

POVERTY CYCLE DISPARITY AMONG PERI-URBAN FARMING HOUSEHOLDS IN UYO, NIGERIA

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ABSTRACT

Urban poverty is more acute than rural poverty and threatens to become worse as the rural exodus increases. This study compares poverty among peri-urban households by decomposing different poverty groups into sub-groups using Foster, Greer and Thorbecke weighted poverty measure. Eighty peri-urban households were sampled through multi-stage procedure. Results reveal that 0.48 of peri-urban farming households were impoverished whereas the poorest of the poor were 0.29. Poverty disparity shows that male headed households were poorer than female headed households. The incidence of poverty increased with age and household size, but decreases with years of education.

Keywords: Poverty Cycle, Disparity, Peri-urban, farming, Nigeria.

INTRODUCTION

Poverty in Nigeria is essentially a rural phenomenon as most of the impoverished people live in the rural areas where they derive their livelihood from farming. Though, urban poverty exists and is also becoming an increasing concern, as reflected in the worsening trend in urban welfare indicators (World Bank, 1997), rural poverty is a much wider issue than the former. The areas surrounding urban centers play an important role in the provision of food to urban consumers, and the proximity of these areas to urban marketers lowers food transport and storage costs (Etim and Edet, 2009).

Akwa Ibom State has a population of 3.9 million (NPC, 2006), the pressure does not only limit land resource available for agricultural purposes but also causes a decline in food supply. According to Etim et al (2005), pressure on population does not only increase food demand but affect resource use and indirectly decreases food supply. With the influx of people into peri-urban and urban areas from rural communities of the state without corresponding measures to keep pace with the high population densities, many urban dwellers are still malnourished.

Etim et al (2005) posited reported that in reaction to the persistent food inadequacies caused by urban population pressure and in a bid to balance food supply with population growth while circumventing the problem of food deficit in urban households, urban and peri-urban dwellers have been involved in farming around their homesteads. Aside from the different crops grown and managed, it is increasing common to see micro-ruminants, poultry and non-ruminants raised and these activities are evolving and to considerable extent becoming phenomenal economic ventures. Despite the involvement of these peri-urban farming households in various economic activities, the generality of their income and wellbeing have

remained low as these farms have recorded limited success in providing food security and increasing incomes. Consequently for these peri-urban household to improve their wellbeing and meet the food requirement of the urban populace, their poverty situation has to be curbed.

Recent and empirical studies by Olayiwola (2013) suggest that poverty comparison and some socio-economic factors and understanding the factors underlying the persistent deprivation of the poor and hungry are imperative for designing policies to meet their needs and improve their well-being. This study was conducted to examine the poverty disparity among peri-urban farming households in Uyo, Nigeria.

METHODOLOGY

Uyo is situated 55 kilometers inland from the coastal plains of South-East Nigeria. The area is located at latitude $5^{\circ}17'$ and $5^{\circ}27'$ North and longitude $7^{\circ}27'$ and $7^{\circ}58'$ East. The areas lie within the humid tropical rainforest zone. Uyo covers an area approximately 35 square kilometers with annual precipitation ranging from 2000 – 3000mm per annum. Etim and Ofem (2005); Etim and Edet (2009) documented that this rainfall regime received in most part of the state encourages farming all year round. Uyo has an estimated population of 309, 537 (NPC, 2006).

The settlement pattern in Uyo is nucleated and being an administrative headquarters majority of civil and public servants and political office holders reside there. Etim *et al* (2006) and Etim and Edet (2009) documented that these people engage in farming within and around their homes. Two-stage sampling technique was employed to select the representative peri-urban households. The first stage involved the purposive selection of 4 peri-urban zones due to their peculiar peri-urban nature, Mbiabong, Afaha Oku, Ikot Oku Ikono and Nsukara. The second stage involved the selection of 20 farming households from the peri-urban areas to make up a total of 80 farming households.

The study utilized mainly primary data obtained from peri-urban farming households using well structured questionnaires over a period of 6 months. Consumption expenditure and information on households' income (farming income and non farming income) formed the majority of the data collected. The former include expenditure on food which was produced and purchased by respondents, and non food items comprised health-care/medication, transportation, clothing, education farm resources and social activities. Values of the open resources such as wild vegetables/fruits, fish, medicinal plants and firewood. Social characteristics of the households also formed part of the data collected. For ease of analysis, data were collected on weekly and monthly basis, and data not available on monthly basis, were collected weekly and then converted to monthly basis

Analytical Techniques

Consumption expenditure (mainly consumption food and non food items) and the values of open resources were used to measure the standard of living of households in the study area. The households' expenditures were then summed up to get the total expenditures of the households. The total household expenditure was divided by the number of household members to get the per capita expenditure as used by World Bank (1996). Since households differ in size and composition, aggregate household consumption can be misleading about the welfare of individual members of the household. Therefore for any given household, an equivalence scale provided by FOS (2004) was used to approximate the number of single

adults, based on nutritional requirement, sex and age of the member of the households. Differences in needs are reflected in differences in consumption. According to UN (2001), adult female are assigned a male equivalence of less than one since they typically consume less; however, that may not mean that they have lower “needs” but rather have less power within the household. The monthly mean per adult equivalent household expenditure (MPAEHE) for the sampled households were obtained by multiplying the nutrition equivalence scales with the number of household members that fall in any of the age and sex categories. The expenditure patterns of the farming households were studied by this procedure.

The MPAEHE of the sample households was used to compute the poverty line used for this study. The poverty line which was estimated using two-third of the means of MPAEHE of the sampled households has been used in several studies. Households expenditure was determined by ranking MPAEHE of the households and then dividing the population into equal increments. The divisions were based on deciles or 10% increments in the study. The poverty line for the study was estimated by calculating two third of the mean.

The most widely used method in quantitative poverty assessment, the Foster, Greer and Thorbecke (FGT's) weighted poverty measure was used for this study (Foster et al, 1984). The P-alpha measure in this class of additively decomposable poverty analysis relate to the different dimensions of the poverty indices and measures P_0 , P_1 , P_2 and the incidence, depth and severity of poverty respectively. The three measures are all based on a single formula, but each index puts different weights on the degree to which a household or individual falls below the poverty line. The FGT poverty measure is particularly useful due to its decomposability of the overall population into sub-groups which allows for comparison of poverty over the various mutually exclusive sub-groups. To see how the measures are defined, the consumption or household expenditures were arranged in ascending order, from the poorer Y_1 , next poorest Y_2 ... with the least poor Y_q .

The FGT poverty measure is defined mathematically as:

$$P_{\alpha i} = n^{-1} \sum_{j=1}^{q_i} \frac{z - Y_{ji}}{ZO_{\max}}$$

Where

$P_{\alpha i}$ is the weighted poverty index for the i th subgroup; n_i is the total number of households in the i th subgroup household in poverty; q_i is the number of households below the poverty line; Y_{ij} is the per adult of household j in sub-group I ; z is poverty line; α is the degree of concern and takes values 0, 1, 2.

Microsoft Excel Package was utilized to compute the weighted poverty measures (P_{α}) and their corresponding standard errors. The contribution (C_i) of each groups weighted poverty measure to the whole groups weighted poverty measure were determined using:

$$C_i = \frac{n_i P_{\alpha i}}{n P_{\alpha}}$$

RESULTS AND DISCUSSION

Presented in Table I are the estimated households' economic wellbeing indicators by consumption level as monthly MPAEHE. The result reveals that sampled households that were within the first deciles on the bottom 10 percent lived on an average of 1881.04 per month and their part of the total monthly MPAEHE was 6.07% whereas households in the 10th decile expended an average of N6762.32 monthly and their share of the total monthly MPAEHE was 21.83%. The first deciles represented the poorest eight households from the sampled eighty households, while the tenth deciles represented presumably eight richest households of the sample. Two thirds of the mean of monthly MPAEHE was N2065.60 (Poverty line) and was located within the eight households of the third deciles.

Table 1. Monthly MPAEHE by Deciles

Deciles	MPAEHE (N)	Expenditure distribution (%)
1 st	1881.04	6.07
2 nd	1969.81	6.36
3 rd	2092.05	6.75
4 th	2128.21	6.87
5 th	2310.09	7.46
6 th	2504.71	8.08
7 th	2568.96	8.29
8 th	3366.28	10.86
9 th	5400.47	17.43
10 th	6762.32	21.83
Total	30983.94	100
Mean	3098.39	
² / ₃ MPAEHE (Poverty line)	2065.60	

Source: Economy Survey Bulletin (2012) & Field Work Data Report

Poverty Profile and Poverty Line

Using the estimated poverty line, the results of 3 poverty measures for the study area were P_0 (0.48) P_1 (0.29) and P_2 (0.18). The implication is that 48% of the farming households in the study area were poor; the average depth of the poor households from the poverty line was 29% while the poorest of the poor were 18%. This shows that the poor households were not equally poor but they vary in their magnitude of the poverty.

Gender of Household Head

The households' poverty was decomposed into male and female headed households in Table 2. The result reveals that the incidence, depth and severity of poverty were higher among male headed than female headed households. A proportion of 60% of the male headed households were impoverished while 40% of the female headed households were poor. The poverty depth and severity and their contribution to the whole groups poverty follow similar pattern like that of the poverty incidence.

The fact that male headed households are poorer than female may be attributable to the fact that most females that headed households were single parents either divorcees or widows with smaller household members compared to the male headed households.

Table 2. Comparison of Poverty by Sex

Sex of household head	P ₀	P ₁	P ₂	Contribution to		
				P ₀	P ₁	P ₂
Male	0.60	0.26	0.14	0.82	0.76	0.62
Female	0.40	0.17	0.08	0.18	0.24	0.38
All	0.48	0.29	0.18	1.00	1.00	1.00

Source: Economy Survey Bulletin (2012) & Field Work Data Report

Age of Household Head

These age categories were used to profile and compare poverty among peri-urban farming households via: 21-40 years, 41-60 years and 61-80years. However, the incidence of poverty among the peri-urban households increases with the age of household head. Table 3 reveals that poverty incidence was highest (60 percent) among household heads within the age interval of 60-80years, 43 percent of heads whose age are in the sub-group 41-60 years are poor, while households whose heads age are between 21-40 years have 36 percent of them in poverty. The contributions to the whole group poverty incidence are 14, 75 and 11 by peri-urban households whose heads' age are 21-40 years, 41-60 and 61-80 years respectively. The age of the household head is directly related to the level of poverty.

This is attributable to the fact that as one increases in age, the ability to do difficult work of which farming is one decreases. Findings are synonymous with Deacon and Krishnan (1998), and Etim and Etim (2010) in their studies on changes in poverty in rural Ethiopia and in Nigeria found that poverty incidence, depth and severity were lower among households headed by persons aged below 45 years.

Table 3. Comparison of Poverty by Age of Household Head

Age of household head (Years)	P ₀	P ₁	P ₂	Contribution to		
				P ₀	P ₁	P ₂
21-40	0.36	0.12	0.04	0.14	0.16	0.13
41-60	0.43	0.24	0.13	0.75	0.62	0.66
61-80	0.60	0.11	0.05	0.11	0.22	0.21
All	0.48	0.29	0.18	1.00	1.00	1.00

Source: Economy Survey Bulletin (2012) & Field Work Data Report

Educational Status of the Household Head

Results on Table 4 reveal that the incidence of poverty was highest (60 percent) among peri-urban household head without formal and lowest (17 percent) among family heads with tertiary educational attainment. Similarly findings were obtained by Schubert (1994) and FOS (1999b) that people with low levels of human capital tends to have higher incidence of poverty. The incidence of poverty is 51 and 32 percent among household's heads with primary and secondary education respectively. Findings further reveal that 48 percent of the whole group's poverty incidence is contributed by households headed by person without formal education. This is followed by heads having primary education (28 percent), secondary education (15 percent) and tertiary education (9 percent) (Table 4). In summary, the extent of poverty increases with decrease in the educational qualification of the heads of peri-urban households. This may not be unconnected with the fact that rate of adoption of

modern farming methods increases with higher educational status which raises farming income with subsequent reduction in poverty. The results of poverty profiling by educational status of the household heads showing that poverty decreases as educational level of the household heads increase conform with findings by Manson (1996), Cavendish (1999), Deacon and Krishnan (1998) FOS (1999; 2004), Bendable (2005), Etim (2007) and Kwacha et al. (2009), Etim and Etim (2010) and Olayiwola (2012) who in their various studies found that poverty reduces with the increase in the years of schooling of the household head.

Table 4. Comparison of Poverty by Educational Status of household head

Education status	P ₀	P ₁	P ₂	Contribution to		
				P ₀	P ₁	P ₂
No formal education	0.60	0.56	0.41	0.48	0.51	0.56
Primary Education	0.51	0.42	0.32	0.28	0.25	0.22
Secondary Education	0.32	0.26	0.19	0.15	0.16	0.14
Tertiary Education	0.17	0.13	0.08	0.09	0.08	0.08
All	0.48	0.29	0.18	1.00	1.00	1.00

Source: Economy Survey Bulletin (2012) & Field Work Data Report

Household Size

As expected, poverty was highest among peri-urban households with relatively large household’s sizes. Farming households were decomposed into 3 sub-groups via: 1-5, 6-10 and 11-15 members (see Table 5). Whereas 36 percent of households with less than 5 members were poor, 69 percent of households with more than 10 members were impoverished. The contributions of 1-5 members sub-group to the whole group’s poverty incidence in 8 percent whereas it is 36 and 56 percent for the 6-10 and 11-15 member’s sub-groups respectively. Results show that as the household size increases, the extent of poverty as well as their contribution to the whole group poverty also increases. The reason may be attributable to the fact that increased household size implies more dependants who rarely contribute to household income.

Findings are however synonymous with World Bank (1991), Lanjouw and Ravallion (1994), Schubert (1994) and, Deacon and Krishnan (1998), and Etim (2007), Etim and Etim (2010) who in their various studies found that poverty increases with increase in the size of family members.

Table 5. Comparison of Poverty by household size

Household Size	P ₀	P ₁	P ₂	Contribution to		
				P ₀	P ₁	P ₂
1-5	0.36	0.13	0.09	0.08	0.07	0.05
6-10	0.52	0.22	0.25	0.36	0.34	0.36
11-15	0.69	0.62	0.57	0.56	0.59	0.59
All	0.48	0.29	0.18	1.00	1.00	1.00

Source: Economy Survey Bulletin (2012)

CONCLUSION

The study revealed showed that poverty levels were higher among households headed by males. The findings further revealed that the age of households heads' and household size were directly related to the poverty status of the households in the study area. This implies that poverty was relatively higher among households headed by older persons and households with more dependants. On the other hand, household's years of formal education was inversely related to the poverty status of the farming households.

This means that poverty level among household headed by those with more years of formal education had lower profile of poverty. This finding is in line with Olayiwola (2013) research work on dynamics on regional poverty in Nigeria.

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