Analysis of Poverty and Income Inequality among Women Farmers in Song Local Government Area, Adamawa State, Nigeria

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ABSTARCT:-The study examines the poverty status and income inequality among women farmers in Song Local Government area Adamawa State, Nigeria. Data was collected from 80 respondents using multi-stage, purposive and simple random sampling procedure. The Gini Coefficient and five point likert type rating scale were used as analytical tools.The results revealed that each household from lowest 2% do not owned any farm income annually on the other hand every household from upper 42.5% maintained an average of N 6,400 farm income yearly. This means that the uppermost 43.7% annual farm income is higher than equivalent value of the lowest. All descriptive results show existence of inequality in farm income distribution in the study area. The Lorenz curve shows a deviation from the line of perfect equality and the Gini-coefficient value of 0.622 also indicates the presence of high income inequality among the surveyed households in the area. Furthermore, the result of farmer's perception towards poverty status and income inequality amongst rural women shows that farmers in the study area have positive and favourable attitude on income inequality. The study thus concluded that there is high percentage of inequality among rural women farmers in the study area and hence recommended that design of poverty reduction programmes should focus more on improving food production for the growing population through increased funding of agriculture and controlled food prices. It further emphasized that private- public partnership should be encouraged to promote growth in agriculture especially the production of food crops, and ensure their availability at cheaper market prices.

Keywords: women farmers, poverty, income and inequality.

I. INTRODUCTION

Global poverty remains a rural problem, with more than three-fourths of the extremely poor people living in rural areas (Dercon, 2009; Byerlee, de Janvry and Sadoulet, 2009; World Bank, 2013). Poverty in all its forms has blighted Nigerian society for generations. Although there have been a multiplicity of programmes and projects with poverty reduction mandate implemented over the years, it appears they were tinkering at the edges rather than the root causes of poverty since its incidence and severity had continued to deepen (Nwachukwu and Ezeh, 2007). Nigeria is a country with the largest population on the African continent, with about 162.5 million people. Of this magnitude, 49% are female representing(80.2 million) while outstanding 51% are males. It is among the thirty most unequal countries in the world with respect to income distribution while the poorest half of the population holds only 10% of national income (British Council, 2012; Idowu*et al*., 2011).

More disturbing is the fact that 54% of Nigerians still live in poverty and the proportion has doubled since 1980 (when about 28% were classified as poor). Human development indicators are also worse than those of comparable lower middle-income countries; 42% of Nigerian children are malnourished. The averages hide a context that is worse for women and girls. Nearly 6 million young women and men enter the labour market each year but only 10% are able to secure a job in the formal sector, and just one third of these are women (British Council, 2012). The vagaries of income distribution have been a subject of immense concern to economists for a long time. This is because high level of income inequality produces an unfavourable environment for economic growth and development (British Council, 2012). Previous studies have shown that income inequality has risen in many developing countries in the last two decades, creating pockets of poverty situation across the globe (Clarke *et al*, 2003; Addison and Cornia, 2001).

It is now common knowledge in Adamawa State, that large local governments like Mubi North, Numan, and Yola North, to mention but a few; have amazing increase in people living in abject poverty, however, Song local government area is not left out, in fact it has increased communities that are in very poor living conditions. In all of these poverty issues, women outnumber that of men. Women receive the brunt of poverty challenges anywhere poverty is prevalent. It is against this backdrop that this paper seeks to examine the gap in income inequality status amongst rural women farmers in the study area and identify a way forward.

II. METHODOLOGY

2.1 Study Area

The study was carried out in Song Local Government Area of Adamawa State. The LGA lies between latitude $9^0.53$ and 10^o12 N of equator and longitude 12^000 and 12^017 E of the Greenwich meridian (Aponu*et al,* 2011). It has a population of 195,188 (NPC 2006). The LGA is bounded to the north by Gombi and Hong LGA and to the East by Maiha to the south East by Fufore LGA and to the West by Shelleng LGA. It has a land area of 4,256 square kilometers. The area has (6) six administrative districts which include Song, Zumo, Sigire (Mboi), Waltadi, Suktu and Ditera districts.

2.2 Sampling Procedure and Data collection

Purposive and multi-stage random sampling techniques were used to select respondents for this study. In the first stage, four districts were purposively selected based on the relative participation of women in agriculture (both crop and animal farming). The second stage involved the selection of two villages on the average (proportional to the number of villages in the selected districts) from district selected. In the third stage, ten women farmers were randomly selected from the sampling frame(Proportional to the number of all registered women group farmers in the selected villages), the sampling frame was obtained from Adamawa State Agricultural Development Programme (AADP) Song/Gombi LGA chapter, thus making total of eighty (80) respondents sampled for the study.Data was collected primarily via structured questionnaire administered to respondents in the study area.

2.3 Analytical Techniques

The data collected ware analyzed using the Gini Coefficient and five point likert type rating scale.

The formula for Gini Coefficient is stated thus:

$$G = 1 + \sum_{1=0}^{k-1}(Y_{i+1} + Y_i)(X_{i+1} - X_i)$$

Where;

Y = Cumulative Proportion of the income variable

X = Cumulative Proportion of the population variable

G = Gini Coefficient

A five point likert type rating scale was used to determine the perception of respondents about their poverty status and income inequality levels.Mean scores were computed from the total scores. Means of 2.0 and below were consider poor while means of 4.0 and above were considered not poor or above the poverty line. This implies that if majority of respondents (say 45 and above) score a mean of 4.0 and above, then the total respondents will be perceived not poor, otherwise the group will be perceived as poor.

III. RESULT AND DISCUSSION

3.1 Determination of Income Inequality using Lorenz Curve and Gini Coefficient

The analysis of inequality is calculated for income by using Lorenz curve and Gini coefficient. It reveals which proportion of total income is in the hands of a given percentage of population. This method is conceptually very similar to the method by quintiles. However, instead of ending up with income shares, the Lorenz Curve relates the cumulative proportion of income to the cumulative proportion of individuals.

Table 1 describesthe determination of income inequality. The result revealed that lowest 2% households do not have any farm income share. In the study area, the major part of farm income is owned by upper 35% households, they owned more than 43.75%. The middle 34 percent households own 45.64% of farm income share. If each household maintained equal farm income in the study area, a household in each District group can averagely possess₦28,300 farm income annually. However, each householdfrom the lowest 2% does not own any farm income annually. On the other hand, all households from the upper 42.5%maintained an average of₦ 6,400 farm income yearly. This means that,the uppermost 43.7% annual farm income is higher than equivalent value of the lowest. All descriptive results show existence of inequality in farm income distribution in the study area.This implies that there is a high percentage of income inequality among the populace in the study area. Invariably, the gap between the rich and the poor is still very wide and that women are at the bottom of the ladder.The Lorenz curve shows a deviation from the line of perfect equality and the Gini-coefficient value of 0.622 also indicates the presence of high income inequality among surveyed households in the district. This study is in agreement with the study of Jude, *et al.* (2011) who indicated that there was a very high level of inequality in income distribution in Abia State, Nigeria. A similar observation was noted byNBS (2005) and Aigbokhan (2008) in the southeast and Nigeria as a whole with Gini coefficients of 0.449 and 0.488 respectively indicating an income inequality among the surveyed population.

Table 1: Farm Income Distribution among sampled households in Song Local   Government Area

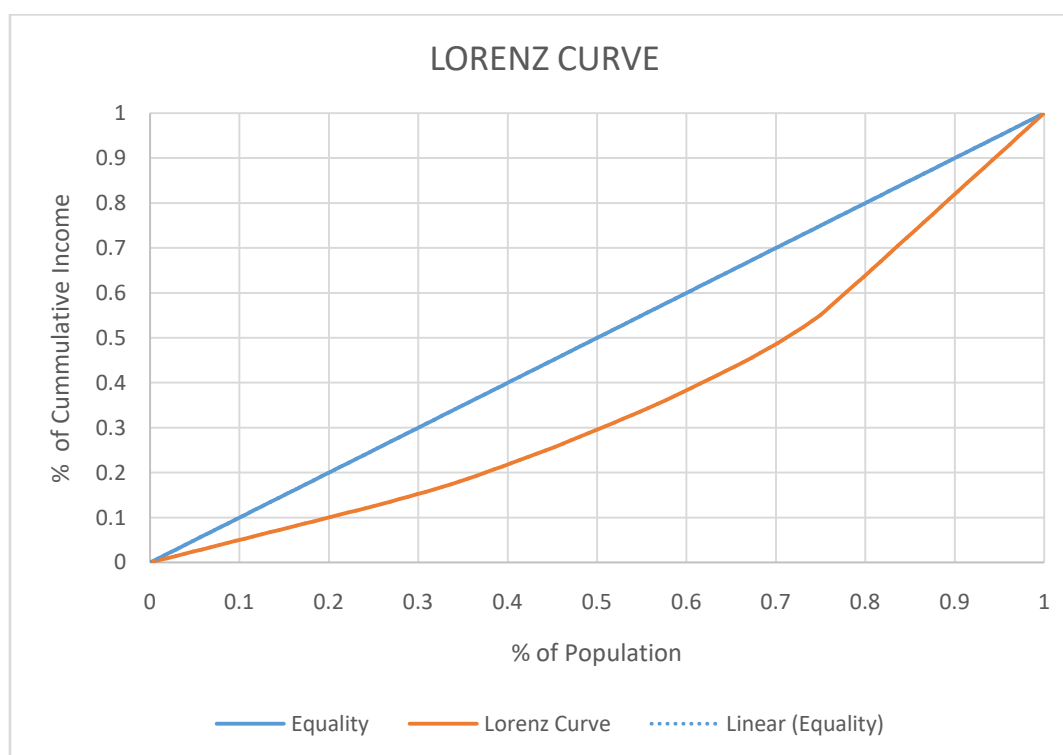| Household number	Cumulative frequency of household (%)	Total farm income (₦)	Share of total farm income (%)	Per household farm income (₦)
2	0	0	0	0
2	2.5	8200	1.72	4100
4	5	19600	4.11	4900
4	5	28400	5.96	7100
34	42.5	217,600	45.64	6400
35	43.75	203,000	42.58	5800
Overall 80	100	476800	100	28300
Total	100	476800	100	28300

Source: Field survey, 2018

Figure 1: Lorenz and Gini coefficient

3.2 Rural Women Farmers Perception towards Poverty and Income Inequality

The analysis of rural women farmer's perception towards poverty and income inequality shows that majority of respondents (56.25%) strongly disagree to the statement that rural women farmers are poor. Almost half of the respondents (31.25%) disagree to the statement that a person who spend N500 a day is rich, also, majority of the respondent (35%) agreed to the statement that Community based organizations help in the fight against rural women income inequality. Majority of the respondent (33.75%) disagree to the statement that there is adequate access to information regarding income inequality, implying that, rural women in the study area are not even aware that there is an inequality in their income distribution; hence they tend to do nothing to help them-selves out of the predicament. Furthermore, about (33.75%) agree to the statement that there is adequate access to financial fund; this may imply that the respondents are not utilizing/accessing the financial fund to change their poverty status or bridge the gap in income inequality. Majority of the respondents disagreed or strongly disagreed to the all three negative statements. This shows that farmers in the study are have positive/favourable attitude towards income inequality.

Table 2: Farmers Perception towards poverty and Income Inequality amongst rural women

Statement	Strongly disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)	Total
Farmers are generally poor.	45(56.25%)	18(22.5%)	14(17.75%)	2(2.5%)	1(1.25%)	80(100%)
A person who spend N500 a day is rich.	22(27.5%)	25(31.25%)	5(6.25%)	20(25%)	8(10%)	80(100%)
Community based organization's help in the fight against rural women income inequality.	8 (10%)	18(22.5%)	11(13.75%)	28(35%)	15(18.75%)	80(100%)
There is adequate access to information regarding income inequality	13(16.25%)	27(33.75%)	10(12.5%)	18(22.5%)	12(15%)	80(100%)
There is adequate access to financial fund	8(10%)	12(15%)	11(13.75%)	27(33.75%)	22(27.5%)	80(100%)

Attitudes towards income inequality was measured using a five point Likert rating scale. Statements (1 = strongly disagree; 2 = disagree; 3 = neutral; 4 = Agree; 5 = strongly agree).

Source: Field survey, 2018.

IV. CONCLUSION AND RECOMMENDATION

This study provides base-line information regarding income inequality among rural women farmers in the study area. The study showed that there is a high percentage of income inequality among rural women farmers in the study area and that the respondents are not even aware of the differences in their income level. Thus in order to improve the income of women farmers, to upgrade their poverty status and address the constraints associated with their income inequality, the following recommendations were made:

1. Policy makers should design poverty reduction programmes that would focus more on improving food production for the growing population through increased funding of agriculture and controlled food prices.
2. Community driven development approach and Community participation programmes should be planned, implemented and sustained via donor agencies such as NGOs, the focus is emphasized on women groups so as to reduce the rate of income inequality amongst them.
3. A public/private partnership is encouraged in subsidization of farm inputs (input subsidy) and enhancing farmers' access to markets(private sector driven via market access policy) this should be targeted to rural areas to reduce poverty and income inequality gap.

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