



## **Simultaneous assessment of various dimensions of poverty in rural areas of Ayedaade local government, Osun State, Nigeria**

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### **Abstract**

Poverty has been the concern of everyone across the globe. This paper assessed the poverty in rural areas of Ayedaade Local Government, Osun State, Nigeria with the specific objective of examining dimensions of poverty. Multi-stage sampling technique was used to select five rural wards, twenty-five villages, and three hundred and sixty-eight household heads. Multi-dimensional poverty line of 33.3% deficiency; International poverty line of 1.90 dollar per person per day; and subjective poverty based on self-reporting, and ANOVA were used. Findings showed that 57.9%, 47%, and 58.4% were poor respectively based on subjective view, income, and multi-dimensional index. ANOVA at observed F-value of 4.497 which was greater than tabulated F-value of  $F_{0.05, 2, 72} = 3.0718$  indicated that there was significant difference in being poor across various dimensions of poverty. This showed that using only one measure cannot give the whole and reliable poverty status of the rural dwellers. It revealed that people's consideration of their poverty status was beyond income only but include other indicators of well-being like education, health and standard of living. It is thus essential to apply measures that are both multi-dimensional and single dimensional in nature to depict true poverty status.

**Key words:** Poverty line, Multidimensional poverty index, Self-report poverty, SDGs, Rural area

### **Introduction**

Many efforts, for instance Millennium Development Goals, have been made to alleviate poverty in the world but these have proved abortive in many parts of the world. Various countries viewed and measured poverty with reference to their own areas of locality, politics, society and economy (World Bank 2001). Poverty is an unsatisfactory life style which is associated with illiteracy, insecurity, illness, lack of access to decent work, low life expectancy and any other life deficiencies (Odishika and Adedeji, 2015; Fasoranti, 2013). Various literatures have indicated that poverty can be in many forms, be it rural or urban, absolute or relative, chronic or transitory, and extreme or moderate poverty (Egwemi and Udoh, 2013). Poverty has become a pervasive matter in both the developed countries and the developing world but it is more affective in the developing countries especially in the rural area where the main livelihood is from farming (Odishsika and Adedeji, 2015; Nsikak-Abasi and Edet, 2013). The proportion of rural population in extreme poverty is high, and its number of poor people exceeds the agricultural capacity to enhance the

sustainable livelihood and development (Olinto, Beegle, Sobarado and Uematsu, 2013). In Africa, the proportion of people living below 1.90 U. S Dollar per day was 57% in 1990 (Kathleen, Luc, Andrew, Isis, 2016).

Rural communities usually rely heavily on secure and equitable access to land, fishery and forest, which are sources of food and shelter, the basis for social, cultural and religious practices and a central factor for economic growth (United Nations, 2012). National Population Commission (NPC, 2006) of Nigeria defines a rural area in the country as any settlement with less than 20,000 population. A number of studies have shown that the vast majority of Nigerians live in rural area of the country where basic facilities are either inadequate or totally lacking. Nigeria as one of the countries in Africa has experienced set-back in fighting poverty, and it was quite unfair for Nigeria, a giant of Africa, for not meeting the target for Millennium Development Goal Poverty Reduction (National Planning Commission 2004). Since the inception of the current democratic rule in 1999, which people thought would bring about developmental changes and improve well being; there have been mixed results of the effect of democratic governance on the level of poverty either in the urban or rural area. For instance, Omoyibo (2013) inferred that the marginalization by government has made rural dwellers to be more vulnerable to poverty than their urban counterparts. Between 1999 and 2007, the dividends of democracy to people was affected by bad leadership.

Eleghasim (2009) in his own study characterized the causes of poverty in Owerri Local Government of Imo State to large number of dependents in household, low level of formal education, low income, weak access to land and subsistence type of agricultural practice. Farinde (2014) found that lack of access to loan, poor transport system to the market, and ineffective storage facilities were problems facing rural farmers in Egbedore, Irepodun and Orolu Local Government Areas of Osun State. Approximately, fifty-six percent of houses in his study area were about 200 metres away from the market. These affected the farming activities, income generation and lives of the farmers. But in order to alleviate poverty in the area, rural dwellers engage in non-farm activities to earn additional income. Rural development intervention, interconnectivity among villages, efficient transport network, provision of credit facility and personal investment were suggested as poverty alleviation strategies in the area (Farinde, 2014).

Adeniyi and Ojo (2013) classified Iwo, Ayedire and Ayedaade as food-insecure area as almost seventy percent of their population were below the food security line of 2,280 calories per adult equivalent. The problems was traced to small farm size, low average monthly income and lack of modern farm input. Their study revealed that 80% had farm plot of less than one hectare, while 79.1% earned less than 18,000 Naira per month. Amao, Ayantoye and Oladejo (2013) maintained that household size and level of literacy were essential determinants of poverty in Ilesa West Local Government of Osun State. The probability of being poor was directly proportionate to the size of household. Olawole (2010) observed that more than half of his sampled population in Badagary Local Government Area of Lagos State below five thousand Naira (poverty line), and recommended that policy should be enacted and enforced to enhance the earning capacity of rural population, most especially the women in order to make their socio- economic status efficient.

Different results and perspectives of scholars pointed to the fact that poverty study is complex and requires continuous review and measurement beyond single dimension through researches in order to provide updated information on poverty situation at different levels. Therefore, this study examined poverty situation with specific objective of simultaneously assessing various dimensions of poverty in rural areas of Ayedaade Local Government, Osun State, Nigeria.

### **Statement of Research Problem**

Poverty, as noted in the literature, is more than measurement of household expenditure or poverty line but also include various dimensions such as poor infrastructure, poor health facilities, environmental

issue, inadequate access to government facilities, illiteracy and ignorance (NBS, 2010). In multidimensional perspective, Odishika and Adedeji (2015), Fasoranti (2013), and United Nation Development Programme (UNDP, 2010) viewed poverty as different dimensions of deprivation of human life such as lack of formal education, insecurity, lack of dignity and benefitting job, malnutrition and food insecurity. Poverty is attached to the exposure of the household to social, economic, physical, and political vulnerability which might be due to their over-dependence on agriculture for survival. Women and children are more vulnerable to poverty than men due to their less engagement in socio-economic and political activities.

Studies have shown that poverty is more persistent in rural area of the world, especially in developing country like Nigeria. Olinto et al.(2013); and Obayelu and Awoyemi (2010) inferred that most of rural dwellers derive their means of living from agriculture and the number of poor people in rural area out-grow the capacity of agriculture to alleviate poverty in rural area. Less access to social amenities, urban-rural bias, and less impacts of democracy, and inappropriate agricultural and economic policies exacerbate the intensity of poverty on farming communities (Odishika and Adedeji, 2015; Amao et al., 2013; Adeleke and Charles, 2016). Factors such as large number of household dependents, low income, low access to the arable land, no credit facilities, and inadequate storage facilities for farm product, inefficient market and transport network cannot be under-estimated as causes of poverty in rural areas (Ogwumike and Akinnibosun, 2013).

Leke and Oluwaleye (2015) attributed the increased poverty in Nigeria to poor infrastructure which were the yields of corruption that undermined democracy and good governance. The failure of poverty alleviation programmes was attributed to lack of good governance which entangled the provision of public infrastructure in Nigeria (Patrick, Otaida and Audu, 2014). Ajala and Aguda (2007) in their study of development inequality in Osun state identified Ayedaade as one of the 16 local government area out of 30 local government area in Osun State that were less developed with index scored less than 1.0 in term of infrastructure. If poverty must be effectively alleviated, there must be adequate provision and utilization of social amenities and basic needs for the poor (Leke and Oluwaleye, 2015). Omoyibo (2013) recommended that the attention should be given to human capital development and infrastructure in rural areas in order to alleviate poverty among rural Nigerians.

The work of Ashagidigbi, Abiodun and Samson (2011) on the effects of infrastructure development on crop farmers' productivity in three selected LGAs (Olorunda, Ayedaade and Ife Central) showed slight positive improvement on farmer's output. Adeniyi and Ojo (2013) who focused on food security among rural households in Iwo, Ayedire and Ayedaade LGAs concluded that the study area was food-insecure as 69.9 percent of the population were below the food security line per adult due to small farm size. All these studies only addressed certain index of poverty taking several LGAs into consideration and thus denied the importance of in-depth study on any of the selected local government areas.

Despite the eighteen years of democracy in Ayedaade Local Government and entire Nigeria, studies have shown that poverty situation especially in rural area of Ayedaade LGA has not improved significantly based on poverty line measurement, and relationship between poverty and the state of infrastructure have not been well established in the previous works reviewed in the study area. Most political parties since the new era of democracy in Nigeria have made poverty alleviation programmes, particularly in rural area a cardinal political issue in their manifestos within the context of the targets of both Millennium Development Goals (MDGs) and Sustainable Development Goals (SDGs). Thus, with close to two decades of democracy in Nigeria, an assessment of how people are faring in political promises made by Nigerian leaders, either such promises were kept and of what effect on the poverty situation at the household level in the rural area become important focus of this study.

Therefore, for the purpose of this study, poverty is taken as lack of essential needs which has made an individual/ household concerns to be physically, socially, economically and politically stagnant and backward, and unable to meet the minimum acceptable standard of living. This is thus measured using both

single and multidimensional variables in order to carry out simultaneous assessment of various dimensions of poverty.

### **Justification of the Study**

Globally, the way forward for poverty has been the primary concern. This has been established in the Millennium Development Goals and their subsequent Sustainable Development Goals. Even in Nigeria, many efforts have been made to alleviate poverty but with little or no success in the grassroots. In order to alleviate poverty, it is pertinent to have first-hand data on poverty. Data are not adequately available or outdated in many local government areas, as local government agencies and researchers show less interest and concern about the poverty especially in rural area of the study. Even most of the literatures reviewed only addressed single dimensional index of poverty, and considered several locations thus denied the essence of in-depth study. It is germane to narrow down the empirical findings of the poverty to the grass root areas of Ayedaade Local Government in order to have up-to-date and additional information on poverty in rural area of the study.

In addition, most literatures reviewed based their poverty measurement on relative poverty line which neglected the perceptions of respondents of seeing themselves as being poor or not. They also failed to measure poverty beyond single dimension (income poverty line). The needs to measure poverty beyond poverty line, and deficiencies in using only relative poverty line have been raised by many researchers. For instance, Ravallion (2016) claimed that the relative poverty measure is implausible; while National Bureau of Statistics (2010) argued that poverty is more than measurement of household's expenditure and has many dimensions.

Therefore, the assessment of various dimensions of poverty is needed in order to make relevant information available especially in planning towards poverty alleviation. The subjective measurement of poverty was therefore used in this study because it defines someone poor, if such a person sees himself or herself as being poor; and multidimensional measurement which depicts various aspects of human life because it measures beyond income; and international poverty line were also used especially to make comparison between single dimension and multi-dimension of poverty.

Based on subjective view, multidimensional poverty index, and international poverty line, this research work is able to provide additional information on poverty with specific reference to various dimensions of poverty in the study area.

### **Hypothesis**

H<sub>0</sub>: There is no significant variation in being poor based on international poverty line, subjective measure of poverty, and multidimensional poverty index

### **Literature Review**

Many efforts have been made to alleviate poverty in the world, but these have been abortive in many parts of the world. Poverty is an unsatisfactory life style which is connected with illiteracy, insecurity, ailment, lack of access to decent employment, low life expectancy and any other life deficiencies (Odishika and Adedeji, 2015; Fasoranti 2013). Various literatures have indicated that poverty can be in many forms, be it rural or urban, absolute or relative, chronic or transitory, and extreme or moderate poverty (Egwemi and Udoh, 2013). Poverty has become a pervasive matter in both the developed countries and the developing world but it is more affective in the developing countries especially in the rural area where the main livelihood is from farming (Odishika and Adedeji, 2015; Nsikak-Abasi and Edet, 2013). In Africa, the proportion of people living below international minimum daily income poverty baseline of \$1.90 was 57% (Kathleen, Luc, Andrew, Isis, 2016). The proportion of rural population in extreme poverty is high, and its proportion of poor people exceeds the capacity to improve the sustainable livelihood (Olinto, Beegle, Sobarado and Uematsu, 2013). Rural communities usually rely on secure access to land which are sources

of basic needs such as food and shelter (United Nations, 2012). National Population Commission (NPC, 2006) of Nigeria defines a rural area in the country as any settlement with less than 20,000 population. A number of studies have shown that the vast majority of Nigerians live in rural area of the country where basic facilities are either inadequate or totally lacking. Nigeria as one of the countries in Africa has experienced hindrance in alleviating poverty, and it was quite unfair for Nigeria, a giant of Africa, for not meeting the target for Millennium Development Goal Poverty Reduction. This might be due to complexity of poverty which Nigeria might not take into consideration (National Planning Commission 2004).

### **Dimensions in Measurement of Poverty**

Poverty is a complex concept with many dimensions. Measurement of poverty could be commenced by setting poverty line either relative or absolute, single or multi-dimensional (Olatomide, 2012; World Bank, 2016). Poverty line is a minimum standard taking income or expense into consideration in order to define someone as either being poor or not (Adigun, Awoyemi and Fabiyi, 2015). Poverty could also be measured on subjective views, basic needs, capacities, and minimum rights (Max Roser, 2013). According to National Bureau of Statistics (NBS, 2010), subjective poverty measure is self-assessment poverty measure allows members of household to define themselves as poor or not. The basic need measure to poverty is based on quantity of energy got from food consumed, for example, monetary value of food that can give 3000 calories per day. On capacities approach, multidimensional index is deemed appropriate. Based on minimum right, World Bank has recommended \$1.90 per person per day as minimum income (Ferreira, Shaohua, Andrew, Yuri, Nada, Jolliffe and Amber, 2016). There were several major revisions on the formulation of poverty line. Ferreira et al. (2016) showed international poverty line has been changed over time. One dollar per day poverty line was introduced in the world in 1990 (World Bank, 1990). In 2005, it was changed to 1.25 Dollar. But in 2015, the line was adjusted from 1.25 international dollars to 1.90 international dollars as extreme poverty, and the moderate poverty line was put as less than 3.10 Dollar per day (Jolliffe and Prydz, 2016).

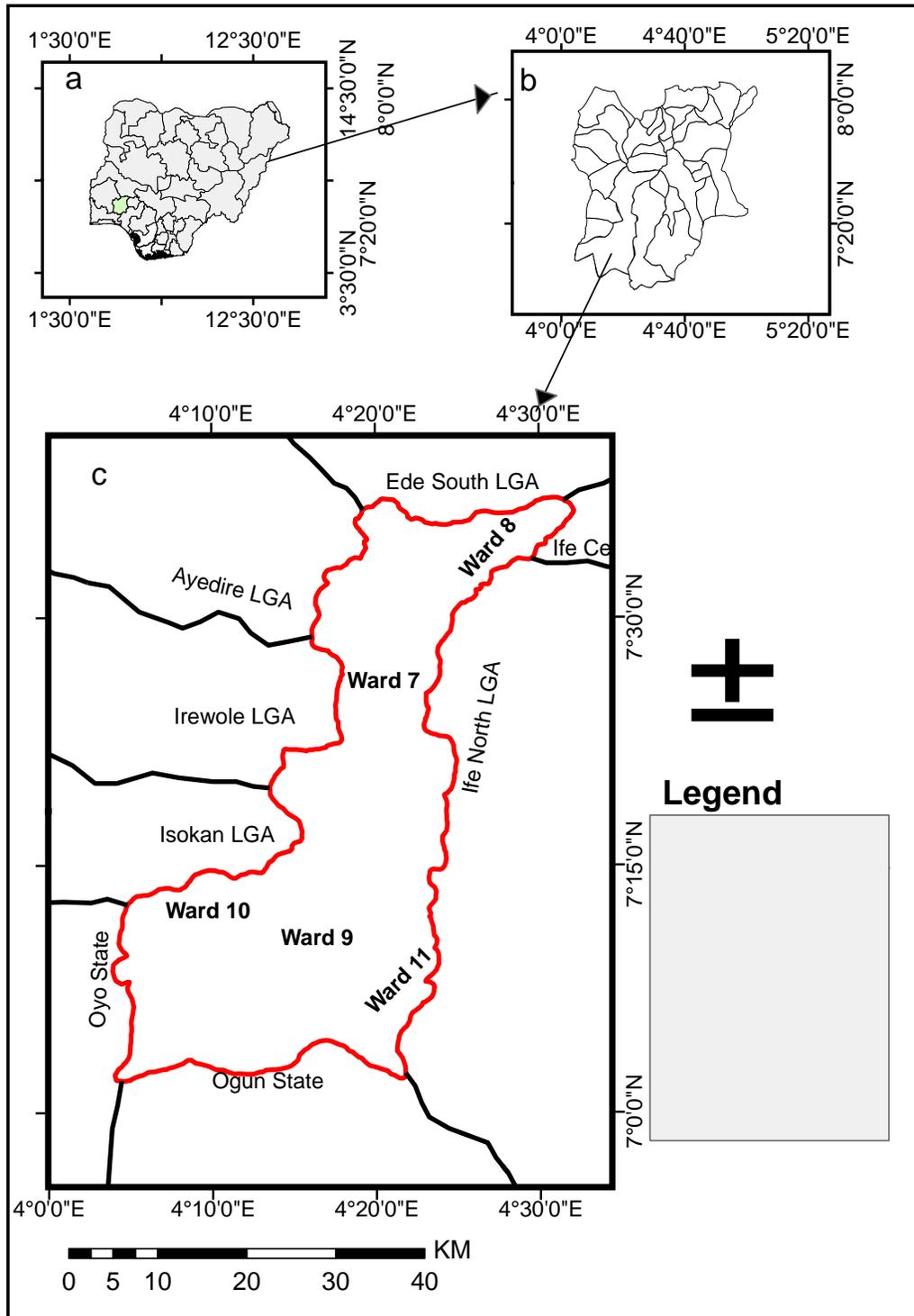
Multi-dimensional poverty index (MPI) is a measure that combines various aspects of wellbeing such as health, education and standard of living into single index. It measures in aggregate terms on how an individual is fairing in different dimensions of well-being index. Multi-dimensional poverty is constructed from ten indicators across three core dimensions: health, education and living standard. Those ten indicators are nutrition, child mortality, year of schooling, school attendance, cooking fuel, improved sanitation, safe drinking water, electricity, flooring, and asset. (United Nations Development Programme, 2016). If someone is deprived in a third or more of the ten weighted indicators, the index defines such a person as multi-dimensionally poor (World Bank, 2016). This connotes that cut off of 33.3 percent is used to differentiate between the poor and non-poor. Households with a deprivation score of 20 percent or higher but less than 33.3 percent are near to multi-dimensionally poor. Households with deprivation score of 50 percent or higher are severely multidimensional poor (UNDP 2016).

Literatures have revealed that there are many measures of poverty. However, scholars have raised concerns on the inadequacy of the use of poverty line as a single measure of poverty because there are other indices of poverty which are interdependent and reinforcing in a vicious cycle. For instance, Ravallion (2016) claimed that the relative poverty measure is implausible; while National Bureau of Statistics (2010) argued that poverty is more than measurement of household's expenditure and has many dimensions. Therefore, the simultaneous assessment of various dimensions of poverty is needed in order to determine significant differences in poverty measures so that the relevant and appropriate planning towards poverty alleviation can be adopted.

### **The Study Area**

Ayedaade Local Government is one of the thirty Local Government Areas in Osun State. It is located between Latitude 7<sup>0</sup>2'N and 7<sup>0</sup>39'N of the Equator and Longitude 4<sup>0</sup>3'E and 4<sup>0</sup>32'E of the Greenwich

Meridian. It shares boundary with Ede South Local Government in the North, Irewole Local Government in the West, Ife North Local Government in the East, and Ogun State in the South. It has six urban wards and five rural wards (Figure 1.1).



**Fig. 1.1:** (A) Nigeria, (B) Osun State, And (C) Ayedaade Showing All Eleven Wards

Source: Re-digitized 2001 Ayedaade LGA Political Map (Ayedaade Town Planning)

## Theoretical Framework

### Theory of Deprivation Trap

The five - dimension framework of poverty was proposed in 1983 by Robert Chamber in his book titled 'Rural Development' in order to analyze the causes and effects of poverty. This theory explains why the poor remains poor. So Robert Chamber came up with the term called "The Deprivation Trap of Poverty in Rural Development". In his framework, five dimensions which are isolation, powerlessness, vulnerability, physical weakness, and material poverty were used.

- i. **Isolation:** This can be in term of bad roads or lack of transportation mode, distant market, unavailability of market for farm yields, and lack of midwife near village. Isolation brings about the disconnectivity with other regions or individual. Remoteness of an area can make an area or household to be less accessible to some benefits.
- ii. **Powerlessness:** It is characterized with unemployment, lack of means to income, expensive basic needs and exploitation. Rural areas are weak in negotiating with people in power (government) especially in aspect of sharing national wealth. They always accept whatever is offered to them by government because they are powerless.
- iii. **Vulnerability:** He described rural areas as being vulnerable to the animal and plant disease, loss of assets and crops, unpredictable weather, loss of jobs and food insecurity. The household becomes poorer due to inability to deal with unforeseen circumstance such as crop failure or contingencies.
- iv. **Physical Weakness:** This involves illness, malnutrition, disability, unaffordability of medical care and medicine when sick. The illness or disability of a household head will contribute to the poverty of that household. This can lead to isolation from participation in the community.
- v. **Material Poverty:** It entails lack of capital, inability to establish business, lack of basic needs, and low agricultural yield.

These are the five problems experienced by poor men and women. They are inter-related, the occurrence of one leads to another. Unless poor people escape these dimensions, they will remain poor.

### Abraham Maslow's Theory of Motivation

Maslow's theory is a theory that explains human needs in hierarchical level of a pyramid. Maslow (1943) argued that every individual is motivated to acquire particular needs in which one need is more important than other. The basic needs which are for physical survival motivate human's behaviour.

The five stages (physiological needs, safety needs, belonging and love needs; esteem, and self-actualization) in Maslow's theory can be divided into deficiency needs and growth needs. The first four stages are always considered as deficiency needs and the fifth stage is called growth needs. The tendency to fulfil certain need becomes stronger in proportion to the period of being denied. For instance, the longer an individual is without food, the more hungry he/she is. Lower stages of deficiency needs must be satisfied before one can proceed to the next higher stage of growth needs. Once the deficiency needs is being met, the individual's habitual action will automatically be directed to the meeting of the next level (growth level). As far as this growth is satisfied, one can reach the top most level of self-actualization. Then, the aim of every individual is to move through all stages and reach self-actualization but the progress has been hindered due to inability to meet basic needs. Poverty causes an individual to remain stagnant in one level or fluctuate between hierarchical levels.

Summarily, some of the five dimensional frame of Robert Chamber 1983 especially powerlessness, physical weakness and material poverty are in line with measurement of multidimensional poverty since it denotes that the lack of transport mode causes isolation; lack of means of income and exploitation of rural areas has made the rural areas to be backward in term of inequality and development. Multidimensional

poverty is retarded from one level of Maslow's pyramid to another, and once someone achieves needs in any level, the other level automatically set-in.

Though, both theories above explained some aspects of poverty but Robert Chamber's Theory of Deprivation Trap is more appropriate to this study since it emphasizes many concepts related to both single and multidimensional poverty which are found essential to the study of poverty in rural area of Ayedaade Local Government Area, Osun State.

### **Methodology**

Multi-stage sampling technique technique was adopted. First, five rural political wards, namely: Gbongan Rural (Ward 7), Ode-Omu Rural (Ward 8 ), Obalufon (Ward 9), Anlugbua (Ward 10), and Araromi (Ward 11) based on 2015 Independent National Electoral Commission Directory in Osun State. Using 1991 population census as the base year and 2.6% growth rate (National Bureau of Statistics, 2016; World Bank, 2016). The estimated population and the estimated households in Ayedaade Local Government Area for year 2017 were 184,730 and 36,946 respectively. Second, the villages in the rural area were categorised based on household numbers (i.e. villages with fewer than 250 households, and villages with more than or equal to 250 households). Third, five villages were purposively selected based on categories of villages with the proportion of 4:1 from each ward, this resulted into 25 villages in all. Fourth, 368 households (76, 85, 73, 43, and 91, from Wards 7 to 11 respectively) were selected based on recommendation of Slovin's principle for 95% confidence level. Lastly, the houses were selected using systematic sampling procedure (in each village, the first house was selected based on balloting and subsequent houses were selected at regular interval got by dividing the sample size with the number of houses). In each selected house, the questionnaire was administered to the household head.

Multi-dimensional poverty index was determined on the standard set by UNDP that any household deprives in 33.3% of aspects of well-being cutting across the health, education and standard of living was poor. International poverty line which describes an individual (household head) whose income below 1.90 Dollar as being poor was also used. While subjective poverty was based on either household heads see themselves as being poor or not. ANOVA through application of SPSS version 23 was used to establish the variation in dimensions of poverty in the study area. ArcGIS 10.4.1 was used to show map for dimension of poverty across the rural wards in the study area.

### **Result and Discussion**

This section analyzes dimensions of poverty in the study area based on three indices. These are Subjective Index (measured based on personal assessment), International Poverty Line (measured by using income) and Multi-dimension Poverty Index (measured by using UNDP recommendation). Table 1 showed the aggregate results of the three dimensions of poverty considered in the study area, and the discussion is based on individual village and ward levels.

#### **Subjective Poverty Based on Self-Assessment**

Subjective poverty measure was based on self- assessment opinion of a household head. The self-assessment of households by household heads in all villages whether they are poor or rich are presented in Table 1 (Column A). On this measure, four villages out of twenty-five villages had 100% of their respondents in poverty (these villages were Lagbaka, Onilu, Monlewo, and Aba Alaafia). Apart from these four villages, another fifteen villages had at least 50% of their population being poor. These were: Atoba (83.3%), Fowosere (80%), Oluwada (75%), Alaguntan (75%), Budale (70%), Olokuta (66.7%), Orile-Owu (66.7%), Wakajaye (58.5%), Motako (57.1%), Araromi - owu (56%) Mokore I (54.5%), Farm settlement (54.5%), and Ajegunle, Abimbola, and Agbumgbu have 50% each. Only six villages had proportion of their population in poverty below 50% (Tonkere with 46%, Ayetoro 45%, Ejemu 33.3%, Ogi I and Mojapa 25% each), and Akiriboto-Oko had none of her population in poverty as all respondents believed that they were

not poor, though this village was highly poor based on multi-dimensional poverty index, and International Poverty line. Nineteen villages had at least half of their population in poverty based on subjective view, and six villages had less than half of their population in poverty.

### **Income Poverty Based on International Poverty Line**

Table 1 (Column B) presented frequency and percentage of people in each village and ward that were below the International Poverty Line of 1.90 dollars (equivalent to 690 Naira at prevailing exchange rate of a dollar to 363 Naira as at 29th December 2017). Based on this, thirteen villages out of twenty-five villages sampled had at least 50 percent of their population below poverty line. Among these thirteen villages, Akiriboto – Oko was the only village that had 100 percent of her respondents in poverty making her the poorest village in the study area. Abimbola and Atoba were next to her with 83.3 percent each, followed by Budale, Agbumgbu, Lagbaka, Fowosere, Wakajaye with 70, 66.7, 60, 60, 58.5 percent respectively, while Aba Alaafia, Monlewo, Olokuta, Tonkere, Ayetoro have 50% percent each. Other twelve villages were below 50 percent as it has been shown in Table 4.5. The village with the lowest percentage was Farm Settlement (22.7%), and followed by Mojapa, and Alaguntan with 25% each, and others were Ajagunle (27%), Ejemu (33.3%), Araromi-Owu (36%), Mokore I (36.4%), Ogi 1 (37.5%), Onilu (40%), Oluwada (41.7%), Motako (42.9%) and Orile-Owu (49%). From the above analysis, it was obvious that number of villages with high population in poverty were more than the number of villages with low population in poverty with ratio of (13:12), this indicated that the income of the respondents in many villages were below 1.90 dollar per day.

### **Multi –Dimensional Poverty in the Study Area**

Twelve variables cutting across education, health and standard of living (which includes - education attainment, nutrition, health, sanitation, clean drinking water, toilet, electricity, modern cooking fuel, employment, communication, mobility, and housing) were used in this study. If any household was deficient in a third or more (33.3% or more) of these twelve weighted indicators, the household was referred to as being poor.

Table 1 (Column C) showed the frequency and percentage of the household heads that were poor based on multi – dimensional poverty index. Based on this, seven villages (Lagbaka, Ejemu, Olokuta, Onilu, Alaguntan, Abimbola, and Aba Alaafia) had 100% of their sampled household heads poor. Villages that had percentage close to 100% were Budale (90%) Agbumgbu (83%), Fowosere (80%), Mojapa (75%) and Ayetoro (70%). Other villages that had half their population in multi-dimensional poverty included Atoba (66.7%), Araromi-Owu (64%), Mokore 1 (63.6%), Wakajaye (62.3%), Ajegunle (61%), Farm Settlement (59.1%), Akiriboto-Oko (50%), Monlewo (50%). Apart from the aforementioned villages, the remaining villages had less than half of their population in multi-dimensional poverty. These villages were Motako (42.9%), Tonkere (41.7%), Oluwada (41.7%), Orile – Owu (33%), and Ogi 1 that had the least proportion of 12.5%. From this, twenty villages had at least half of their population in multi-dimensional poverty, while only five villages had less than half their population in multi-dimensional poverty.

From Table 1, it could be seen that there was difference in the proportion of the respondents in poverty based on different dimensions - subjective assessment of poverty (57.8%); International poverty line (47%), and multi- dimensional poverty index with (58%). But there was more closeness between single dimension based on subjective view (57.8%), and multi – dimensional poverty index (58%) than single dimension based on International Poverty Line (47%). Based on ANOVA statistical test at observed F-value of 4.497 which was greater than tabulated F-value of  $F_{0.05, 2, 72} = 3.0718$ , there was significant difference in being poor based on both single dimension-International Poverty Line, and single-dimension subjective assessment and multi-dimensional poverty (Table 2).

**Table 1**

*Dimensions of Poverty Level in Villages of the Study Area*

WARD (Villages under each ward)	Subjective Poverty (Personal Assessment) (Column A)		International Poverty Line (income) (Column B)		Multi -Dimensional Poverty line (Multi Variables) (Column C)	
	Not Poor	Poor	Not Poor	Poor	Not Poor	Poor
<b>WARD 7:</b>	<b>39.5%</b>	<b>60.5%</b>	<b>45%</b>	<b>55%</b>	<b>38.2%</b>	<b>61.8%</b>
(Mojapa)	75%	25%	75%	25%	25%	75%
(Oluwada)	25%	75%	58.3%	41.7%	58.3%	41.7%
(Wakajaye)	41.5%	58.5%	41.5%	58.5%	37.7%	62.3%
(AkiribotoOko)	100%	0%	0%	100%	50%	50%
(Lagbaka II)	0%	100%	40%	60%	0%	100%
<b>WARD 8:</b>	<b>56.5%</b>	<b>43.5%</b>	<b>51%</b>	<b>49%</b>	<b>49.4%</b>	<b>50.6%</b>
(Agbumgbu)	50%	50%	33.3%	66.7%	17%	83%
(Ogi I)	75%	25%	62.5%	37.5%	87.5%	12.5%
(Ayetoro)	55%	45%	50%	50%	30%	70%
(Tonkere)	54%	46%	50%	50%	58.3%	41.7%
(Ejemu)	66.7%	33.3%	66.7%	33.3%	0%	100%
<b>WARD 9:</b>	<b>28.8%</b>	<b>71.2%</b>	<b>48%</b>	<b>52%</b>	<b>50.7%</b>	<b>49.3%</b>
(Olokuta and others)	33.3%	66.7%	50%	50%	0%	100%
(Fowosere and others)	20%	80%	40%	60%	20%	80%
(Atoba)	16.7%	83.3%	16.7%	83.3%	33.3%	66.7%
(Onilu and others)	0%	100%	60%	40%	0%	100%
(Orile -Owu- Obalufon)	33.3%	66.7%	51%	49%	67%	33%
<b>WARD 10:</b>	<b>39.5%</b>	<b>60.5%</b>	<b>63%</b>	<b>37%</b>	<b>35%</b>	<b>65%</b>
(Alaguntan)	25%	75%	75%	25%	0%	100%
(Motako)	42.9%	57.1%	57.1%	42.9%	57.1%	42.9%
(Monlewo and others)	0%	100%	50%	50%	50%	50%
(Abimbola)	50%	50%	16.7%	83.3%	0%	100%
(Farm Settlement)	45.5%	54.5%	77.3%	22.7%	40.9%	59.1%
<b>WARD 11:</b>	<b>42.9%</b>	<b>57.1%</b>	<b>62%</b>	<b>38%</b>	<b>33%</b>	<b>67%</b>
(Budale)	30%	70%	30%	70%	10%	90%
(AraromiOwu)	44%	56%	64%	36%	36%	64%
(Aba Alaafia)	0%	100%	50%	50%	0%	100%
(Ajegunle)	50%	50%	72.2%	27.8%	39%	61%
(Mokore I)	45.5%	54.5%	63.6%	36.4%	36.4%	63.6%
<b>Total in all Villages</b>	<b>42.1%</b>	<b>57.9%</b>	<b>53%</b>	<b>47%</b>	<b>41.6%</b>	<b>58.4%</b>

Source: Authors' Fieldwork

**Table 2**

*ANOVA Showing Variation in Dimensions of Poverty*

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	4987.915	2	2493.958	4.497	0.014
Within Groups	39927.431	72	554.548		
Total	44915.347	74			

**Source: Authors' Fieldwork**

Table 3 (Column A) presented poverty based on category of villages. The category of villages with less than 250 household heads had 59.7% of their respondents in poverty while category of villages with greater than equal to 250 household heads had 56.7 % when the poverty was considered based on personal assessment. Based on International Poverty Line, Table 3 ( Column B) depicted that smaller villages with household heads of less than 250 had 48.6% of their population in poverty, while large villages with greater than equal to 250 household heads had 59.5% of their respondents below the International Poverty Line. Table 3 (Column C) showed multi-dimensional poverty level in each category, 69% of the respondents in the villages with less than 250 household heads were poor, whereas 51.3% in the category of more than equal to 250 household heads were poor. This indicated that multi-dimensional poverty and subjective poverty were more in villages with smaller population which might be due to negligence of small villages by government in providing public amenities.

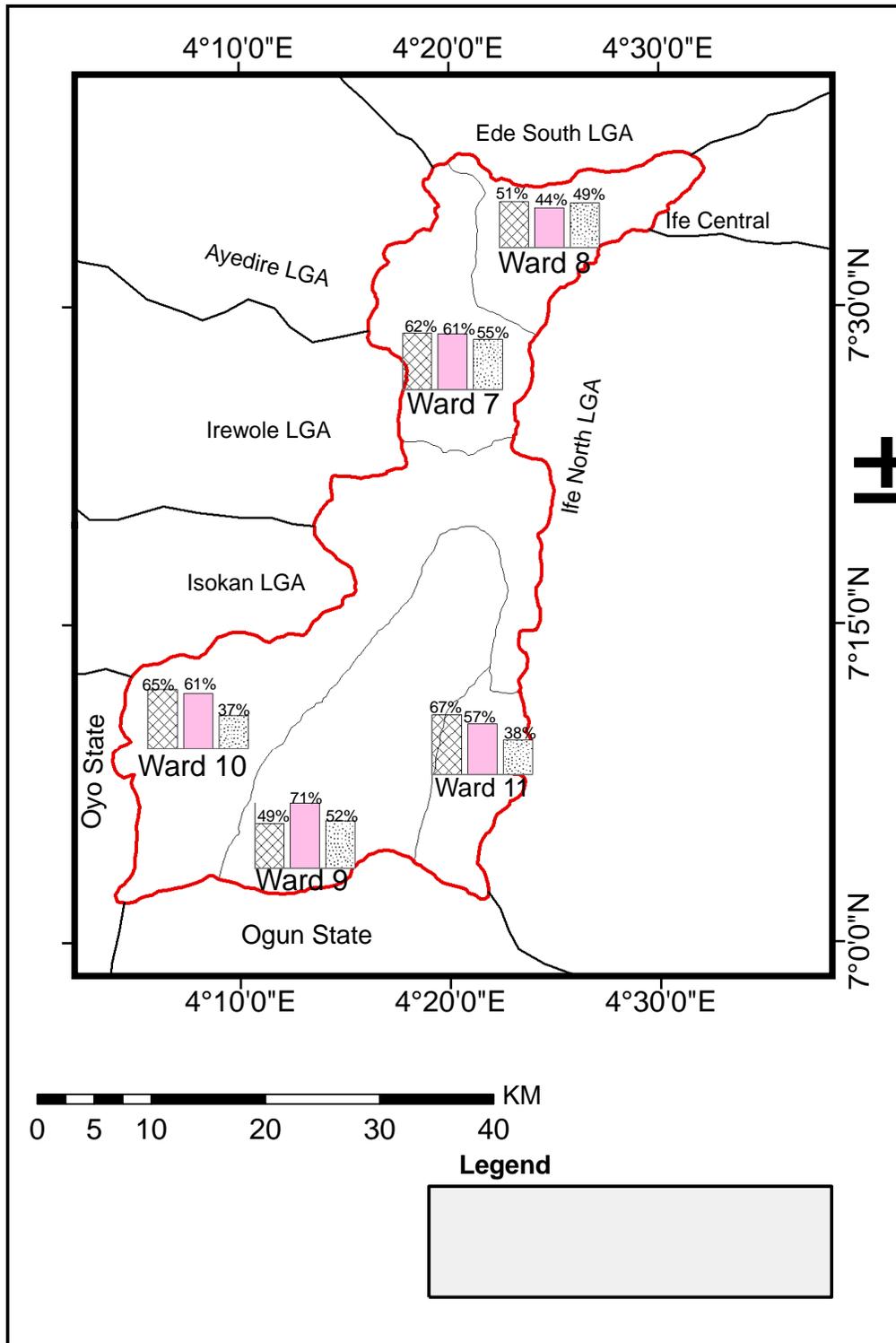
However, in comparing all three dimensions of poverty in each ward, Figure 2 revealed that multi-dimensional poverty was the highest with 62%, and followed by subjective poverty with 61%, and income poverty with 55% of the respondents in (Ward 7). 51% of the respondents were multi-dimensionally poor, while 49% earned below International Poverty Line; 44% were poor based on subjective views of the respondents in (Ward 8). 71% of the respondents were in subjective poverty which was the highest not only in Ward 9 but also when it was compared with other dimensions and wards. Ward 9 also had 52% poverty level in term of International Poverty Line, and 49% of multi-dimensional poverty. In Ward 10, the level of multi-dimensional poverty was 65%, and 61% of subjective poverty, whereas the lowest in Ward 10 was poverty based on International Poverty Line of 37%. Figure 2 also depicted that there was 67% of multi-dimensional poverty level, 57% of subjective poverty, and 38% of poverty based on International Poverty Line in Ward 11. Finally, Figure 2 presented that subjective poverty was highest (71%) in Ward 9, and lowest (44%) in Ward 8. Multi-dimensional poverty was highest (67%) in Ward 11, and lowest (49%) in Ward 9. And based on International poverty line, Ward 7 had the highest percentage (55%), and Ward 10 had the lowest percentage (37%). It could be deduced that there was variation in each dimensions of poverty across the wards, but multi-dimensional poverty and subjective poverty were closer than income poverty in more wards (Ward 7, Ward 10, and Ward 11). It showed that people consideration of their poverty status was beyond only income but other indicators of well-being like education, health and standard of living.

**Table 4.6**

*Table Showing Poverty Based on Categories of Villages*

CATEGORY	Poverty Based on Subjective View (Column A)			Poverty Based on International Poverty Line (Column B)			Multi-dimensional Poverty (Column C)			
	Poor	Not Poor	Total	Poor	Not Poor	Total	Poor	Not Poor	Total	
Small Villages (Village < 250 households)	Frequency	86	58	144	70	74	144	100	44	144
	Percent (%)	59.7%	40.3%	100%	48.6%	51.4%	100%	69%	31%	100%
Large Villages (Village ≥ 250 households)	Frequency	127	97	224	103	121	224	115	109	224
	Percent (%)	56.7%	43.3%	100%	46%	54%	100%	51.3%	48.7%	100%
For all Villages	Frequency	213	155	368	173	195	368	215	153	368
	Percent (%)	57.9%	42.1%	100%	47%	53%	100%	58.4%	41.6%	100%

Source: Authors' Fieldwork



**Fig. 4.3:** Dimensions of Poverty in Rural Wards of Ayedaade Local Government

Source: Authors' Fieldwork

Though, the 33.3% level of deprivation was set as percentage to determine those households that were multi-dimensionally poor, households with a deprivation score of 20 percent or higher but less than 33.3 percent were near to be multi-dimensionally poor, and households with deprivation score of 50 percent or higher were severely poor as it is stipulated by UNDP, (2016) and shown in Table 4. It revealed that if respondents in 'near to poverty' missed any additional variable, the level of multi-dimensional poverty would increase by 30.2% in the study area. But if respondents in 'not severely poor' had access to any additional variable, the additional 39.1% would escape multi-dimensional poverty (Table 4).

**Table 4***Level of Multi-dimensional Poverty of respondents*

NAME OF WARDS	Far from Poverty(< 20% deficiency)	Near to Poverty(20% to 33.2% deficiency)	Not Severely Poor(33.3% to 49.9% deficiency)	Severely Poor (50% and above deficiency)	TOTAL
Ward 7	8(10.5%)	19(25%)	36(47.4%)	13(17.1%)	76(100%)
Ward 8	13(15.3%)	27((31.8%)	32(37.7%)	13(15.3%)	85(100%)
Ward 9	11(15%)	24(32.9%)	23(31.5%)	15(20.6%)	73(100%)
Ward 10	1(2.3%)	17(39.5%)	12(27.9%)	13(30.2%)	43(100%)
Ward 11	3(3.3%)	24(26.4%)	41(45.1%)	23(25.3%)	91(100%)
TOTAL	36(9.8%)	111(30.2%)	144(39.1%)	77(20.9%)	368(100%)

Source: Authors' Fieldwork

**Conclusion**

This study revealed there was variation among single dimensions of poverty (both income poverty and subjective poverty), and multidimensional poverty as there was difference in the proportion of the respondents in poverty based on different dimensions - subjective assessment of poverty (57.8%); International poverty line (47%), and multi- dimensional poverty index with (58%). But there was more closeness between single dimension based on subjective view (57.8%), and multi – dimensional poverty index (58%) than single dimension based on International Poverty Line (47%). This finding revealed that subjective poverty was highest (71%) in Ward 9, and lowest (44%) in Ward 8. Multi-dimensional poverty was highest (67%) in Ward 11, and lowest (49%) in Ward 9. And based on International poverty line, Ward 7 had the highest percentage (55%), and Ward 10 had the lowest percentage (37%).

It could be deduced that there was variation in each dimensions of poverty across the wards, but multi-dimensional poverty and subjective poverty were closer than income poverty in many wards (Ward 7, Ward 10, and Ward 11). Nineteen villages had at least half of their population in poverty based on subjective view; and thirteen villages also had more than half of their population in income poverty; and twenty villages had at least half of their population in multi-dimensional poverty. It showed that people consideration of their poverty status was beyond only income but other indicators of well-being like education, health and standard of living. This study indicated that multi-dimensional poverty and subjective were more in villages with smaller population which might be due to negligence of small villages by government in providing public amenities.

It is concluded that there was significant difference in being poor based on both single dimensions (international poverty line, and subjective view) and multi-dimensional poverty. This showed it was possible for either international poverty line or multi-dimensional poverty index based on international standard to define someone who does not see himself/herself as being poor as poor. This shows that using only one measure cannot give the whole and reliable poverty status of the rural dwellers. It is thus essential to apply a more robust indices which should incorporate all dimensions of poverty rather than reliance on single index in poverty study. This is corroborated with the findings of Ravallion (2016) that claimed that

using only relative poverty measure was implausible; and National Bureau of Statistics (2010) argued that poverty was more than measurement of household's expenditure and had many dimensions.

### Recommendation

This study recommends that both single and multidimensional measures should be adopted in studying situation of poverty in any region so that various dimensions of poverty can be determined and poverty can be alleviated in all its dimension.

### Implications

Both global organization and various levels of governments have made different policies which majorly focus on monetary income. This has reflected in programmes, for instance Npower programme in Nigeria, government applied to alleviate poverty in their regions. Based on this study, government should involve the poor themselves in planning of poverty alleviation programme as the poor have their subjective views of what poverty is to them. More than monetary means, other methods such as provision of infrastructure should be applied especially in rural areas.

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