

Measurement of Poverty in Ekiti State, Nigeria

Olayinka Bobola Awopetu^{1*}, Bosede Olanike Awoyemi²
and Oluwole Oladipo Aiyegbusi³

^{1,2 & 3}Department of Economics, College of social and Management Sciences, Afe Babalola University Ado-Ekiti, Nigeria

Abstract

Poverty and material deprivation has remained for a long time a subject of major concern of many governmental and non-governmental organizations in both the developed and developing nations. This study examined the measurement of poverty in Ekiti State, Nigeria using the data generated from the primary sources. The study employed the composite methods of measuring poverty i.e Foster, Greer, and Thorbecke (FGT) and the Multidimensional poverty index (MPI) to assess the level of poverty in Ekiti State. The FGT measures the depth of poverty (Poverty gap), incidence of poverty (Headcount index), and the intensity or severity of poverty from the poverty line. The MPI assesses the simultaneous or “joint” deprivations poor people or households experience into a set of indicators. A total of 1,110 households from the sixteen local government areas were sampled. The result indicates that the level of poverty is high in Ekiti State. It also revealed that the likelihood of poverty increases with low level of education, unemployment, large family size, 58-65 yrs of age while it decreases with polygamous marriage, male gender, wage employment, higher levels of education, and a higher average monthly income. This study therefore recommends that government should try to create more employment opportunities for the people by encouraging local production of goods and services which will revive many industries. In addition, Nigeria government should design and implement policies like enlightening the households on the importance of modern family planning, and sensitizing them on the better choice of having smaller families. This will allow for a manageable number of household size and curtail the sporadic growth of the population thereby reducing poverty.

Keywords: Poverty, FGT, MPI, Households

1.0 Introduction

Poverty is a social phenomenon that has been the subject of discussion and research for several decades. It is a vital problem in the world and someone dies every minute as a result of poverty related reasons and this has a catastrophic effect on developing countries generally especially in Sub-Saharan Africa (Alex, 2019). Poverty presents itself in different forms depending on the nature and magnitude of human deprivation; an economic condition in which people lack adequate income to obtain a low level of food, health service, housing, clothing, and education generally recognized as necessary to ensure an adequate standard of living (Jane, Naomi, Emma & Merryn 2021). Poverty is also experienced when income falls below \$1.90 per day (World Bank, 2020). The perception of poverty over the years is changing with emerging perspectives in different contexts. Poverty remains a cogent topic of discourse in Africa (Beegle, & Christiaensen, 2019). It is specified as a risk factor in coping with health challenges (Teresa Pearson, 2015). Efforts are being intensified globally through interventions, reforms, and sustainable development goals to stop poverty and improve the standard of living of the people. It can be disputed that poverty varies from one subgroup to another such that it is seen in all aspects as antithetic to economic growth (Omoniye, 2018). The challenges that poverty creates in Nigeria have attracted the attention of successive

administrations. However, it persists as a paradox-poverty in the midst of plenty and rising during the periods of economic growth (Omoyibo, 2013).

Dauda (2017) opined that poverty pattern in Nigeria varies from many other countries' pattern, given that even with the economic growth documented, poverty keeps increasing with the West and North-East geopolitical zones taking the lead in the poverty indices. This situation is at variance with the experiences of developing countries in America, Europe, and Asia where economic growth leads to poverty reduction (Amra, Mirza & Sanel, 2022). This aligns with long-standing assumption that the relationship between poverty, economic growth and development is uneven. Despite several policies and programmes that were developed to eradicate poverty in Nigeria, poverty alleviation has remained an illusion in Nigeria. However, Umar, Obidke, and Ozor, (2017) suggested that the Structural Adjustment Programme (SAP) and post-SAP eras in Nigeria were drawn by active government intervention in the alleviation of poverty with insignificant improvement in standard of living.

Many reasons have been given for the awful performance of poverty alleviation initiatives in Nigeria which includes: poor funding and corruption, poor design and implementation, policy discrepancies and disruptions, (Orokpo, Francis, Ogwu, & Adamu 2018). In spite of the disputes surrounding its conceptualization, it is generally agreed that poverty has negative effects on individuals and communities; it produces social exclusion, fear, deprivations and distress (Dave, 2015). The poor people become voiceless and powerless as they live in low quality environments with low incomes and inadequate social amenities. Poverty may lead to loss of self-actualization, self-fulfilment, self-confidence, bad orientation and neglect of cultural values and heritage such that people most times are ashamed of their cultural and racial identity (Shah, Zhao, Mullainathan, & Shafir, 2018).

Despite the fact that Nigeria is one of the major oil producing countries endowed with natural resources, majority of the people are still poor. The Nigeria Bureau of Statistics in the year 2020 analyzed that 40% or 83 million Nigerians live in poverty. It is estimated that the population of the poor people will increase to 90 million, or 45% in 2022. Thus, the United Nations' sustainable development goal to end extreme poverty by 2030 is not likely to be achieved.

2.0 Literature Review

Poverty Situation in Nigeria and Ekiti State

According to (NBS 2020), four in ten Nigerians or over 82.9 million Nigerians live in poverty with a population of over 200 million people and was estimated to constantly increase in the next decades according to the national bureau of statistics (NBS) in its latest poverty and inequality report which defines poverty as an annual expenditure which falls below N137, 430 (N376.50 per day or roughly \$1 on N360/\$). This is lower than a 62.6% poverty reported by NBS in 2010 using per capita approach.

It was estimated by the World Bank that an additional one million people were pushed into poverty in Nigeria between June and November 2021, resulting in a total of about 8 million people being abandoned to poverty in 2021 and bringing our nation's poverty headcount to about 91 million. Reports have revealed that Nigeria is now having the largest number of people living in extreme poverty (less than \$1.90 per day) all over the world. About 46.4% of her estimated 195.6 million total populations now live in extreme poverty while over 70% of the population is classified as poor. (Solomon, 2018).

Ekiti State is a State in the South West region of the country. The State is seen as the poorest in the region (NBS 2019) and one of the poorest in Nigeria based on internally generated revenue, and the low allocation it gets from the federation account (Ekiti State Government, 2021). Ekiti State is an agrarian state. This implies that majority of the people live in rural areas where farming is their major activity and source of income. It is a relatively small, compact and ethnically homogeneous state which, has been the source of agricultural produce for the large cities in South western Nigeria for a long time. It is also one of the largest cocoa producers in Nigeria. In spite of this, the economic base of the state is very poor and there is an obvious inverse relationship between labour and output/income. Interventions, whether in terms of production activities or development assistance, normally change the socio-economic status of a community over time.

Theoretical and Empirical Review

The Vicious cycle of poverty which was propounded by Ragnar Nurkse (1953) is of the view that there is a continuous or circular constellation of forces tending to act and react upon one another in such a way as to keep a poor person, society, or country in a state of poverty. This theory explains that a poor man may not have enough to consume and as a result, may be weak leading to physical weakness, low capital, and eventually remains poor. The Vicious Circles of Poverty as stated by Jhingan (2003) is simply the circular relationships that tend to perpetuate the low level of development in developing countries. It implies a circular gathering of forces that tend to act and react upon one another in such a way as to keep a poor country or a person in a state of poverty. For instance, a poor person may not have enough to be well fed. Thus, his health may be weak because of malnourishment. Being weak physically and health-wise means that his productive capacity is low and this implies that he cannot generate enough resources to be well fed. Thus, this situation implies that he is poor because he is poor. What is certain in this analysis is the fact that an individual's poor health status is both a consequence and a cause of poverty.

The vicious circle operates both on the demand and supply sides. On the demand side, the low level of real income leads to a low level of demand, which leads to a low level of investment, deficiency of capital, low productivity, and low income. Also, on the supply side, a low level of real income means low saving which also leads to low investment to deficiency of capital. This theory has been criticized by numerous economists who do not consider vicious poverty as an obstacle in the path of economic development. According to Prof. Hirschman, the basic problem of economic development in these countries is the lack of decision making ability.

Empirical Literature Review

Dada and Fanowopo (2020) examined the impact of institutions on the relationship between economic growth and poverty reduction in Nigeria using autoregressive distributed lag and data from 1984 to 2018. However, the result of the study revealed that economic growth and institutions positively affect poverty reduction both in the short run and the long run. Thus, the study discovered that both economic growth and strong institutions are significant factors that can be used to reduce poverty in Nigeria.

In his findings, Danaan(2018) explores the theoretical nature of poverty in Nigeria. The study argues that poverty is complicated and multidimensional phenomena because the factors that affect it cut across the social, psychological, cultural and economic spheres of existence. The study suggests the knowledge of those factors that causes poverty and a good method of addressing it effectively and excellently. The paper argues that empowering people to develop resilience to manage and overcome it within the range of their resources and capabilities is a means of reducing poverty.

Idike *et al.* (2020) examined the effects of human capital development and poverty reduction on SDGs' achievement in Ebonyi State, Nigeria. Focus group discussions and in-depth interviews were employed in the study to gather data for thematic analysis. The findings revealed that poverty reduction schemes implemented by the Ebonyi State Government suffer from poor targeting, methodology and sustainability which hinder the achievement of SD in the State. Deinne and Ajayi (2021) used both probabilistic and non-probabilistic techniques to analyze household data while studying the dynamics of poverty, inequality and SD in Delta State, Nigeria. The results revealed a significant geographical variation in inequality and poverty levels, posing huge risks to SD in the State. Furthermore, Essien (2016) investigated the role of civil society organizations (CSOs) in social inclusion and SD. The findings however indicated that CSOs are not only inefficient but also contribute to social exclusion.

Nwosa and Ehinomen (2020) in their findings on the nexus between income inequality, poverty and economic growth in Nigeria from 1981 to 2018 used autoregressive distributed lag method of estimation. The result revealed that while inequality has a positive and significant effect on economic growth in Nigeria, poverty has an insignificant effect on economic growth. Adeleye *et al.* (2020) carried out a comparative analysis on growth, poverty and inequality in sub-Saharan Africa, Latin America and Caribbean countries using pooled ordinary least square, fixed effects and system generalized method of

moment for the period 2000 to 2015. The result shows that inequality growth rate increases poverty and economic growth reduces poverty. However, the study concludes that income inequality is a great determinant of poverty.

3.0 Methodology

The survey research design was adopted for this study. It describes the process of conducting research using a survey of respondents in a specific manner. Data for this study were collected from the primary source using a self-structured designed questionnaire that was administered by research assistants and field supervisors. In this study, stratified, simple random and proportionate sampling techniques were adopted. Stratified sampling was used to stratify the state into urban and rural areas, while simple random sampling which allows the respondents to have equal chance of being selected was used to select participants from each area. Proportionate sampling was then used to apportion appropriate sample size to each local government areas in the strata. To determine the sample size, the Taro Yamane Formula (Yamane, 1973) was used. The sixteen local governments were divided into urban and rural areas based on their population size. The rural population falls below 200,000 while the urban population falls above 200,000 (City Population, 2022). Ekiti State is one of the smallest States of Nigeria. It has a population of about 3,592,100 million (National Population Commission, NPC, 2022). It has a total land mass of 6,353km². Ekiti State has sixteen local government areas (LGAs) with eight LGAs in urban and rural areas. The urban includes; Ado, Ikere, Ikole, Gbonyin, Ekiti South West, Ekiti West, Ijero and Ido/Osi LGAs, while the rural LGAs are Efon, Emure, Ise/Orun, Ilejemeje, Oye, Ekiti East, Irepodun/ Ifelodun, and Moba. It has three senatorial districts which are: Ekiti South Senatorial district, Ekiti North Senatorial district and Ekiti Central Senatorial district. The population projection for the local government varied and it ranges from 60,000 to about 500,000.

Measurement of Poverty

This study employs the composite methods of measuring poverty i.e Foster, Greer, and Thorbecke (FGT) and Multidimensional poverty index (MPI). These are composite measures which allow mapping of per capita income or expenditure of individuals or other factors in a standardized way to provide a useful statistical measure of the overall poverty level.

A parameter called alpha (α) is used by the FGT to measure poverty level, which measures the depth of poverty (Poverty gap), incidence of poverty (Headcount index), and the intensity or severity of poverty from the poverty line.

The poverty gap is expressed as;

$$FGT_1 = p_1 = \frac{1}{N} \sum_{i=1}^H \left(\frac{ZL - Y_i}{ZL} \right)$$

Where; n = is the total number of samples

H = the number of poor

ZL = the poverty line

Y_i = per capita income

The headcount measures the incidence of poverty among the samples of people. The headcount index does not account for the severity of poverty and it is fixed at a certain level of expenditure. It gives the proportion of the poor and it is expressed as;

$$FGT_0 = \alpha_0 = \frac{H}{N}$$

The FGT Poverty Severity is expressed as:

$$FGT_2 = p_2 = \frac{1}{N} \sum_{i=1}^H \left(\frac{ZL - Y_i}{ZL} \right)^2$$

$$FGT_2 = \frac{H}{N} [\mu^2 + (1 - \mu^2) C_v^2]$$

Where C_v is the coefficient of variation among the incomes of the poor, H is the total number of the poor, and μ is given by;

$$\mu = \frac{1}{H} \sum_{i=1}^H \left(\frac{ZL - Y_i}{ZL} \right)$$

The multi dimensional poverty index (MPI) assesses the simultaneous or “joint” deprivations poor people or households experience into a set of indicators. The MPI combines two key pieces of information to measure poverty: the incidence of poverty or the proportion of people who experience multiple deprivations and the intensity of their deprivation- the average proportion of (weighted) deprivations they experience. Based on the Alkire Foster methodology, it is created by multiplying the percentage of the population who are poor (poverty headcount) and the intensity of poverty. The first component is called the multidimensional headcount ratio (H), which is given by:

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

where q is the number of people who are multidimensionally poor and n is the total population.

The second component is the intensity of poverty (A), which is expressed as:

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

Where $c_i(k)$ is the censored deprivation score of individual i and q is the number of people who are multidimensionally poor. The MPI is the product of both:

$$MPI = H \times A$$

4.0 Results and Discussions

Poverty Analysis in Ekiti State

According to the FGT, the incidence of poverty in Ekiti State is 44.6%, implying that 44.6% of respondents are poor based on population percentage. The value (poverty depth) is 17.4%, meaning that an average poor respondent would need 17.4% of the poverty line (N 426.8), which is comparable to \$1.00, to get out of poverty. The value (poverty severity) reveals that the poor respondent's poverty severity is 9.0%. Similarly, the MPI is 35.9%, showing that fewer than half of Ekiti State's population is multidimensionally poor.

Disaggregating the population into male and female groups, the data suggest that 45.4% of males and 43.8% of females are poor. Similar to this, the values for the poverty depth () indicate that an average poor male and female would need, respectively, 15.9% and 19% of the poverty line (N393.64; \$0.93 and N465.80; \$1.10) to escape poverty. The figures show that the poverty severity rates for poor men and women are 7.3% and 11.1%, respectively. Additionally, according to the MPI findings, women in Ekiti state (41.8%) were multidimensionally poorer than men (30.9%), as they are more deprived of health, education, and wealth than males. The findings suggest that the incidence of poverty is higher among male respondents than female respondents. To escape poverty, however, female respondents will need more money than males. The results imply that poverty is more severe among poor women than poor men.

The results of measuring poverty based on level of education indicate that 94.7% of the uneducated are poor, while 68.6%, 33.6%, and 42.7% of those with primary, secondary, and post-secondary education are poor, respectively. Similarly, an average person with no primary, secondary, or post-secondary education would need 57.4%, 32.9%, 16.7%, and 14.9% of the poverty line (N121.21, N224.12, N350.46, and N463.20, respectively) to end poverty. The findings show that the severity of poverty for those with no education, primary education, secondary education, and post-secondary education is, respectively, 36.8%, 18.4%, 10%, and 7.2%. Similarly, according to the MPI statistics, 58.8%, 58.3%, 22.4%, and 35.9% of people with no, primary, secondary, or post-secondary education are multidimensionally poor. The poverty rate is higher among people with less education than among those with secondary and post-secondary education, suggesting that education reduces poverty.

Analyzing poverty according to various occupations reveals that 59.2% of the unemployed are poor. Furthermore, 36.1% and 46.8% of those in wage employment and self-employment are poor, respectively, while 57.6% of those who are not available for work are poor. Similarly, the results imply that it would take 27.2%, 13%, 25.3%, and 17.3% of the poverty line N239.14, N424.41, N258.14, and N529.46 respectively) for unemployed, wage-employed, not available for work, and self-employed individuals to escape poverty. The results reveal that 15.9%, 6.1%, 15.1%, and 8.8% of those who are unemployed, wage-employed, not available for work, and self-employed are in extreme poverty. According to the MPI estimates, 37.2%, 35.2%, 31.8%, and 36.9% of unemployed, wage-employed, not available for work, and self-employed people are multidimensionally poor. According to the findings, the poverty rate among the unemployed is very high, and it would require more money to get them out of poverty. The dynamic of poverty according to the number of children was also investigated, and the findings from the FGT and MPI indicate that the incidence of poverty is higher among those who have more than 10 children compared to other groups. In addition, FGT poverty analyses based on health status reveal that the incidence of poverty is highest among those with poor health status, at 90%, compared to those with excellent (32.8%), good (50.3%), and fair (50.3%). Those with poor health status will also need more money to get out of poverty, whereas those with fair health status have the lowest poverty severity compared to other categories. The results of the MPI also indicate that many individuals with a poor health status (78.3) are multidimensionally poor. The results show that having a lot of children and being in bad health raise the rate, depth, and severity of poverty compared to other factors.

Table 4.1 FGT and MPI poverty analysis in Ekiti State.

Ekiti	FGT analysis				MPI analysis			
	PL (\$)	PL (₦)	Headcount (α_0)	Depth (α_1)	Severity (α_2)	Head count	INT	MPI
Gender	1.01	426.77	44.6	17.4	9.0	52.3	68.7	35.9
Male	0.93	393.64	45.4	15.9	7.3	45.5	67.8	30.9
Female	1.10	465.80	43.8	19.0	11.1	60.2	69.5	41.8
Education								
None	0.29	121.21	94.7	57.4	36.8	76.3	77.0	58.8
Primary	0.53	224.12	68.8	32.9	18.4	60.4	96.6	58.3
Secondary	0.83	350.46	33.6	16.7	10.0	33.6	66.7	22.4
Post-secondary	1.10	463.40	42.7	14.9	7.2	53.8	66.7	35.9
Occupation								
Unemployment	0.57	239.14	59.2	27.2	15.9	52.9	70.3	37.2
Wage	1.01	424.41	36.1	13.0	6.1	51.8	67.9	35.2
Not available	0.61	258.14	57.6	25.3	15.1	42.4	75.0	31.8
Self-employment	1.25	529.46	46.8	17.3	8.8	54.2	68.2	36.9
No of children								
0-4	1.05	443.32	39.0	13.2	6.2	50.0	68.2	34.1
5-9	0.93	392.28	59.1	27.1	15.1	58.0	68.6	39.8
≥10	0.49	208.68	77.8	57.2	43.3	66.7	86.1	57.4
Health Status								
Excellent	1.03	435.58	32.8	10.4	6.1	59.0	70.5	41.6
Good	1.09	459.85	50.3	11.7	5.5	54.1	66.7	36.1
Fair	0.78	330.63	50.34	11.50	6.87	20.0	66.7	13.3
Poor	0.18	77.04	90.00	87.69	44.70	100.0	78.3	78.3

Source: Field Survey (2023)

Note* PL → poverty line, INT → poverty intensity

Discussion of findings

According to the conclusions of this study, the poverty rate in the state as defined by the FGT is 46.6%, the severity is 9.0%, and it would take 17.4% of the poverty line (N426.7) or \$1.01 to lift an individual out of poverty. Similarly, the MPI for Ekiti State is 35.9%, showing that less than half of the population is multidimensionally poor. According to the National Bureau of Statistics (2020), the poverty headcount, depth, and severity for Ekiti State were 52.1%, 17.4%, and 7.8%, respectively, based on the 2018/2019 NLSS per capita income of \$137,430. While the severity is higher with a difference of 1.2%, the poverty rate in this study is lower than the NBS at 5.5%, and the poverty gap remains the same at 17.4%. The fluctuating cost of living and state of the Ekiti economy at the time of this research could account for these variations. The findings suggest that the incidence of poverty is higher among male respondents than female respondents. However, women will require more money to escape poverty than men. The results likewise suggest that poverty is more severe for poor women than for poor men. In a similar manner, the MPI data demonstrate that women are multidimensionally poorer than men, with significant gaps in health, education, and wealth. According to Ngoma and Mayimbo (2017), women are disadvantaged in society, as they are frequently impoverished, have less formal education, and hold low-paying jobs. This study also demonstrates that the poverty rate decreases with post-secondary education and wage employment, whereas it rises without education, unemployment, having more than 10 children, and poor health.

5.0 Conclusion and Recommendations

This study measures the level of poverty in Ekiti State. Based on the results and discussions, it is therefore concluded that the level of poverty is high in Ekiti State. It is also concluded that the likelihood of poverty increases with low level of education, unemployment, large family size, 58-65 yrs of age while it decreases with polygamous marriage, male gender, wage employment, higher levels of education, and a higher average monthly income. Based on these findings, this study recommends that,

The government should encourage those people without education to go to school and also sensitize them on the importance of education. They should also encourage the people with low level of education to go for further studies. Government should also embark on programs like issuing of bursaries, scholarships, and so on to the rural people to encourage them.

Nigeria government should design and implement policies like enlightening the households on the importance of modern family planning, and sensitizing them on the better choice of having smaller families. This will allow for a manageable number of household sizes and curtail the sporadic growth of the population thereby reducing poverty. Government should try to create more employment opportunities for the people by encouraging local production of goods and services which will revive many industries. Also, the government should encourage the development of small and medium enterprises to provide funds for small and micro businesses that can keep people busy and improve their livelihood.

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Olayinka Bobola Awopetu conceived the study, and other authors, Bosede Olanike Awoyemi and Oluwole Aiyegbusi, participated in data collection, analysis and revised the draft and final manuscript.

Consent for publication:

All authors have endorsed the submitted version and agreed to its publication in Nutrition and Health. All authors also affirm that this study has not been previously published or submitted for peer review elsewhere.

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This analysis was exempt from ethical approval because there was no direct involvement of animal or human subjects.

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