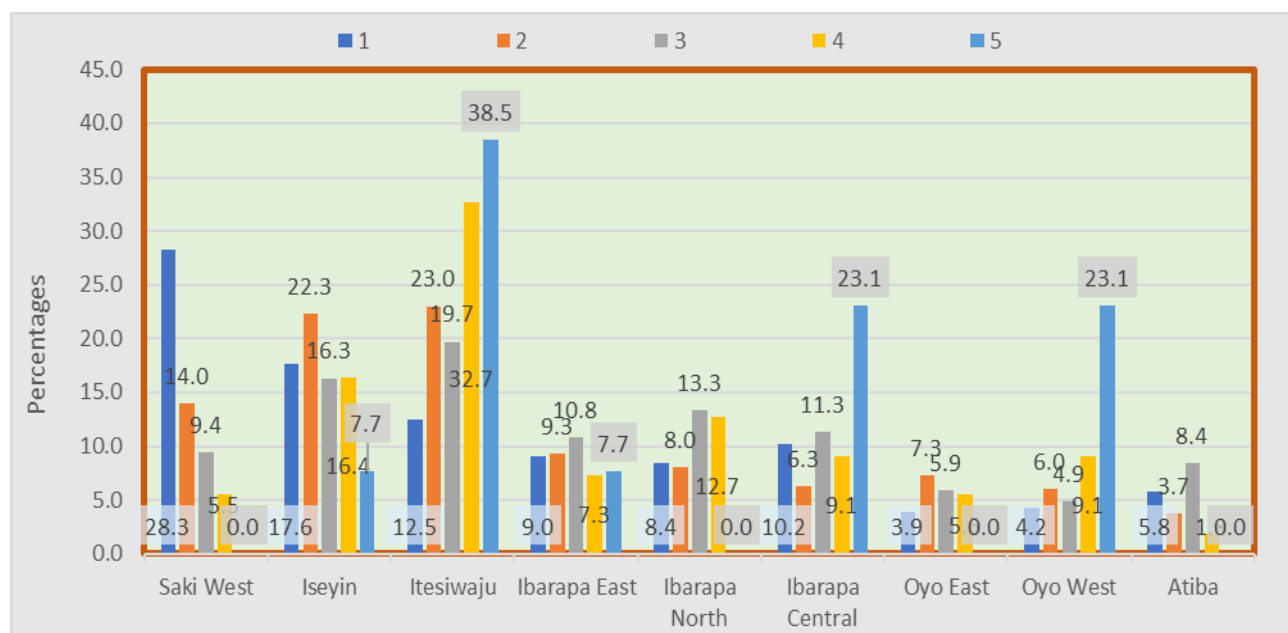

Figure 7: Households' Scores on Indebtedness Scale

Source: Author's Fieldwork, 2023; $X^2 = 102.671$, $p = 0.000$

The observed variation in households' performance on the indebtedness scale is statistically significant across the study area, given $X^2 = 102.671$ and p = 0.000. Consequently, it can be concluded that the observed differences in performance on the indebtedness scale have some spatial undertone.

Households' Performance on Capacity Scale in the Study Area

Further, the index of households' capacity using their monthly income was computed by dividing the households' mean deviation of total monthly income by the mean total monthly income multiplied by 100 to convert to a percentage.

The percentage score is therefore considered the Index of households' capacity. The conversion to percentage was done to make a comparison of indices required for vulnerability assessment possible at a similar scale. Results of the computation for households' capacity index ranging from < 6.98 to 31.31 show that on the capacity scale running from *1 - 3*, the majority of households (61.0%) scored *1*, while others scored *2* (38.6%) and *3* (0.4%).
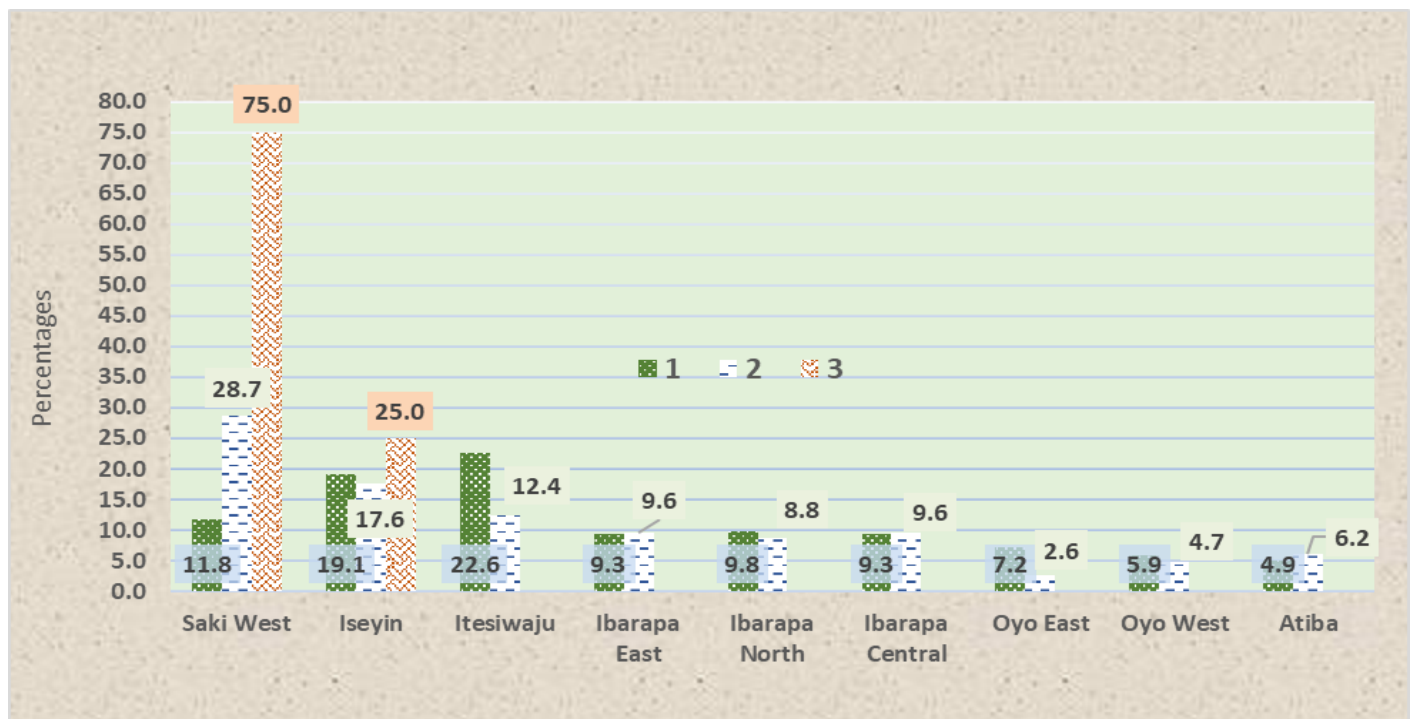

Figure 8: Households' Performance on Capacity Scale
Source: Author's Fieldwork, 2023; $X^2 = 70.585$, p = 0.000

Further results on households' capacity scale show that across the study area, households that scored *1* include those from Itesiwaju (22.6%), Iseyin (19.1%), Saki West (11.8%), Ibarapa North (9.8%), Ibarapa East and Central (9.3%), Oyo East (7.2%), Oyo West (5.9%) and Atiba (4.9%). Similarly, households that scored *2* on the capacity scale include those from Saki West (28.7%), Iseyin (17.6%), Itesiwaju (12.4%), Ibarapa East and Central (9.6%), Ibarapa North (8.8%), Atiba (6.2%), Oyo West (4.7%) and Oyo East (2.6%) whereas, households from Saki West (75.0%) and Iseyin (25.0%) only had scored *3* on the capacity scale (See Figure 8). The observed households' performance on the capacity scale shows statistically significant variation across the study area, given X^2 = 70.585 and p = 0.000. This implied that the observed differences in performance on the capacity scale have some spatial undertone.

Households' Performance on Vulnerability Scale in the Study Area

To evaluate household vulnerability, the study had to relate the indices of exposure, sensitivity and capacity. Recall the UNDRR's Vulnerability Model:

$$HE + HI - HC = Pv$$

(Where: HE = Households' Expenditure;
HI = Households' Indebtedness;

HC = Households' Capacity;
Pv = Households' Vulnerability)

It implied that households' vulnerability is computed by subtracting households' capacity score from the summation of their expenditure and indebtedness scores, and the output is at a similar scale to other indices computed. Results of the computation for households' vulnerability index run from *-1 – 8*. Vulnerability Index, being a negative attribute of households, increases towards the positive axis of the scale while the negative axis of the scale implies resilience. A negative vulnerability score means that households had more capacity to deal with the challenges of poverty, whereas a positive vulnerability score implies that households had lower capacity to deal with the challenges of poverty in the study area.

Across the study area, majority of households (25.0%) on the vulnerability scale scored *2* while others scored *0* (23.6%), *1* (16.0%), *3* (15.9%), *4* (6.8%), *5* (5.6%), *6* and *7* (3.1%), *8* (0.8%) and *-1* (0.3%). These observations implied that only 23.9% of households that scored *-1* and *0* on the vulnerability scale were not vulnerable. They could mitigate and/or cope with the challenges of poverty in the study area. Further study on households' vulnerability showed that among households that were resilient against poverty, having scored *-1* include those from Saki West (66.7%) and Iseyin (33.3%) only. Also, households from Saki West (27.1%), Iseyin (18.6%), Itesiwaju (12.7%), Ibarapa Central (9.3%), Ibarapa North (8.9%), Ibarapa East (8.1%), Atiba (7.6%), Oyo West (4.7%) and Oyo East (3.0%) were able to cope with challenges of poverty haven scored *0* on the vulnerability scale (See Table 4).

The other 76.1% of households in the study area had been vulnerable to poverty with increasing magnitude as their scores on the vulnerability scale ran from *1 – 8* (vulnerability increases towards positivity). Among households that scored *1* on the vulnerability scale were those from Saki West (30.6%), Iseyin (16.9%), Itesiwaju (11.9%), Ibarapa East and Central (10.6%), Ibarapa North and Oyo East (6.2%), Oyo West (3.8%) and Atiba (3.1%). Those that scored 2 on the vulnerability scale include households from Itesiwaju (25.2%), Iseyin (20.8%), Saki West (13.2%), Ibarapa East (9.2%), Ibarapa North (8.4%), Ibarapa Central (7.2%), Oyo West (6.0%) and East (5.6%), and Atiba (4.4%) among others.

Majority of households that scored *5* on the vulnerability scale were from Saki West and Itesiwaju (19.6%) while others were from Iseyin (16.1%), Oyo West (12.5%), Ibarapa Central (10.7%), Oyo East (7.1%), Atiba and Ibarapa North (5.4%) and Ibarapa East (3.6%) whereas those that scored *6* on the vulnerability scale include majority from Itesiwaju (35.5%),

Iseyin and Ibarapa North (12.9%), Saki West and Atiba (9.7%), Oyo East and Ibarapa East (6.5%), and Ibarapa Central and Oyo West (3.2%). With a majority of households from Iseyin (25.8%) and others from Itesiwaju (19.4%), Ibarapa East (12.9%), Saki West, Ibarapa North and Central (9.7%), Oyo East (6.5%) and Oyo West and Atiba (3.2%) scoring **7** on the vulnerability scale, only households from Itesiwaju (50.0%) and Ibarapa Central and Oyo West (25.0%) had scored **8** on the vulnerability scale (See Table 4).

The observed variations in households' performance on vulnerability scale is statistically significant across the study area given $X^2 = 122.313$ and p = 0.000. One can thus conclude that the observed differences in performance on vulnerability scale is not by chance across the study area. There are definitely some factors that were responsible for the significant variation observed in the results.

Table 4: Households' Scores on Vulnerability Scale

Locality	Levels of Vulnerability (increasing towards positivity)									
	-1	0	1	2	3	4	5	6	7	8
Saki West	66.7	27.1	30.6	13.2	10.1	7.4	19.6	9.7	9.7	0.0
Iseyin	33.3	18.6	16.9	20.8	17.6	19.1	16.1	12.9	25.8	0.0
Itesiwaju	0.0	12.7	11.9	25.2	17.0	22.1	19.6	35.5	19.4	50.0
Ibarapa East	0.0	8.1	10.6	9.2	11.3	13.2	3.6	6.5	12.9	0.0
Ibarapa North	0.0	8.9	6.2	8.4	15.1	11.8	5.4	12.9	9.7	0.0
Ibarapa Central	0.0	9.3	10.6	7.2	10.7	11.8	10.7	3.2	9.7	25.0
Oyo East	0.0	3.0	6.2	5.6	8.2	2.9	7.1	6.5	6.5	0.0
Oyo West	0.0	4.7	3.8	6.0	5.0	4.4	12.5	3.2	3.2	25.0
Atiba	0.0	7.6	3.1	4.4	5.0	7.4	5.4	9.7	3.2	0.0
Total	0.3	23.6	16.0	25.0	15.9	6.8	5.6	3.1	3.1	0.8

Source: Author's Fieldwork, 2023; $X^2 = 122.313$, p = 0.000

Socioeconomic Correlates of Households' Vulnerability in Study Area

This study further seeks clarification on the influence of socioeconomic characteristics of households on their vulnerability. It thus subjected the socioeconomic attributes of household heads (age, education (in years), total monthly income, assets acquisition, total monthly expenditure, and indebtedness) and their vulnerability to Pearson's correlation analysis. Findings show that households' indebtedness (r = 0.793) and monthly expenditure (r = 0.739) had a strong positive correlation with vulnerability of households. It thus implies that the more the income of households, the more likely will be vulnerable owing to poverty. This can be true since the commitments of such households would have increased financially. Further, assets acquisition among households (r = 0.560) and poverty headcount (r = 0.529) had average positive correlations with their vulnerability, whereas age of household heads had a weak positive correlation with vulnerability (r = 0.162). The correlation coefficients are all significant at a 99% confidence level (See Table 5). These imply that while there is an increase in any of these households' attributes, their vulnerability increases.

On the contrary, it was also brought to fore that households' monthly income (r = - 0.529) had a negative average and educational qualifications of household heads (r = - 0.184) had a weak negative correlation with their vulnerability.

The correlation coefficients are both significant at 99% confidence level (See Table 5). These imply that while there is an increase in any of these two attributes, the vulnerability of households decreases.

Table 5: Correlates of Households' Vulnerability

Correlations									
Description		Age	Education	Income	Poverty	Assets	Expenditure	Indebtedness	Vulnerability
Age	Pearson Correlation	1	.000	.028	-.028	.155**	.281**	.090**	.162**
	Sig. (2-tailed)		.991	.378	.378	.000	.000	.005	.000
	N	1002	1002	1002	1002	1002	1002	1002	1002
Education	Pearson Correlation	.000	1	.357**	-.357**	.055	.014	-.325**	-.184**
	Sig. (2-tailed)	.991		.000	.000	.082	.661	.000	.000
	N	1002	1002	1002	1002	1002	1002	1002	1002
Income	Pearson Correlation	.028	.357**	1	-1.000**	.042	.032	-.912**	-.529**
	Sig. (2-tailed)	.378	.000		.000	.186	.309	.000	.000
	N	1002	1002	1002	1002	1002	1002	1002	1002
Poverty Headcount	Pearson Correlation	-.028	-.357**	-1.000**	1	-.042	-.032	.912**	.529**
	Sig. (2-tailed)	.378	.000	.000		.186	.309	.000	.000
	N	1002	1002	1002	1002	1002	1002	1002	1002
Assets	Pearson Correlation	.155**	.055	.042	-.042	1	.716**	.255**	.560**
	Sig. (2-tailed)	.000	.082	.186	.186		.000	.000	.000
	N	1002	1002	1002	1002	1002	1002	1002	1002
Expenditure	Pearson Correlation	.281**	.014	.032	-.032	.716**	1	.381**	.739**
	Sig. (2-tailed)	.000	.661	.309	.309	.000		.000	.000
	N	1002	1002	1002	1002	1002	1002	1002	1002
Indebtedness	Pearson Correlation	.090**	-.325**	-.912**	.912**	.255**	.381**	1	.793**
	Sig. (2-tailed)	.005	.000	.000	.000	.000	.000		.000
	N	1002	1002	1002	1002	1002	1002	1002	1002
Vulnerability	Pearson Correlation	.162**	-.184**	-.529**	.529**	.560**	.739**	.793**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	
	N	1002	1002	1002	1002	1002	1002	1002	1002

**. Correlation is significant at the 0.01 level (2-tailed).

Source: Author's Computation, 2023

V.   Conclusion and Recommendations

From the foregoing, one would discover that vulnerability to poverty in Oyo State, Nigeria, has taken a critical dimension concerning its understanding and persistence despite all efforts geared at eradicating poverty. Unfortunately, given the level of poverty in the study area, households had difficulties in accessing and acquiring assets, and they have been marginalised from enjoying infrastructural facilities and services, whereas available social amenities have offered inadequate and unaffordable services.

Therefore, to solve the observed problems and future challenges, the study suggested that the Government should encourage and prioritise initiatives that will enhance the creation of sustainable job opportunities and skill acquisition training programmes. Family planning and basic education should be provided while encouraging financial literacy programmes to help the poor learn financial management of their income. Harnessing opportunities to support communities and individuals through cooperatives, credit and thrift societies, and accessibility to soft loans that they can rely on rather than selling their assets and farm implements during difficult times. Further, social safety net or targeted subsidies for necessities directed at challenges relating to food, health and power supply can be planned and implemented.

REFERENCES

Adebisi, J. A (2018), Impact of Global System for Mobile Communication on Regional Development in Oyo State, An Unpublished Ph. D Thesis Submitted to the Department of Urban and Regional Planning, LAUTECH, Ogbomoso.

Adeboyejo, A. T., Olaitan, O. A. and Ogunkan, D. V. (2024), Rural Households' Response Pattern to Climate Change and Poverty in Surulere Local Government Area, Ogbomoso, Nigeria in International Journal of Innovative Science and Research Technology, Vol. 9 (8), pp. 1051 – 1062.

Adeoti A. I (2014) Trend and Determinants of Multidimensional Poverty in Rural Nigeria. *Journal of Development and Agricultural Economics*, 4: 220-231.

Adepoju, A.O.; Yusuf, S.A.; Omonona, B.T. and Okunmadewa, F.Y. (2011), Vulnerability Profile of Rural Households in South-West Nigeria in *Journal of Agricultural Science*, 3(1), 128 - 139.

Agunbiade M. O. and Oke J. T. O. (2019) Poverty analysis of cassava farming households in Osun State, Journal of Development and Agricultural Economics, Vol. 11(1), pp. 9-14

Alkire, S., Foster, J.E., Seth, S., Santos, M.E., Roche, J.M., and Ballon, P. (2015). Multidimensional poverty measurement and analysis: Overview of Methods for Multidimensional Poverty Assessment. OPHI Working Papers, 84.

Alkire, S., Foster, J., Seth, S., Roche, J., Santos, M., and Ballon, P. (2015a). Multidimensional Poverty Measurement and Analysis. Oxford University Press.

Alkire, S., Roche, J., Seth, S., and Sumner, A. (2015b). Identifying the Poorest People and Groups: Strategies Using the Global Multidimensional Poverty Index. Journal of International Development, 27(3):362- 387.

Amnesty International (2020). Forced Evictions and Poverty. A Publication of Amnesty International IOR 40/2626/2020 June 2020, Amnesty International Ltd, London WC1X 0DW, UK. www.amnesty.org

Arndt, C. and Tarp, F. (2017). *Measuring Poverty and Wellbeing in Developing Countries*. Oxford University Press, UK.

Bersisa, M. and Heshmati, A. (2016). "Multidimensional Measure of Poverty in Ethiopia: Factor and Stochastic Dominance Analysis" in A. Heshmati (ed.), *Poverty and Well-Being in East Africa. Economic Studies in Inequality, Social Exclusion and Well-Being*. Cham: Springer.

Bhattacharya, J., Currie, J., & Haider, S. (2011). Poverty, food insecurity, and nutritional outcomes in children. Journal of Health Economics, 30(5), 875-888.

Blaikie, P. (1994), At Risk: Natural Hazards, People's Vulnerability, and Disasters, Routledge, London

Bohle H. G, Downing, T. E and Watts, M. J (1994), Climate Change and Social Vulnerability: Toward a Sociology and Geography of Food Insecurity in *Global Environmental Change*, Vol. 4 (1), pp. 37 - 48.

Brady, D. (2003). Rethinking the sociological measurement of poverty. Social Forces, 81(3), 715-752.

Chamber, R. (1989), Editorial Introduction: Vulnerability, coping and policy. Institute of Development Studies Bulletin, 20(20), 1-7.

Chamber, Robert, and Gordon Conway (1992), *Sustainable Rural Livelihoods: Practical Concepts for the 21st Century*, Discussion Paper 296, Institute of Development Studies, University of Sussex, Brighton, UK, February, pages 9-12.

Cheung, K. C. K., Chan, W. S., & Chou, K. L. (2019). Material deprivation and working poor in Hong Kong. *Social Indicators Research:* Social Indicators Research: An International and Interdisciplinary Journal for Quality-of-Life Measurement, Springer, vol. 145(1), pages 39-66, August. DOI: 10.1007/s11205-019-02093-0

Choe, J. (2008). The effects of poverty on crime rates. Journal of Economic Development, 33(2), 131-144.

Dang, Hai-Anh H.; Dabalen, Andrew L. (2019): Is Poverty in Africa Mostly Chronic or Transient? Evidence from Synthetic Panel Data. In *The Journal of Development Studies* 55 (7), pp. 1527–1547. DOI: 10.1080/00220388.2017.1417585

Dangeot, A., & Safojan, R. (2019). Identifying poor children: understanding the differences between poverty approaches. Review of Economics of the Household in Special IARIW-World Bank Conference "New Approaches to Defining and Measuring Poverty in a Growing World" Washington, DC, November 7-8, 2019

Edoumiekumo, S. G; Karimo, T. M and Tombofa, S. S (2013) Multidimensional Energy Poverty in the South-South Geopolitical Zone of Nigeria in *Journal of Economics and Sustainable Development*, 4(20): 96 - 103

Eguaroje O. E., Alaga T. A., Ogbole J. O., Omolere S., Alwadood J., Kolawole I. S., Muibi K. H., Nnaemeka D., Popoola D. S., Samson S. A., Adewoyin J. E., Jesuleye I., Badru R. A., Atijosan A., and Ajileye O. O. (2015), Flood Vulnerability Assessment of Ibadan City, Oyo State, Nigeria, in *World Environment*, Vol. 5 (4), pp 149 - 159, DOI: 10.5923/j.env.20150504.03.

FAO (2020). The State of Food Security and Nutrition in the World. FAO Report 2020

Garba, A (2006), Alleviating Poverty in Northern in Nigeria: A Paper Presented at the Annual Convention of Zumunta Association, Minneapolis, MN, USA July 28 - 29.

Hulme, D., & Shepherd, A. (2016). "Conceptualizing vulnerability and poverty." *Journal of International Development*, 28(5), 761-774.)

ILO, 2020. "World Employment and Social Outlook 2020"

Kara, A., Jones, B., Smith, C., & Liu, Y. (2023). *The Role of Financial Inclusion in Poverty Reduction: A Cross-Country Analysis*. Journal of Economic Studies, 48(3), 456-478. doi:10.1108/JES-04-2023-0156.

Kolawole, B. O, Omobitan, O. A, Yaqub, J. O (2015), Poverty, Inequality and Rising Growth in Nigeria: Further Empirical Evidence. *International Journal of Economics and Finance*, 7 (2), 51-62.

Krishna, A. (2017). "Poverty and vulnerability in developing countries." Journal of Economic Development, 42(1), 1-15.

Laajaj, Rachid (2017): Endogenous time horizon and behavioural poverty trap: Theory and evidence from Mozambique. In *Journal of Development Economics*, Volume 127, pp 187-208

Lawson, D. (2004). The Influence of Ill Health on Chronic and Transient Poverty: Evidence from Uganda University of Manchester. *CPRC Working Paper* No 4, March 2004.

Luigi, C. (2004), Assessing Households Vulnerability to Unemployment Shocks: A Simulation Methodology Applied to Bosnia and Herzegovinia, pp. 21

Lybbert, Travis J.; Wydick, Bruce (2018): Poverty, Aspirations, and the Economics of Hope. In *Economic Development and Cultural Change* 66 (4), pp. 709–753. DOI: 10.1086/696968

Mba, P. N., Nwosu, E. O., & Orji, A. (2018). An Empirical Analysis of Vulnerability to Poverty in Nigeria: Do Household and Regional Characteristics Matter? *International Journal of Economics and Financial Issues*, 8(4), 271 - 276.

Retrieved from https://www.econjournals.com/index.php/ijefi/article/view/6847

National Bureau of Statistics. (2009). "Poverty Profile for Nigeria". NBS Office, Abuja, Nigeria.

Nwaobi, G. (2002), A Vector Error Correction and Non-nested Modelling of Money Demand Function in Nigeria in Economic Bulletin, Vol. 3 (4), pp. 1 - 8.

Okpe, J. and Abu, G. A (2009), Foreign Private Investment and Poverty Reduction in Nigeria (1975 - 2003) in Journal of Social Sciences, Vol. 19 (3), pp. 205 - 211.

Oxfam, 2020. "Time to Care: Unpaid and Underpaid Care Work and the Gender Pay Gap"

Oyo State Government (OYSG, 2020), Oyo State at a Glance: A Publication of Oyo State Government Press, Agodi Secretariat, Ibadan, p. 109.

Salami R., Von Meding J. &Giggins H, 2017, "Urban settlements' vulnerability to flood risks in African cities: A conceptual framework", *Jàmbá: Journal of Disaster Risk Studies,* Vol. 9, No. 9, https://doi.org/10.4102/jamba.v9i1.370

Saunders, P., Wong, M., & Bradshaw, J. (2023). *Comparative Analysis of Poverty Measures: A Study of Monetary and Living Standards Approaches Using Survey Data from High-Income Countries*. Journal of Social Policy, 52(2), 234-257. DOI:10.1017/S0047279423000158.

Statista Research Department (2022) Household Structure in Nigeria by area in 2019. A Publication of the World Bank Development Indicators: worldbank.org

Stifel, D. and Woldehanna, T. (2016). "Poverty in Ethiopia, 2000–11: Welfare improvements in a changing economic landscape", in C.A. Arndt, McKay, and F. Tarp. (eds), *Growth and Poverty in Sub-Saharan Africa*. Oxford University Press. 78

Stifel, D. and Woldehanna, T. (2017). "Estimating Utility-Consistent Poverty in Ethiopia, 2000–11", in C. Arndt and F. Tarp (eds), *Measuring Poverty and Wellbeing in Developing Countries*. Oxford University Press.

Stiglitz, J. E. (2012). The price of inequality: How today's divided society endangers our future. W.W. Norton & Company.

UNDP, 2020. "Human Development Report 2020"

UNICEF, 2021. "Child Poverty and Social Protection"

Wilson, W. J. (1987). The Truly Disadvantaged: The Inner City, the Underclass, and Public Policy. University of Chicago Press.

World Bank (2001) World Development Report 2000/2001*Attacking Poverty,* New York, Oxford University Press.

World Bank (1992) World Development Report 1992 *Development and the Environment,* New York, Oxford University Press.

World Bank, 2020. "Poverty and Shared Prosperity 2020"

World Bank, 2021. "Poverty and Shared Prosperity 2021"