



Original Article

Effect of Fadama 111 development project on human Capacity building in Abia state, Nigeria

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Abstract

The study, was conducted to determine the extent the Fadama 111 Development Project has been able to build human capacity of participants in the various areas of agricultural endeavour offered by the Project. Fadama 111 is the third phase of the Fadama Project in Nigeria, and is essentially an agricultural diversification project. In conducting the study, the multi-stage random sampling technique was used in the selection of the sample. In the first stage, the state was stratified into the three geo-political zones of the state. In the second stage, 3 local governments were selected from each of the zones, giving a total of 9 local governments out the 17 Local Government Areas of the State. In the third stage, two Fadama Users' Groups (FUGs) were selected from each of the 9 local governments, giving a total of 18 FUGs in the fourth Stage, 10 participants were randomly selected from each of the FUGs, giving a sample size of 180 farmers. Data were collected through the use 180 copies of questionnaire/ interview schedule distributed to respondents. The data collected, were analyzed using descriptive statistics, such as frequency distribution, mean, and inferential statistics, such as Z- test which was used to test for significance of difference between population and sample mean ratings of capacity building activities. The perception of respondents to capacity building activities showed the following had means more than 3.05 on a 5-point rating scale: gari, poultry meat egg production, yam mini-sett, plantain chips, cassava odorless fufu, smoked fish, goat and sheep production, and pork production, while chin-chin, cassava bread, tom brown, pepper spice, snail production grass cutter production and dry fish had mean scores less than 3.05. The results of hypothesis testing showed no significant difference between the population and sample means, regarding the benefits derived from the capacity building activities at 5% level. The calculated value of Z-test of 0.0213 was less than the table value of 1.96 at 179 degrees of freedom. The study recommends among others, greater sensitization of rural dwellers on the benefits of the Fadama capacity building activities for greater participation of rural people to reduce rural poverty

Keywords: Farmer, perception, Fadama, project, capacity, building

Introduction

The National Fadama Development Project (Fadama I) was introduced in 1993-1999 with support from the World Bank. Fadama is a local word for low-lying flood plains usually with easily accessible

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shallow groundwater. Ingawa, Oredipe, Idefor, and Okafor (2003) referred to Fadama as a Hausa name for irrigable lands that are flood plains and low lying area underlined by shallow aquifer found along Nigeria Rivers. Fadama I focused mainly on production but largely neglected downstream activities such as processing, preservation and conservation and rural infrastructure to ensure the efficient evacuation of farm output to markets. The project did not take into consideration other resource users such as those in livestock and fishery production. This resulted not only in increased conflicts between the users but also restricted benefits to only those accruing from crop production (Igbeka, 2003).

National Fadama Development Project II (NFDP II) was established by the Nigerian Government in 2004 with the assistance by the World Bank to ensure all year round production of crops in all the states of the Federation through the exploitation of shallow aquifers and surface water potentials in each state using tube well and petrol driven-pump technology among others. Fadama II project was a follow-up-to Fadama I, which only focused on crop production and largely neglected the support of past production activities such as a commodity processing, storage and marketing (Nwafor and Alpuerto, 2009). The emphasis of Fadama II was on providing bore holes and pumps to crop farmers through simple credit arrangement which aimed at boosting aggregate crop output. health care, lack of active participation in decision making process (Ajayi, 2008). One of the objectives of the project is to build the capacities of the rural people, or beneficiaries thereby empowering them with technical and entrepreneurial skills to profitably engage in agricultural production/processing activities to reduce poverty. Poverty is one of the gravest challenges facing the world today, with a staggering 40% of the world's population living with reality of the threat of extreme poverty. In a situation where one in five persons lives in a state of poverty, the severity threatens survival (Gustavo and Kostas, 2007). Poverty has raging economic and social phenomenon that manifests itself in the inability of the victims to acquire the basic necessities of life. Poverty goes beyond material deprivation to include: insecurity, vulnerability and exposure to risk, shock and stress. It specifically includes not having enough to eat, poor drinking water, poor nutrition, unfit housing, high rate of infant mortality, low life expectancy, low level of energy consumption, low educational opportunity, low employment opportunity, poor access to portable water.

According to World Bank (2000), poverty in Nigeria has been described as “widespread and severe”. Absolute poverty, extreme poverty, or abject poverty is “a condition characterized by severe deprivation of basic human needs, including food, safe drinking water, sanitation, health facilities, shelter, education and information. It depends not only on income but also on access to basic services (World Bank, 2013). According to Robert (2003), the former president of the World Bank, absolute or extreme poverty is “a condition so limited by malnutrition, illiteracy, disease, squalid surroundings, high infant mortality, and low life expectancy as to be beneath any reasonable definition of human decency. Absolute poverty therefore, refers to lack of minimum physical requirement for existence (Ojowu, 2007).

The establishment of Fadama III was based on the success and benefits of the implementation of Fadama II, which was also a follow-up to the first National Fadama 1 Development Project (NFDP-1). The project which was conceived by the Federal Ministry of Agriculture and Water Resources (Nigeria) was designed to run for five years (Bakari, 2012). Like Fadama II, the project has employed demand-driven approach to: (1) address productive infrastructure, (2) improve livelihood opportunities, (3) empower rural poor, (4) promote socially inclusive and community-based approaches, and (5) accord adequate attention to technical quality assurance.

Fadama III is a current effort of the Government to transform Nigeria agriculture. The major thrust of the project is to increase the income of users of rural land and water on a sustainable basis. This is to reduce rural poverty, increase food security and contribute to the realization of key Millennium Development Goals (MDGs).

The concern about the threat posed by poverty has led the Nigerian Government to devote considerable attention to alleviating its scourge through various programmes, some of which are in co-operation with the civil society and donor agencies. The agricultural sector is not only the most important non-oil economic sector in Nigeria, it is also the single largest employer of labour, employing about 70% of working population (National Bureau of Statistics, 2007). Thus, the agricultural sector is often seen as important for reducing poverty (Agenor *et al.*, 2004). The National

Fadama Development Project II was World Bank assisted and aimed at sustainable increase in the incomes of all users of Fadama resource and reduce conflict among the farmers (Imo State Fadama Development, 2007). The Fadama III aims to scale up the impacts and development effectiveness of a well-performing project by aligning it more closely with the new agricultural transformation agenda, which was adopted by the Federal Government of Nigeria in 2011.

Agbarevo and Obinne (2010) observed that Community Development approach used by Fadama Project assumes that rural development would be better achieved by assisting people to identify, define and limit their problems and needs, and then plan and implement selected action to arrive at a solution. It takes the form of problem-solving approach by the community or group facilitated by government/NGOs. The model has the advantage of active participation of people in projects of which they are the beneficiaries. Previous government efforts aimed at reducing rural poverty and hunger were not very impressive. They largely used top-down approach in implementing programmes designed to increase food production, income and standard of living of rural people (Baldwin cited in Agbarevo, 2005). Fadama project on the other hand is demand-driven in which the beneficiaries or participants determine their priorities, analyze their problems, plan how to solve them, choose between alternative courses of action, and implement the chosen course of action with government officials acting as facilitators in a very participatory manner.

It was to alleviate rural poverty by increasing the production potentials of farmers and rural dwellers engaged in productive ventures that the Fadama project was announced. However, the extent to which it has achieved the objectives that gave impetus to its existence is apparently unknown. Hence, the need to evaluate the project in human capacity building.

Materials and Methods

The population of the study included all the participants of the Fadama III project in Abia State. In conducting the study, the multi-stage random sampling technique was used in the selection of the sample. In the first stage, state was stratified into the three geo-political zones of the state. In the second stage, 3 local governments were selected from each of the zones, giving a total of 9 local governments out of the 17 Local Government Areas in the State. In the third stage, two Fadama Users' Groups (FUGs) were selected from each of the 9 local governments, giving a total of 18 FUGs in the fourth stage, 10 participants were randomly selected from each of the FUGs, giving a sample size of 180 farmers.

Data were collected through a structured questionnaire and interview schedule, which were based on the objectives of the study in the questionnaire included a 5-point likert type rating scale of Very beneficial = 5, Beneficial = 4, Undecided = 3, Not beneficial = 2, and Useless = 1 respectively, were used to measure the respondents' rating on the benefits derived from human capacity building activities. A five point rating scale add up to 15, and gives 3.0 as the mean when divided by 5. The upper limit of 3.0 is 3.05, and was used as cut-off point for positive response. Based on the obtained mean score, the decision rule was that any mean score of 3.05 and above implied beneficial, while below 3.05 meant not beneficial. The significance of difference between sample and population means was determined by Z-test of significance between sample and population means at 95% confidence level, that is, $P \leq 0.05$.

Results

Table 1 reveals that most of the human capacity building activities had mean scores greater than 3.05, while few had mean scores less than 3.05. Capacity building technologies that had means above 3.05, that is positively perceived in capacity human building included: Cassava odorless fufu ($\bar{x}=3.41$), gari ($\bar{x}=4.32$), yam mini-sett ($\bar{x}=3.73$), plantain chips ($\bar{x}=3.61$), pork production ($\bar{x}=3.11$), broiler production ($\bar{x}=3.93$), egg production ($\bar{x}=3.79$), Goat and Sheep production ($\bar{x}=3.35$) and smoked fish ($\bar{x}=3.39$). This means that the participants in the various communities have positive perception regarding the benefits they obtained from participating in the project. However, other capacity building activities such as Chim chin, cassava bread, tom brown, pepper/ spice, snail production, grass cutter production and dry fish had the mean scores less than 3.05 as follows; ($\bar{x}=2.04$), ($\bar{x}=2.21$), ($\bar{x}=1.61$), ($\bar{x}=2.5$), ($\bar{x}=1.99$), ($\bar{x}=1.88$) and ($\bar{x}=1.99$) respectively. This means that the activities were perceived negatively as being non-beneficial. This may be partly as a result of lack of skill required

and capital to acquire equipment and materials necessary for successful execution of the human capacity building activities in these communities.

Table 1: Result of z-test analysis of significance of difference between sample and population means regarding benefits of capacity building activities

Groups	\bar{x}	Mean	SD	P≤0.05	z-cal
Sample	2.974				
		1.6504	1.324	1.96	0.0213
Population	1.3236				

Source: Field survey, (2015) not significant. Ho accepted.

TABLE 2: Perception of participants relative to benefits derived from capacity building activities

Capacity building variables	VB	B	UD	NB	U	-X	Standard deviation
Cassava-odorless fufu	17(85)	28(112)	22(66)	21(42)	2	3.41*	1.11
Chim chim	0	0	38(114)	18(36)	34	2.04	0.90
Cassava bread	0	7(28)	38(114)	12(24)	33	2.21	1.03
Garri	51(255)	23(92)	10(30)	6(12)	0	4.21*	1.11
Tom brown	0	0	10(30)	35(70)	45	1.61	0.68
Yam miniset	17(85)	42(168)	21(63)	10(20)	0	3.73*	0.90
Plantain chips	24(120)	30(120)	16(48)	17(34)	3	3.61*	1.16
Pepper spices	0	17(68)	39(117)	6(12)	28	2.5	1.12
Pork production	21(105)	16(64)	15(45)	19(38)	19	3.01*	1.48
Poultry production	25(25)	45(180)	12(36)	5(10)	3	3.93*	0.97
Egg production	30(150)	34(136)	11(33)	7(14)	8	3.79*	1.24
Goat and sheep meat	25(125)	45(180)	0	10(20)	10	3.72*	1.28
Honey production	2(10)	30(120)	32(96)	22(44)	4	3.05*	0.92
Snail production	0	0	36(108)	17(34)	37	1.99	0.91
Grass cutter	0	0	19(57)	41(82)	30	1.88	0.73
Fish production	12(60)	38(152)	20(60)	10(20)	10	3.35*	1.18
Dry fish	0	0	39(117)	11(22)	40	1.99	0.94
Smoke fish	0	60(240)	11(33)	13(26)	6	3.39*	0.97
Grand mean					ΣX	53.41	18.63

Source: Field survey, 2015.

* = positive perception

The table shows that the sample mean was 2.974, while the population mean was 1.324. The difference between sample and the population means was 1.6504. The standard deviation of the sample was 1.324. The Z-test showed that the difference between the sample and the population means was not significant at 95% confidence level ($P \leq 0.05$). This is because the calculated Z-value of 0.0213 was less than the table z-value of 1.96. Therefore, the null hypothesis which stated that there was no significant difference between the sample and population mean ratings regarding farmers' Perception of the effect FADAMA 111 Project activities in human capacity building was accepted, while the alternative hypothesis was rejected.

Discussion

The study has shown that out of the eighteen ventures involved in the capacity building activities of the project, eleven were rated as beneficial by the participants with garri production as the most beneficial capacity building venture followed by broiler production, egg production, yam mini-sett production, sheep and production, plantain chips, odourless fufu, fish production, and honey production, all of which were rated beneficial. Other ventures which were rated not beneficial included chin-chin, grass cutter production, snail production, pepper/ spices, sheep and goat

production, cassava bread, pork production and tom brown. It should be noted that the rating is reflection of ascribed relevance of the ventures to needs of the participants and may not necessarily be an indication of the derivable benefits from those ventures on strict economic terms. This is because training on ventures the participants are not interested in would not be rated beneficial even when they may be very profitable. In this regard, Agbarevo (2008) reported that recommendations which rural female and male farmers regarded as very relevant to their felt needs recorded high adoption, while those that did not address their felt need recorded low adoption rates. The need to ensure that extension technological recommendations addressed farmers' felt needs cannot, therefore, be overemphasized, he concluded. Resource poor farmers are conscious of their needs and constraints associated with their farming environments in their efforts to realize their goals of production, income, security and conservation of their resource base. Therefore, they weigh the expected benefits of any recommendation from extension against these variables to determine their sustainability or otherwise before adoption. Only recommendations that give the highest promise of meeting such needs are adopted. Therefore, extension efforts aimed at improving agriculture require an understanding of the existing farming system and how recommended technology can increase productivity by relieving such constraints (Mazur and Titilola cited in Agbarevo 2012).

Moreover, it is important to note that some profitable ventures that were rated not beneficial to the participants could have arisen from the capital outlay required and lack of technical efficiency needed to run the ventures. This is because rural dwellers are poor and weigh the cost of investment against available capital, and would not want to risk their little capital on any venture when derivable benefits have not been well demonstrated. Although participants in the project receive financial assistance, Abia State has been defaulting in providing its counterpart funding, and even if it has not been defaulting, the fund can hardly be enough. Human capacity building vis-à-vis the Fadama project is designed to equip the participants with the relevant technical skills, knowledge, and entrepreneurial skills relative to the various ventures under the project, which would enable them to run any venture of their choice profitably to increase their income. Hence, better application of technology and management skills by the farmers would lead to an increase in productivity and income

Conclusion and Recommendations

Based on the findings of the study, the paper concludes that the Fadama 111 human capacity building activities have positively impacted on the farmers as reported by the farmers themselves. In other words, the project has been able to assist them acquire the requisite knowledge, skills and entrepreneurial capacity to successfully engage in their chosen ventures. Consequently, the paper recommends concerted effort to educate non-participants on the benefits of the human capacity building activities of the project so that more farmers can enlist in the project as this would help reduce rural poverty.

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