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National Fadama Development Project III: Achievements and Constraints of Selected Beneficiary Farmers in Niger State

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Abstract
This study assesses the impact of the third national Fadama development policy on poverty reduction among selected farmers in Niger State, by assessing the achievements and constraints faced by the beneficiaries. The study also adopted both quantitative and qualitative method of data analysis. The chi-square method of statistical analysis was used to test the hypothesis. The study discovered that Fadama III project was a success in increased income, daily expenditure, increased savings, improved diet, acquisition of personal properties, ability to send and sponsor children in schools, ability to purchase parcels of land amongst others. It was also discovered that the programme faces some challenges like insufficient disbursement of funds, problem of herdsmen, poor road network, and politicization of the programme among others. The study recommends that subsequent poverty and agricultural programmes should take the issue of providing farm machines to the farmers serious, sufficient funds in subsequent agricultural and poverty reduction programmes should be disbursed in time and poverty reduction programmes should not be politicized.

Keywords: Development, National Fadama, Programme, Poverty, Farmers
JEL Classification: H42, I32, O13

1. Introduction

One of the major problems confronting Nigeria today is how to improve the quality of lives of the rural dwellers and reduce the level of poverty thereby increasing income, employment generation and consequently improved social and economic livelihood (Girei, Dire, Yuguda, 2014). In spite of the dominant role of the petroleum sector as the major foreign exchange earner, agriculture remains the main stay of the Nigerian economy (Adamu, Biwe, Suleh, 2013). Agriculture

especially, small- scale irrigation "Fadama" plays a key role in Nigerian economy as a basic source of food, income, and employment especially for women in the slack period of rain-fed agriculture (Ogunjimi & Adekalu, 2003). "Fadama" is a local "Hausa language" word referring to low-lying swampy areas consisting of alluvial deposits and containing exploitable aquifers, Girei, et al (2014). The concept was adopted by the World Bank to refer to its rural development programme. The National Fadama Development Project 1 focused mainly on the promotion of simple low-cost irrigation technologies in the bid to increase food production, but largely neglected the down-stream activities such as processing, preservation, conservation and rural infrastructures meant to ensure efficient evacuation of farm produce to the markets. Also, the project did not take into consideration the farmers involved in other areas of agriculture, like livestock and fisheries. This resulted in not only perpetual conflicts between the users, but restricted benefits to only those who were involved in crops production (Chidawa, 2020).

At the completion of the project phase I in 2001, the Nigerian government adopted new rural development strategies to address most of the discovered flaws and constraints to implementation. The new strategy, which was in line with the African Development Bank's strategic plan, had as its focus, a number of approaces to development. The plan stressed the need of consistency, sustainability, and greater equity in the access to benefits of the land resources in Fadama areas of the country. Consequently, the bank found it necessary to agree to the Nigerian government's request for funding phase II of the project, not only as a follow-up to phase I but also to expand it in scope and size (Abang, 2015).

The National Fadama Development Project III is an International Development Association (IDA) credit facility assisted project with confirming sources from the federal government, state government and local communities. It was implemented in six- year period (2004-2009). It was declared effective nationally on 27th May, 2004 by the World Bank. There was also an additional financing implemented to December 2017 (World Bank, 2016).

The objective of Fadama III is to increase in the income of 50 percent of the fadama users that participated in the project, empowerment of communities to take charge of their development agenda so that 60 percent of the local development plans prepared by fadama community association are implemented and reduce conflicts by users of Fadama resources (World Bank, 2016).

The National Bureau of Statistics observed that the poverty rate of Niger State as at 2013 stood at 49.6 percent (National Bureau of Statistics [NBS], 2014) and increased to 66.11 percent in 2019, (NBS, 2019). Poverty is more in the rural areas of the state, the rural dwellers who are predominantly farmers complain of lack of fund to purchase fertilizer, herbicides and other farm inputs, most rural dwellers in the state are living in abject poverty, characterized with the inability to participate in socio-economic activities coupled with complains on the implementation of the programme in Niger State (Chidawa 2020). Most of these farmers also cry of challenges they encounter in the course of the programme living in thatched houses, prone to diseases due to lack of medical services and other social amenities. This study is to examine the extent to which Fadama III contributed to poverty reduction among farmers in Niger State. In view of the above, the study becomes imperative to answer some important questions:

i. What are the achievements of National Fadama Development Project III on the beneficiaries?

ii. What are the challenges faced in the implementation of the programme?

2. Empirical Review

The National Fadama Development Project III as a rural transformation strategy was introduced to solve the problem of rural development. A lot of studies on rural development in general and fadama project in particular have been carried out in different parts of Nigeria and on different aspect of the impact analysis of the National Fadama Development Project (Abang, 2015).

Oghenero (2020) evaluated the constraints and strategies perceptions of fadama III in the Niger Delta Area of Nigeria. Using a multi-stage sampling process and ANOVA for the analysis, the results of the study revealed that some constraints such as inadequate fund, inadequate input supports and high bureaucracy of donor agencies were identified as serious constraints. This has clearly indicated that inadequate materials and long processes involved in the disbursement of funds have negatively affected the smooth flow of the programme.

Chidawa (2020) also conducted a study to examine the prospects and challenges of the Third National Fadama Development Project among yam farmers in Niger state, using the simple percentage in the course of analysis. The statistical analysis carried out clearly indicated that Fadama III has greatly impacted on the yam farmers in Niger state by reducing the beneficiaries distance and travel time to the nearest

community and increased household incomes of the beneficiaries. The study also discovered that the Fadama III yam farmer's beneficiaries face challenges such as inadequate farm equipment, lack of capital, high cost of transportation, and unavailability of fertilizers, herbicides, pesticides and improved seeds. The above study has clearly indicated that the project has impacted on the yam farmers in Niger state, though the farmers still face a lot of challenges. From the reviewed works it was discovered that no research work on fadama III project that covers the three senatorial districts in Niger state have been conducted, this is the gap that the work seeks to fill.

In a similar study by Solomon (2020) on analysis of impact of Fadama III Additional financing on beneficiaries income and poverty alleviation in Abuja, Nigeria using descriptive analysis and simple percentage the study revealed that Fadama III AF supported farmers with improved seeds varieties, fertilizers, Agro-chemical, water pump, sprayers, advisory services and capacity building training.

In another study conducted by Cornelius, Kabir and Oluwaseun (2020) on the impact of Fadama III on food security status of beneficiary farmers in Kabba-Bunu LGA, Kogi State using descriptive statistical analysis, logistic regressions, food security index (FSI) food Insecurity Gap (FIG), Head Count Ratio (HCR) and Surplus Index (SI) the crop output level of the farmers showed that beneficiary farmers had more output than the non-beneficiary farmers with an output difference of 1% before Fadama programme and a crop output difference was 9.5% after the project similarly. The farmers had 0.16% difference in their level of consumption before the Fadama project and 13.9% difference in their consumption after the project in favour of the beneficiary farmers. The result further showed that 83% of the beneficiary farmers are food secure as against about 34% of non-beneficiary farmes. The above studies have indicated that fadama III programme have impacted positively on its beneficiaries in the study areas.

Nwoye and Nwalieji (2019) examined the effect of male and female participants in the implementation of Fadama III additional financing project among cassava farmers in Anambra state, Nigeria. The study revealed that untimely provision of inputs, irregular advisory services, corrupt practices, lack of access to credit and poor road network were regarded as the major constraints to male and female participants in the project activities. The above studies have clearly indicated that the beneficiaries faced some challenges.

Kuza, Okwoche and Age (2018) in their assessment of the impact of the fadama III development project on beneficiaries in

Nassarawa State, Nigeria used multi-stage, stratified and simple random sampling techniques, the impact of the project on beneficiaries was ascertained by comparing their income and yield before and after they became beneficiaries. The findings of the study revealed that there is a mean difference of N224,381.1 in the income of beneficiaries after becoming members of national Fadama development project III. There was also a mean difference of 8.014kg in the yields of beneficiaries after becoming members of National Fadama Development III Project. The difference in the yields is significant at 1% level of probability. The study concluded that national Fadama Development Project III has therefore increased the farm yield of the beneficiaries. This is because they would produce more using irrigation during off farm season. The study revealed that there was a significant difference in the yields of the beneficiaries after the project.

In another development Kwon-Ndung, Ishor and Kwon-Ndung (2018) analyzed the midline impact of Fadama III Agricultural Development Project on poverty alleviation among beneficiaries in Benue State, Nigeria, by the use of a Lawrence curve, income inequality was 0.37830 while the concentration coefficient was 0.401243, the result shows that the Fadama III treatment was confirmed the highest impact of the Fadama project on the income distribution among members. This study has opened the doors for the sustainability of the programme.

Terwase (2018) conducted a study on the economic impacts of Fadama III project on the beneficiaries in Makurdi Local Government Area, the study revealed that lack of inputs support is one of the problems faced by Fadama III beneficiaries. In another study conducted by Babatunde and Temitope (2017) on effect of Fadama III programme on dry season vegetable farmers in Kwara State, Nigeria, the study concluded that problems faced by the beneficiaries include inadequate credit, untimely distribution of inputs among others.

Pius (2014) studied of the income level of Fadama III beneficiaries in Delta State as at closure, using the difference in difference (DD) analytical tool to compare change in outcome of the programme for beneficiaries and non-beneficiaries. Findings revealed that the current average level of income of participants of Fadama III project as at project closure in December 2013 is N106, 829.75. This represent an income increase of N44,349.75 or 70.98% from the baseline income of N62,480 of Fadama III beneficiaries. On the other hand, the average income of Fadama III non beneficiaries grew to N85,997.22 from a baseline income of N63,572. This represents an increase from 35.28% to 82.5%. The participants were able to generate an average

income of N106,829.15, thus achieving an increase of 70.98% from participating in Fadama III project.

Olusegun, Taiye and Musa (2013) studied the perception of Fadama III participating farmers on pests and diseases in Kwara State, Nigeria. The result shows that two- third of the respondents were aware of Integrated Pest Management (IPM) Control strategy and a large majority of (82%) claimed to practice it. The study showed that under environment friendly atmosphere, IPM knowledge by Fadama III farmers could ensure improved agricultural productivity.

This study adopted theory of participation, the theory has been discussed by several scholars towards the 21st century calling for more active engagement of poor people in development, some of these Scholars include: Chambers, Karol, Cornwall and Giles. Mohan (2008) stated that the strongest advocates of participating in development is characterized by biases eurocentrism, positivism and top- downism which are disempowering. The tendency according to Mohan is to equate development with modernity achieved by western societies and to copy them through planning by experts. The flip side is that ''non expert'' local people were sidelined and their only role was to act as the object of control schemes (Abang, 2015). In participation, it includes both the ability of acting together with others and the realization of personalistic value of action on the fulfillment of the person himself. This theory is relevant to this study because it encourages the participation of individuals in their development. The theory gave rise to the Community Driven Development (CDD) Approach adopted by the World Bank in the implementation of the Fadama programme.

3. Methodology

The study adopted the primary and secondary methods of data collection. The data collected included respondents' personal background, achievements and constraints faced in the project implementation. Data collection was facilitated with the aid of trained research assistants selected from the three senatorial districts of the state. Multistage stratified random sampling and purposive sampling techniques were used in the selection of respondents. In the first stage, the state was stratified into four according to Niger State senatorial districts. In each of the zone, participating local government areas in Fadama III was purposively selected in proportion to the existing number of Fadama User Groups. In line with this, two local government areas in each of the districts were selected. A total number of six local government areas were sampled.

Three hundred (300) beneficiaries were randomly selected in the FUGs in the six selected local government areas in proportion to their number in each local government. The study also adopted interview of key informants, observation and focus group discussion. The data collected was further analyzed using descriptive statistics, frequency distributions and percentages were employed in the analysis. Regression and Chi-Square statistical system was used to test the hypotheses. Regression Analysis measure the relationship that exist between dependent and independent variables

4. Results and Discussion

Table 1: Inadequate Capital

Responses	Frequency	Percentage
Very high	145	50
High	38	13
Somehow low	45	16
Low	36	12
Very low	25	9
Total	289	100

Source: Researcher's Survey, 2020

The above table shows the responses on inadequate capital, as one of the problems encountered by Fadama III, (145) 50% Very High, (38) 13% High, (45) 16% Somehow Low, (36) 12% Low, (25)9% Very Low, this is also supported by the response of the chairman of Fadama III in Wushishi Local Government, Mr. Waziri who affirmed that this posed a serious challenge in the course of implementing the project, as a result of that the programme did not yield a positive result in the local government area. This has clearly indicated that inadequate capital is one of the problems encountered by Fadama III beneficiaries, this is in agreement with a study conducted by Chidawa (2020) to examine the prospects and challenges of Fadama III among yam farmers in Niger State, Nigeria. The study discovered that lack of capital is one of the major problems encountered by the beneficiaries.

Table 2: Untimely Distribution of Inputs like Improved Seeds, Fertilizers, Herbicides among others

Response	Frequency	Percentage
Very High	103	36
High	60	21
Somehow Low	74	26
Low	42	14
Very Low	10	3
Total	289	100

Source: Researcher's Survey, 2020

From the above table (103)36% of the respondents went for Very High, (60)21% High (74)26% Somehow Low, (42)14% Low and (10)3% Very Low, the response of some of the FUG, Chairmen is in line with the above result, who stated that these funds are at times delayed by the state coordination unit before setting to the targeted beneficiaries which may arrive late thereby leading to poor implementation. this has clearly indicated that untimely distribution of inputs is one of the major constraints of Fadama III beneficiaries. This is in line with the study conducted by Babatunde and Temitope (2017) on effect of Fadama III programme on dry season vegetable farmers in Kwara State, Nigeria, the study concluded that problems faced by the beneficiaries include inadequate credit, untimely distribution of inputs among others.

Table 3: Insufficient Farm Machineries / High Cost of hiring Tractors

Response	Frequency	Percentage
Very high	104	40
High	43	15
Somehow low	64	22
Low	22	8
Very low	56	19
Total	289	100

Source: Researcher's Survey, 2020

The above table shows (104) 40% Very High, (43)15% High, (64)22% Somehow Low, (22)8% Low and (56)19% Very Low, this is supported by the responses of the beneficiaries in Chiri Village who affirmed that their major challenge is lack of tractors and other farm machines, they told us that the tractor that was allocated to their FCA was later diverted to another local government. This has clearly showed that insufficient farm machine / high cost of hiring tractor is one of the problems faced by the beneficiaries, this is in agreement with a study by

Terwase (2018) on the economic impacts of Fadama III project on the beneficiaries in Makurdi Local Government Area, the study revealed that lack of inputs support is one of the problems faced by Fadama III beneficiaries.

Table 4: Poor Road Network

Responses	Frequency	Percentage
Very high	12	44
High	58	20
Somehow low	28	9.6
Low	23	8
Very low	53	18.4
Total	289	100

Source: Researcher's Survey, 2020

The responses of the respondents as shown above indicate that (12)44% went for Very High (58)20% High, (26) 9.6% Somehow Low, (23) 8% Low and (53)18.4% Very Low, this poses a serious challenge to sure of the Fadama III beneficiaries in transporting their goods from their farms to the markets. We also observed that there were no access roads to most of their farms, in Ebbo-banzhi Lapai Local Government Area, we had to leave our motor-cycles and took off some of our clothes and walk inside water before getting to the earth-dam provided by Fadama III, we also had the same experience when going to the Lioji 60 Hectares Rice Irrigation Scheme in Kontagora LGA. It is clear that poor road network is a problem faced by the beneficiaries, this is in agreement with participants a study conducted by Nwoye and Nwalieji (2019) on male and female participants in the implementation of Fadama III Additional financing project among cassava farmers in Anambra state, Nigeria. The study revealed that untimely provision of inputs, irregular advisory services, corrupt practices, lack of access to credit and poor road network were regarded as the major constraints to male and female in the project activities.

Table 5: Increased Yield / Stock

Responses	Frequency	Percentage
Very high	102	35
High	120	44
Somehow low	38	13
Low	19	7
Very low	10	3
Total	289	100

Source: Researcher's Survey, 2020

The above table shows the results on increased yields (102) 35% of the respondents went for Very High, (120) 44% High, (38) 13% Somehow Low, (19) 7% Low, (10) 3% Very Low. This is also supported with what we saw in the course of our study, same of the beneficiaries in Liofi and Badeggi, Kontogora and Katcha Local Government Area respectively led us to their personal stores loaded with bags of rice. This clearly indicate that the beneficiaries of the programme has experienced increase in yields and stock, this is in agreement with a study conducted by Terwase (2018) in a study of the economic impact of Fadama III project on beneficiaries in Benue state, Nigeria. The study revealed that there was significant economic impact of the project on the livelihood of the participants, assets acquisition, success in input provision and 98.2% increase in yield of participants.

Table 6: Improved Seedlings Breeds

Responses	Frequency	Percentage
Very high	127	44
High	96	33
Somehow low	37	13
Low	24	8
Very low	5	2
Total	289	100

Source: Researcher's Survey, 2020

The above results present the responses of the respondents on improved seedlings / breads (127) 44% went for Very High, (96)33% High, (37)13% Somehow Low, (24)8% Low, (5)2% Very Low, from our discussion with the farmers in Gulu and Chiri who told us that Fadama III provide seeds of rice and sorghum. From the results it is clear that the respondents benefitted from the programme through improved seedlings/breeds, this is also in agreement with a similar study by Solomon (2020) on analysis of impact of Fadama III Additional financing on beneficiaries income and poverty alleviation in Abuja, Nigeria using descriptive analysis and simple percentage the study revealed that Fadama III AF supported farmers with improved seeds varieties, fertilizers, Agro-chemical, water pump, sprayers, advisory services and capacity building training.

Table 7: Food Security

Responses	Frequency	Percentage
Very high	91	31
High	121	42
Somehow low	46	16
Low	26	9
Very low	5	2
Total	289	100

Source: Researcher's Survey, 2020

The above table presents the responses of respondents on food security (91) 31% Very High, (121) 42% High, (46) 16% Somehow Low, (26) 9% Low and (5) 2% Very Low, In the course of our study no beneficiary was able to tell us that he has experienced shortage of food after the intervention, some of them took us round to see their stores loaded with foodstuff. This has clearly indicated that the programme has contributed towards solving the problem of food security this is in agreement with a study conducted by Cornelius, Kabir and Oluwaseun (2020) on the impact of Fadama III on food security status of beneficiary farmers in Kabba-Bunu LGA, Kogi State using descriptive statistical analysis, logistic regressions, food security index (FSI) food Insecurity Gap (FIG), Head Count Ratio (HCR) and Surplus Index (SI) the crop output level of the farmers showed that beneficiary farmers had more output than the non-beneficiary farmers with an output difference of 1% before Fadama programme and a crop output difference was 9.5% after the project similarly. The farmers had 0.16% difference in their level of consumption before the Fadama project and 13.9% difference in their consumption after the project in favour of the beneficiary farmers. The result further showed that 83% of the beneficiary farmers are food secure as against about 34% of non-beneficiary farmers.

5. Conclusion and Recommendations

The first objective is to identify the constraints encountered by Fadama III beneficiaries in Niger state. The variables of the objective include inadequate capital, untimely distribution of inputs, and insufficient farm machines poor network among others. The result from the respondents clearly shows that problems such as poor road network, insufficient fund, untimely distribution of inputs and poor implementation of the programme are problems are challenges faced by the programme. The interviews and focus group discussions is also in line with the results

The second objective was to examine the achievements of Fadama III on the beneficiaries in Niger State. This consists of variables such as increased yields/stock, improved seedling / breeds increased. In subsequent poverty alleviation / agricultural programmes, provision of funds and other inputs should be disbursed on time, this will serve as an encouragement for the targeted beneficiaries to prepare and start their farm work on time.

i. The government should take the business of road construction and rehabilitation serious to link the village to their farms and the markets, this will ameliorate the problem of transporting farm products to the respective villages and markets.

ii. The government should also take the issue of grazing grounds serious, this will enable the farmers to produce more from their farms and the problem of farmer's- herder's clashes will be solved.

iii. Sufficient funds should be provided to the beneficiaries of poverty reduction programmes, this is what can only lead to the success of the programme.

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