

Comparative Analysis of Gender Off-Farm Activities in Zone B Area of Benue State: Implication for Rural Poverty Reduction in Benue State

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Abstract: The study compared gender off-farm activities and its implication on poverty reduction in Benue State, Nigeria. Multi-stage stratified and purposive random sampling was adopted to select the same size of 200 respondents from 5 local government areas. The results revealed that apart from age, there was significant difference in education ($t = 2.24, p < 0.05$); household ($t = 2.50, p < 0.05$); farm size ($t = 6.12, p < 0.05$) and annual non-farm income ($t = 6.14, p < 0.05$). Chi-square showed a significant difference ($\chi^2 = 37.48$) in the number of off-farm activities carried out by male and female respondents. Through negative, the result revealed a significant relationship ($\chi^2 = -24.87$) between respondent's off-farm activities and household. It is recommended that like agricultural activities, government should provide credits to boost non-farm activities and make agricultural extension relevant to farmers who engage in off-activities.

Key words: Comparative, gender, off-farm, activities, poverty, reduction

INTRODUCTION

In Nigeria, women play a major role in the production of food crops and also undertake activities, such as trade to earn cash income (Ajani, 2008). The significant contribution of women to food production and processing has been empirically reported in various micro level studies in Nigeria (Amaza *et al.*, 1999; Ani, 2003). Given the necessary resources and the same enabling environment as their male counterpart in farming activities, women farmers are equally efficient in the utilization of these resources to achieve higher productivity proxied by profitability given their potential in price (allocative) and economic efficiencies (Ajani, 2001).

Gender inequality hinders women's chances of employment, education, access to decision making and affects them and their household's food security. Women typically have limited access to land, education, information, credit, technology and decision making for. In the course of poverty reduction programmes in the third world countries, much emphasis has been laid on agricultural activities by the rural people who are mostly hit by poverty.

Nigeria women lag far behind men in most indicators of socio-economic development. With 52% of rural women living below the poverty line, women constitute the majority of the poor, the unemployed and the socially disadvantage.

Little or less mentioning had been made about non-farm income operation which could by and large help curb poverty. The Shell Petroleum Development Company of Nigeria Limited incorporated fishing and entrepreneurship, such as mechanics in the bid to eradicating poverty in her sustainable development strategy programme. In a similar dimension, the Nigeria millennium development goal identified areas, such as improving rural based employment opportunities. The rural economic and socio-cultural empowerment can therefore, be realistic if the farmers' sources of income are not limited to farming activities but external to off-farm operations. One significant flaw in most poverty alleviation policies in Nigeria is the lack of special provision for women. Given the fact that poverty is felt more by women, a special program on poverty alleviation for women is highly desired (Garba, 2005).

DFID (2002) opined that jobs availability for poverty reduction is a function of economic development which hitherto depends on the environment for raw materials, water and energy. In many development countries, 70-80% of jobs are based on natural resources, such as agriculture, forestry, fisheries and tourism. IFAD, articulated the following focal points for the reduction of poverty in Eastern and Southern Africa: Promotion of efficient and equitable market linkages; building rural financial system accessible to the poor; strengthening demand-based information and technology system;

supporting community and household based mechanisms for the prevention and mitigation of HIV/AIDS and providing a basis for development in post-conflict situations.

Zuamo and Aondoakaa (2007) identified numerous small business ideas available in the third world countries, some of which are off-farm oriented and could yield positive economic result in the fight against poverty. Worthy of mentioning include: sawmilling, pottery, weaving, carving, leathery work and carpentry. Others include blacksmithing, retailed trading, brick-laying, barbing, hair dressing, entertainment, drinking parlour operations, teaching and traditional medicine practices. Most of the poverty reduction programmes are rural based in policy formulation but urban and ruling class or authority based in implementation. Most of the programme on increased agriculture productivity with little or no attention to the exploration of the rural community to identify other economics fortunes of fighting poverty.

Many rural people who are aware of their predicaments keep re-doubling their efforts in increasing farm size to better their lots, yet does not combat poverty. A search through the literature has shown that no empirical comparative study has been carried out on genders' off-farm income and its implication to rural poverty alleviation in Benue State. Specifically, the study was to:

- Identify and compared the socio-economic characteristics of the respondents (male and female farmers)
- Identify off-farm activities being carried out in the study area
- Examine the factors that influence respondents' participation in off-farm employment
- Assess the relationship between off-farm employments and household poverty

MATERIALS AND METHODS

The study is carried out in zone B area of Benue and Beine State. It is divided administratively and agriculturally into three zones: A-C by Benue State agriculture and rural development authority (BNARDA, 1998). It has a population of 4.2 million (NPC, 2006). The maim source of livelihood of the people is agriculture; hence it is named the food basket of the nation. It is the major producer of yam, cassava, rice, guinea corns, millet, sweet potatoes, maize, sesame, soybean, mango, citrus beans, etc. Other non-farm activities are also present. The populations of this study are rural people who are gain

gainfully employed in farm and non-farm income yielding operations. A multi-stage stratified and purposive sampling technique was adopted to select the sample size of 200 respondents from 5 local government areas. From each of the local government areas, 40 respondents $X 5 = 200$ were selected to constitute the sample size for the study.

Both descriptive and inferential statistics were used to analyze the data. Objective 1 was analyzed using descriptive statistics and t-test while objective 2 and 3 were analyzed with regression analysis and Chi-square, respectively. In a poverty line, people are counted as poor when their measured standard of living falls below a minimum acceptable threshold. There are various measures that can be used to define this minimum level of welfare. Whatever methods used to define this threshold, the poverty line is a relatively arbitrary divider of poor and non-poor. For this study, the dollar per day poverty approach was adopted. The dollar per day has become an acceptable standard for measuring poverty across countries for international comparability.

RESULTS AND DISCUSSION

The result of socio-economic characteristics of respondents is presented in Table 1 for the 200 respondents sampled, 84 were male while 116 were female. Analysis of age shows that a greater proportion of farmers fall within the age group of between 21-40 years. This result supports the findings of Rahji (1999) that agricultural activities are mostly performed by youths. However, while the mean age for male farmer was found as 36.6 years that of the female was 37.05 years. Moreover, the result of t-test of mean difference showed a significant difference between the ages of the male and female farmers.

The analysis of educational level of respondents showed that majority of the respondents 89.3 and 81.9% male and female respondents, respectively were literate. This is in contrast with the often held belief that rural farmers are illiterate. However, there was no significant difference in the educational level of male and female respondents.

In terms of household size, the studies found out that the highest number of respondent for each group have household size of between 6-10 persons. While the mean household size for male was found to be 10 persons while female were 9 persons. Hence, a significant difference ($t = 2.50$; $p \leq 0.05$) was found between the household size of the two groups.

Furthermore, the result on farm size shows that majority of farmers cultivate < 4 ha. The 46% of men and

Table 1: Socio-economic characteristics of respondents

Factors	Male (84)		Female (116)		t-value calculate
	No.	Freq.	No.	Freq.	
Age (years)					
≤20	6.00	7.1	7.00	6.1	1.32
21-40	51.00	60.7	70.00	60.0	
41-60	27.00	32.2	39.00	33.6	
Mean	36.60		37.05		
Education (years)					
No formal	9.00	10.7	21.00	18.1	2.24
Primary	14.00	16.7	27.00	23.3	
Secondary	46.00	54.8	57.00	49.1	
Tertiary	15.00	17.8	11.00	9.5	
Mean	10.42		8.81		
Household size					
≤5	14.00	16.7	16.00	13.8	2.50
6-10	48.00	57.1	64.00	55.2	
11-15	15.00	17.9	23.00	19.8	
16-20	6.00	7.1	8.00	6.9	
21-25	1.00	1.2	5.00	4.3	
Mean	9.30		10.22		
Farm size (ha)					
0.1-2.0	22.00	26.2	34.00	29.3	3.00
2.1-4.0	39.00	46.4	63.00	54.3	
4.1-6.0	19.00	22.6	12.00	10.3	
6.1-8.0	3.00	3.6	2.00	1.7	
>8.1	1.00	1.2	5.00	4.3	
Mean	3.46		2.76		
Annual farm income (₦,000)					
≤100	80.00	95.2	108.00	93.1	6.12
101-200	1.00	1.2	5.00	4.3	
>201	3.00	3.6	3.00	2.6	
Mean	74.14		47.14		
Annual non-farm income (₦,000)					
≤100	79.00	94.0	105.00	90.5	6.14
101-200	3.00	3.6	7.00	6.1	
>201	2.00	2.4	4.00	3.4	
Mean	72.37		45.23		

Field Survey, 2010; Significant at 0.05

54% of women had farm size that ranged from 2-4 ha. The mean farm size of male and female farmers was found as 3.4 and 2.76 ha, respectively although, there was no significant difference between the two groups. The low farm size found from the study implies that the farmers are peasant given the sizes of their farms. Analysis of annual farm income of respondents showed significant difference ($t = 6.12$; $p \leq 0.05$) between the male and female farmers. Majority of the farmers (95% for male and 93% for female) earn below ₦100,000. This amount translates to about ₦8,333 per month which is far below Nigeria's minimum wage.

The low farm income underscores the need for other off-farm jobs in order to supplement the meager income from the farm. Similarly, a greater percentage (94.0 and 90.5%) of male and female farmers, respectively earn \leq ₦100,000. Only a small proportion earn above ₦200,000. The mean value of off-farm income for male and female farmer was found to be ₦72,370 and 45,230, respectively. Thus, the result of t-test

Table 2: Distribution respondents according to selected off-farm activity

Activity	Male		Female	
	Freq.	%	Freq.	%
Retail trading	13	15.5	59	50.9
Teaching	12	14.3	14	12.0
Brick laying (mason)	8	9.5	-	-
Barbing	6	7.1	-	-
Carpentry	5	6.0	-	-
Entertainment band	4	4.8	-	-
Drinking parlour operations	4	4.8	11	9.5
Saw milling	4	4.8	-	-
Wood carving	3	3.6	-	-
Weaving of traditional cloth	3	3.6	11	9.5
Leather works	2	2.4	1	0.9
Traditional medicine	1	1.2	3	2.6
Photo graphing	4	4.8	1	0.9
Vulcanizing	3	3.6	-	-
Bicycle repairing	1	1.2	-	-
Blacking smiting	3	3.6	-	-
Hair dressing	1	1.2	6	5.0
Motorcycle mechanics	4	4.8	-	-
Fishing/hunting	2	2.4	3	2.3
Pottery	-	-	6	5.2
Others	1	1.2	1	0.9

Field survey, 2010

Table 3: Chi-square showing difference in off-farm activities carried out by farmers

Factors	Chi-square			
	df	Tabulated	Calculated	Decision rule
Male off-farm activities	20	31.41	33.0	H_0 reject
Female off-farm activities	-	-	-	-

of mean difference showed that off-farm income of male is significant; higher ($t = 6.14$; $p \leq 0.005$) than of the females.

The result of the off-farm activities carried out in the study area is presented in Table 2. The result revealed that there were about 20 activities which farmers engaged in. Among them, men engage more (14.3%) in teaching while quite a good number of women (31.9%) were engaged in retail trading. The result showed that while men engage in all activities with the exception of pottery, women do not engage in activities such as wood carving, carpentry, blacksmithing, bricklaying, barbing, entertainment, vulcanizing and bicycle repairing and motor mechanics. The result implies that men are more versatile taking off-farm jobs than women, hence the significant difference between them as shown by the value of the Chi-square (33.0) (Table 3).

Table 4 shows the result of factors that influence respondents' participation in off-farm employment. Different functional forms were fitted for the analysis but linear gave the best fit. In addition, the performance of the regression model was good. The coefficient of determination (R^2) was high (0.89). This shows that 89% variation in off-farm employment was accounted for by variations in the socio-economic characteristics of respondents.

Table 4: Influence of socio-economics characteristics of farmers on off-farm employment

Variables	Regression coefficient	
	Male	Female
Age	2.6840	8.7692
	2.5000	1.8400
Education	5.4940	2.5450
	2.4000	2.9400
Household size	6.0250	0.5830
	2.3400	0.5700
Farm size	1.9357	2.3780
	4.4000	0.7200
R ²	0.8900	-
Adjusted R ²	0.7800	-
F	4.5600	-

Field survey, 2010

Table 5: Chi-square showing relationship between farmers' off-farm activities and rural household poverty

Factors	DF	Tab-value	Cal-value	Decision rule
Poverty level	1	3.84	-24.87	Reject H ₀
Off-farm activities	-	-	-	-

Significant at the 0.01 level; Analysis of field data, 2010

The result showed that for men, age, education level and household size are significant and hence, major determinants of respondents' participation in off-farm activities. The coefficients of these variables are positive showing that they move in the same direction. In other words as age, education level, household size and farm size increase, the off-farm activities they engage in also increase.

On the other hand, the significant factors that determine women engagement in off-farm jobs as found by the study include age and educational level. This implies that as the age and education level of women increases, their engagement in off-farm activities also increases.

The result of Chi-square showing the relationship between farmers' off-farm activities and household poverty is presented in Table 5. The result revealed a significant relationship ($\chi^2 = -24.87$) between farmers' off-farm activities and rural household poverty. The negative sign indicates that as farmers' off-farm activities increases, the rate of household poverty decreases. In other words, as farmers engage in other non-farm activities, it is most likely that their income will increase and subsequently reduce the poverty incidence in their household. This implies that engagement of farmers in other off-farm activities reduces the incidence of household poverty as these activities will provide them with additional income with which to meet their household needs. This could be attributed to the fact that farm produce have seasons and during the off-season farmers need other sources of income to supplement their farm income. Based on the finding of the study, researchers reject the null hypothesis that participation of farms

in off-farm activities has no significant relationship with household poverty. This implies that any policy by the government to provide other non-farm activities through Small-Scale Enterprises (SMEs) will go a long way to reducing poverty in Nigeria.

CONCLUSION

The results revealed a significant difference in the number of off-farm activities carried out by male and female farmers. Furthermore, the result revealed a significant relationship between farmers off-farm activities and household poverty. This implies that farmers' participation in off-farm activities is capable of reducing household poverty. The study, therefore concludes that farmers in addition to their farm work can also engage in other non-farm activities to augment their income from farm, thereby alleviating poverty in rural areas. Off-farm employment should be emphasized among the rural community. Participation of the rural populace in off-farm activities should also be given attention by the change agents in the course of information dissemination.

RECOMMENDATIONS

- Concerted efforts should be made by government, NGOs and community based organizations in providing basic infrastructure such as feeder roads, electricity, health care, pipe borne water among others to the rural communities. These should be adequately provided to boost economic and social activities in the rural areas to alleviate poverty
- Adequate credit facilities should also be provided to the rural people
- More emphasis should be laid on girl child education, so as to bridge the educational gap evidenced in the study area in order to enhance productivity
- Again, rural people should be trained to develop saving spirit so as to build their capital base. They should be helped to discover their environment turning natural materials in existence into income to help them pull out of vicious circle of poverty
- Bottom-up or bottom-top approach should be used in formulating and implementing policies and programmes aimed at poverty alleviation

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