



Assessment of Multidimensional Poverty Among Farming Households in Southern Taraba, Taraba State, Nigeria

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ABSTRACT

This study assessed multidimensional poverty and among farming households in Southern Taraba, Taraba State, Nigeria. A multistage sampling procedure was used to select 180 farming households, and data were collected using structured questionnaires. Data were analysed using descriptive statistics, deprivation scores, the Multidimensional Poverty Index (MPI), and a multiple regression model. The results showed that 54% of respondents were male, with a mean age of 40 years and an average household size of six members. About 93% had formal education, the average farm size was 3 hectares, and farming was the primary occupation for 45% of respondents. Furthermore, 68% were married, 54% lacked access to credit, 62% were not members of farmers' associations, and 58% engaged in business as an additional source of income. The deprivation analysis revealed that the standard of living and health dimensions contributed most to multidimensional poverty. The Global MPI indicated that Wukari recorded the highest population share of poor households (40%) among the selected local government areas, while Shatima had the highest share (7.2%) among the sampled communities. The study concluded that multidimensional poverty is widespread among farming households in Southern Taraba and poses a challenge to improved livelihoods, peace, and stability. It recommends promoting farmers' participation in cooperative societies and implementing gender-responsive agricultural and poverty reduction programs.

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INTRODUCTION

The distribution of poverty in Nigeria has shown that poverty is very much pronounced in rural areas where bulk of the nation's population reside (Udoh., 2025). The country's rural areas is home to about 53% of the nation's population (United State Agency For International Development, USAID, 2017). Poverty is one of the factors that threatens growth and development, and its reduction is important to speed up economic growth (Beatriz, 2016). Poverty is characterized by lack of income and productive resources, lack of purchasing power, exposure to risk, malnutrition, high mortality rate, low life expectancy, and insufficient access to social and economic services (Thulo et al., 2025). In Nigeria, poverty is not a new phenomenon. However, in the last two decades, incidence of poverty has been on the increase despite its physical and human resources. The country has an estimated population of over 190 million people (51 percent male, 49 percent female) with an estimated growth rate of 2.43 percent per annum and a high dependency ratio of 88 percent (NBS, 2017). Currently, over 90 million Nigerians live in extreme income poverty, which is the highest globally (World Poverty Clock, 2018). In fact, according to the organization, about 14 persons slide into such poverty every minute in the country. In terms of multidimensional poverty, Nigeria is still home to about 97 million poor people which is more than any other Sub-Saharan African country (Oxford Poverty and Human Development Initiative, 2018).

Poverty is a multidimensional and complex phenomenon (Khan, Saboor, Rizwan & Ahmad, 2020). Chen *et al.*, (2019) perceived poverty as a set of interrelated forces which are limited resources, need, pattern of deprivation, lack of

entitlement and basic security, exclusion, dependency, social class, inequality, economic position and unacceptable hardship. To Gwariro *et al.*, (2017), poverty is powerlessness, insecurity, low self-confidence, malnutrition, inadequate health facilities and low social relations. Also, Michael *et al.*, (2019) sees poverty as deprivation of, or insufficient access to resources is low to certain acceptable standard in the society. This study follows the Oxford Poverty and Human Development Initiative (OPHI) broader perspective and multiple deprivations in health, education and living standards. In recent past, the concepts of poverty have expanded beyond economic, material notions of income and consumption to encompass experiential and psychological dimensions, such as access to services, feelings of social exclusion and lack of political rights (Oyekale, 2019). Poverty measurements based solely on income can demonstrate the capacity of people to consume through the market; but it does not capture their access to public goods like education, healthcare, and infrastructure among others (Le, 2015).

One of the most common features of rural existence in Nigeria is poverty, and its prevalence has been very high (Dauda, 2017). Poverty in rural Nigeria is multifaceted and has geometrically increased in the country in the last three decades (Alaye, 2024). The scale of poverty and its complexity in Nigeria differs with location (Adeleke *et al.*, 2023). In a bid to reduce poverty and promote rural development, successive governments in Nigeria have over the years, been launching and implementing different agricultural programmes and policies at every tier to stamp out food insecurity and poverty. Some of the programmes and

policies are National Accelerated Food Production Programme (NAFPP), National Poverty Eradication Programme (NAPEP), Agricultural Transformation Agenda (ATA), Subsidy Reinvestment Programme (SURE-P) and National Social Investment Programme (N-SIP), National Fadama Development Project, Community Social Development Projects, Seven Point Agenda, Vision 20:2020 and Millennium Development Goals (MDG) (Onwuemele, 2015). An observation is the lifestyle and set up of many community dwellers both in the rural, peri-urban and urban areas is a testimony that the poverty alleviation programmes in Nigeria have not achieved much (Ajiboye *et al.*, 2020). Given this context, this aims to describe the socio-economic characteristics of the respondents in the study area, assess the average deprivation score by dimensions and indicators of poverty in the study area, determine the Global MPI (Multidimensional Poverty Index) by selected LGA's and selected Communities in Southern Taraba, Taraba State, Nigeria.

MATERIALS AND METHODS

Study area and Sampling Techniques

The study was conducted in Southern Taraba, Taraba State, Nigeria, comprising five Local Government Areas (LGAs): Wukari, Takum, Donga, Ussa and Ibbi. The area covers

approximately 14,099 km² and had a population of 687,077 in 2006, projected to about 1.23 million in 2023. It shares boundaries with several LGAs in Taraba State, Nasarawa and Plateau States to the northwest, Benue State to the southwest, and the Republic of Cameroon to the southeast. Southern Taraba experiences a tropical wet-and-dry climate, with an average annual rainfall of about 1,800 mm. Agriculture is the major economic activity, with most inhabitants engaged in small-scale production of food and cash crops, including yam, maize, sorghum, cassava, rice and sesame. Other livelihood activities include freshwater fishing, livestock and poultry production, forestry, trading and civil service. The major ethnic group is the Jukun, alongside Tiv, Igbo, Yoruba and Hausa communities. A multi-stage sampling technique was used for obtaining relevant data for this research work. The first stage sampling involved the random selection of three (3) local government areas, out of the five (5) local government areas that made up Southern Taraba. These LGAs include Wukari, Ibi and Takum. Second stage sampling was the random selection of three (3) wards from each of the local government areas which are: Puje, Hospital, Rafin kada, Rimi uku 1, Rimi uku2, Nwonyo 1, Dutse, Rogo and Manya. In the last stage, out of the eighteen (18) villages selected, one hundred and eighty (180) respondents were randomly selected in the study area using Taro Yamane formula.

Table 1: Sample Frame of the Study Area

LGA	Wards	Communities	Population	Sample size
Wukari	Puje	Shatima	600	13
		Ando moto	500	11
		Mamara	633	14
	Hospital	Dakka	567	12
		Ason	533	12
	Rafin kada	Rafin kada	467	10
Ibi	Rimi uku 1	Sarkin Tasha	400	9
		Sarkin Aska	333	7
		Bakyu	367	8
	Rimi uku 2	Gindin Waya	333	7
		Sarkin budu	317	7
		Moti	300	7
Takum	Dutse	Mbiya	533	12
		Muji	500	11
		Kofar Liman	500	11
	Rogo	Wadata	467	10
		Tati	433	10
	Manya	Gangum 1	400	9
Total			8,183	180

Analytical Techniques

A combination of analytical tools was employed for this study. Descriptive statistics such as frequencies, percentage, mean and standard deviation were used to achieve socio-economic characteristics of the respondents. Deprivation score was used to achieve the average deprivation score by dimensions and indicators, and the global multidimensional poverty index was used to achieve multidimensional poverty by selected Local Government Area and selected Communities.

Global Multidimensional Poverty Index (GMPI)

The global MPI contain information from 3 dimension and 10 indicators, which are grouped into three equally weighted dimensions: education, health and living standards. Each dimension has a weight of 1/3. In the global MPI, a person is identified as multidimensional poor or MPI poor if they are

deprived in at least one-third of the weighted MPI indicators. In other words, a person is MPI poor if the person's weighted deprivation score is equal to or higher than the poverty cut-off of 33.33% The global MPI measure identifies those who are close to the one-third threshold, that is, individuals are vulnerable to multidimensional poverty if they are deprived in 20% to 33.32% of weighted indicators. The measure also specifies a higher poverty cut-off to identify those in severe poverty, meaning those deprived in 50% or more of the dimensions.

Following Alkire et al. (2021), the Multidimensional Poverty Index is mathematically expressed as:

$$MPI = H \times A \quad (1)$$

Headcount (H)

The headcount is the proportion of people who are poor; the multidimensional head count ratio (H) is expressed as:

$$H = \frac{q}{n}$$

with q as the number of multi-dimensionally poor, and n as the total population.

(2)

Intensity (or Breadth) of Poverty (A)

It is the average deprivation score for the multidimensional poor and can be expressed as:

$$A = \frac{\sum_{i=1}^n c_i(k)}{q} \quad (3)$$

where: $c_i(k)$ is the censored deprivation score of individuals, i , and q is multidimensional poor.

Table 2: Global MPI: Dimensions, Indicators, Deprivation Cut-Offs and Weights

Dimensions of poverty	Indicators	Deprived if	Indicator Weight
Education	Years of schooling	No eligible household member has completed six years of schooling	1/6
	School attendance	Any school-aged child is not attending school up to the age at which he/she would complete class 6.	1/6
Health	Nutrition	Any person under 70 years of age for whom there is nutritional information is undernourished.	1/6
	Child mortality	A child under 18 years has died in the household in the five years period the survey.	1/6
	Cooking fuel	A household cooks using solid fuel, such as dung, agricultural crops, shrubs, wood, charcoal or coal.	1/18
	Sanitation	The household has unimproved or no sanitation facility or it is improved but shared with other households.	1/18
Living standards	Drinking water	The household source of drinking water is not safe, or safe drinking water is a 30-minute walk or longer walk from home, roundtrip.	1/18
	Electricity	The household has no electricity.	1/18
	Housing	The household has inadequate housing materials in any of the three components: floor, roof or walls.	1/18
	Assets	The household does not own more than one of these assets: radio, TV, telephone, computer, animal cart, bicycle, motorbike or refrigerator and does not own a car or truck.	1/18

RESULTS AND DISCUSSION**Socio-Economic Characteristics of Farmers in Southern Taraba**

The findings indicate that the respondents were predominantly young and economically active, with 86% aged 55 years or below and a mean age of 40 years. This suggests a relatively youthful farming population that may be more receptive to improved agricultural technologies and innovative practices. Male respondents (54%) slightly outnumbered females (46%), indicating greater male participation in farming in the study area. The respondents had an average household size of six members, with 56% having five or fewer members, suggesting the availability of family labor for farm activities. The study also revealed a high level of educational attainment, as 93% of respondents had some formal education. This could enhance their ability to acquire information, adopt improved technologies and improve household welfare. Most respondents (72%) operated three hectares or less, indicating that farming was predominantly small-scale.

The finding suggests that limited farm size may constrain farm income and influence poverty status. Furthermore, 68%

of respondents were married, which may increase household financial responsibilities and reduce resources available per household member, potentially increasing vulnerability to poverty. Although farming was an important livelihood, only 45% identified farming as their major occupation, while others were mainly engaged in civil service, trading and artisan activities. This indicates the importance of livelihood diversification among the respondents. However, 54% lacked access to credit, potentially limiting their capacity to invest in productive farm activities due to constraints such as inadequate collateral.

The study further showed that 62% of respondents did not belong to any group or association, suggesting limited access to the benefits associated with group membership, such as credit, information, collective marketing and social support. Finally, 58% had business as an additional source of income, while others depended on civil service, artisan activities and assistance from family and friends. Overall, the findings suggest that education, livelihood diversification, access to credit and group membership are important socioeconomic factors that may influence the poverty status and welfare of farming households in the study area.

Table 3: Socio-Economic Characteristics of Farmers in Southern Taraba

Variable	Category	Frequency	Percentage (%)
Age (years)	16-35	81	45.0
	36-55	74	41.1
	56 and above	25	13.9
Mean = 40.0 (SD = 12.4)			
Sex	Male	97	53.9
	Female	83	46.1
Household size	Mean = 5.6 (SD = 2.8)	180	100.0
Educational Level	No formal education	13	7.2

Variable	Category	Frequency	Percentage (%)
Farm size	Primary education	19	10.6
	Secondary education	80	44.4
	Tertiary education	68	37.8
	Mean = 3.0 (SD = 1.5)	180	100.0
Marital status	Single	27	15.0
	Married	122	67.8
	Divorced	20	11.1
	Widow/Widower	11	6.1
Major Occupation	Farming	81	45.0
	Civil servant	51	28.3
	Trading	39	21.7
	Artisan	9	5.0
Access to credit	Yes	83	46.1
	No	97	53.9
Member of group	Yes	69	38.3
	No	111	61.7
Other source of income	None	12	6.7
	Civil servant	1	0.6
	Business	104	57.8
	Artisan	15	8.3
	Gift from friends and family	48	26.7

Source: Field Survey, 2025

Average Deprivation Score by Dimension and Indicator

The result of average deprivation score by dimension and indicator in table 6 showed that standard of living and health dimension contributed the most to multidimensional poverty in the study area while education dimension contributed the least. This implies that the respondents in the study area are deprived most in housing, cooking fuel, sanitation and electricity from the living standard dimension while nutrition

and child mortality from health dimension. This agrees with the findings of Tigre (2018) who found that Living standards dimension contributed the most to multidimensional poverty in the study area. The result also showed an MPI of 0.26, which implies that Multidimensional poverty index considers 26% from the number of poor people and the intensity of their deprivation.

Table 4: Average Deprivation Score by Dimension and Indicator

	MPI	Dimension	ADS	Indicator	ADS
Multidimensional Poverty Index	0.26	Education	0.15	Year of schooling	0.15
				School Attendance	0.15
				Nutrition	0.46
		Health	0.37	Child mortality	0.27
				Cooking fuel	0.61
				Sanitation	0.57
		Standard of Living	0.51	Drinking water	0.4
				Electricity	0.45
				Housing	0.73
				Asset	0.27

Source: Field Survey, 2025 Average Deprivation Score

Global Multidimensional Poverty Index (LGA)

The result of the Global Multidimensional Poverty Index (G-MPI) by selected local government areas as showed in table 8 revealed that Wukari, Ibi and Takum have MPI of 29%, 24% and 24% respectively. This implies that 65%, 58% and 59% of households in Wukari, Ibi and Takum respectively are multidimensional poor with poor households on average deprived in 45%, 42% and 41% of indicators. The result also

showed percentage of non-poor household in Wukari, Ibi and Takum to be 35%, 42% and 41% respectively with highest percentage population share of poor households Wukari (40%), followed by Takum (35%) and Ibi (25%). The result also revealed that Southern Taraba has MPI of 0.26. This implies that 61% of households in Southern Taraba are multidimensional poor with poor households on average deprived in 43% of indicators.

Table 5: Global Multidimensional Poverty Index (LGA)

LGAs	Non-poor	MPI	Headcount	Intensity	Vulnerable	Severe poverty	Population Share
S/Taraba	39%	0.26	61%	43%	21.2%	15.5%	100%
Wukari	34.8%	0.29	65.2%	45%	16.7%	19%	40%
Ibi	42%	0.24	58%	42%	19.9%	11.2%	25%

LGAs	Non-poor	MPI	Headcount	Intensity	Vulnerable	Severe poverty	Population Share
Takum	41%	0.24	59%	41%	27%	14.4%	35%

Source: Field Survey, 2025 Multidimensional Poverty Index

Global Multidimensional Poverty Index (Communities)

The result of the Global Multidimensional Poverty Index (G-MPI) by selected communities as showed in table 9 revealed how MPI varies across communities. The result showed that Shatima community has the highest headcount (85%) and MPI of 0.36, which implies that 85% of households in Shatima community are multidimensional poor with poor

household on average deprived in 42% of indicators and a population share of 7.2%. The result also revealed that Mbiya has the lowest headcount (25%) and MPI of 0.83, which means 25% of households in Mbiya community are multidimensional poor with poor households on average deprived in 33% of indicators and a population share of 6.7%.

Table 6: Global Multidimensional Poverty Index (Villages)

Villages	Non-poor	MPI	Headcount	Intensity	Vulnerable	Severe poverty	Population share
Shatima	15%	0.36	85%	42%	7.5%	15.5%	7.2%
Ando moto	45%	0.22	55%	41%	18%	9.2%	6.1%
Mamara	36%	0.23	64%	41%	7.2%	14.2%	7.8%
Dakka	42%	0.27	58%	39%	42%	8.3%	6.7%
Ason	58%	0.18	42%	42%	24.9%	8.4%	6.7%
Rafin kada	60%	0.18	40%	46%	20%	10%	5.6%
Sarkin Tasha	56%	0.16	44%	36%	44.8%	0%	5%
Sarkin Aska	71%	0.10	29%	33%	14.2%	0%	3.9%
Bakyu	50%	0.21	50%	42%	25%	0%	4.4%
Gindin Waya	71%	0.12	29%	42%	42.6%	14.5%	3.9%
Sarki budu	43%	0.29	57%	50%	28.7%	28.5%	3.9%
Moti	43%	0.21	57%	36%	28.7%	0%	3.9%
Mbiya	75%	0.83	25%	33%	58.3%	0%	6.7%
Muji	45%	0.20	55%	37%	27%	9.2%	6.1%
Kofar Liman	55%	0.17	45%	37%	27.5%	0%	6.1%
Wadata	40%	0.23	60%	39%	40%	10%	5.6%
Tati	20%	0.37	80%	46%	0%	30%	5.6%
Gangum 1	44%	0.24	56%	43%	22%	11.2%	5%

Source: Field Survey, 2025 Multidimensional Poverty Index.

CONCLUSION

This study evaluates the assessment of multidimensional poverty among farming households in Southern Taraba, Taraba State, Nigeria and found that multidimensional poverty is prevalent among farming households with higher percentage population share of poor households in Wukari local government and Shatima community. The result also showed that standard of living and health dimension contributed the most to multidimensional poverty in the study area. This study therefore recommends promoting farmers' participation in cooperative societies and implementing gender-responsive agricultural and poverty reduction programs.

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