

**ANALYSIS OF POVERTY PROFILES OF PARTICIPATING AND NON PARTICIPATING  
RURAL FARM WOMEN IN FADAMA III DEVELOPMENT PROJECT IN GOMBE STATE,  
NIGERIA**

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**Abstract**

*Poverty incidence in developing countries as Nigeria has been a rural phenomenon that requires development agencies and other stakeholder's intervention. The poverty profiles of participating and non participating rural farm women in Fadama III development project in Gombe State Nigeria was studied and analyzed in 2013. The study analyzed socio economic characteristics of rural farm women, their poverty levels and problems faced by beneficiary women in the programme. A multistage random sampling technique was used in the selection of six Local Government Areas (LGAs), Fadama Community Associations (FCAs), Fadama User Groups (FUGs), participating and non-participating rural farmers. A structured questionnaire was administered to 360 randomly selected rural women farmers (180 participating and 180 non participating rural women farmers). Data were analyzed with descriptive statistics like frequencies, percentages, mean and poverty gap analysis. The study revealed that participating rural women and non participating rural farmers had mean ages of 35.5 years and 36.72 years respectively and acquired secondary education. Also Fadama women farmers had mean farm size of 2.69 while the non Fadama farmers farmed on 2.39 hectares of land. Both farmers groups had a monthly income of ₦ 75, 59.28 (Fadama III Rural Women Farmers) and ₦27, 505.56 (Non Fadama III Rural Women). The poverty gap analysis showed that 68.33 % and 72.22 % of the participating and non-participating Fadama III rural farm-women were poor respectively and will require 36.56 % and 61.37 % of their poverty line to get out of poverty. The study therefore recommends timely supply of farm inputs by the project, prompt payment of counterpart funds by relevant agencies and replication of the project to other communities in order to reduce rural poverty in the state.*

**Keywords:** *Poverty, Rural, Women, Farmers, Fadama III*

**Introduction**

Nigeria's basic socio-economic indicators place it among the 20 poorest countries in the world. Poverty both income and non income, worsened during the 1980s and 70 % of the population had daily consumption expenditures of below the equivalent of USD 1 per day in 1999 compared to 40 % in 1992 (Akanji, 2002; NPC, 2008). Poverty is widespread but more severe in rural areas where poverty and

socio-economic pressures have unravelled the social fabric and contributed to the breakdown of social safety nets previously provided by wealthier rural community members. The Nigerian National Planning Commission in her 2005 Millennium Development Goals Report has however, observed that poverty is essentially about deprivation. It is about lack of limited access to essential capabilities that could facilitate long and healthy life, becoming more knowledge, maintaining and adequate standard of living and participating meaningfully in decisions affecting one's life. According to Earth Trends (2003), 70.2 percent of Nigerian population lives on less than \$1 a day, while 90.8 percent lives on less than \$1 a day. The total income earned by the richest 20 percent of the population is 55.7 percent. While the total income earned by the poorest 20 percent 4.4. This explains the alarming increase in poverty and the sharp inequality between the rich and the poor. According to World Bank and DFID (2005) approximately 70 million people live on less than US \$1/day, 54% of Nigerians live below the poverty line and over one third live in extreme poverty (defined as those who cannot afford 2,900 calories per day) (UNDP, 2006). The rising profile of poverty in Nigeria is assuming a worrisome dimension as empirical studies have shown. According to the UNDP (2012), the population in poverty is given as 68.7 million, as at 2004.

Several studies have affirmed the central role of women in agricultural production. In Nigeria and some other African countries like Ghana, Sierra Leone, Zaire to mention but a few, it is an established fact that majority of their citizenry lived in rural areas and bulk of these rural dwellers are women (Mabaworiki, 2001). According to Akinyemi *et al.*, (2008), rural women represent a high percentage of Nigeria 140million population. CIA (2009) is of the view that, women make up 49.60% of the nation's total population. They are responsible for production of labour force and for producing 70 % of the nation's food. At this period of food insecurity, global recession, it becomes imperative to study the participation of women in this important project-Fadama III and knowing that neglecting women in this project means missing out almost the stakeholders in agricultural sector. Most food, produced by the poorest is for home consumption and often there is a marked period of food in security during the pre-harvest period (Akanji, 2002).

The Federal Government of Nigeria has taken several steps over the years to use agriculture as a vehicle to alleviate poverty and attain food security. There is low and declining productivity of Nigerian agricultural sector due to poor developed irrigation potential, gender imbalance in resources accessibility, inadequate and poorly funded and maintained production infrastructure, poorly agricultural research and extension systems, inadequate availability and distribution of key inputs (Fertilizers, chemicals, machinery and improved seeds) (Anon, 2002; Ezeh 2012). With the projections made by the World Bank that poverty in Nigeria will increase by two-thirds, and the possibility of 60% of the population living below the poverty line in ten years, the Government of Nigeria adopted the concept of poverty alleviation as a major thrust of its annual budget since 1996 (Amalu, 2005). Though these development programmes were centred towards alleviating rural poverty and to raise the standard of living of the people, especially vulnerable groups including women, much has not been achieved in this regard. In view of the above stated facts, Nigerian governments adopted and implemented various poverty alleviation programmes including the National Fadama Development Project (NFDP) which was established as a follow-up to the Fadama II operated in 18 states of Nigeria and is supported by World Bank and African Development Bank (ADB). The objective of the programme is to increase the incomes of users of rural land and water resource on a sustainable basis, increasing their incomes, reducing rural poverty, increase food security and contribute to the achievement of key Millennium Development Goals (MDGs) such as eradication of extreme poverty and hunger, promote gender equality and empower women, ensure environmental sustainability and develop a global partnership for development (GSFCO, 2012). In order to fill this research gap, this study seeks to determine the poverty profiles of participating and non-participating rural farm women in Fadama III project in Gombe State, Nigeria

#### The specific objectives of the study were to:

- describe selected mean and percentage socio-economic characteristics of participating and non participating rural farm-women in the study area.
- determine the poverty levels of the participating and non participating rural farm-women in Fadama III projects in the study area.
- describe the problems militating against effective participation of Fadama III rural farm-women in the project.

#### Research Hypothesis

H<sub>01</sub>: There is no significant difference between the poverty levels of participating rural-farm women and non participating rural farm-women in Gombe State.

#### Materials and Methods

This study was carried out in Gombe State, Nigeria. Gombe State is a successful socio-political fusion of two distinct groups of people, comprising the Emirate of Gombe North and ethnic groupings of Gombe South in the North Eastern region of Nigeria. Gombe State is located between Latitudes 9°30' and 12°30' North and Longitudes 8°45' and 11°45' East. It lies in the centre of North East geopolitical zone of Nigeria and shares boundaries with all other states in the zone; Adamawa and Taraba in the South-south, Bauchi in the West, Bornu in the east and Yobe in the North-east. According to NPC (2006), the population of Gombe State in 2006 census stood at about 2,365,040 while women constitute 1,120,812 and the State has an average population density of 130/km<sup>2</sup> (Wikipedia, 2012).

Multi-stage random sampling technique was used in the selection of local government areas, Fadama Community Associations (FCAs), Fadama Users Groups (FUGs) and participating rural farm women and non-participating rural farm women. First, six (6) Local Governments Areas (LGAs) were randomly selected out of the eleven (11) LGAs that make up Gombe State. Second, two (2), FCAs each were randomly selected from the selected LGAs to give a total of 12 FCAs. These are: Kwaya Banganje FCA and Billiri south B FCA in Billiri LGA, Jillahi and Tongo youth and women FCAs in Funakaye LGA, Jaka-Dafari and Nasarawa FCAs in Gombe LGA, Bambam Yiri and Kamo FCAs in Kaltungo LGA, Nafada East and Birini Fulani East FCAs in Nafada LGA and Kwadon and Dadin kowa FCAs in Yamaltu-Deba LGA. Also three (3) FUGs were randomly selected from each FCAs to give a total of 36 FUGs. From the selected FUGs, five (5) participating rural farm-women were randomly selected to give a sample size of 180 participating rural farm women. Finally, the non participating rural farm-women were randomly selected from where the participating rural farm-women were selected to give a grand sample size of 360 rural farm-women (180 for participating rural farm-women and 180 non-participating rural farm-women. Objectives i and iii were realized with descriptive statistics as frequencies, percentages and mean counts, while objective ii was captured with Poverty Gap analysis

#### Model Specification

Poverty Gap analysis was used to determine the poverty levels of rural women-farmers in accordance with Ezeh (2007); Nwaobiala (2013a).

$$H = q/n \dots \dots \dots (1)$$

Where;

H = Head count ratio

q = number of poor rural women-farmers participating in the project.

n = total number of rural farm-women participating.

$$I = [(z-y)/z] \dots\dots\dots(ii)$$

Where,

I = Poverty gap

Z = Poverty line-estimated using the mean household expenditure

Y = Average income of the poor rural farm-women participating.

**Results and Discussion**

Data on Table 1 shows that the mean age of Fadama III participating rural women farmers was 38.05 years, while the non Fadama III participating rural women farmers was 36.72 years. The implication is that both groups of rural women farmers were within the middle-aged groups which are still energetic and productive. The Table shows that 75.00% and 88.89% of the participating and non-participating rural farm women in Fadama III project in Gombe State were married. It is likely that the married women were more relatively stable, because of the need to supplement the family's means of livelihood (Adeboye *et al.*, 2008). The table revealed that a good proportion (48.33%) of the participating rural farm women in Fadama III project in Gombe State had secondary school education while 38.33% of them had primary school education. The level of education attained by a farmer not only increases his/her farm productivity but also enhances ability to understand and evaluate new production technologies

(Obasi, 1991; Ajibefun and Aderemola, 2004). The ability to read and write would enable both groups of farm women to better utilize effectively and efficiently whatever resources exist in the area. The result shows that the mean sizes of farmland cultivated by participating and non-participating rural farm women were 2.62ha and 2.39ha respectively. This implies that most of the participating and non-participating rural farm women in the study area were medium scale farmers who either inherited or accessed appreciable parcels of land. This is not in agreement with Awoyemi (1999) that rural women farmers in Nigeria are predominantly smallholders with average farm size of between 1 and 2 hectares. The mean years of farming experience was 11.91 and 9.52 years for participating and non-participating rural farm women respectively while the respondents' annual farm income Mean Monthly income for Fadama III participating and non participating rural women farmers ₦75,590.28 and ₦27,505.56 respectively. It is obvious from the result that the mean annual farm income of the participating women farmers was greater than their counterpart (non-participating women farmers). The relatively low annual farm income status of the rural women farmers has implication on their participation level and household welfare as reflected in their expenditures. Despite the fact that these amounts are significant for the average farmer, all mean annual incomes below ₦ 50, 000.00 were classified as belonging to low income group (Okorji, 1999).

**Table 1: Mean Distribution of Selected Socio-Economic Characteristics of Fadama III Participating Rural Women and Non Participating Farmers in Gombe State, Nigeria. (N=180 Fadama III Rural and N= 180 Non Fadama III Rural Women Farmers)**

Variables	FADAMAIII RURAL WOMEN FARMERS	NON FADAMAIII RURAL WOMEN FARMES
	Mean	Mean
Age (years)	35.05	36.72
Farming Experience (years)	11.91	9.52
Farm Size (hectares)	2.62	2.39
Monthly income (₦)	75, 590.28	27,505.56

Source: *Field Survey Data, 2013*

**Determination of the Poverty Profiles of the Participating and Non-Participating Rural Farm Women in Fadama III Project**

The poverty indicators of the participating and non-participating rural farm women in Fadama III Project in Gombe State are shown in Table 2. The table shows that the poverty line (mean monthly household expenditure) of the Fadama III participating rural farm women was ₦16, 488.00 per month or ₦ 19,7856.00 per annum while that of the non participating rural farm women was ₦ 16,914.0 per month or ₦202,968.00 per annum.

The coefficient of incidence of poverty otherwise called the head count ratio (Ezeh *et al.*, 2012) was 0.6833 for the Fadama III participating rural farm

women and 0.7222 for non Fadama III participating farm women. This implies that 68.33% and 72.22% of the Fadama III participating and non participating rural farm women respectively in Gombe State were poor because their incomes fell short of the mean household expenditure used as poverty line. This result compared favourably with Ezeh (2009) that obtained 53.67 % and 32.15% for Fadama III participants and non participants respectively in Imo State Nigeria.

The coefficient of poverty depth (gap) also known as the income shortfall was 0.3658 for the Fadama III participating rural farm women, and 0.6137 for the non Fadama III participating rural farm women. This implies that the poor participating rural farm women

in Fadama III project in the State required 36.56% of the poverty line to get out of poverty while the non participating farm women in Fadama III project required 61.37% of their poverty line to get out of poverty. This amounts to ₦6, 031. 31 per participating rural farm woman per month or

₦72,375.73 per annum and ₦10,380.12 per non-participating Fadama III rural farm woman per month or ₦124,561.46 per annum. This result corroborates with Ezeh *et al.*, (2012) that obtained a poverty gap index of 0.48 for female Fadama 1 farmers in Abia state.

**Table 2: Poverty Indicators of Participating and Non Participating Rural Farm Women in Fadama III Project in Gombe State, Nigeria**

Poverty indicators	Participating Rural Farm Women	Non Participating Rural Farm Women
Poverty line (₦)	16488.00	16914.00
Poverty incidence	0.6833	0.7222
Poverty gap (Poverty Depth)	0.3658	0.6137

Source: *Field Survey Data, 2013.*

### Problems of Effective Participation of Rural Farm Women in Fadama III Development Project

The Problems militating against the active participation of rural farm women in the project technology component of Fadama III in Gombe State is shown in Table 3. The table shows that a good proportion (53.33%) of the participating rural farm women ascribe late arrival of farm input as a major problem. This is because majority of the farmers depend solely on sourcing these improved varieties on crops, livestock and fingerlings from the programme. Also, 49.44% of the participating rural farm women averred that non-payment of counterpart funds by State and Local Governments hampered their participation in the project. This supports the

view of Nwaobiala, (2013a) that non-participation of stake holders in community-based programmes due to non-payment of counterpart funds by government at the State and Local government levels.

Furthermore, a fairly good proportion (32.22%) of participating women farmers complained of the problem of inadequate training and re-training of participating farmers by the programme facilitators. This is contrary to the views of Nwaobiala (2013b) that staff training and re-training of farmers has led to increased participation of farmers in any agricultural development programme, thereby exposing them to the latest improved technology packages, risk aversion and farm budgeting procedures.

**Table 3: Distribution of the Problems of Rural Farm Women Participation in National Fadama III Development Project in Gombe State, Nigeria**

Category of problems	Frequency	Percentages
Administrative bottlenecks and bureaucracy in release of capital funds	38	21.11
Late arrival of farm inputs	96	53.33*
Infrequent visit of Extension Officers	32	17.78
Inadequate training and retraining of participating rural farm women	58	32.22*
Ineffective leadership of FCA and FUG	42	23.33
Nonpayment of counterpart funds by state and LGAs	89	49.44*
Lack of infrastructural development by the project to evacuate or process the produce	28	15.56

Source: *Field Survey Data, 2013*

\*Multiple responses recorded

30% and above = Associated Problems

### Conclusion and Recommendations

The main objective of the study determined poverty profiles of participating and non participating rural women farmers in Gombe State, Nigeria. The effects of the project have revealed the poverty line, poverty incidence and poverty gap of both farmer groups. This shows that the beneficiary women farmers had

lower poverty levels than their counterparts, indicating that the project impacted on their living standards. Despite this, the project identified late arrival of farm inputs, non prompt payment of counterpart funds and inadequate training and retraining of women as pertinent problems affecting the project.

The following recommendations were proffered;

- The Fadama office should consider compensating a group that participated well and encourage them to safe guard their fund and see it as their own capital.
- Problem of late arrival of farm inputs, such as, fertilizers, seeds and other agro-chemicals, should be improved upon by distributing them to the FCAs earlier especially during the off-season when the inputs are cheap for transmission to FUGs early enough since the use of inputs are time specific.
- Special funds should be advanced to Local government coordinating offices by State coordinating office for infrastructural development to enable them maintain poor infrastructures such as roads. The communities should also embark on infrastructural development projects such as road maintenance and rural electrification to assist the programme and attract participating rural farm-women to establish small-scale processing firms in their areas.
- Governments at all levels (Federal, State and Local) should pay their counter-part funds on time in order to sustain and improve the participation level of the rural farm-women and to enable them and the development partner achieve the goals of the project.
- Finally, considering the impact made by the project in the areas studied, the project should be replicated in other communities to help reduce rural poverty.

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