



Understanding The Household Income And Expenditure Of Beneficiaries Of Fadama II Project In Adamawa State, Nigeria

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ABSTRACT

The study assessed the Household Income and Expenditure of Beneficiaries Before and After fadama II Project in Adamawa State, Nigeria. Data were collected from a sample of 160 respondents using structured questionnaire Descriptive statistics was employed in the analysis. Income and expenditure was determined using descriptive statistics. The findings from the study showed that the income of the beneficiaries rose from N187,559.12 to N323,631.69. This represent an increase of N136,072.57 which represent about 72.55%. This clearly shows that the increase was over and above the 20% increase set up for the fadama II project to achieve at the end of the its lifespan of 6 years. Similarly, expenditure before and after the project has also increase by N38,481.12 from N42,647.81 to N81,128.93 and this represent 90.23%. The study further reveals significant impact of fadama II on income and expenditure at 1% probability level which has clearly shown that the project has touched the lives of the participants. It is obvious from the results that the project has made a significant impact on the beneficiaries in the State. Stakeholders should facilitate where feasible in the establishment of micro irrigation scheme that will ensure all year round crop production and livestock rearing. This will help in ensuring crop production all year round that will lead to increase income of the respondents. Also government at all levels should continue partnering with donor agencies to establish more of such poverty alleviating projects and programmes in the state and expand the scope of future projects.

Keywords: Investigation, Household, Income, Expenditure, Fadama

INTRODUCTION

Many countries achieved enormous economic growth through their small scale farmers thereby help in improving household income and reducing poverty in many rural areas. In this regards, small scale farming through dry season agricultural production activities is one of the ways of unleashing a sustainable agricultural revolution that could contribute significantly towards enhancing food security and reduction of high rate of poverty in the country. Nigeria has unprecedented opportunities for agricultural growth and development but achieving them will require more effective and efficient farmer's integration. Fadama farming has been identified to provide such a lead in achieving this noble objective which ensures continuous crop and livestock production all year round. House hold income is an important determinant of household expenditure and food security. Therefore, it is very eminent farmers have to identified guaranteed source of income that will facilitate improved farmers livelihood. Ensuring improved small scale household farming is the only way to reduce poverty in the country. Therefore the promotion of agriculture at the grassroots would definitely accelerate the development of cottage industries thereby helping in improving household income and expenditure on the needed household services. Doing so will help in improving the life of not only the household but the nation at large, fight poverty and introduce more sustainability in our food security requirement as food is life. The implementation of fadama II project which adopted a paradigm shift to bottom up, demand driven,

participatory and all inclusive approach to farming has made small scale farmers to organize themselves into cooperatives for participation in the project. Fadama is Hausa name adopted by the World Bank and refers to low lying swampy areas consisting of alluvial deposits and containing extensive exploitable aquifers (Girei, 2015). Several studies have considered this approach as good in poverty reduction, addressing vulnerability of the poor to food insecurity and livelihood collapse and improve the quality and sustainability of natural resources that constitute key assets in rural livelihood (Bene, 2003; Ellis and Allison, 2004; Homewood *et al.*, 2004).

Dry season farming is one of the ways in harnessing the agricultural potentials of Nigeria through the exploitation of fadama lands, which is small-scale, farmer based, privatized irrigation system for crop production especially during the dry season. It is an alternative to large-scale irrigation, which failed to meet the food self-sufficiency and food security of the country (Baba, 1993). The importance of fadama cropping system arises from the fact that fadama activity afforded people some opportunities at a time they would have been idle, besides, the surplus labour during dry seasons is utilized unlike in the rainy season when labour is a constraint (Sanda and Ayo, 1994). Fadama farming has not only made the users proactive but proved to be a sustainable panacea to income generation, poverty reduction and food security. Besides, it has provided succor via rural finance and also helped in empowering communities to take charge of their development agenda.

The Study Area

The study was conducted in Adamawa State, Nigeria. The state is located in North – Eastern part of Nigeria. It lies between latitudes 7⁰ and 11⁰ N of the equator and longitudes 11⁰ and 14⁰ E of the Greenwich meridian (Adebayo, 1999). It occupies a land area of about 42,159 km² and has an altitude of about 185.9m above sea level. It had a population of 3,168,101 persons, National Population Commission (NPC, 2006) with an estimated population of 4,038,208 people based on 2.8% yearly projected growth rate for year 2014 (NPC, 2006). Adamawa state has an annual average rainfall of 759 mm and mean annual temperature of 34.6⁰C. There are two notable vegetation zones in the State; the Sub-Sudan Zone and the Northern Guinea Savannah Zone. The Sudan Zone is marked by short grasses and short trees, commonly found in the Northern parts of the State. In the South, the vegetation is thick with tall grasses and trees.

Majority of the people in Adamawa State are farmers. Cattle rearing are also a major occupation, while village communities living on the banks of Rivers Gongola, Benue and their tributaries in the State engage in fishing and farming.

Data Collection

The research make use of primary data collected from 160 fadama II food crop farmers belonging to five local government areas of Adamawa State. These local government areas were selected purposively since they had been identified to have participated in World Bank supported fadama II project in Nigeria between the years 2004 and 2009. From participated Local Government Areas, farmers were selected randomly and structured questionnaires were used in the collection of the data and complemented by secondary information obtained from review of related projects and programmes. The data collected included respondents' personal background, income and expenditure before and after the scheme. Descriptive statistics such as frequency, mean and percentages were used in analyzing the data.

RESULTS AND DISCUSSIONS

Table 1 below showed the income and expenditure of fadama II Project beneficiaries before the commencement of project implementation. Analysis of the Table revealed that 15 respondents had income level of less than N20,000 which represented 9.38% with a total N233,739 with those within the income range of between N20,000 and N50,000 accounted for 25.63% with 41 respondents attracting a total income of N1,407,529. Similarly, majority of the respondents totaling 104 represented 85% with total income of N28,368,189. The average income of the respondents was found to be N187, 559.11. The overall income of the respondents was estimated at N30, 009,457. Also, before the startup of the project, respondent's expenditures were determined with overall estimated total expenditure for the respondent

estimated at N6, 823,650. The analysis further shows that majority numbering 75 of the respondents had expenditure of less than N20,000 which accounted for 46.87% with a total expenditure level of N797,213. Those that had their expenditure level of between N20,000 and N50,000 accounted for 23.76% with 38 respondents and total expenditure of .N1,366,648. A total of 29.3% of the respondents numbering 47 had their expenditure level of above N50,000 with overall average expenditure of N42,647.81.

Table 1: Household income and Expenditure of beneficiaries before Fadama II project

Income Range (₦)	Respondents No for each Income Category	Percentage	Total Income for each category (₦)	Respondent No for each Expenditure category	Expenditure percentage	Total Expenditure for each category (₦)
≤10,000	2	1.25	15,285	36	22.50	210,881
10001-20,000	13	8.13	218,454	39	24.37	586,332
20001-30,000	10	6.25	241,715	10	6.25	227,227
3001-40,000	17	10.63	568,311	15	9.38	553,665
40001-50,000	14	8.75	597,503	13	8.13	585,756
>50000	104	85.00	28,368,189	47	29.38	4,659,789
Total	160	100	30,009,457	160	100	6,823,650
Mean			187,559.11			42,647.81

Source: Field Survey, 2013

Table 2: Household Income and Expenditure of Beneficiaries after Fadama II Project

Income Range (₦)	Respondents No for each Income Category	Income Percentage	Total Income for each category (₦)	Respondent No for each Expenditure category	Expenditure percentage	Total Expenditure for each category (₦)
≤10,000	-	-		9	5.63	52,455
10001-20,000	-	-		32	20.00	478,025
20001-30,000	6	3.75	157,951	20	12.50	521,711
30001-40,000	4	2.50	147,146	16	10.00	548,476
40001-50,000	12	7.50	548,055	6	3.75	271,476
>50000	138	86.25	50,927,919	77	48.13	11,108,485
Total	160	100	51,781,071	160	100	12,980,628
Mean			323,631.69			81,128.93

Source: Field Survey, 2013

Analysis in Table 3 revealed significant impact of the project on income and expenditure at 1% probability level. This therefore has clearly shown that with this increment which is about 72.55% above the fadama II project of 20% target, the participated crop farmers had improved their socio-economic status through enhanced crop yield which resulted to increase income and consequently led to reduction in poverty level of the participated respondents.

In order to measure the level or the impact of the project on the participants' income and expenditure after the project, similar analysis was carried out as presented in Table 2 below. The analysis revealed that none of the respondents had income level of below N20,000. This shows that their income has improved as a result of their involvement in the project activities as against the 15 respondents before their participation. Those whose income falls within the range of between N20,000 and N50,000 accounted for 13.75% with 22 respondents under this category and their total income was estimated at N853,152. This income was lower than the income for same category before their participation in the fadama programme. The lower income was due to low number of respondents within this category which was found to be for only 22 respondents as against the income of N1,407,529 for 41 respondents. Comparing the incomes of respondents and the number of farmers involved (before and after project), the number of respondents is about 50% lower than those before the project (41) while the total income of the respondent in this category is more than half (N853,152) and this clearly indicated that the level of income of the respondent

under this category has greatly improved as against their before participation. This means that the fadama project has been able to improve the farmer's income. Similarly, the respondents with income of over N50,000 has also increase from 104 to 138 respondents, showing an increase of 21.25% from 65% to 86.25% This is also a clear indication of improved in respondents income. The total average income was also found to be N323,631.69 revealing an increase in income of N136,072.58 from N187,559.11 to N323,631.69 representing 72.55%. The study also shows that the total income realized by the respondents after the project is N50,927,919 as against their income of N30,009,457 before their participation, This shows an increase of N20,918,462 representing 69.71%. Table 2 further showed that the expenditure of the respondents for those whose expenditure of less than N20,000 were 41 which represented 25.63% with a total expenditure of N530,480. The sum of N1,341,663 was the expenditure of the respondent within the category of between N20,000 and N50,000 and this consist of 42 respondents and accounted for 26.25%. However, majority representing 77 respondents accounted for 48.13% had the highest expenditure of N11,108,485. This is also higher than the expenditure of those in the same category before their participation in the project which totaled N4,659,789. The net increase in the total expenditure was found to be N6,448,700 representing 138.39%. This result is also a clear indication of the positive impact of the project and a clear indication that the project has impact positively in their livelihood. The average expenditure of the respondents after the project was found to be N38,481.12 indicating a rise from N42,647.81 to N81,128.93 representing 90.23%.

Table 3: T- test analysis on the Impact of fadama on Respondents

Variable	Mean (Naira)	Mean Difference (Naira)	Percentage	Std. error	T. value
Income before fadama II	187,559.11			365,115.89	
Income after fadama II	323,631.69	136, 072.58	72.55	477,325.36	161.55***
Expenditure before fadamaII	42,647.81			76,111.13	
Expenditure after fadamaII	81,128.93	38,482.69	90.23	346,713.23	172.83***

Source: Field Survey, 2013. *** Significant at 1 percent

The findings of this study is also in agreement with that of Simonyan *et al*, (2012) in their study on the impact of Fadama II on beneficiary crop farmers income in Kaduna State who reported that, the net income of the project beneficiaries increases significantly compared to before the project from N302,796.95 before fadama II to N709,492.52 after fadama II. This represents an increase by 57.32%. Also, Adamu *et al*. (2013) in their study on impact of community driven development of the National Fadama II Project in Gombe state shows that, the mean income of participants before and after NFDP-II was N69,285.0 and N108,749.0 respectively revealing an increase of N39,464 representing 56.96% which implies that, there was a significant increase in the income level of farmers that participated in the project and thus impacted positively on the production and income of the participants. The analysis also revealed an increase in expenditure from N42,647.81 to N81,128.93 showing an increase of N38,482.69 and this represented 90.23 % indicating a possibility of improved livelihood as revealed by the excess funds available to them that facilitated improved in expenditure to cater for their desired needs. The reasons for this increase in net income and expenditure are obvious. The fadama II project is all embracing in its intervention programme, addressing basic aspects of agricultural production problems such as pilot asset acquisition, farm roads, and capacity building through its advisory services among others for the crop production beneficiaries under the project. Acquisition of irrigation facilities ensured off-season production. This result also corroborated results obtained by Ingawa (2005) that the average farm size of the beneficiaries increased by tremendously. He concluded that fadama farmers recorded an income of N177,000 as against N127,050,00 for the non-fadama farmers. This further indicates that the fadama farmers are in better position to invest more on agriculture, to increase farm size, output and income. In the submission of Akangbe *et al*, (2012) reported that on the whole, fadama projects increased

employment opportunity, increased income and minimized constraints associated with agricultural production.

The impact Evaluation Report (IER/Beneficiary Assessment Report (BAR) of the fadama II Project in Adamawa State shows that the net income of fadama II beneficiaries before and after the project in the state indicates that their average net income rose from N83,710.01 in year 2005 to N152,932.60 in year 2006 which represent a net increase of N69,223.00 (83%) and was far above the goal of 20% increase set up for fadama II project to achieve at the end of its lifespan of six years.

CONCLUSIONS

The overall finding shows that net income of the beneficiaries before and after the project indicates that their average net income rose from ₦187, 559.11 to ₦323, 631.69. This represents a net increase of ₦136,072.58 representing 72.55% which was above the goal of 20% increase set up for the fadama II Project to achieve at the end of its life span of six years. Similarly, expenditure before and after the project implementation indicated an increase in expenditure by ₦38,481.12 and this represent 90.23 % which was recorded as an increase in expenditure among respondents. It is therefore recommended that government at all levels should put in place effective machinery that will ensure that small scale farmers in the country gets the required access to the much needed agricultural inputs, markets, land, finance, infrastructure and technologies. These will help in boosting their productivity on sustainable basis and make them less vulnerable and ensure improved household income. Stakeholders should facilitate the establishment where feasible micro irrigation scheme that will ensure all year round crop production and livestock rearing. This will help in ensuring crop production all year round that will lead to increase income of the respondents. Also government at all levels should continue partnering with donor agencies to establish more of such poverty alleviating projects and programmes in the state and expand the scope of future projects.

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