Assessment of Factors Influencing Beneficiary Participation in Fadama II Project in Niger State, Nigeria

*[1]H.U. Muhammad, [2]B.F. Umar, [2]B. Z. Abubakar and [3]A.S. Abdullahi
[1]Dept. of Agricultural Economics & Extension Technology, Federal University of Technology, Minna.
[2]Dept. of Agricultural Economics & Extension, Faculty of Agriculture, Usmanu Danfodiyo University, Sokoto
[3]Dept. of Economics, Usmanu Danfodiyo University, Sokoto.
[*Correspondence author, e-mail: ; usmanhmuhd@yahoo.com]

ABSTRACT: The paper investigated factors influencing beneficiary participation in Fadama II project in Niger State. Three LGAs out of eleven LGAs that benefited in Fadama II project were randomly selected for the study. To this end, one Fadama Community Association (FCA) and five Fadama User Groups (FUGs) were randomly selected from each LGA that benefited. Five beneficiaries were also randomly sampled from each FUG. Seventy five (75) beneficiaries were randomly sampled for the study. Descriptive statistics and logit regression model were used to analyze the data collected. However, large proportion of the beneficiaries participated in problem identification (69.3%) and project implementation (80%) in the stages of project development. Women participation in Fadama II project was identified to be low (28.0%). Meanwhile, educational level and membership of cooperative society significantly influenced participation ($P < 0.01$). Household size was a positive factor that significantly influenced participation ($P < 0.05$) in Fadama II project in the study area.
Keywords: Fadama II Project, Beneficiary, Participation, Fadama Community Association, Fadama User Group

INTRODUCTION

Development experts are of the view that participation is an essential ingredient to development. However, many efforts by governments, international development agencies, local organizations and non-governmental organizations with main focus in rural livelihood improvement, in the past few decades did not achieve a desired results in terms of positive impact and its sustainability (Mohammed, 2003). This is evident from the number of people in Nigeria and other African countries who still live below one dollar per day and not being able to cater for their basic human needs (Immink and Olagoke, 1997).

In Nigeria, whenever positive development is achieved it often not stands the test of time as soon as external support ceases. This is evident from various programmes such as the National Fadama Development Project (Fadama I project) implemented between 1993 -1999 and the Agricultural Development Programme (ADPs) supported by World Bank loans in Nigeria. Development effort at local or grassroot level is worsened when targets of such programmes are either left worse off than before or the project measures were not relevant to the needs and aspirations of the people (Paul, 2010). This situation calls for people-oriented programme, where intervention is designed to improve existing circumstances of the people; and it should begin and end with target of change. According to Mohammed (2003), such approaches which encourage self-reliance among communities and reduce dependence on external interventions by involving people in rural livelihood improvement programme right from needs assessment, priotizing needs, identifying solutions, adequate planning, implementation as well as monitoring and evaluation of the programmes remained imperative.

However, Fadama II project was introduced in 2004 to be implemented in 11 states (Adamawa, Bauchi, Ogun, Gombe, Imo, Kaduna, Kebbi, Lagos, Niger, Oyo and Taraba) and the Federal Capital Territory (FCT). The major objective was to address noted shortcomings in the implementation of Fadama I project. Fadama II project used Community-Driven Development (CDD) approach as a targeting instrument. It is a

bottom-up approach which is a negation of top-bottom approach employed in Fadama I project (Aliyu, 2004).

According to World Bank (2003), the major objective of Fadama II Project include; supporting the provision of marketing infrastructure, improving mechanism of conflict resolution, establishment of rural non-farm enterprises, sustainable increase in income of beneficiaries by at least 20% and encouraging beneficiaries` participation. The cornerstone of community-based initiative is the active participation of the community in the project design and implementation. Mustapha (2004) reported that non-involvement of project beneficiaries in the design and implementation can lead to bad project design, less cost effective and untimely delivery of project inputs and inequitable distribution of project benefits.

In order to address problems in respect of beneficiaries' participation in Fadama II Project, the determinant and stages of project development have to be understood. To this end, this study was conducted to; describe the socio-economic characteristics of the beneficiaries, assess beneficiaries' participation at different stages of project development, determine factors that influenced beneficiaries` participation and the constraints faced by the beneficiaries in Niger State Fadama II Project.

METHODOLOGY

The study was conducted in Niger State which is located in the Guinea Savanna Vegetation Zone in the North Central part of Nigeria. It lies between latitude 8^0–10^0 N and longitude 3^0–8^0 E with total land area estimated at 74,244 square kilometers (Misari, 2002). The state has total human population as at 2006 census of about 3,950,249 (NPC, 2007). The major ethnic groups of the state are: Nupe, Hausa and Gbagyi with farming as their major occupation. The mean annual rainfall is between 1000 -1500mm.

The data used for this study were obtained from primary source. To obtain the data, structured questionnaire was designed and administered to the respondents. Discussions were also held with key informants in the study area. Multi-stage random sampling technique was used to select the respondents. This involved the random selection of three (3) Local Government Areas that benefited in Fadama II Project. This was followed by random sampling of one Fadama Community Association (FCA) from each of the selected LGAs that benefited in Fadama II project. Five Fadama User Groups (FUGs) were also randomly selected from each of the selected FCAs, five members (household heads) were randomly selected from each of the selected FUGs. This produced sample size of 75 respondents.

Descriptive and inferential statistics were used in this study. The descriptive statistics involved the use of frequency distribution and percentages. Meanwhile, inferential statistics (Logit regression model) was used to determine the factors that influence beneficiary participation in Fadama II project activities. The logit model is based on the cumulative logistic distribution function expressed by Gujarati (1995) as;

$$Pi = \frac{1}{1+e^{-z}} \tag{1}$$

If Pi is the probability of participation in Fadama II project, then probability of otherwise is $1 - Pi$ which in logistic function can be expressed as:

$$1 - Pi = \frac{1-1}{1+e^{-z}} \tag{2}$$

$$= \frac{1}{1+e^{z}} \tag{3}$$

The ratio of equation (1) and (3) will the odds ratio:

$$\frac{Pi}{1 - Pi} = \frac{1 + e^{-z}}{1 + e^{z}} \tag{4}$$

$$\frac{Pi}{1 - Pi} = e^{z} \tag{5}$$

The equation (5) is the odds ratio in favour of participation in Fadama II project. It is the ratio of the probability that a respondent participated in Fadama II project to the probability that he/she did not.

Taking the natural log of both sides of eqn. (5)

$$Li = \frac{\ln Pi}{1 - Pi} = z \tag{6}$$

$Li =$ Log odds ratio or logit

$$Z = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \cdots \beta_7 x_7 + \mu \tag{7}$$

Though Z (cumulative logistic distribution) is a linear combination of variable that have both upper and lower bounds, no bounds can be assigned to the variable Z itself as values assigned

by Z depend on the values of the unknown parameters, β_1-β_7 also. To obtain the value of Z, the likelihood of observing the sample was formed by introducing dichotomous response variable Yi, such that;

Yi = 1 if i[th] respondent benefited.
  = 0 if i[th] respondent did not benefit
X_1 = Gender of respondent (Male = 1, otherwise 0)
X_2 = Age of respondent (year)
X_3 = Household size (Number of persons)
X_4 = Educational level (years spent in school)
X_5 = Occupation (Farming = 1, otherwise 0)
X_6 = Participation in cooperative (year)
X_7 = Farm size (ha)
$\beta_1 - \beta_7$ = Regression Coefficient
β_0 = Constant term

RESULTS AND DISCUSSION
Socio-economic Characteristics
Table 1 revealed that 54.7% of the respondents were within age bracket of 45-59 years while 26.6% and 16% were within age brackets of 30-44 years and 60 years and above respectively. The results suggest that a proportion of the youth and elderly benefited from Fadama II Project.

Marital status of the respondents shows that 66.7%, 13.3% and 9.3% of the respondents were married, widows and divorced respectively. The results indicate that widows and divorced constituted some proportion of the beneficiaries. This result is in line with Umar (2007) who stated that Fadama II project has consideration for women particularly widows and divorced.

Results in Table 1 also revealed that 46.7% of the beneficiaries possessed primary school education, 22.7% had secondary school education while 9.3% had tertiary education. This implies there was high literacy level among the respondents and thus was likely to assist them in understanding the programme. This substantiates the view of Islam (1997) that identified primary and secondary schools education to enhance understanding of a programme and productivity of work force.

The results (Table 1) further revealed that 60% of the respondents were farmers. This agreess with other studies (Umar 2007; Adeyemi *et al.,* 2007; Ephraim *et al.,* 2007) that identified crop production to be by far the most important single source of income that provides well above 46% of total income for Fadama II project beneficiaries in

Niger, Kebbi and Kaduna states. However, the respondents were also engaged in other occupations like trading and knitting but to a lesser extent.

Table 1: Distribution of respondents by socio-economic characteristics

Characteristics	Frequency	%
Gender		
Male	54	72.0
Female	21	28.0
Total	75	100
Age (years)		
< 30	2	2.6
30-44	20	26.7
45-59	41	54.7
Above 60	12	16.0
Total	75	100
Marital status		
Married	50	66.7
Widow	10	13.3
Single	8	10.7
Divorced	7	9.3
Total	75	100
Educational Level		
Non formal	16	21.3
Primary	35	46.7
Secondary	17	22.7
Tertiary	7	9.3
Total	75	100
Occupation		
Farming	45	60.0
Trading	7	9.3
Artisanship	3	4.0
Civil Servant	11	14.7
Others	9	12.0
Total	75	100
Household Size		
1-5	3	4.0
6-10	18	24.0
11-15	34	45.3
Above 15	20	26.7
Total	75	100
Cooperative Experience (yrs)		
1-2	3	4.0
3-4	53	70.7
Above 4	19	25.3
Total	75	100

Source: field survey, 2009

The results also revealed that 69.3% of the respondents had household size of between 6-15 persons. This large household size depicts common characteristics of rural households particularly in Northern Nigeria where polygamy is mostly practiced and family labour is also utilized for farming activities. On cooperative membership experience, majority (70.7%) of the respondents had 3-4 years experience. This implies the cooperative society is not new among the respondents.

Beneficiary participation in project development stages
Results in Table 2 reveal that participation of the beneficiaries took different forms at different stages of project development. The stages are problem identification, decision making, project implementation and project evaluation.

To this end, participation by the beneficiaries was remarkable at problem identification (69.3%) and project implementation (80%) while participation was low for project evaluation (40%) and decision making (26.7%). This implies beneficiaries were highly involved in identification and priotizing of problems as well as implementation of chosen projects.

Logit Regression Estimates of Factors that Influence Participation
Results in Table 3 revealed that household size is a significant factor ($p < 0.05$) influencing participation in Fadama II project. The positive coefficient (0.0193) suggests that individuals with large household size were likely to participate in the project as they appeared to have more family burden to contain with, in terms of social and economic services, and therefore need support to meet their family daily needs. Educational level was also found to be a positive significant factor ($P<0.01$) influencing beneficiaries' participation. This was measured in terms of number of years spent in school. The results reveal that the beneficiaries possessed one form of education or another and this affirms that the beneficiaries have spent some number of years in school. This educational attainment was likely to assist them in understanding the objectives of the project and in records keeping. Membership of cooperative society has positive coefficient (0.379) and was a significant factor ($P<0.01$) influencing

beneficiaries' participation in Fadama II project. The positive coefficient reveals that the more an individual participate in cooperative associations the more likely he is to benefit in the project. This result further affirms that individuals that benefited in the project have been members of cooperative societies for certain period of time.

Table 2: Distribution of respondents by participation in project development stages

Stage of Project Development	Frequency	%
Problems identification	52	69.3
Decision Making	20	26.7
Project Implementation	60	80.0
Project Evaluation	30	40.0
Total	162*	

Source: field survey, 2009   *   Multiple responses

Table 3: Logit Regression Estimate of Factors Participation in Fadama II Project

Variables	Logit Regression Coefficient	t-values
Gender (X_1)	2.442	0.96n.s
Age (X_2)	0.044	0.33n.s
Household size (X_3)	0.193	0.035**
Educational Level (X_4)	0.667	0.01*
Major Occupation (X_5)	0.331	0.33n.s
Membership of coop. (X_6)	0.369	0.01*
Land Size (X_7)	-0.190	0.41n.s
Constant	4.991	

Source: Field survey, 2009   *Significant at % level
** Significant 5% level   n.s Not significant

Beneficiary Perceived Constraints
Table 4 reveals that one of the major constraints faced by the beneficiaries was the mandatory counterpart contribution (10% for rural infrastructure and 30% for pilot assets) the project demanded from them. They considered it too high and it made participation in the project difficult. Also bad experience from previous projects like Fadama I project created initial skepticism about the Fadama II project. Long procedures such as opening of bank accounts, keeping minutes of meetings and priotizing needs also constituted hindrance to the beneficiaries. Also, untimely release of funds was another constraint as most of the time the funds (grants) were not given to the beneficiaries at the right

time. Hijack of programmes by top government officials and public office holders also denied the rural poor opportunity to participate in Fadama II project.

Table 4: Constraints faced by beneficiaries

Constraints	Frequency*	%
High Counterpart contribution Demanded from beneficiaries	70	94.7
Bad experience from past intervention	64	85.3
Too much bureaucratic process	42	56.0
Untimely funds disbursement	20	26.0
Political interference (Elite capture)	13	17.0

Source: Field Survey, 2009   *Multiple responses

CONCLUSION AND RECOMMENDATIONS
Findings from this study revealed that, individuals with large household size stood better chance of participating in the project than small households as the large households were considered to have more family burden to contain with. Educational level and membership of cooperative were also important factors influencing participation in the project. Women participation in the project was however identified to be low.

Based on the findings of the study, it is recommended that the mandatory counterpart contribution by the project beneficiaries should be reduced. This could provide opportunity for those that consider the contribution required as too high to pay and participate in the project. Also, the procedures involved as pre-requisite for participation in Fadama II Project and any other rural livelihood improvement intervention programme which the beneficiaries may consider as difficult should be made simple to understand.

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