CONTRIBUTIONS OF SMALL-SCALE COMMUNITY-OWNED INFRASTRUCTURE (SCI) AND ASSET ACQUISITIONS TO THE ATTAINMENT OF FADAMA III PROJECT DEVELOPMENT OBJECTIVES IN OGUN STATE, NIGERIA

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ABSTRACT

The study was carried out to ascertain the contribution of small-scale community- owned infrastructure and asset acquisition to the attainment of Fadama III Project Development Objectives in Ogun State, Nigeria. The study employed the mixed method approach, involving quantitative and qualitative techniques. A total of 300 respondents were selected using multi-stage sampling procedure, complemented with the probability proportional to size technique. Twenty five sessions of focus group discussions were also held with the Fadama Community and Users Associations. Descriptive analysis was employed to explain access to productive rural infrastructures and agricultural product market attributable to the project, describe the nature of the major value additions, and classify equipment acquired by Fadama User Groups and Fadama Community Associations (FCAs), while profitability technique was utilized to ascertain the incomes pre and post value addition. The results showed that access to SCI ranged from 5.9% for newly constructed access roads to 45.2% for rural open market, with an average of 3.2% of the FCAs having access to at least 1 SCI category compared to 7% under control. Also, 90.8% of the Fadama Community Associations had access to market information compared to 9.2% under the control and the 87.2% obtained at baseline. This was found to be statistically significant at 1% level. Pilot asset acquisition ranged from 2.1% for cold room to 24.3% under Knap sac sprayer. A total of 78.5% of respondents had access to various pilot assets compared to the less than 1% (with the exception of farm tools) recorded for most assets under control. The colossal acquisition of equipment is not unconnected to the Fadama III intervention in the State. The estimated mean enterprise incomes before value addition ranged from ₦126.10 per hectare for cassava to ₦225.59 per unit for poultry production, compared to the range of between ₦82.00 and ₦170.01 observed for the control. Similarly, the mean enterprise incomes after value addition ranged from ₦153.8 for garri to ₦291.30 for paddy rice under the treatment, compared to the range of between ₦109.0 for cassava flour and ₦175.0 obtained under control for paddy. These results were significantly different from those of the treatments. Arising from the outcome of the study, it is evident that the implementation of the small scale community owned infrastructures and acquisition of pilot assets had contributed in no small way to the achievement of the Fadama III Project Development Objective in Ogun State. However, concerted efforts needed to be made to: facilitate access of more project beneficiaries' to infrastructures and pilot assets through enhancement of component envelopes; ensure continuous capacity building; ensure sustainable operation of the Fadama User Equity Fund given the need for asset maintenance and replacement; support targeted value chains given the benefits of income enhancement and obvious subsidy support under Agricultural Transformation Agenda; emphasize farm diversification activities to complement beneficiaries' incomes; and target younger and vibrant farmers.

Keywords: Fadama III, Small Scale Community Owned Infrastructure, Pilot Asset Acquisition http://dx.doi.org/10.4314/joafss.v11i1.1

INTRODUCTION

Though, Nigeria's economy performed well recently between 2006 and 2010, with increases in GDP growth rate from 6.03 percent in 2006 to 6.96 percent in 2010 NBS, (2011),

the incidence of poverty and food insecurity continues to be a critical challenge. Inflation rate is still very high, put at an average of 10.9 percent as at November 2012, while unemployment rate stood at 23.9 percent in 2011(NBS, 2012). The 2011 UN Global Hunger Index further ranked the country 40 and classified it as having serious hunger. Incidentally, the phenomenon of poverty was noted to be more prevalent in the rural areas (NBS, 2012). In an effort to reverse the previous trends, the Federal Government of Nigeria (FGN) renewed its commitment to promoting growth in the agricultural sector and prepared the National Economic Empowerment and Development Strategy (NEEDS). The policy objectives of NEEDS are complemented by those contained in the New Agricultural Policy (NAP) and the Rural Development Policy (both of 2001), which further emphasized growth and development of all aspects of agriculture, and increased investment in rural areas. Towards translating the agricultural growth objectives of NEEDS into reality, the FGN with assistance from the World Bank implemented the first National Fadama Development Project (NFDP-I) from 1993 to 1999 and was adjudged successful. The success of the NFDP-I gave rise to the design and implementation of the second National Fadama Development Project (NFDP II) in joint collaboration of FGN, World Bank and the African Development Bank, in 18 states (12 IDA States and 6 AfDB States) of the federation. Following the further success and demonstrated positive impact of the NFDP II, the Fadama project was further up-scaled into third National Fadama Development Project (NFDP-III), which is currently on- going. The Project is a comprehensive five-year action program developed by the Federal Ministry of Agriculture & Water Resources (FMAWR) and the World Bank in close collaboration with other relevant Federal and State Government Ministries, Local Governments and other key stakeholders (Donors, Private operators and NGOs) to raise productivity and incomes in rural areas. The project supports productive activities, infrastructural development, technical assistance and investment in assets and land quality and services identified by communities as relevant to generation of higher income and better livelihoods. The approach taken is centered on the Community-Driven Development model and includes investing in: capacity building, public infrastructure, inputs, adaptive research, extension services, knowledge transfer, and group-owned productive assets through matching grants, advisory services, land management improvements, and mechanisms to avoid or resolve conflicts among Fadama resource users.

Objectives of the Study

The broad objective of the study was to assess the contributions of the Small-scale Community-owned Infrastructures (SCI) and Asset Acquisitions to the attainment of the Fadama III project development objectives. The specific objectives were to:-

(i) describe the socio-economic characteristics of the respondents;

(ii) determine the access to productive rural infrastructure, and disaggregate the SCI in terms of types, number and percentage of the participating Fadama Communities' access;

(iii) describe the means of access to agricultural product markets attributable to the project, and quantify the percentage of FCAs that have access to market information;

(iv) enumerate and describe the classes of equipment acquired by FUGs and FCAs in the project participating states;

(v) identify the nature of major value additions to the agricultural commodities produced by the fadama users groups and estimate the percentage increase in income from sales of value-added agricultural products.

Conceptual Framework and Literature Review

Fadama is a Hausa word for an irrigable land usually flood plains with shallow aquifers found along Nigeria major river system. Such lands are especially suitable for irrigated production, fish farming, traditional fish feed and water for livestock. The Fadama I Project focused basically on crop production through supplementary water supply which resulted in conflict amongst common resource users. Fadama II Project was implemented to address the problems identified in Fadama I by involving all the stakeholders in the common resource utilization and some down-stream activities such as value addition and marketing were equally implemented. Fadama III Project is a follow on to the Fadama-II which is now implemented in 35 States and the FCT. The development objective of Fadama III Project is to sustainably increase the incomes of Fadama users. By increasing their incomes, the Project will help reduce rural poverty, increase food security and contribute to the achievement of a key Millennium Development Goal (MDG). The project was expected to support the financing of five main components designed to transfer financial and technical resources to the beneficiary groups in: (i) institutional and social development; (ii) physical infrastructure for productive use; (iii) transfer and adoption of technology to expand productivity, improve value added output, and conserve land quality; (iv) support extension and applied research; and (v) provide matching grants to access assets for income generating and livelihood improvement (World Bank, 2008).

Project Components

The Fadama III project was therefore designed to support five main components which are mutually interwoven and reinforcing:

Component 1. Capacity Building, Communication and Information Support: The capacity building component is to provide support for community organizations and Local Governments. Functions in this component include community mobilization, organizing beneficiaries into viable Fadama User Groups (FUGs)/Economic Interest Groups (EIGs) and their apex associations - the Fadama Community Associations (FCAs), training and technical assistance support to empower the communities and capacity building for Local Governments.

Component 2. Small-Scale Community-owned Infrastructure: The study essentially attempts to address the progress towards achieving the outcome indicators for this Component 2 of fadama III. In this component, grant resources is expected to be allocated annually to each of the participating FCAs for implementing priority demand-driven community-owned projects. These community owned infrastructure subprojects range in sizes as identified by the communities themselves and include: rehabilitation and/or construction of Feeder and Fadama access roads, culverts and small bridges; infrastructure for sustainable natural resources management. The menu of subprojects will include: rehabilitation and/or construction of feeder and access roads, culverts and small bridges; rural markets and boreholes; infrastructure for sustainable natural resource management, including improved conservation of soils and agronomic practices, water harvesting techniques, and, where feasible, integration of this infrastructure into

local/community land-use planning; and infrastructure that cuts across FCAs and/or LG boundaries, including stock routes, pastures and watering points (NFCO, 2009)[2]. Funding principles will be 90 percent grants and up to 10 percent of the investment costs as counterpart contributions (in cash or in materials and labor).

Component 3. Advisory Services and Input Support: Under this component, the project provides support to empower Fadama users to purchase advisory services responsive to the needs of Fadama users. On input support, the provision of input is also of a high priority, given that many of the rural communities do not have assured and reliable access to inputs. The advisory services component has as its goals, to enable Fadama User Groups participating in the project to adopt productivity enhancing techniques and appropriate marketing techniques on their Fadama enterprises to increase income. This will be achieved through demand responsive advisory services to be provided by a wide range of private and public service providers.

Component 4. Support to the ADPs, and Sponsored Research: This component provides support to Agricultural Development Projects (ADPs) in States to carry out specific and limited functions. Under this component, the project will provide specialized technical assistance, training, experience-sharing, and knowledge-exchange opportunities to service providers, with emphasis on improving the quality, effectiveness, availability, affordability, and timeliness of advisory services. The beneficiaries will be established with public and/or private sector service providers, with a proven record certified by the ADP. The training menu will include specific agricultural technologies, such as new varieties and cultivation methods, participatory methodologies and facilitation skills, marketing and enterprise management.

Component 5. Assets Acquisition for Individual FUGs: Under this component, the project will scale up the matching grant approach, successfully piloted under Fadama II, to support common interest groups (FUGs/EIGs) and value added from the products produced by their members and diversify their sources of livelihood. The matching grant will be targeted to economic interest group (EIGs) of poor Fadama users including the disadvantage groups (such as the handicapped, widows, the sick and economically inactive members of the community) who do not have access to either subsidized or market rate credit, and who, as individuals are too costly to be served by financial institutions due to the perceived high risk, lack of information and high transaction cost. Prior to the project, the target beneficiaries were disorganized and operated as individuals, widely dispersed across rural space. They lived in communities that are beyond the reach of financial institutions that may be willing and able to extend services to the poor. This facility, thus serves as a mechanism to mobilize the formation of community groups, to give FCA members practical financial experience as well as revenue from small income-generating activities, thereby, making them more attractive to be financed as a group by mainstream financial institutions. For the economically-active FUGs, who constitute the majority of beneficiaries, the Project contributes up to 70 percent of the total cost of the demanded subproject, while the beneficiaries make up-front cash payment of up to 30 percent of the

subproject cost. The cash counterpart payments are being deposited in an approved commercial bank/financial institution. In addition, FUGs operate a savings scheme with a view to promoting community-level capitalization, as well as to ensure sustainability of the investment activities funded through this Component. The savings is in the form of a withholding of an amount equivalent to at least 10 percent of the net revenues of the FUGs annually. The vulnerable groups also receives matching grant of up to 85 percent from the project and are expected to pay 15 percent counterpart after harvest and/or the sale of their marketable surplus (NFCO,2009)[1].

Implementation Strategy

The implementation strategy for Fadama-III project is anchored on a Community Driven Development (CDD) approach. Its design is premised on private sector-led, demand-driven strategy, as opposed to the top down approach associated with previous donor projects. Under this approach, various Fadama resource users, including crop farmers, pastoralists, fisher men and women, and on-and off-farm entrepreneurs, operating through their respective Fadama User Groups (FUGs) and their apex bodies, Fadama Community Associations (FCAs), would reach consensus on how to use the common resources for their mutual advantage in accordance with the Project Appraisal Document. Through this process, communities would decide on which advisory services and infrastructures they need to enable them attain development goals they set for themselves based on their own efforts. The consensus so reached would be articulated in Local Development Plans (LDPs) drawn up at the level of the Fadama Community Associations. In support of this, the project document for the Third National Fadama Development Project (Fadama III) provides for a socially inclusive participatory process of local development planning. This strategy has been practiced in the concluded Fadama II phase.

METHODOLOGY

The Study Area

The study was conducted in Ogun State in the South-western part of Nigeria. It borders Lagos State to the South, Oyo and Osun States to the North, Ondo Sate to the East and Republic of Benin to the West. It lies in the humid forest agro-ecological zones between Latitudes $6^0.55'$ and 7^0 North of the equator and Longitudes $3^0.46'$ and $4^0.15'$ east of the Greenwich meridian (OGSFCO, 2010). Average temperature ranges between 27^0 C and 32^0 C, with rainfall ranging between 1,250 mm and 1,800 mm. The total population is put at 4,054,272 (2005 Estimate), while population density stood at 139.5/km^2 (Wikipedia, the free encyclopedia). Mixed small scale farming was the predominant form of production and between 90 to 95 percent of the total output is accounted for by households that cultivate between 0.5 to 2ha. The livestock sub-sector is dominated by traditional systems of production and small ruminants are one of the most important livestock species in terms of output and capital value, while poultry is raised throughout the State. Fishery production is largely aquaculture and has been a source of farm diversification income, while agro-forestry resources and activities abound in most parts of the State .

Methods of Sampling and Sample Size

Respondents for the survey were selected from two treatments and one control. The two treatments were: Fadama II LGAs in Fadama III and Non-Fadama II LGAs in Fadama III. However, given that there are 20 LGAs in Ogun State, with 10 LGAs each falling into the two treatments, the control group was obtained from the non-fadama groups within the non participating communities. The sampling frame was the Fadama Community Associations (FCAs) in the participating 20 LGAs. The frame was drawn from the comprehensive list of FCAs formed and registered in Ogun State. Selection of respondents involved three steps, namely: listing of the households under each of the enterprise of the FCAs; listing of FUGs under each enterprise; and proportional random selection of respondents within the enterprises. Twenty-five (25) sessions of focus group discussions (FGDs) were also mounted to allow for gradual discovery of the changes that occurred during project implementation and provide insights into project and other external factors that led to these changes. About 15% of the samples drawn for the study covered women and other vulnerable households.

Methods of Data Analysis

The study used in-depth descriptive analysis of the relevant socio-economic variables to critically; assess the access to productive rural infrastructures, describe the means of access to agricultural product market attributable to the project, and explain the classes of equipment acquired by FUGs and FCAs. The study further analyzed the nature of the major value additions to agricultural commodities produced by the Fadama User Groups and employed percentages, tabular presentation, and difference between means to explicitly explain the proportion and significance of the variables under consideration.

Profitability Analysis

Profitability technique was also used to ascertain the level of household enterprise incomes before and after value addition. The technique is expressed as:

$$NFI = GFI\ (P(Q).Q) - TC\ (VC + FC) \quad \ldots\ldots\ldots\ldots\ldots\ldots (1)$$

Where,

NFI = Net Farm Income
GFI = Gross Farm Income
PQ = Price per Unit of Output
Q = Total Output
TC -=Total Cost of Production
VC = Variable Cost
FC = Fixed Cost

RESULTS AND DISCUSSION

Socio-economic Characteristics of Sampled Farmers

The study revealed that 53.0% of participants and 58.3% of farmers under the control group fall within 41-50 age category (Table 1). This signifies that most of the sampled farmers are at the peak of their productive cycle and are likely to be having savings and investments after satisfying the household needs. Also, 80% of the treatment household heads were exposed to formal education compared to 56.3% under control (Table 2).

Table 1: Age Distribution of Household Heads (%)

Variable Description	20-30 years	31-40 years	41-50 years	51-60 years	> 60 years	Total
Fadama III in Fadama II LGAs	15.8	9.8	50.4	17.6	6.4	100.0
Fadama III in Non Fadama II LGAs	12.8	7.7	56.4	17.9	5.1	100.0
Mean Value	14.3	8.8	53.4	17.8	5.8	100.0
Control Group	33.3	-	58.2	6.3	-	100.0

Source: Survey results, November, 2011

Table 2: Level of Education of Respondents (%)

Variable Description	No Formal Education	Primary Education	Secondary Education	Tertiary Education	Never Attended	Total
Fadama III in Fadama II LGAs	14.8	31.2	23.4	25.4	5.2	100.0
Fadama III in Non Fadama II LGAs	13.9	31.7	23.3	24.8	4.3	100.0
Mean Value	14.4	31.5	23.4	25.1	4.8	100.0
Control Group	24.7	22.7	17.3	16.3	19.0	100.0

Source: Survey results, November, 2011

The high percentage recorded under the treatment is an indication of the opportunities therein for technology absorption within the Fadama III project in the State. In addition, 35.9% of the treatment households are headed by women, compared to the 8.7% reported at baseline (Table 3).

Table 3: Gender of Respondents (%)

Variable Description	Male	Female	Total
Fadama III in Fadama II LGAs	69.2	30.8	100.0
Fadama III in Non Fadama II LGAs	59.0	41.0	100.0
Mean Value	64.1	35.9	100.0
Control Group	79.3	20.7	100.0
Baseline	91.3	8.7	100.0

Source: Survey results, November, 2011

This is a pointer to the level of women participation and the social inclusive element of the Fadama III project in Ogun State. About 20.7% of the households in the control group are headed by women. Majority (49.1%) of the respondents were involved in crop production, 16.9% and 12.2% in livestock and fisheries respectively, while 4.6% practiced agro-processing (Table 4).

Table 4: Economic Activities of Respondents (%)

Variable Description	Baseline	Fadama III in Fadama II LGAs	Fadama III in Non Fadama II LGAs	Mean Value	Control Group
Crop production	43.6	40.7	39.4	40.1	64.2
Livestock production	10.5	13.1	20.6	16.9	9.4
Fishery production	9.5	12.1	12.2	12.2	5.8
Agro – processing	2.5	8.2	10.2	9.2	2.6
Non-farming Activities	15.3	16.1	17.5	16.8	10.2
Others, specify	18.6	5.5	4.6	5.1	8.2

Source: Survey results, November, 2011

Access to productive rural infrastructures

Table 5 revealed that about 45.9% and 38.8% had access to rural open market and rehabilitated access roads respectively, 36.3% lock up shops, 34.2% boreholes, among others. Thus, about 32.0% of the Fadama Community Associations had access to at least one SCI category. Inter-treatment comparison showed minor difference; relative to the control however, achievements were higher. This development may not be unconnected to the likely spill-over effect of project benefits to the Non Fadama III communities.

Table 5: Fadama Community Associations with Access to Small Community Infrastructures (%)

Variable Description	Fadama III in Fadama II LGAs		Fadama III in Non Fadama II LGAs		Mean Value Fadama III LGAs		Control Group	
	No.	%	No.	%	No.	%	No.	%
Rehabilitated Access roads	45	37.5	48	40.0	47	38.8	10	16.7
Newly Constructed Access Roads	6	5.0	8	6.7	7	5.9	2	3.3
Culverts	18	15.0	20	16.7	19	15.9	6	10.0
Small Bridges	13	10.8	17	11.7	15	11.3	10	16.7
Rural Open Markets	54	45.0	56	46.7	55	45.9	15	25.0
Lock up Shop	42	35.0	45	37.5	44	36.3	5	8.3
Borehole	44	36.7	38	31.7	41	34.2	2	3.3

Source: Survey results, November, 2011

Means of access to agricultural product market attributable to the project and % of FCAs with access to market information

The means of access to agricultural product market has implications for marketing efficiency within the project intervention areas. Table 6 revealed that about 10 % of the respondents use feeder roads as means of access to the markets, 6.0 % rural access roads, while 1.9 % depended on foot path. Also, 11.5% of the respondents in the treatment group further had access to the use of motor-cycles and bicycles compared to the 1.1 % observed for the non-fadama communities the observed significant difference in these results is not unconnected to the Fadama III intervention. Access to information enhances market transparency, efficiency and improvement in the incomes of the fadama households.

Table 6: Means of Access to Agricultural Product Markets (%)

Variable Description	Fadama III in Fadama II LGAs	Fadama III in Non Fadama II LGAs	Mean Value Fadama LGAs	Control Group
Rural feeder roads	10.1	9.3	9.7	5.6
Rural Access roads	5.9	6.1	6.0	3.4
Foot path	1.7	2.1	1.9	5.7
Bicycle/Motorcycle	6.1	4.6	5.4	1.8
Motor- Cycle	6.5	5.6	6.1	0.3

Source: Survey results, November, 2011

Table 7 indicated that 90.8% had access to market information compared to 9.2% for the control group. This was also found to be statistically significant at 5% level.

Table 7: Access to Market Information by Fadama Community Associations (%)

Variable Description	Yes	No
Fadama III in Fadama II LGAs	90.0	10.0
Fadama III in Non Fadama II LGAs	91.5	8.5
Mean Value	90.8	9.2
Control Group	52.4	47.6
Mean Value/Control Group	2.382**	

Source: Survey results, November, 2011
*** Denotes 5% level of significance

Classes of equipment acquired by FUGs and FCAs in the participating States

Aside labor and access to land and inputs, productive assets and technology are some of the other determinants of household production, productivity, income and poverty reduction. Possession of productive assets has a positive effect on food security. Table 8 indicated that the treatment had more access to productive assets compared to the control. About 24.3% had access to Knapsack sprayer, 19.3% water pumps , 6.2 % ponds, 6.1% processing equipment, compared to the less than 1% recorded by the control, excluding farm tools. These achievements are not unconnected to the Fadama III intervention in Ogun State.

Table 8: Classes of Equipment Acquired by FUGs and FCAs (%)

Variable Description	Fadama III in Fadama II LGAs	Fadama III in Non Fadama II LGAs	Mean Value	Control Group
Knapsack Sprayer	19.3	29.3	24.3	0.7
Pond	5.7	6 6	6.2	0.1
Processing Equipment	5.9	6.3	6.1	0.5
Water pump	14.3	24.3	19.3	0.2
Fishing Accessories (Canoe, nets, etc)	3.9	2.6	3.3	0.6
Livestock Units (Battery Cage, pen, etc)	4.9	6.8	5.9	0.2
Farm tools	5.9	8.9	7.4	44.0
Cold Room/Freezer	2.8	1.4	2.1	0.0
Generator	3.5	4.2	3.9	0.1

Source: Survey results, November, 2011

Nature of major value-additions to agricultural commodities produced by the Fadama User Groups and estimated increase in income from sales of value added agricultural products

The major agricultural commodities produced by the Fadama Users Groups in the State were cassava, maize, rice, vegetables and palm oil. Garri, cassava flour (*elubo*) and *fufu* were the key value additions to cassava, while palm oil was the main addition from palm fruit. Results from the Net Farm Income Analyses as detailed in Table 9 showed that the mean income from agricultural enterprises before value addition ranged from ₦126.10 per hectare for cassava sole to ₦225.59 for poultry under the treatment group, compared to the control, which recorded a range of between ₦82.0 per hectare for vegetables and ₦170.90 per hectare under rice production.

Table 9: Household Enterprise Incomes before Value Addition (₦000)

Variable Description	Fadama III in Fadama II LGAs	Fadama III in Non Fadama II LGAs	Mean Value	Control Group	Test of Significance (Mean Treatment & Control)
Cassava/Maize/Ha	210.11	215.12	212.70	108.00	2.412**
Cassava Sole/Ha	132.00	120.00	126.10	98.11	2.345**
Maize-sole/Ha	198.00	184.00	191.00	94.00	2.510**
Vegetables/Ha	195.00	185.04	187.50	82.00	2.011***
Rice/Ha	229.00	190.00	209.50	170.90	1.981***
Palm-fruits/Ha	225.11	210.02	217.01	152.04	2.421**
Poultry/HH	236.73	215.01	225.59	105.20	2.351**
Aquaculture/HH	162.42	159.54	161.00	89.12	1.850***

Source: Survey results, November, 2011

NB: **, *** Denotes 5% and 10% level of significance respectively.

The test of significance showed that these results were significantly different from those obtained under the treatment groups at 5 and 10 percent levels.The incomes after value addition differed across enterprise types. The mean value added incomes as reflected on Table 10 ranged from ₦153.8/ha for garri to ₦291.30/ha under paddy rice production for the treatment group compared to the range of between ₦109.0/ha for cassava and ₦175.30/ha for rice.

Table 10: Household Crop Enterprise Incomes after Value Addition (₦000)

Variable Description	Fadama III in Fadama II LGAs	Fadama III in Non Fadama II LGAs	Mean Value	Control Group	Test of Significance (Mean Treatment and Control)
Garri	157.20	150.40	153.80	110.02	1.842***
Cassava Flour	164.21	157.30	160.80	109.00	0.282
Palm-oil	281.50	262.60	272.10	164.30	2.052**
Paddy rice	316.00	266.60	291.30	175.00	2.065**

Source: Survey results, November, 2011
NB: **, *** Denotes 5% and 10% level of significance respectively.

The test of significance showed that these results were significantly different from those obtained under the control (Table 10). The percentage increases in income from value addition ranged from 22 percent to 39.2 percent under the treatment compared to the range of between 8.1 percent and 14.1 percent under control (Table 11).

Table 11: Percentage Increase in Income from Value Addition to Product

Variable Description	Fadama III in Fadama II LGAs	Fadama III in Non Fadama II LGAs	Mean Value	Control Group
Garri	19.1	25.3	22.0	12.1
Elubo	24.4	31.0	27.5	11.1
Rice	38.0	40.3	39.2	14.1
Palm-oil	25.1	25.1	25.1	8.1

Source: Survey results, November, 2011

CONCLUSION AND RECOMMENDATIONS

The study indicated that the project contributed meaningfully to the project development objective. In terms of access, 32% of the FCA had access to rural infrastructures compared to the 7.0% under the control. With over 90% access to market information as depicted by the study, marketing activities will be more transparent and efficient. This has implications for farmers' returns. Also, through project intervention, 78.5% percent of the respondents now have access to productive assets compared to the 46.4% under control. The enhanced access to productive assets will upscale agricultural productivity, income and reduce poverty. In terms of value addition, the project enhanced the value addition potentials of such commodities like cassava, rice and palm-oil. Income increases as a result of processing ranged from 22.0 percent to 39.2

percent under the treatment, compared to a range of 8.1% to 14.1% increase under control. The study recommended amongst others the need: to increase beneficiaries' access to small scale rural infrastructures and pilot assets through up-scaling the FUG/FCA envelopes under these interventions; to facilitate sustainability operation of the FUEF, such that beneficiaries can access funds for maintenance and replacement of assets; for increased and targeted support for commodity value chains of comparative advantage. Focus should be on the Agricultural Transformation Agenda prioritized commodities, without prejudice to the community driven development approach operation under the project; for continuous capacity building of the beneficiaries/User Groups on asset/infrastructure operation and maintenance with a view to enhancing their faculties for project operations. It is also imperative to urgently put in place sustainability plan that will ensure project continuity after project exit. Other recommendations include the need: for more targeted support to the beneficiaries and other vulnerable groups; to encourage more interventions in the area of farm diversification activities, with the view to complementing and enhancing the incomes of the beneficiaries, while it noted the need to target younger farmers, given the need for project sustainability.

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